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PERCIPIENCE

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Rev. Dr. Dominic Savio, SJ

Principal

St. Xavier's College (Autonomous), Kolkata



The essence of our institution lies in guiding young minds to recognize their potential, equipping them to face challenges with confidence, and inspiring them to rise as individuals.



"True wisdom lies not in what we see, but in how deeply we understand."

St. Xavier's College (Autonomous), Kolkata, has always been a place where excellence is both pursued and nurtured. Every student here begins a journey of discovery, where academic rigor is paired with personal growth and self-realization. The essence of our institution lies in guiding young minds to recognize their potential, equipping them to face challenges with confidence, and inspiring them to rise as individuals who not only achieve but also lead and motivate others.

The Xavier's Commerce Society has consistently embodied this vision since its inception. Serving as the representative body of the Department of Commerce, it has endeavored to expand the scope of learning beyond the classroom, enabling students to engage with new ideas, perspectives, and opportunities. Its many initiatives have cultivated an environment of critical thinking, creativity, and collaboration. YouThink Volume XX is a reflection of this dedication, standing as a platform that celebrates discourse, innovation, and the shaping of progressive thought.

The theme of this edition, Percipience, highlights the importance of discernment and clarity. It encourages us to move beyond surface appearances, to perceive with depth, and to apply understanding with wisdom. It reminds us that true growth lies in our ability to interpret meaning, to question with purpose, and to act with foresight. This aligns closely with the values we uphold at St. Xavier's College (Autonomous), Kolkata, where students are encouraged to think critically, to develop vision, and to leave a mark that extends beyond themselves.

The successful completion of YouThink Volume XX has been possible only through the dedication and support of many. I sincerely thank Rev. Dr. Joseph Kulandai SJ, Vice Principal, Department of Commerce (Morning), and Rev. Dr. Peter Arockiam SJ, Vice Principal, Department of Commerce (Evening), along with Dr. Amitava Roy, Dean, Department of Commerce (Morning), and Dr. Soheli Ghose, Dean, Department of Commerce (Evening), for their constant guidance and encouragement. I also extend my gratitude to the professors on the reviewer board, whose thoughtful inputs have greatly enriched this publication. A special note of appreciation goes to the Professor-in-Charge, Dr. Anulekha Banerjee, Managing Editor, Dr. Sumona Ghosh, the Editorial Board of YouThink, and the members of the Xavier's Commerce Society, whose dedicated efforts have brought this edition to life.

Finally, to all the contributors who have shared their insights and ideas, your work forms the foundation upon which this journal continues to grow.

Rev. Dr. Dominic Savio, SJ



Rev. Dr. Joseph Kulandai, SJ

Vice Principal (Morning)
St. Xavier's College (Autonomous), Kolkata



Through the lens of percipience, we discover the subtle connections that bind thought to action and knowledge to purpose, fostering personal growth and guiding us toward a life of meaning and insight.



"In the journey of life, percipience allows us to see beyond appearances, uncovering the harmony between knowledge and wisdom."

This moment, marked by profound significance, urges us not only to broaden our perspective but also to deepen our understanding of ourselves and the world around us. Through the lens of percipience, we discover the subtle connections that bind thought to action and knowledge to purpose, fostering personal growth and guiding us toward a life of meaning and insight. In this pursuit, reality reveals its many dimensions, inspiring us to seek clarity, act with wisdom, and contribute to a legacy that resonates far beyond our own lives.

St. Xavier's College has long stood as a centre of enlightenment, cultivating a spirit that encourages students to question conventions and approach life with discernment and vision. Our institution remains dedicated not merely to transmitting knowledge but to shaping individuals who can face complexity with depth, responsibility, and grace. In this mission, the Xavier's Commerce Society plays an essential role. By creating platforms such as YouThink, it has consistently empowered students to express their ideas, engage in dialogue, and cultivate intellectual curiosity. This journal continues to nurture a culture of rational thought and critical reflection, equipping students with insights that extend well beyond their academic journey.

I offer my sincere congratulations to the YouThink Editorial Board for choosing Percipience as the theme for this edition, a theme that captures the essence of discernment and reflects the growing need for thoughtful engagement in our times. The diverse contributions in this volume, authored by students and scholars alike, mirror a rich spectrum of ideas and perspectives. They represent a balance of tradition and progress, reflecting the adaptability and forward-thinking spirit that education in the 21st century demands. I also extend my gratitude to the professors and guest contributors, whose scholarship has added depth and breadth to this edition, leaving a lasting impression on its readers.

The publication of Youthink: Volume XX stands as a testament to the hard work, dedication, and pursuit of excellence by the members of the Xavier's Commerce Society. Their efforts have once again created a space where imagination meets intellect, and where individual aspirations are realized through collective endeavour. This achievement underscores the Society's invaluable role in nurturing a culture of excellence within the commerce community of St. Xavier's College.

As we celebrate this twentieth edition of the journal, I extend my warmest wishes to YouThink: Volume XX. May it continue to inspire our students to sharpen their vision, to look beyond the obvious, and to channel their brilliance into every path they choose to follow. It gives me immense pride to commend the Xavier's Commerce Society for producing this edition, which not only reflects the enduring heritage of a Xaverian but also embodies the values and aspirations of the Department of Commerce at St. Xavier's College (Autonomous), Kolkata.

May God bless you all.

Rev. Dr. Joseph Kulandai, SJ



Rev. Dr. Peter Arockiam, SJ

Vice Principal (Evening)

St. Xavier's College (Autonomous), Kolkata



As we climb the
path of
knowledge, each
moment of clarity
takes us nearer to
the summit of true
understanding.



"The art of wisdom lies not in what we look at, but in how deeply we learn to see."

As we climb the path of knowledge, each moment of clarity takes us nearer to the summit of true understanding. The journey may be demanding, often filled with trials and uncertainties, yet its rewards are profound and enduring. The pursuit of wisdom is not a destination but a lifelong voyage, one that calls for patience, discernment, and an openness to new perspectives. The Xavier's Commerce Society has always stood as a source of inspiration for our students,

providing an environment where ideas thrive and young minds are encouraged to reach their fullest potential. Through its unwavering commitment to fostering intellectual growth and collaboration, the Society has built a tradition that continues to empower generations. YouThink remains one of its most cherished contributions, a platform where students share insights, question assumptions, and engage meaningfully with the world around them.

This twentieth edition of YouThink carries forward that legacy under the theme of Percipience. The articles within its pages are not only rooted in intellectual curiosity but also reflect thoughtful engagement with real-world complexities. Each contribution encourages readers to look beneath the surface, to uncover hidden patterns, and to refine their understanding of contemporary challenges. By engaging with these varied perspectives, students are invited to cultivate sharper critical thinking and to develop the wisdom to act with foresight in an ever-evolving world. The launch of YouThink: Volume XX, Percipience, is a testament to the vision, creativity, and passion of our students. Following in the footsteps of earlier editions, this volume explores the richness of perception, discernment, and clarity of thought. The diverse articles it presents embody a broad spectrum of inquiry, offering reflections that stimulate the intellect while also inspiring purposeful Action.

As we celebrate this milestone edition, let us be guided by the insight it champions and the possibilities it opens for the future. May this volume serve as a source of inspiration, urging us all to think more deeply, to act more wisely, and to embrace the opportunities that lie ahead. I extend my warmest congratulations to the Xavier's Commerce Society for producing a publication that reflects not only the academic strength of the Department of Commerce at St. Xavier's College

(Autonomous), Kolkata, but also the values and traditions of the Xaverian heritage. The thoughtful contributions within these pages are a valuable resource for students, faculty, and all who engage with them. I trust that this edition will enlighten, challenge, and inspire, offering new insights and clarity to its readers.

May your aspirations be fulfilled. God bless you all!

Rev. Dr. Peter Arockiam, SJ



Dr. Sumona Ghosh

Managing Editor

St. Xavier's College (Autonomous), Kolkata



Life continuously
invites us to see
with clarity to look
beyond the
surface and
recognize the
deeper truths that
shape our journey.



"The strength of progress lies not in what we gather, but in how clearly we perceive."

Life continuously invites us to see with clarity to look beyond the surface and recognize the deeper truths that shape our journey. Across time, the call for discernment has guided humanity, opening new pathways of understanding and inspiring us to act with purpose. Percipience is not simply an act of observation; it is the art of discerning meaning, where insight and wisdom come together to shape our collective destiny. This timeless pursuit is embodied in the legacy of St. Xavier's College (Autonomous), Kolkata, a beacon of thought, reflection, and progress. True percipience is a shared endeavour, urging us to transcend illusions and cultivate the clarity required to unlock the infinite possibilities within us.

The spirit of Percipience compels us to explore deeper layers of meaning, forging connections between knowledge and foresight. YouThink carries this essence, empowering students to sharpen their vision, challenge assumptions, and embrace the pursuit of understanding. By moving beyond the superficial and engaging with depth, we awaken a force of transformation, one that illuminates complexities, dispels ignorance, and propels us toward wisdom and excellence.

For years, YouThink has been more than a journal; it has been a mirror of diverse thought and a canvas of boundless ideas. Each volume has revealed new insights, weaving together perspectives that enrich our understanding of life, society, and the human spirit. It continues to stand as a lighthouse of intellect, guiding readers from uncertainty to clarity, and from questions to discovery. By harmonizing voices across time and experience, YouThink affirms the enduring pursuit of knowledge that defines our community.

As we present YouThink Volume XX: Percipience, I extend my heartfelt gratitude to the professors and administration whose support and guidance remain integral to this journey. I commend the remarkable dedication of the Joint Editors-in-Chief, Maansi Chamaria and Pratham Shah, along with the entire Editorial Board, whose commitment and vision have brought this edition to life with such brilliance. The realization of this twentieth edition owes much to the unwavering encouragement and leadership of Rev. Dr. Dominic Savio, SJ, Principal; Rev. Dr. Joseph Kulandai, SJ, Vice Principal, Department of Commerce (Morning); and Rev. Dr. Peter Arockiam, SJ, Vice Principal, Department of Commerce (Evening). The valuable contributions of Dr. Amitava Roy, Dean, Department of Commerce (Morning), and Dr. Soheli Ghose, Dean, Department of Commerce (Evening), have been instrumental in shaping this work.

With deep appreciation, I look forward to the clarity and impact you will continue to bring to every sphere of life. With this faith, I am honoured to present YouThink Volume XX: Percipience.

Dr. Sumona Ghosh



Maansi Chamria & Pratham V. Shah

Joint Editors-in-Chief

St. Xavier's College (Autonomous), Kolkata



History shows that
progress has never
emerged solely
from knowledge.



“It is not the abundance of information that empowers us, but the clarity with which we perceive it.”

In an age defined by complexity, velocity, and constant transformation, humanity's greatest strength has become its ability to make sense of the world. History shows that progress has never emerged solely from knowledge, but from insight—from the awareness to distinguish patterns, recognize truths, and interpret change. This spirit of clarity and discernment lies at the heart of Percipience, the theme of Youthink Volume XX.

At Youthink, our mission has always been to foster critical inquiry, intellectual curiosity, and collaborative thought. Guided by these principles, we present Volume XX, dedicated to exploring the profound role of perception in shaping economies, societies, markets, and global narratives. This theme reflects our collective aspiration not merely to observe the world, but to understand it with depth and intention.

This year's edition stands as a testament to the analytical rigor and creative brilliance of our student contributors. Through the Feature section, they examine emerging geopolitical realignments, shifts in economic power, the architecture of new financial systems, and the socio-technological forces shaping the future. Their writings illuminate the frameworks through which humanity perceives its evolving reality.

The Beyond, Ascent, and Precis sections offer critical insights into corporate strategy, technological disruption, behavioral economics, branding intelligence, global diplomacy, and the deep interplay between finance, society, and governance. Together, these contributions weave a rich narrative grounded in scholarship, curiosity, and nuanced understanding.

Our Guest Article bring distinguished perspectives from eminent thinkers who expand the boundaries of discussion through expertise and lived experience. We extend our deepest gratitude to the contributor whose voice enrich the academic fabric of this edition and elevate its intellectual standard.

The Interviews section features conversations with visionaries whose journeys exemplify the essence of perception—leaders who not only witnessed change but interpreted it, anticipated it, and built upon it. Their reflections remind us that true progress is powered not by sight, but by insight.

This endeavor would not have been possible without the steadfast support of the administration of St. Xavier's College. We express our sincere appreciation to Rev. Dr. Dominic Savio, SJ, Principal, Rev. Dr. Joseph Kulandai, SJ, Vice Principal (Department of Commerce – Morning), and Rev. Dr. Peter Arockiam, SJ, Vice Principal (Department of Commerce – Evening). We also extend our gratitude to Dr. Amitava Roy, Dean, Department of Commerce (Morning), and Dr. Soheli Ghose, Dean, Department of Commerce (Evening), for their constant encouragement and belief in our vision.

We remain deeply grateful to our Managing Editor, Dr. Sumona Ghosh, whose guidance and discernment have played a defining role in shaping Youthink Volume XX. Our heartfelt appreciation extends to the Editorial Board, whose meticulous efforts ensured that every idea was refined with precision, every section curated with care, and every article presented with clarity.

Lastly, we thank the readers, contributors, faculty, and students of St. Xavier's College for their continued support and engagement. Youthink exists because its ideas are read, questioned, discussed, and carried forward.

As we conclude this edition, we recognize that Percipience is more than a theme—it is a mindset, a discipline, and a responsibility. Beyond the written pages, this publication embodies growth, collaboration, and the enduring pursuit of understanding.

With immense pride and anticipation, we welcome you to Youthink Volume XX: Percipience.

Maansi Chamria

Pratham V. Shah



Riya Kedia & Yash Nahar

Joint Secretaries

St. Xavier's College (Autonomous), Kolkata



“It is not knowledge alone, but the ability to perceive that shapes understanding.”

Seventeen years ago, a vision took flight—an endeavour to cultivate corporate insight and foster holistic development among Xaverians. When we joined this legacy on 11 November 2023, we did not merely step into a society; we stepped into a tradition of critical thought, informed dialogue, and collaborative excellence. What began as an initiative to publish the annual journal of the Department of Commerce, Youthink, has grown into a thriving institution nurtured by the collective intelligence and commitment of its members.

This year, Percipience, the theme of Youthink Volume XX, reflects a distinct evolution in the way we learn, interpret, and engage with the world. In an era overflowing with information, it is insight that distinguishes noise from nuance. The essence of Percipience lies not only in seeing but in discerning—an attribute that defines the character of the Xavier's Commerce Society and resonates through every article and contribution within this edition.

Throughout this past year, the society has continued to build upon its legacy through six vibrant and intellectually stimulating events—each marked by spirited debate, sleepless nights, creative conflict, and shared achievements. These events are not merely academic exercises, but reflections of a dynamic ecosystem shaped by curiosity, discipline, and camaraderie. And behind this tapestry of experiences stands the unwavering commitment of 25 dedicated individuals whose efforts continue to strengthen the present and guide the future of this society.

The successful culmination of Youthink is a testament to collective effort. We extend our deepest gratitude to Dr. Sumona Ghosh, Managing Director of Youthink, for her guidance and discerning mentorship, and to Dr. Anulekha Banerjee, our esteemed teacher-in-charge, for her constant support and leadership. We acknowledge the XCSers of the Finance Committee for ensuring seamless execution, and offer our appreciation to the Editorial Board for safeguarding the journal's academic and creative integrity. We also recognize the Editors-in-Chief, whose clarity of vision and relentless commitment played a defining role in shaping this year's journal.



In an era
overflowing with
information, it is
insight that
distinguishes noise
from nuance.

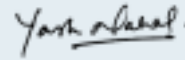


As we reflect on this journey, we are reminded of novelist Virginia Woolf’s words: “The whole world is a work of art; we are the critics. We may shut our eyes, but we cannot help seeing.” It is in this act of seeing—of perceiving—that we find growth. What began as participation has transformed into perspective, and perspective into identity. For us, that identity will always remain defined by one enduring colour: black.

Today, as we present Youthink Volume XX: Percipience, we celebrate not the end of an effort, but the continuation of a legacy. May this edition inspire you to perceive beyond the obvious, question with intent, and engage with depth.



Riya Kedia

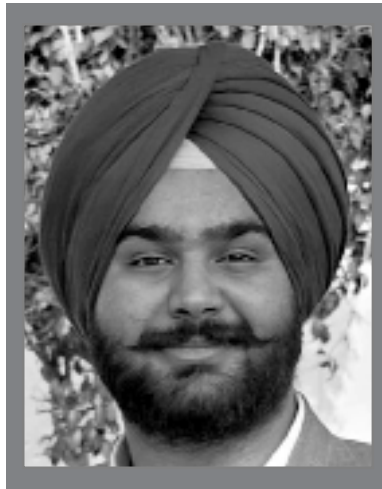


Yash Nahar

FEATURE

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“

UPI will not just coexist with cash it will increasingly dominate, shaping a future where digital payments become the new norm, while maintaining a harmonious balance with physical currency.

”

The UPI Paradox: Digital Growth Amid Cash Resurgence

Dipika Beria
Department of Commerce (Evening)

Gobind Singh Gill
Department of Commerce (Morning)

ABSTRACT

India's advancement in the digital payment ecosystem has rewritten the rules of money movement in both domestic and global markets, with UPI emerging as its defining face. By the first half of 2025, India stands as the third most funded fintech ecosystem globally, after the United States and the United Kingdom. Yet beneath this surge lies a striking paradox, the return of cash. Currency in circulation has more than doubled since demonetization, even as India leads the world in real-time digital payments. This article delves into how, despite a booming fintech economy, dependency on cash continues to rise driven by merchant costs, regulatory frictions, policy gaps,

and the cultural comfort that physical money still offers. As outages, MDR charges, and compliance fatigue test digital trust, India's payment landscape is spinning in a carousel where cash and code coexist. The question is not whether India will go cashless, but whether digital convenience can ever earn the same certainty, familiarity, and faith that paper currency has held for generations.

KEYWORDS: UPI, Demonetization, MDR, Economy, Digital Payments, Cashless.

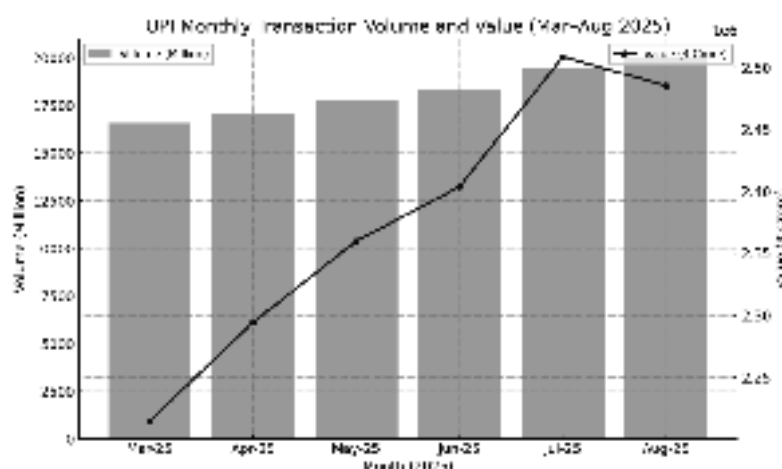


Figure 2: Monthly Transaction Volume and Value
(Source: NPCI)

FROM CASH TO CODE: THE RISE OF UPI

The Unified Payments Interface (UPI) is a real-time interbank payment system launched by the National Payments Corporation of India (NPCI) in April 2016. UPI enables users to transfer funds instantly between bank accounts via mobile apps using a Virtual Payment Address (VPA), without needing account numbers.

UPI has witnessed exponential growth since its launch. After striking one billion monthly transactions in October 2019, UPI surpassed two billion in October, 2020. According to NPCI data, 684 banks were using UPI by July 2025, with 19,467.95 million UPI transactions in that month alone, totaling

State-wise Contribution to UPI Transactions (2025)
(in per cent)

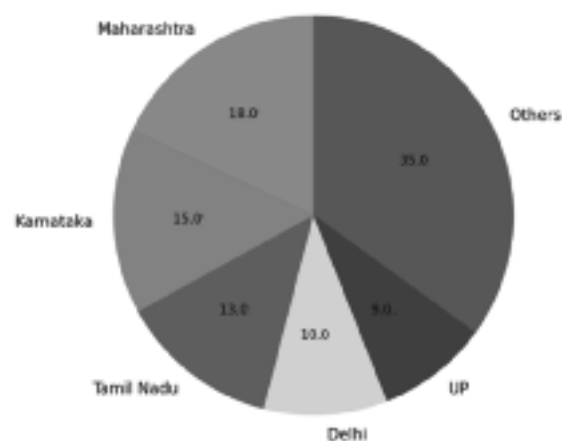


Figure 3: State wise Contribution to UPI Transactions 2025
(Source: NPCI)

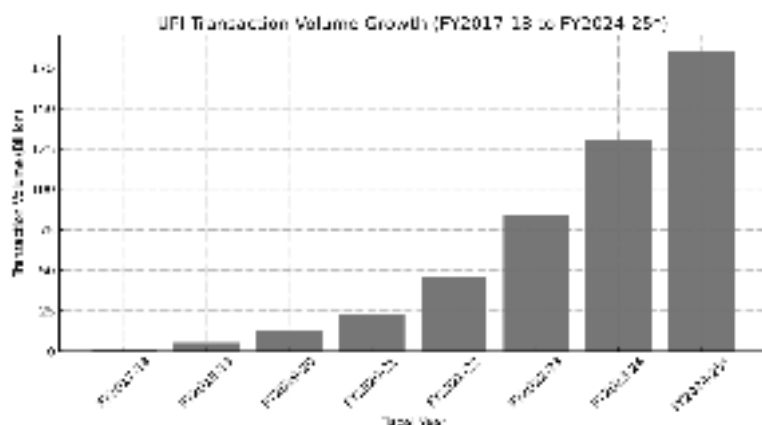


Figure 1: Transaction Volume Growth FY2017-FY2025
(Source: PWC Payment handbook 2020)

25,08,498.09 crore. A new monthly record of 20,008.31 million transactions worth 24,85,472.91 crore was recorded by UPI in August 2025. In comparison to August 2024, the volume of transactions in August 2025 increased by almost 34 per cent on an annual basis.

India's proactive push toward a cashless economy is what led to UPI's explosive

growth. A billion people now use UPI as their default payment method in response to regulatory incentives, growing smartphone usage, and the emergence of domestic FinTech's. Unmatched convenience and confidence were established by its zero-cost structure, bank-to-bank interoperability, and real-time settlement. From local vendors to large merchants, QR codes have replaced currency notes as a symbol of inclusion and efficiency. Innovations such as UPI Lite and Credit on UPI further democratized access, embedding digital payments into India's everyday rhythm setting the stage for what many call the UPI decade. Yet beneath this seamless surge lies a paradox. Even as digital payments touch new heights, cash continues to make a quiet but powerful comeback, revealing the cracks in India's digital payment story.

THE RETURN OF CASH: REASONS BEHIND THE RESURGENCE

Despite India's leadership in digital financial transactions, the country has witnessed a remarkable surge in cash circulation over the past eight years. According to Reserve Bank of India (RBI) data, the demonetization of Rs 500 and Rs 1,000 notes in 2016 marked a turning point, but currency in circulation has since more than doubled. In value terms, cash in circulation stood at 34.70 lakh crore as of September 6, 2024, compared to around 16.5 lakh crore just before demonetization.

The demonetization initiative launched in November 2016 aimed to eliminate black money and encourage individuals to transition from cash payments to digital methods. Although after government's attempt encourage digital payments through demonetization, the consistent and significant rise in the amount of currency in circulation over the last eight years indicates that cash continues to be firmly embedded in India's economy, influenced by cultural practices, informal transactions, and the ongoing dependence of households and small enterprises on physical currency due to confidence in it, especially in regions where digital literacy is not widespread.

Notably, following the lockdowns caused by the COVID-19 pandemic, cash usage saw a resurgence as

restrictions were relaxed and economic activities picked up: ATM withdrawals, cash spending in retail, and small-value transactions in person returned to nearly pre-COVID levels.

When behavior in rural India is examined, cash's position as the trustworthy default becomes even more evident. Six years after demonetization, 76 per cent of participants in a LocalCircles study stated that they continue to pay with cash for everyday costs like groceries, meal delivery, and house repairs, proving that digital technology has not entirely substituted traditional cash use. Particularly small business owners are turning back to cash because they are worried about the GST and other compliance requirements associated with digital receipts.

Nearly 44 per cent of lower-income households state that they spend the majority of the amount of cash they get from government benefit programs on food and necessities, demonstrating how cash still dominates welfare flows. Even in moments of growing digital infrastructure, the trust, immediacy, and certainty of cash remain deeply rooted especially for those less reached by digital literacy or intimidated by transactional overheads.

MERCHANT DISCOUNT RATE: THE HIDDEN FRICTION

Although UPI digital payments are often promoted as 'free' for customers, merchants bear the financial burden in the form of the Merchant Discount Rate (MDR). To encourage digital adoption, the government made MDR zero for RuPay Debit Card and BHIM-UPI transactions and even launched the Incentive Scheme for Promotion of RuPay Debit Cards and Low-Value BHIM-UPI Transactions (P2M) to support the payment ecosystem. However, despite these measures, merchants remain wary of hidden costs, compliance burdens, and settlement delays.

Even a 0.5 - 1 per cent fee can seem costly to small firms with low margins when contrasted with the ease of using cash. Even though they have access to UPI infrastructure, many MSMEs still use cash because of this friction, which is worsened by worries about tax

visibility and possible GST penalties. Digital adoption may plateau unless MDR is sustainably addressed with affordable, dependable resolution mechanisms, particularly in semi-urban and rural India where immediacy and trust are crucial.

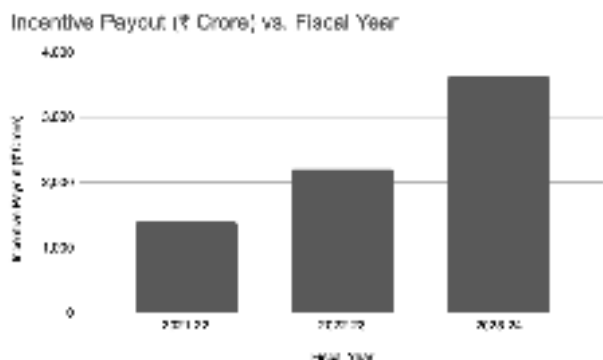


Figure 4: Year-wise Government Incentive Payout
(Source: RBI)

FORECAST AND FUTURE OUTLOOK OF UPI

Looking ahead, UPI is expected to sustain aggressive growth, expanding its role from a domestic payment platform to a backbone of India's digital transaction ecosystem. According to PwC's Indian Payments Handbook 2024 - 2029, UPI's transaction volume is projected to reach 439 billion transactions by FY 2028 - 29. Meanwhile, Invest India projects that by FY 2028 - 29, digital payments transaction volume could hit 481 billion and value could cross 593 trillion, with UPI dominating as the principal medium.

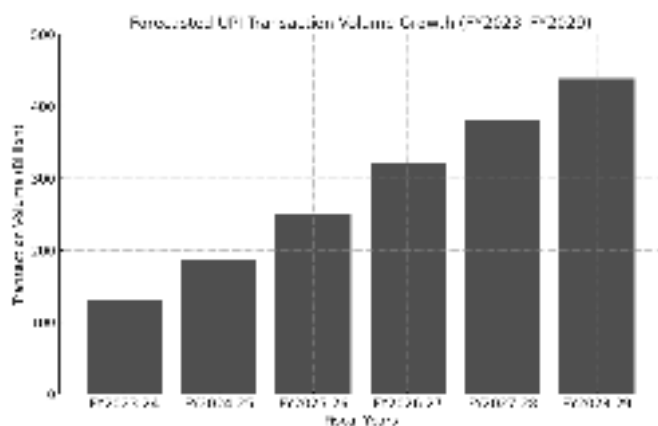


Figure 5: Forecasted UPI transaction Volume Growth (FY2023-FY2029)
(Source: PWC Payment handbook 2025-26)

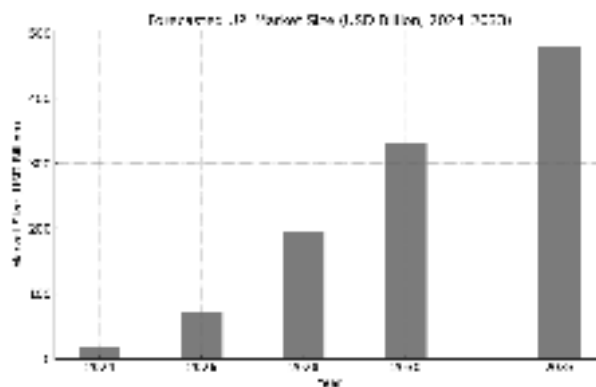


Figure 6: Forecasted UPI Market Size (2024-2033)
(Source: Markets and Data)

In market valuation terms, a report by IMARC projects the UPI market size (in USD terms) will grow from USD 16.9 billion in 2024 to USD 478.9 billion by 2033, implying a compound annual growth rate (CAGR) of ~45 per cent from 2025 to 2033. Another forecast suggests India's real-time payments (of which UPI is a dominant share) will grow at ~22.6 per cent CAGR over FY2025 - 2032.

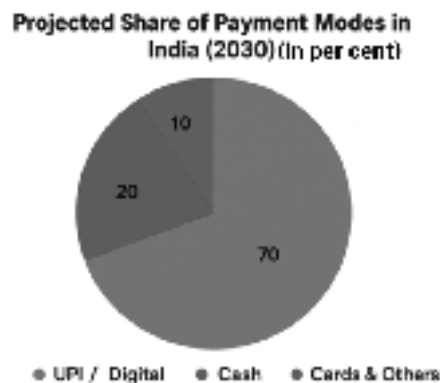


Figure 7: Projected share of Payment Modes in India
(Source : Pwc Handbook, 2025-2029)

Several structural advantages and prevailing trends strongly support UPI's ascendancy over cash. Its convenience and ubiquity allow users to make instant payments anytime and anywhere via mobile apps or QR codes, eliminating the need for physical cash handling. The open, API-based architecture ensures seamless interoperability, enabling banks, fintechs, and

third-party app providers to integrate effortlessly. Low or zero transaction costs further enhance UPI's appeal compared to the logistical and security costs of cash.

Regulatory and policy support, including government initiatives, RBI backing, past demonetization, and investments in rural connectivity and financial inclusion, have accelerated adoption. Meanwhile, the inherent economics of cash are shifting, as handling, security, and logistics costs make physical money increasingly less competitive. Finally, rising smartphone and internet penetration projected to exceed 900 million users in India by 2025, including rural areas continues to expand the addressable market for digital payments, cementing UPI's position as the preferred medium over cash.

In sum, if projections hold, UPI may not just outgrow cash in many use cases, but become the default medium for retail, micro-payments, and even merchant transactions supporting India's transition toward a 'less-cash' economy.

THE DARK SIDE OF SWEDEN'S CASHLESS SOCIETY

Sweden has been the face of financial reforms since time immemorial, introducing the first ever paper banknotes for Europe in 1661. Today among the Nordic countries it leads the revolution on the digital payment forefront. With the goal of going completely cashless by the end of 2025 almost fulfilled, this digital divide has also reared its ugly head and come back to haunt the citizens caught up on the wrong side of the spectrum.

Only 8 per cent of the Swedish population uses cash in 2022 and the amount of cash circulation in the economy has halved since 2007. This cashless growth was accelerated in 2012 when a consortium of banks launched Swish, a digital payments app for account-to-account transfer. While both these being commendable milestones, they also highlight the challenges in a digital economy.

Increased dependence on online platforms has augmented the vulnerability of the population to frauds and cyber-attacks. As per the data over 56 per cent of the population has received fraudulent SMS messages. Since Swiss banks play a pervasive role and issue Bank

consumer IDs and Swish accounts. Being cash dependent in Sweden means being unable to participate in active public life. The unbanked, migrant, and poor often are excluded from healthcare services, unemployment benefits, and other public services, forcing them to live in cash bubbles where they have to rely on others even for the most basic monetary transactions.

We can clearly see that the future of the country is cashless, however it is imperative we take the necessary steps in securing the value of paper currency as well as a safeguard for the vulnerable population.

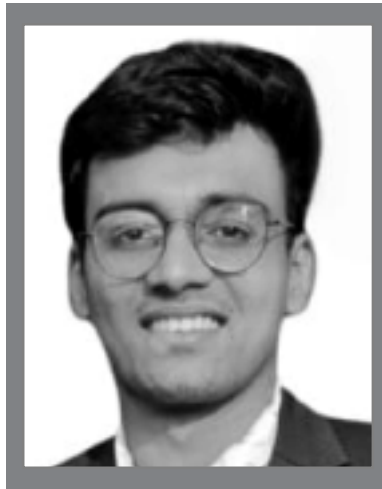
CONCLUSION

India's UPI led digital payment revolution is poised to define the future of money movement, offering unmatched convenience, speed, and interoperability. While cash has seen a resurgence due to cultural habits, merchant frictions, and gaps in financial inclusion, these factors are unlikely to derail UPI's long-term ascendancy. Lessons from global examples, such as Sweden, highlight that a careful balance must be struck between digital innovation and cash, ensuring that vulnerable populations are not excluded and trust in the financial system is maintained. With rising smartphone penetration, supportive policies, and continual fintech innovation, UPI is set to outgrow cash across most retail, micro-payment, and merchant transactions, cementing its position as the backbone of India's 'less-cash' economy. The brief return of cash underscores the importance of trust and familiarity, but the trajectory is clear: UPI will not just coexist with cash it will increasingly dominate, shaping a future where digital payments become the new norm, while maintaining a harmonious balance with physical currency.

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Emerging economies and U.S. rivals are slowly building the foundation for a world where financial power is shared, not concentrated in one currency.

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The Currency Gambit: De-dollarization and the Rise of Financial Multipolarity

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ABSTRACT

The global financial landscape is undergoing a quiet but profound transformation as emerging economies seek to challenge the entrenched dominance of the U.S. dollar. What was once an unquestioned pillar of

international trade and reserves is now being re-evaluated amid shifting geopolitical alliances, evolving digital ecosystems, and the rise of new economic blocs such as BRICS. This trend reflects not merely economic recalibration but a strategic assertion of monetary sovereignty. The question is no longer whether the dollar's supremacy will be challenged, but rather how nations like India will position themselves in shaping the contours of the post-dollar global order.

This article dissects the forces driving the shift, evaluates the economic viability of emerging alternatives, and situates India's macroeconomic strategy within this evolving international monetary architecture where technology, trade policy, and geopolitical intent converge to redefine financial power in the twenty-first century. It assesses the practical viability of a multipolar monetary future and evaluates the profound implications such a transition would hold for global economic stability, international power dynamics, and the future of financial globalization itself.

KEYWORDS: De-dollarization, Multipolar Financial System, Foreign Reserves, U.S. Dollar (USD), BRICS, Diversification, Dominance.

HISTORICAL CONTEXT OF THE UNITED STATES DOLLAR (USD)

The United States Dollar has dominated the global financial system for more than seventy years, shaped by a series of post-war agreements. The turning point came in 1944 with the Bretton Woods Agreement, which tied the dollar to gold at a fixed rate of \$35 per ounce. This arrangement established the dollar as the world's primary reserve currency and gave it an aura of stability that few currencies could match. Over time, this role provided the United States with what French finance minister Valéry Giscard d'Estaing famously termed an 'exorbitant privilege', the ability to sustain large trade deficits without undermining global confidence, since governments and businesses worldwide continued to rely on the dollar for trade and reserves.

That privilege took a new form in August 1971 when President Richard Nixon suspended the dollar's convertibility into gold, ending the Bretton Woods

Agreement and marking the start of the fiat-dollar era. Just a few years later, the petrodollar system gave the currency another lifeline. A deal with Saudi Arabia, later extended to OPEC partners, ensured that oil exports would be priced in dollars. Even today, close to 80 percent of global oil transactions are still settled in USD, keeping worldwide demand for the currency strong.

A big reason for this resilience lies in the global trust placed in U.S. Treasury bonds, which serve as the world's most liquid and reliable safe asset. As of December 2024, foreign investors held about \$8.5 trillion in U.S. federal debt, roughly 30 percent of all publicly held debt. This deep market has long reinforced the dollar's role at the center of global finance. But cracks are beginning to appear. Rising U.S. debt levels and shifting geopolitical currents have raised questions about how long this dominance can last. A 2024 CFA Institute survey found that 63 percent of finance professionals expect the dollar to partially lose its reserve status within the next 5 to 15 years, as more countries push for a multipolar system.

The dollar still enjoys immense advantages, but the momentum toward de-dollarization reflects a growing desire for balance. Emerging economies and U.S. rivals are slowly building the foundation for a world where financial power is shared, not concentrated in one currency.

WHAT AND WHY OF DE-DOLLARIZATION

De-dollarization refers to the global move away from the U.S. dollar in international trade, finance, and reserves. For decades, the Dollar has dominated, but recent trends show signs of gradual diversification. According to the IMF's COFER data, the dollar accounted for nearly 71 per cent of global foreign exchange reserves in 1999, but by 2024, that figure had dropped to 58 per cent, marking its lowest point in 25 years. This shift reflects concerns about overdependence on a single currency and a desire among emerging economies to strengthen their autonomy.

For countries like Russia and China, dollar dominance is not just about economics but also about politics.

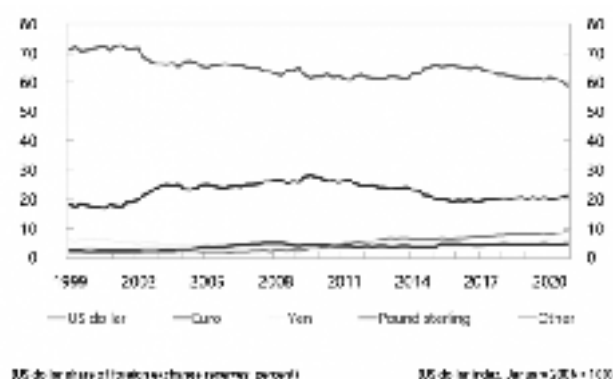


Figure 1: Various currencies' share of Foreign Exchange Reserves in percentage.
(Source: IMF COFER)

Washington's extensive use of the dollar system in its foreign policy, particularly through sanctions, has highlighted the risks of reliance. Following Russia's 2022 invasion of Ukraine, the U.S. and its allies froze \$300 billion of Russian central bank reserves and cut several banks off from the SWIFT network. This was described by Moscow as an 'economic war' and served as a wake-up call for other nations, underscoring how vulnerable they are to U.S. financial tools.

The use of sanctions has expanded dramatically in recent decades. Data from the U.S. Treasury shows that sanctioned individuals, companies, and entities have more than doubled since 2000, targeting countries from Iran to Venezuela and institutions in China and Russia. While effective in exerting pressure, this strategy has also accelerated moves by countries to seek alternatives, whether through trade in local currencies, central bank digital currencies, or increasing the use of gold.

Furthermore, post-sanctions, the ruble-yuan trade volume between Russia and China 'skyrocketed,' demonstrating a clear pivot in trade settlement away from the USD. This strategic realignment signals the gradual, yet persistent, emergence of a truly financially multipolar world.

Another major factor driving de-dollarization is the global impact of the U.S. Federal Reserve policy. Interest rate hikes in 2022–23 of 525 Basis Points, aimed at controlling U.S. inflation, had ripple effects worldwide. According to the Institute of International

Finance (IIF), emerging markets saw nearly \$90 billion in portfolio outflows during that period, while the cost of servicing dollar-denominated debt soared. This highlighted how decisions in Washington can destabilize entire economies thousands of miles away.

While the dollar remains the backbone of global finance, the steady diversification of reserves, trade settlements, and financial systems signals a shift toward financial multipolarity, a world where no single currency holds unchecked dominance.

THE FINANCIAL CHESSBOARD

Global currency shifts are akin to a strategic chess match. The U.S. dollar holds its dominant position on the board; while competing currencies and new payment systems are repositioned in calculated gambits at the margins. This reflects a protracted game aimed at gradual diversification, not an imminent checkmate to the dollar's pre-eminence.

1. Chinese Renminbi (RMB)

China has made the most overt and ambitious moves to position its currency, the Renminbi (RMB), as a viable alternative. The RMB now accounts for only about 2–3 per cent of global reserves, and China's capital controls limit its appeal. A key component of this strategy is the Cross-Border Interbank Payment System (CIPS), China's alternative to the Western-dominated SWIFT system. In 2024, CIPS processed a staggering 175.49 trillion yuan (approximately \$24.47 trillion), a significant increase from previous years, demonstrating the growing adoption of the RMB in international transactions.

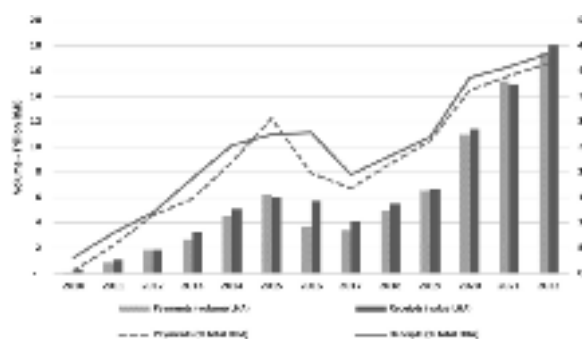


Figure 2: Renminbi international receipts and payments via banks, 2010–2022
(Source: Zucker-Marques-2025)

2. BRICS and Regional Blocs

The BRICS bloc (Brazil, Russia, India, China, and South Africa) has become a vocal proponent of a multipolar currency order. The most discussed proposal is the creation of a common BRICS currency for trade settlement. The BRICS development bank's CFO calls a single BRICS currency only a 'medium- to long-term ambition'. There is no unified fiscal or monetary authority across these diverse economies, so any BRICS coin is at best a far-off idea.

3. Central Bank Digital Currencies (CBDCs)

The development of CBDCs is set to accelerate the transition to a multipolar currency system. CBDCs can enable faster, cheaper, and more efficient cross-border payments, reducing the need for intermediaries and, by extension, the reliance on the dollar. In principle, CBDCs could fundamentally rewire cross-border payments by enabling central banks to settle transactions directly with one another, bypassing the current correspondent banking system that is heavily reliant on U.S. financial intermediaries and the dollar.

4. IMF's Special Drawing Rights (SDR)

A final, albeit more theoretical alternative is the International Monetary Fund's Special Drawing Rights (SDR). As a composite reserve asset based on a basket of major currencies (U.S. dollar, euro, Chinese RMB, Japanese yen, and British pound), the SDR offers the appeal of institutional neutrality, standing above the politics of any single nation. Transforming the SDR into a genuine dollar alternative would require a monumental overhaul of the IMF's mandate and governance structure. Critically, such reforms would need to overcome the de facto veto power held by the United States, its largest shareholder.

5. Alternative Financial Infrastructures

Countries under Western sanctions have built or expanded their own payment networks. Russia's SPFS (System for Transfer of Financial Messages) is a domestic SWIFT alternative, created after banks were cut off. In Asia, India's Unified Payments Interface (UPI) has become a global template. Domestically UPI handles

85 per cent of India's digital payments, and now PayPal and others are integrating it into cross-border payment platforms.

Each of the above alternatives fits into a patchwork strategy. No one piece yet tips the balance, but collectively they create choices. In the current era, each 'move' on this financial chessboard is calculated to protect national interests without provoking confrontation, making de-dollarization a game of patience and balance.

INDIA'S STANDPOINT

India has remained a bright spot among major leading economies, having a GDP growth of 6.5 per cent in FY2024–25 despite global headwinds. Its currency has held up relatively well: in Apr'24 - Jan'25 the rupee weakened only 2.9 per cent, outperforming peers like the Canadian dollar and South Korean won (which fell 5 - 8 per cent). This resilience reflects India's strong fundamentals which include positive foreign inflows (over \$30 billion in 2024 on bond index inclusion), record forex reserves (\$705 billion by Sept 2024), and a modest current-account deficit (Q1 FY26 CAD only 0.2 per cent of GDP).

EXHIBIT: Services Trade Account - Net Flows (\$ billion)

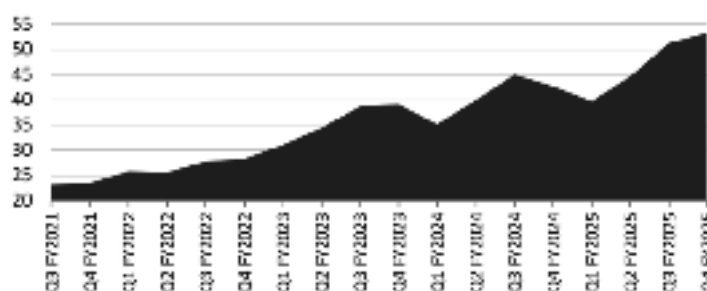


Figure 3: Increase in India's inflows from invisibles
(Source: RBI, CEIC, ICRA Research)

India has quietly taken steps to internationalize the rupee, but without an ideological 'de-dollarize' stance. In 2025 the RBI relaxed rules on special Rupee Vostro Accounts, allowing banks to open them without prior approval. Until late 2024 the RBI aggressively sold dollars from reserves to defend the currency, but since

the new governor took over it has allowed more market-driven movement. Regulations are being tweaked (FEMA/LRS/ECB rules) to enable more trade in rupees and deeper capital flows. On the fiscal side, the government's recent corporate tax cuts and planned individual tax relief have given the rupee a lift with investors anticipating stronger growth and FPI flows. In practice, the rupee still has low international usage. The 2023 settlement of a crude oil transaction between India and the UAE using the Indian Rupee represents a tangible challenge to the petrodollar's hegemony, showcasing a practical application of de-dollarization policy between two major emerging economies.

India's digital payments platform is on the other hand scaling rapidly. The Unified Payments Interface (UPI) dominates domestic digital payments (85 per cent of volume) and is being exported abroad. In 2025 PayPal announced a cross-border platform linking UPI with global partners (Brazil's Mercado Pago, Tencent, etc.). Looking ahead, the RBI aims to take UPI global: its 'Payments Vision 2025' targets UPI/RuPay acceptance in about 20 countries by FY2029. These moves expand India's payment rails, but they still ultimately clear INR. Thus, UPI helps bypass legacy banking for retail remittances, but doesn't on its own dethrone the dollar as the underlying settlement currency.



Figure 4: Increase in volume of UPI transactions
(Source: NPCI)

CONCLUSION

In the coming years we are likely to see more diversification, not a clean break: central banks will modestly add other currencies and gold, regional blocs

will expand local-currency trade agreements, and digital payment rails will proliferate. However, the U.S. dollar will likely stay at the core of global finance for some time. For India and other BRICS nations, the goal is often dual – to safeguard against dollar shocks while not provoking crippling retaliation. By examining angles like motivations, mechanisms, and alternatives, one can turn the ambiguity of the de-dollarization debate into a clearer understanding of where the cracks in dollar dominance lie, and what might eventually fill them.

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The Rupee in The Rubble

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ABSTRACT

India's relationship with waste is often perceived as an insurmountable crisis—a narrative of overflowing landfills and choked waterways. This article challenges that perception, arguing that it is a profound failure of 'percipience.' Where many see only a liability, a new generation of social entrepreneurs sees a multi-billion-dollar economic frontier. By applying deep insight to a systemic problem, these innovators are building a formal, profitable, and sustainable circular economy from the ground up. Through an analysis of India's waste landscape and case studies of pioneering startups like Phool.co and Banyan Nation, this article demonstrates how entrepreneurial percipience is unlocking immense value hidden in plain sight. It reveals that India's refuse is not its ruin, but potentially its most underestimated resource, capable of fueling a green-collar gold rush that aligns economic growth with environmental restoration, turning the nation's greatest challenge into a formidable asset.

KEYWORDS: Waste, Green-collar, Economy, Phool.co, Recycle, Sustainable.

INTRODUCTION

The Mountain of Misperception

At the edge of every Indian metropolis lies a man-made mountain, a monument to consumption that grows by the day. The Ghazipur landfill in East Delhi, a sprawling testament to urban excess, receives thousands of metric tons of waste daily. It is a potent symbol of a national challenge, representing a perception of waste as an endpoint—an unsightly, unmanageable, and valueless consequence of modern life. India, one of the world's largest waste generators, produces over 65 million metric tons of Municipal Solid Waste (MSW) annually, a figure expected to swell to 165 million tons by 2030.

This conventional view, however, represents a profound failure of 'percipience'—the art of seeing beyond the surface to grasp a deeper truth. It is the inability to see the forest for the trees, or in this case, the rupee in the



Recognizing the scale of the challenge as a potential competitive advantage may well prove to be one of the nation's defining transformations in the coming decades.



rubble. While the data paints a grim picture of the problem, it simultaneously obscures the scale of the opportunity. Hidden within these mountains of refuse is the raw material for a new economy: an Indian circular economy poised to be worth billions. A new wave of social entrepreneurs is leading this shift, armed not with heavy machinery, but with the incisive clarity to perceive a resource where others see only ruin. They are the vanguards of a movement that is not just cleaning up India but building its next great industry.

The problem of perception is not only cultural but also institutional. Waste management in India is still largely seen as a municipal responsibility rather than a space for innovation. This entrenched mindset has limited experimentation and slowed systemic reform. By reframing waste as an opportunity rather than a liability, India has the chance to leapfrog from reactive management to proactive value creation, much like it did in the digital payments sector with UPI. Recognizing the scale of the challenge as a potential competitive advantage may well prove to be one of the nation's defining transformations in the coming decades.

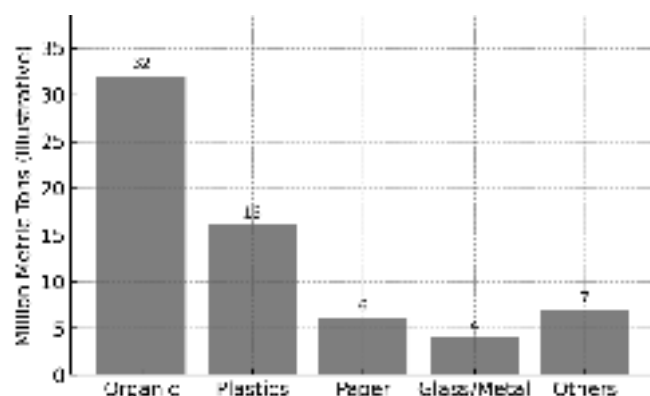


Figure 1: India's Annual Waste Mountain (Composition in Million Metric Tons) — Illustrative.
(Source: Primary Data)

Case Study in Percipience: The Alchemy of Faith

Nowhere is this percipience more evident than in the work of Phool.co. Every day, an estimated eight million metric tons of flower waste are discarded from temples and mosques across India, eventually finding their way into the

nation's rivers. To the casual observer, this is an unavoidable byproduct of devotion. But to founder Ankit Agarwal, it was a glaring market inefficiency. He perceived that these sacred offerings, rich in cellulose and essential oils, were not waste but a valuable organic resource.

Phool.co's business model is a masterclass in circular design. The company employs marginalized women to collect floral waste from temples along the Ganges. This waste is then handcrafted into high-value consumer goods: organic incense, compost, and, most remarkably, a vegan alternative to leather called 'Fleather'. This is not merely recycling; it is alchemy. The company has transformed a potent source of water pollution into a revenue-generating, job-creating engine for social good. To date, Phool.co has upcycled over 11,000 metric tons of floral waste and provided livelihoods to hundreds of women, demonstrating that ecological restoration and economic empowerment can be two sides of the same coin.

The innovation here is not only technological but also social. By involving women from marginalized backgrounds, Phool.co is redefining who gets to participate in the green economy. It proves that sustainability initiatives can be deeply inclusive, creating dignity of labor in spaces often dismissed as menial. The symbolism of transforming discarded temple offerings into something as futuristic as 'Fleather' underscores a uniquely Indian narrative of tradition meeting modernity in the pursuit of sustainable enterprise.

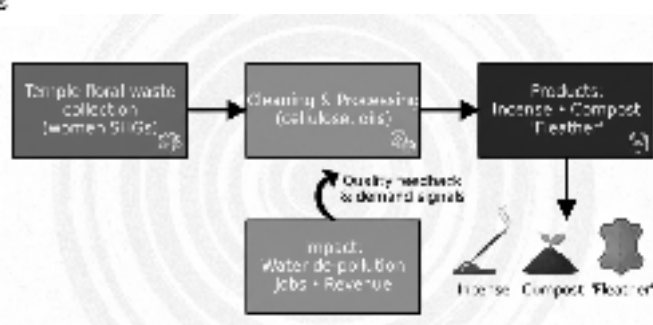


Figure 2: The Phool.co Business Model - A Circular Flow (Illustrative).
(Source: Primary Data)

Taming the Plastic Tide

A similar percipience is at work in the far more complex domain of plastic waste. India generates nearly 16 million metric tons of plastic waste annually, yet the formal recycling capacity is woefully inadequate. The majority is either landfilled or managed by an informal sector of waste-pickers operating in hazardous conditions. Banyan Nation, a Hyderabad-based startup, perceived that the core problem was not the plastic itself, but the broken, inefficient, and untraceable supply chain for recycled materials.

Their solution was to build a formal, technology-driven ecosystem. Banyan Nation uses a proprietary cloud platform to connect thousands of informal waste-pickers, aggregating and processing their collected plastic. They then apply a rigorous cleaning and sorting process to produce near-virgin quality recycled granules that major brands like L'Oréal and Unilever are now using in their packaging. By formalizing an informal sector and guaranteeing quality, they have created a market where none existed. This is the essence of percipience: identifying and solving the most critical bottleneck in a system to unlock its latent value.

What makes Banyan Nation's approach remarkable is its ability to work with, rather than against, the informal economy. Instead of displacing waste-pickers, it integrates them, providing training, stable incomes, and safer working conditions. In doing so, the company demonstrates that technology-enabled inclusion can turn fragmented supply chains into scalable engines of sustainability. The model highlights how private innovation, when designed thoughtfully, can complement public waste management efforts and catalyze systemic reform.

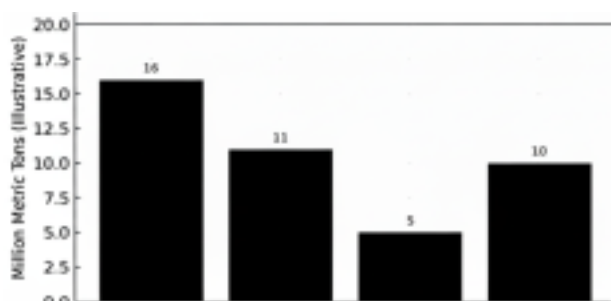


Figure 3: Plastic Waste Management in India (Illustrative).
(Source: Primary Data)

The Economics of Insight: A Green-Collar Gold Rush

The efforts of startups like Phool.co and Banyan Nation are not isolated acts of charity; they are the bedrock of a burgeoning industry. The circular economy in India, which prioritizes waste reduction and resource regeneration, is projected to unlock an economic opportunity worth up to \$624 billion by 2050, according to estimates by the Ellen MacArthur Foundation. This is not a niche market; it is a fundamental re-imagining of industrial production and consumption.

This economic shift is already attracting capital. Venture capital investment in India's cleantech and sustainability sector has seen a steady rise, signaling that investors are beginning to perceive the immense returns hidden in these innovative models. More importantly, this transition is creating a new category of employment: the green-collar job. From waste-pickers integrated into formal supply chains to chemical

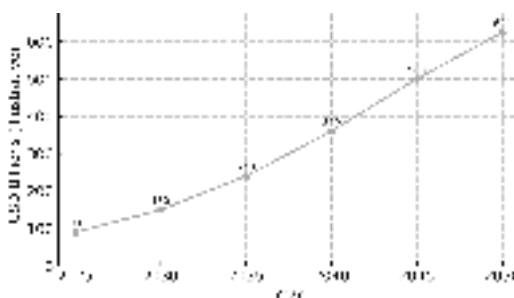


Figure 4: Projected Growth of India's Circular Economy (Illustrative path to ~\$624B by 2050).
(Source: Primary Data)

engineers developing new biomaterials, the circular economy is building a workforce with the skills to power a more sustainable future.

If nurtured correctly, India could become a global hub for circular economy innovation, exporting not just recycled materials but intellectual frameworks and business models. In the same way that Indian IT services reshaped the global digital economy, Indian circular enterprises could redefine how the world thinks about sustainability-driven growth.

CONCLUSION: From Insight to Infrastructure

The journey from a linear 'take-make-dispose' economy to a circular one is not without its challenges. Scaling

these innovative models requires navigating complex logistical hurdles, advocating for supportive government policies, and fundamentally shifting consumer behavior. The success of individual entrepreneurs, however brilliant, cannot solve the problem alone. Their percipience must be translated into national infrastructure.

The stories of Phool.co and Banyan Nation are more than just inspiring tales of startup success. They are a proof of concept for a new Indian dream—one where economic progress is not at odds with environmental stewardship. They prove that the most profound business insights often come from looking at old problems with new eyes. The rupee has always been in the rubble; it simply took the clarity of percipience to see it. The critical question now is whether India as a nation can cultivate this same insight, and build a system that recognizes its waste not as a burden to be managed, but as an opportunity to be seized.

Ultimately, the challenge is one of mindset as much as infrastructure. If India embraces this shift wholeheartedly, it has the chance not only to solve its own waste crisis but to lead the world in demonstrating how sustainability can be profitable, inclusive, and transformative at scale.

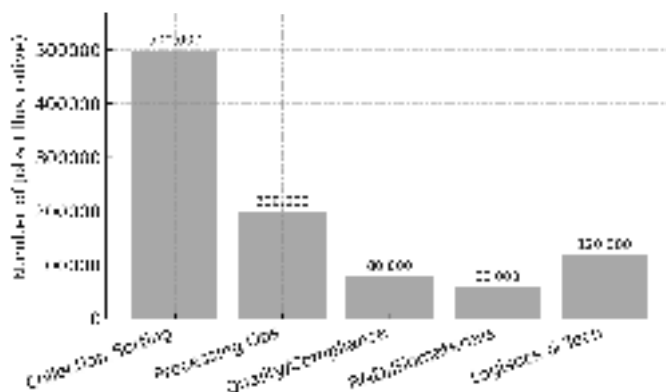
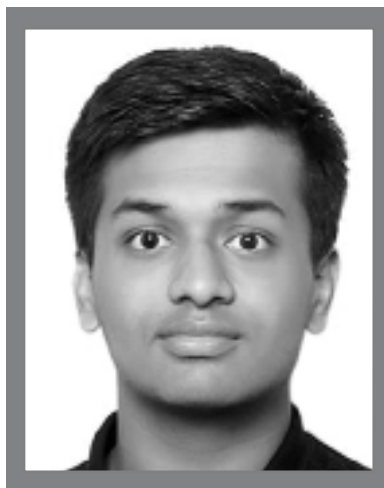


Figure 5: Green-Collar Job Creation Potential (Illustrative).
(Source: Primary Data)

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India must turn external credibility into internal efficiency, ensuring that ratings result in tangible benefits—lower borrowing costs, steady growth, and inclusive development.

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Credit Assessment and National Prospects: Ratings, Reality & India's Destiny

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ABSTRACT

In 2025, India's sovereign credit profile was upgraded by S&P Global to BBB1 marking its first such improvement in nearly two decades. The move reflects confidence in India's fiscal and growth management, and offers a strong vote of confidence in the country's policies. This article evaluates India's strategic position in the global markets through the prism of this credit-rating upgrade. The story of ratings is more than alphabets and symbols; it

embodies perception, credibility, and influence. This article explores the mechanics of sovereign ratings, the business models that shape them, and the reasons behind divergence among rating agencies.

It also examines India's position in comparison with peer economies, the role of financial multipliers, and the day-to-day effects on citizens. The article also shows how ratings can influence borrowing costs for policymakers, investors, and institutions. Finally, the focus is not just on global recognition but on India's path towards Viksit Bharat 2047.

KEYWORDS: Sovereign Rating, S&P, GDP Growth, Financial Multipliers, Fiscal Prudence, Viksit Bharat 2047.

Credit Ratings: Currency of Trust

Ratings play an essential role in the global financial system as they define the credit structure of corporations, banks and even countries by influencing the principal and the rate at which they would be able to borrow, in turn affecting the whole credit and the

investment landscape of the nation. They provide a standardized and an independent assessment of risk to investors, instilling more confidence and helping them allocate funds more efficiently.

Ratings also carry regulatory weight as many law and capital adequacy frameworks directly refer to them, making them important for financial policy. The difference between investment grade and high - yield bonds are based on these ratings, (the higher the rating, the lower the yield) and a minor shortcoming in the rating would impair the working of the organization or the country.

A biased rating would impair the growth and future prospects of an entity, and hence these ratings are given after thorough research by credit rating agencies.

Credit Rating Agencies (CRAs) - Arbiters That Move Nations

The Big Three - S&P Global Ratings, Moody's Investors Service, and Fitch Ratings, dominate global credit ratings with a 95 per cent market share² across the world and provide publicly visible credit opinions which are increasingly used by investors, regulators and market participants. They largely have an issuer - pay model, where the issuer commissions the rating, along with subscription/analysis businesses that have grown in importance recently. There are a few local players too, but they aren't perceived as a credible rating source on a worldwide basis, hence their importance is very minimal globally as they collectively have less than 5 per cent market share across the world.

S&P Global Ratings parent company is S&P, which has a highly diversified business model. The company's rating arm generates significant income, but a major portion of its revenue comes from other divisions such as market indices (e.g., the S&P 500), Platts (commodity information), and financial market intelligence. The benefit accrued to S&P due to this diversification is that it reduces its dependence on pure credit ratings and gives the company additional influence to move the market through its indices and benchmarks. With around 45 per cent global market share³, it is the largest and the most dominant player among the three.

Interpretation	Fitch and S&P	Moody's
Highest quality	AAA	Aaa
High quality	AA+	Aa1
	AA	Aa2
	AA-	Aa3
Strong payment capacity	A+	A1
	A	A2
	A-	A3
Adequate payment capacity	BBB+	Baa1
	BBB	Baa2
	BBB-	Baa3
Likely to fulfill obligations, on going uncertainty	BBB+	Ba1
	BB	Ba2
	BB-	Ba3
High-risk obligations	B+	B1
	B	B2
	B-	B3
Vulnerable to default	CCC+	Caa1
	CCC	Caa2
	CCC-	Caa3
Near or in bankruptcy or default	CC	Ca
	C	C
	D	D

Source: IMF (2010)

Figure 1: Credit Rating Comparison
(Source: IMF (2010))

Moody's Investors Service, part of Moody's Corporation, relies heavily on the issuer - pays model for credit ratings, but its business stability is ensured due to Moody's Analytics. This division provides risk management software, data, and technology-driven solutions, which are increasingly important for banks, investors, and corporations. Though its rating services control a major part of revenue, it is pushing towards becoming a risk intelligence and analytics powerhouse, making it less vulnerable to volatility in the ratings market. With around 30-33 per cent share of the global market, it is the second - largest credit rating agency and has a strong reputation for corporate credit ratings.

Fitch Ratings, which is owned by Hearst Corporation, is the smallest of the three credit rating agencies having around 10-12 per cent market share. Unlike the other two rating agencies, it has less diversification outside credit ratings. It maintains some subscriber-based revenue streams, and is often seen as more active, having strengths in emerging markets and areas of structured finance. Moreover, it plays an important role in offering competition and alternative perspectives in the highly concentrated ratings industry despite lacking the scale and influence of its larger peers.

Agency	Categories & Weightings	Key Factors
S&P Global Ratings	Economic (20 per cent) External (20 per cent) Fiscal (30 per cent) Monetary (10 per cent) Qualitative (20 per cent)	- GDP per capita, growth trends - Current account balance, external debt, FX reserves - Fiscal balance, debt-to-GDP, debt profile - Inflation track record, central bank credibility - Political stability, institutional effectiveness, policy credibility
MOODY'S RATINGS	Economic Strength (25 per cent) Institutional Strength (25 per cent) Fiscal Strength (25 per cent) Susceptibility to Event Risk (25 per cent)	- GDP size, growth volatility - Governance quality, rule of law, policy credibility - Debt burden, debt affordability - Political shocks, banking crises, external shocks
FitchRatings	Structural Features (20 per cent) Macroeconomic Performance (20 per cent) Public Finances (30 per cent) External Finances (20 per cent) Qualitative Overlay (~10 per cent)	- GDP per capita, income level, governance indicators - Growth performance, inflation trends - Fiscal deficit, government debt - Current account, FX reserves, external debt - Policy credibility, institutional strength, vulnerabilities

Table 1: Sovereign Credit Rating Models

(Source: Sovereign Rating Methodology, Scorecard - Based Sovereign Rating Model, Sovereign Rating Criteria.)

India's Sovereign Rating: Momentum and Caution

India recently regained the credit rating which had been given to the country by S&P Global in 1990, that is BBB6, from its previous rating of BBB-, which is the first S&P upgrade for India in 18 years. Despite this upgrade, the ratings given by the other two credit rating agencies, namely Moody's and Fitch are the same at Baa3 and BBB- respectively. This upgrade from S&P Global, is a pleasant situation for the nation but it is far from reaching its goal. Despite being the 4th largest economy of the world in terms of GDP, it is far behind many small nations in terms of the rating and it is essential for the

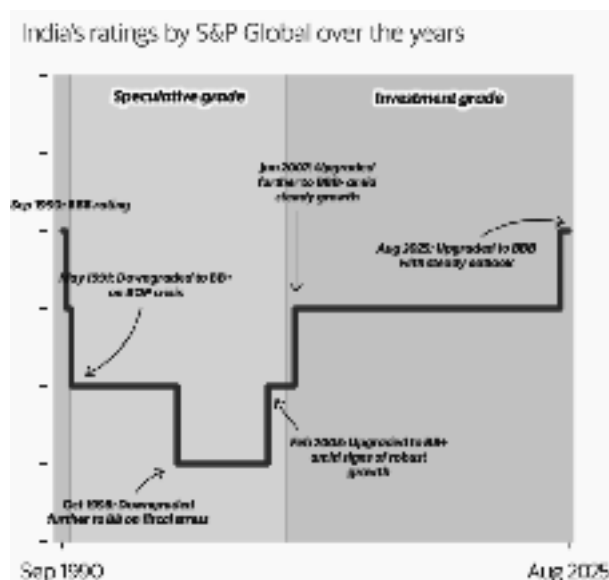


Figure 2: India's credit rating down the years
(Source: livemint.com7)

rating to be upgraded further so that the servicing costs of loans are reduced which in turn reduces the fiscal deficit and the government has more funds to allocate to other sectors which increases employment and in turn increases GDP.

S&P cited that further upgrade in India's rating is difficult unless it delivers sustained fiscal consolidation and reduces its fiscal deficits for the net change in government debt to fall below 6 per cent of GDP on a structural basis, then only the upgrades would be

possible, but these are targets that are challenging given the high spending needs of the developing nation.

Moody's and Fitch held their ground, outweighing the continuing fiscal and structural risks against the recent growth momentum of India. Both the agencies highlighted that high public debt, fiscal consolidation, and exposure to external shocks continue to limit India's credit profile.

India and the World: Comparative Insights

India is the 4th largest economy in the world with a nominal GDP of 330.688 lakh crore, but still has the least credit rating among the top 10 economic nations of the world, despite its recent credit rating upgrade. Due to this, the government of India even did an economic survey and published a research report in the budget of 2021-22 citing the ratings to be unfair and not completely representative of its economy. There are certain factors where the nation has outperformed the other nations and there are also some shortcomings because of which the Credit Rating Agencies are hesitant to upgrade India's credit rating. The areas where the Indian government is performing better than other countries and the areas where it is falling short are mentioned below:

Drivers of Upgrade

Strong and Sustained Economic Growth

All the three Credit Rating Agencies had a positive outlook on India's growth performance. S&P stated that real GDP growth averaged 8.8 per cent⁹ during FY22 -

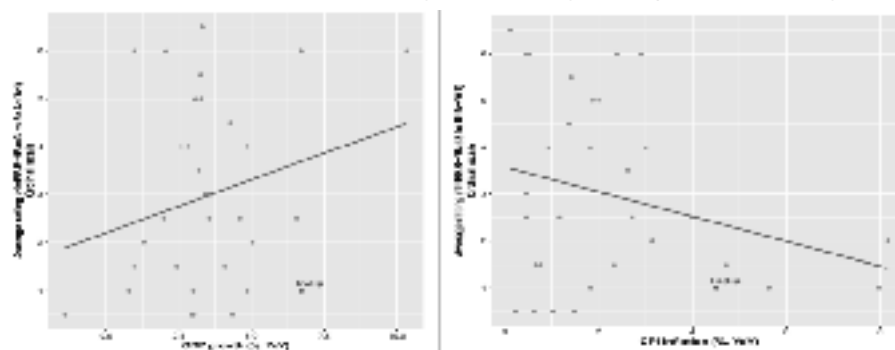


Figure 3: Correlation between GDP growth, CPI Inflation and Ratings (2021-22)
(Source - IMF and Bloomberg10)

24, the highest in Asia - Pacific, and is projected around 6.8 per cent annually over the next three years. Fitch highlighted that India's growth outlook remains well above BBB peer medians. Moody acknowledged the nation's sustained high growth momentum and has revised growth forecasts upwards in recent years. Despite this the rating of India compared with other countries with the same GDP growth is very low.

Improved Quality of Government Spending

S&P applauded India's shift towards productive expenditure, Capital spending is expected to rise to 3.1 per cent¹¹ of the country's GDP by FY26, with combined Centre and state infrastructure spending estimated at about 5.5 per cent of GDP. This approach towards spending supports medium-term growth and fiscal quality.

Fiscal Consolidation and Better Debt Dynamics

All three agencies had a positive viewpoint for the same toward India. S&P projects the general government deficit to decline from 7.3 per cent of GDP in FY26 to 6.6 per cent by FY29, and debt-to-GDP to fall from around 83 per cent in FY25 to 78 per cent by FY29. Moody's cited that India benefits from stable domestic financing of its fiscal deficit, which reduces external susceptibility.

Monetary and Macroeconomic Stability

India's credible monetary policy framework has been one of its key strengths. S&P highlighted the nation's effective inflation targeting which is within the RBI's 2-6 per cent band, resulting in high expectations and macro stability. Fitch noted India's ability to maintain macroeconomic stability despite global challenges.

External Stability

India's external account stability has been viewed positively by all the three agencies. S&P upgraded India's 'transfer and convertibility' rating from BBB+ to A-, citing strong FX reserves and improved confidence in capital flows. Moody's noted a comfortable external liquidity surplus strengthening the nation's economy. Fitch stated the stability of India's external position and judged the tariff impacts to be moderate on the nation's economy

Impeding factors

High Debt and Fiscal Deficits

Despite improvements in maintaining debt and fiscal deficits, India's debt levels remain high relative to its peers. Fitch flagged the increased debt burden (approx 80–81 per cent of GDP) and large deficits as major constraints. Moody's expressed concerns over high interest payments of the nation and the slow pace of debt reduction.

Weak Revenue Mobilisation

Moody's highlighted challenges in expanding tax collection and noted that recent policy moves (such as tax threshold increases) could lessen revenues. Fitch pointed out that faster fiscal consolidation depends heavily on sustained high nominal growth.

Structural and Governance Gaps

Both Moody's and Fitch underscored the need for deeper structural reforms in taxation, productivity, governance, and ease of doing business. These institutional factors are essential for future rating upgrades of the nation.

External and Trade Vulnerabilities

All three agencies noted India's exposure to global shocks, capital flow volatility, and trade disruptions. Fitch specifically mentioned the U.S. tariff actions as a moderate downside risk to growth and external performance of India.

The Biased Framework

Despite these limitations, there are biases which are exhibited by the three rating agencies. Only 5 of the rating measures used by Moody's are quantitative and the rest of the measures are qualitative and there are no background details about the people who are entrusted with this task of measuring and assigning ratings. Fitch has provided a table assigning weights, but states that the weights are only for illustrative purposes and they are not the actual weights used.

Countries having lower GDP growth, higher debt to GDP ratios, higher inflation levels have higher credit ratings than India. For example, some countries like Phillipines, Kazakhstan, Brasil, have higher credit

ratings than India despite having lower GDP growth and the justifications cited by the rating agencies for this evaluation are the qualitative measures.

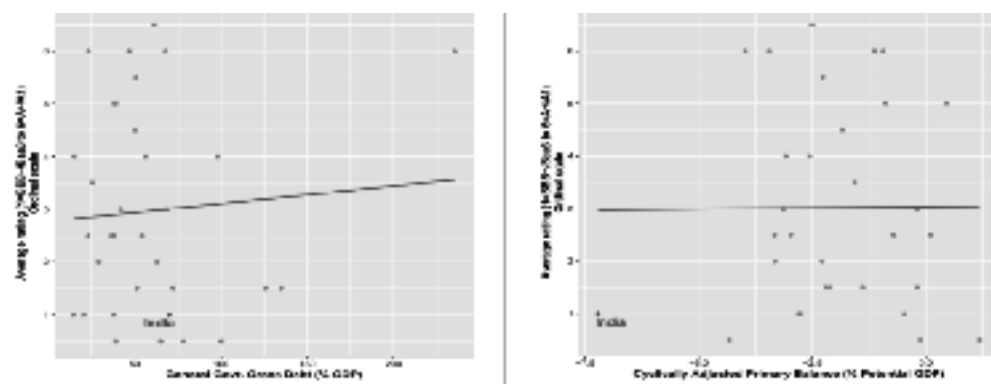


Figure 4: Correlation between General Govt. Gross Debt, Cyclically Adjusted Primary Balance and Ratings (2021-22)
(Source: IMF and Bloomberg10)

The Multiplier Effect: Effect of credit ratings on the country and its people

India, the world's most populous nation and the seventh largest by area, operates with a substantial financial outlay each year to fund developmental, infrastructural, and welfare initiatives. This spending is financed through government revenues such as taxes and non-tax receipts and by borrowing from domestic and international markets to bridge fiscal gaps.

The cost of these borrowings is heavily influenced by the sovereign credit ratings assigned by global agencies, which reflect the country's creditworthiness. A lower rating signals higher risk, leading lenders to charge higher interest rates due to higher default spreads. This raises the borrowing cost, widens the fiscal deficit, and compels the government to adopt fiscal tightening measures such as increasing taxes and reducing expenditure.

Interest rate = Risk free interest rate + Default Spread

The interest rate in the case of sovereign countries is the interest rate of 10-year government sponsored treasury bonds and if we subtract the default spread from it, which is inversely proportional to ratings, we get the risk-free interest rate.

While such steps aim to restore fiscal balance, they often result in reduced funding for infrastructure and development programs. Lower public investment can slow economic activity, reduce disposable incomes, and increase unemployment, ultimately weighing on long-term growth prospects.

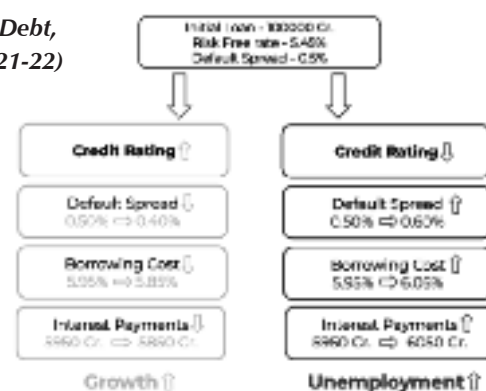


Figure 5: An illustrative example
(Source: Primary Data)

The Road Ahead

The vision of Viksit Bharat 2047 is not just about top-line GDP figures; it's about building an economy worth \$30 trillion¹¹ that is both globally competitive and resilient at home. Achieving this requires world-class infrastructure, strong financial institutions, and fair opportunities for all sections of society. The recent sovereign rating upgrade shows that India's macroeconomic path is heading in the right direction, but challenges remain that need to be addressed to turn external recognition into domestic strength.

Actionable Steps

Improvement of Credit Misallocation in Public Sector Undertakings (PSBs) – Public sector banks must be reformed to improve efficiency. Merger of 27 PSBs into

1212 is among such significant steps so that capital is deployed to productive businesses, finances major infrastructure projects, and contributes to industrial credit. Long-term aim is to have at least two13Public Sector Undertakings (PSBs) among top 20 banks of the world by 2047.

Keep Fiscal Prudence and Policy Consistency – Sovereign ratings are a function of credibility. India should eschew short-term borrowing patterns, keep fiscal deficits in check, keep important parameters such as the Debt-to-GDP ratio in control, and show consistency in reform efforts such as rationalization of GST14 to disinvestment. Consistent policy helps to build investor confidence and sustains a gradual ratings improvement.

Prioritize innovation, R&D & tech adoption – Long-term GDP growth is powered by innovation that creates employment in the formal economy and makes an economy competitive. Programs like R&D tax incentives15, mission funding, growth capital funding, tech clusters, office build-out of R&D by private industry, and STEM degrees make a skilled labor pool. Lead agencies are the Ministry of Education, state agencies, and industry.

Strengthen FinTech Governance & Consumer Protection – Safe and transparent digital credit is indispensable to financial inclusion, entrepreneurship, and entering households into the formal financial system. Good governance lowers risk such as lending bubbles that rating agencies keep a close eye on. Main steps are standardized disclosures of loans, grievance redressals, direct disbursement, and a common credit registry, where RBI, Finance Ministry, and industry participants lead from the front.

Future Outlook

The path ahead is not just about global recognition; it's about tackling domestic challenges. India must turn external credibility into internal efficiency, ensuring that

ratings result in tangible benefits—lower borrowing costs, steady growth, and inclusive development. Only then can the dream of Viksit Bharat 2047 become a reality.

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Fashion Fallout: How Micro Trends Create Macro Impacts

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The fashion industry is cruel, promoting the culture of excess, filling our landfills, and making our waterways toxic.



ABSTRACT

Fashion, once seen as an expression of oneself, has now been downgraded to us getting trapped by trends and filling our wardrobes with so many one-time use clothes in the fear of missing out. Society today conditions us to think that having more is the norm. That materialism is needed to fit in. The fashion industry is cruel, promoting the culture of excess, filling our landfills, and making our waterways toxic. If all this wasn't enough, it is also responsible for about 10 per cent of global carbon emissions. At the same time, garment workers, including children, are made to work on extremely low wages in inhumane conditions that we cannot even think of. This article explores the nightmares of fast fashion, the disguise of greenwashing, and the slow incorporation of sustainable fashion.

KEYWORDS: Fast Fashion, Carbon Footprint, Microplastics, Greenwashing, Labour Exploitation, Overconsumption.

INTRODUCTION

Change can begin in our closets.

Mass consumption is on the rise, and the fashion industry is no exception.

Fast fashion is more than a catchy phrase that frames overconsumption as a privilege, when, in truth, it is an illusion. The reality behind the dream of endless choice is a nightmare for the planet that we are not ready to face.

Over the last two decades, fashion cycles have accelerated. Brands such as Zara and Shein churn out trends in weeks, encouraging frequent purchases and quick disposal.

Fashion, which was once rooted in craftsmanship and self-expression, has now been replaced by imitation and little individuality.

ENVIRONMENTAL FALLOUT

The world's clothing graveyard - Beneath the surface of fashion lies a disturbing truth: deserts are turning into dumping grounds. Chile's Atacama Desert has more than 39,000 tonnes of illegally dumped unwanted clothes, a pile so big it can be seen from space. The Atacama is just one visible scar of the global crisis. Worldwide, over 120 million tonnes of textiles are

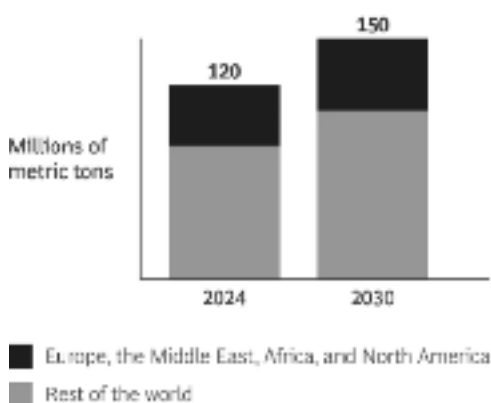
Not only that, water that remains is often toxic, turning the rivers in Bangladesh and India into unnatural shades of red and blue from the discarded dyes, posing a threat to our ecosystems and human health.

Carbon footprint and micro-fibre spread - Every trend we chase leaves a carbon trail, resulting in melting glaciers and rising seas. Responsible for nearly 10 per cent of global carbon emissions, the fashion industry

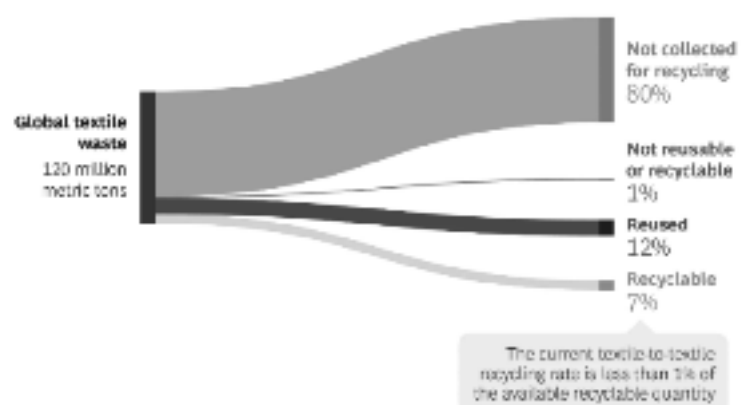
EXHIBIT 1

Textile Waste Is Growing Rapidly, but Only a Fraction of It Is Reused or Recycled

The volume of global textile waste is increasing...



...but in 2024, only 20% of that volume was collected, of which far less than 1% was made into new textiles



Sources: European Environmental Agency; US Environmental Protection Agency; BCG analysis.

Figure 1: Growth in the rate of textile waste versus recycling
(Source: Fashion Industry Consulting and Strategy | BCG)

discarded annually, a figure expected to rise to 150 million in the years to come. These numbers are not just statistics; they are shirts, shoes, and jeans that could have been reused but instead lie buried in deserts and mountains. Meanwhile, many brands resort to incinerating unsold stocks, releasing toxins into the air. Together, they become silent monuments to our culture of excess.

Fashion's thirst and toxic rivers - The fashion industry has a far-reaching and significant impact on wastewater. By the time a cotton shirt is manufactured, it has already consumed 2700 litres of water, enough to keep a person hydrated for 3 years.

affects the climate through energy-intensive production and deforestation. Every synthetic clothing that we wash leaves microfibres, which slip into waterways and return to us in the form of food we intake or the water we consume.

SOCIAL FALLOUT

The human cost of cheap fashion – exploitation at the start of the chain

We wear the trends; they carry the cost.

Unfortunately, the cost of fashion is not borne only by

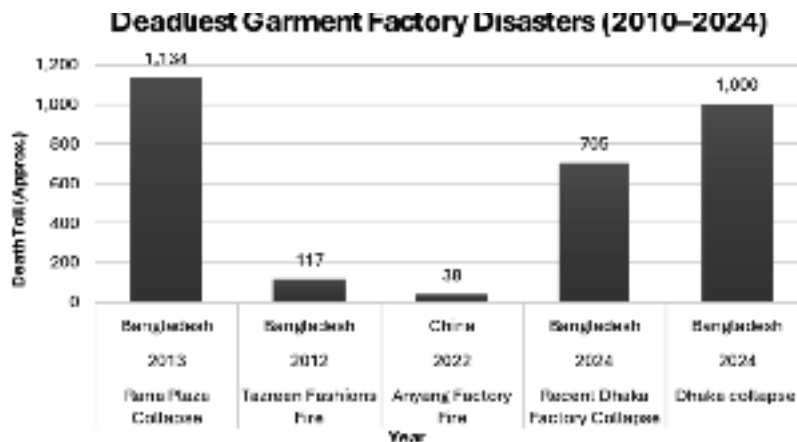


Figure 2: Deadliest Garment Factory Disasters (2010–2024)
(Source: Own Illustration)

the present-day workers stitching our clothes. Children often step into the same factories as parents, out of necessity, not choice. Women and children, forming the backbone of the fashion industry, continue to work under exploitative conditions, working up to 16 hours a day, 7 days a week, of which less than 2 per cent of them make a living wage. The Rana Plaza collapse, ending the lives of nearly 1100 garment workers, remains a gruesome reminder of the human risks behind fast fashion.

The factory workers of Asia have been described by the European Parliament as ‘Slave labour’, proving that slavery continues to be a part of our society, hidden under the disguise of exploitative labour practices. Unless we decide to open our eyes to see the world as it is, and take accountability for it, the situation will only

worsen.

The invisible communities- inequality at the end of the chain

The Home-based, informal workers at the far end of supply chains often face the bleakest conditions while receiving the smallest share of value. One of the most exploitative aspects is that these workers operate on a piece-rate basis, earning only for what they complete, without any minimum wage, job security, or safety net.

The women garment workers in Bangladesh, for instance, earn nearly 20 per cent less than men, despite having similar expertise and skills.

When COVID-19 hit, millions of them were left unpaid as brands cancelled orders overnight without any notice or severance. Yet these communities go out of customers’ sight, while brands market ‘choice’ and ‘affordability.’ Inequality is woven into every seam: consumers in wealthier nations enjoy low prices and fast delivery, while the people at the far end of the chain endure the human cost. Ultimately, the system keeps it that way—complex, opaque, and hard to trace.

CONSUMER TRENDS AND CULTURE

Fast fashion prioritizes quantity over quality, reducing durability, causing us to discard clothes just after a handful of uses.

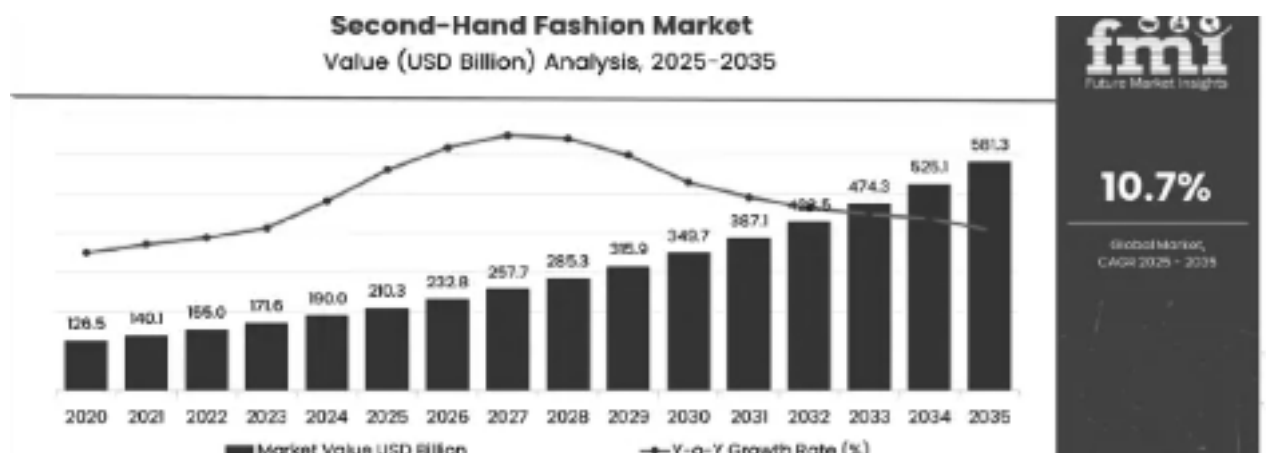


Figure 3: Second-Hand Fashion Market Size and Share Forecast Outlook (2025 to 2035)
(Source: <https://www.futuremarketinsights.com/reports/apparel-market>)

At the same time, second-hand and resale fashion have taken a drastic shift from being niche ideas to becoming a boom.

‘The Second-Hand Fashion Market is estimated to be valued at \$210.3 billion in 2025 and is projected to reach \$581.3 billion by 2035, registering a compound annual growth rate (CAGR) of 10.7 per cent over the forecast period.’

Key Takeaways:

Metric	Value
Second-hand fashion market estimated value in (2025 E)	USD 210.3 billion
Second-hand fashion market forecast value in (2035 F)	USD 581.3 billion
Forecast CAGR (2025 - 2035)	10.7 per cent

Table 1: Second-Hand Market Size and Share Forecast Outlook (2025 to 2035)
(Source: <https://www.futuremarketinsights.com/reports/apparel-market>)

These shifts are further accelerated by digital tools through peer-to-peer resale and the inclusivity of resale listings on their e-commerce sites. The thrifted outfits have now been viewed as desirable rather than ‘second-best’, putting the ‘Worn-once’ culture into question.

SOLUTION AND ALTERNATIVES

Fast fashion’s fallout demands systematic solutions. On the policy front, governments are pushing for stronger accountability. Under the EU’s new Sustainable and Circular Textiles

framework, law now mandates that large fashion companies must disclose the unsold stock they hold, and soon, destroying them may be banned altogether. Extended Producer Responsibility (EPR) laws also shift the responsibility for garment waste directly onto brands, thus ending the old tradition of leaving it to consumers or municipalities. These measures aim to curb profits from overproduction while safeguarding the local communities through stricter policies.

Businesses are gradually revamping their models. Platforms like Depop, eBay, or even local thrift stores prove that resale, once a niche, is now becoming central, with projections showcasing a promising growth of \$350 billion by 2028, as shown below in Figure 4.

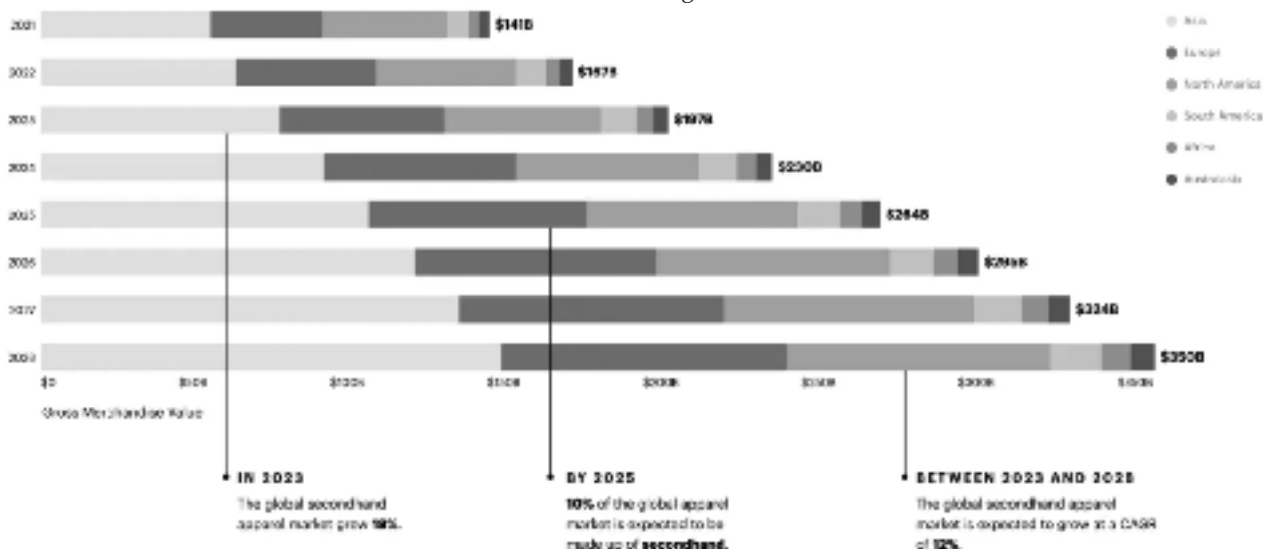


Figure 4: Global Second-hand Apparel Market to Reach \$350 Billion by 2028, Growing 3 Times Faster Than Overall Global Apparel Market
(Source: <https://fashionista.com/2024/03/thredup-resale-report-secondhand-growth-2024>)

This inclination towards a circular system of clothing has reshaped the fashion industry, turning our discarded clothes into someone else's treasure.

In the UK, the social media post about slow fashion has surged up to 29 per cent over the past year.

Yet, consumers often find it difficult to navigate through an industry full of eco-labels that often lack clarity. That's when technology steps in.

Projects like the UK's 'Autosort for Circular Textiles' are training AI and robotics to scan, sort, and recycle old garments. Meanwhile, brands like H&M are turning to data to produce more efficiently, cutting down on waste before it piles up.

The result? More clothes designed to be worn, not scrapped.

However, regulation and technology can only go so far. As consumers, we hold immense power.

Imagine if every new shirt you bought was one you could picture yourself wearing 30 times. That self-reflection can shrink the landfills in Chile, protect the garment manufacturers, and keep the rivers cleaner in Bangladesh.

It's not about perfection. Just a shift toward mindful purchases, rather than an impulsive one.

OBSTACLES AHEAD

'Greenwashing occurs when fashion brands present themselves as 'sustainable' or 'eco-friendly' without

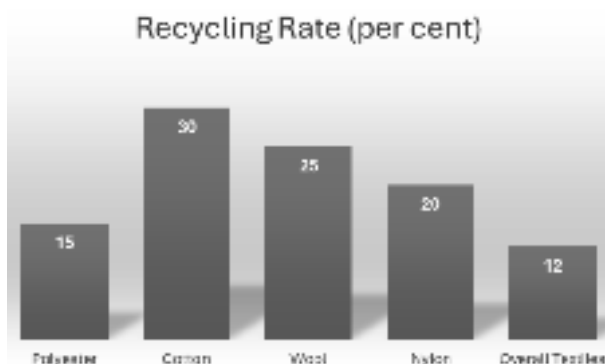


Figure 5: Global Textile Fibre Share (2023)
(Source: Own Illustration)

actually making real changes to their harmful practices.'

'Greenwashing is a rife,' a UK regulator bluntly stated, noting that nearly 59 per cent of eco-claims are misleading. In India, the outcome is even more catastrophic, with the Advertising Standards Council claiming that 'nearly 8 in 10 green claims don't hold up when examined.' This leaves the consumers skeptical about the brand's claim of 'Sustainability.'

SHARE OF GLOBAL TEXTILES (PER CENT)

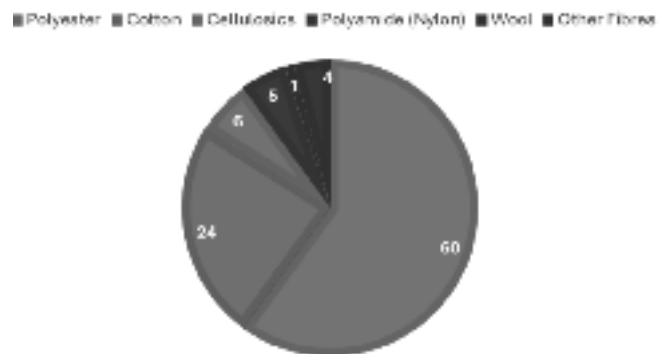


Figure 6: Recycling Rates of Different Textile Materials
(Source: Own Illustration)

Dig deeper, and you would realize that it's not only about the misleading labels but also the materials used in the process. Polyester, a fibre derived from fossil fuels and used to make cheaper clothes, sheds microplastics in every wash. It accounts for approximately 60 per cent of global textiles, and is difficult to recycle, thus polluting the landfills for centuries.

To worsen the situation, the higher cost of ethical clothing and poor infrastructure further widen the gap between wanting to buy responsibly and acting upon it.

CONCLUSION

As rightly said by Josephine Philips, 'Valuing the things that we own is a climate solution'. Not too long ago, society held a different wisdom of siblings passing down clothes with pride. What the world called scarcity then was, in fact, an art of valuing and cherishing. If any fashion trend deserves revival today, let it be this generational cycle of clothing, a tradition of continuity,

gratitude, and care.

Change often starts with something as small as a decision, and our approach towards right and wrong.

For decades, these choices have felt optional, a matter of personal preference or style. But when freedom of choice causes the world to suffer, making a shirt that we will only wear twice, such privilege starts carrying the weight of responsibility.

Valuing what we already own is no longer just a conscious alternative; it's a necessary shift. The only way for fashion to move forward is by slowing down. The shift doesn't begin in policy or marketing. It begins quietly, consistently, where it always could have: in our closets. Now, it should.

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With growing global investor attention, governance expectations, and thousands of young employees depending on stability, the timing and structure of founder exits matter more than ever.

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Exit Gambit: The Rise of Strategic Founder Exits in Startups

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ABSTRACT

The entrepreneurial landscape is witnessing a wave of strategic founder exits, a phenomenon reshaping the life cycle of startups across the globe. Founders, long seen as the soul of their businesses, are increasingly stepping aside after raising heavy rounds of capital or achieving lofty valuations. While such exits can bring in seasoned leadership that improves governance, compliance, and scalability, they also risk diluting vision, weakening culture, and leaving fragile business models behind. This article unpacks the implications of the exit gambit through global and Indian case studies, empirical research, and a critical exploration of whether founder departures ultimately mature the startup ecosystem or destabilize it further.

INTRODUCTION

The mythology of startups is often tied to their founders the inspiring leaders who take risks, rally teams, and disrupt industries. Yet, there is a growing

realization that the person who can build a daring prototype is not always the same leader who can run a billion-dollar enterprise. As startups achieve scale, governance burdens mount, and many founders either step down voluntarily or are nudged aside by investors.

This founder exit gambit is not confined to Silicon Valley alone. In India, too, the phenomenon is visible across unicorns and late-stage ventures, marking a decisive shift in the way startups evolve. But the core questions remain: Are these exits professionally smart, laying the foundation of stability, or do they strip companies of their cultural DNA, leaving them vulnerable to collapse?

Why Founders Exit: From Vision to Vulnerability

Founders start with relentless grit. But after Series B or C, growth demands change discipline trumps charisma, and execution requires more structure. Data from Harvard Business Review reveals that by the time companies hit IPO, just 25 per cent of founders are still CEOs.



Figure 1: The Founder's Dilemma
(Source: Harvard Business Review)

In India, Flipkart is perhaps the most cited case. Founded by Sachin and Binny Bansal as India's Amazon in 2007, Flipkart reshaped e commerce with customer trust at its heart. Yet, by 2018, when Walmart acquired a majority stake valuing Flipkart at \$22 billion, Sachin Bansal had already exited amid boardroom disagreements with investors. While professional

leadership has since stabilized operations under Walmart's oversight, many argue that Flipkart lost part of the entrepreneurial culture that once made it agile against Amazon.

Similarly, Zomato's journey shows the tug of war between founder vision and investor control. Founder Deepinder Goyal has stepped back from daily operations multiple times as the company experimented with professional managers, before returning to focus on long term vision when facing cultural and operational turbulence. These back-and-forth leadership handovers highlight how fragile exits can be if not well managed.

Professional Leadership: Stability in Action

Professional CEOs often bring a layer of maturity. A McKinsey (2022) study found that startups making this transition at Series C improved survival rates by up to 30 per cent.

- Uber and Dropbox's journey reflect this dynamic globally.
- In India, Ola Cabs provides a mixed case. Founder Bhavish Aggarwal has reduced his operational role in recent years, bringing in professional leaders to manage day to day complexities. This has allowed Ola to diversify into electric mobility and fintech, focusing on governance and regulatory compliance—critical in a sector marked by policy friction.

When handled well, these changes boost investor confidence. PwC data shows a 35 per cent rise in institutional trust when professional CEOs replace founder led management, especially in regulated industries.

The Risks of Founder Exits: Losing Vision and Culture

But exits are not free of costs. Founders bind startups to their original vision, and their absence can cloud purpose and weaken employee connectedness.

- WeWork's collapse is a global warning, but India too has cautionary cases. Housing.com, under the flamboyant Rahul Yadav, experienced meteoric rise in 2014 but quickly lost direction after his dramatic

ouster. Without his energy, the platform could not maintain its momentum, eventually merging with Prop Tiger.

- Paytm Mall, launched with great fanfare under Vijay Shekhar Sharma's ecosystem, struggled once professional managers tried cutting burn rates without a strong guiding vision, losing ground to Amazon and Flipkart.

Employee morale often suffers as well. Studies by MIT Sloan (2022) show 20 per cent attrition spikes after founder exits. At Indian startups, such transitions often led to disillusionment, as employees once inspired by founder passion found it difficult to feel the same motivation under corporate managers.

How long does it take Indian unicorns to exit?

Startup exits can happen through a successful public listing, an acquisition or liquidation event (shutdown).

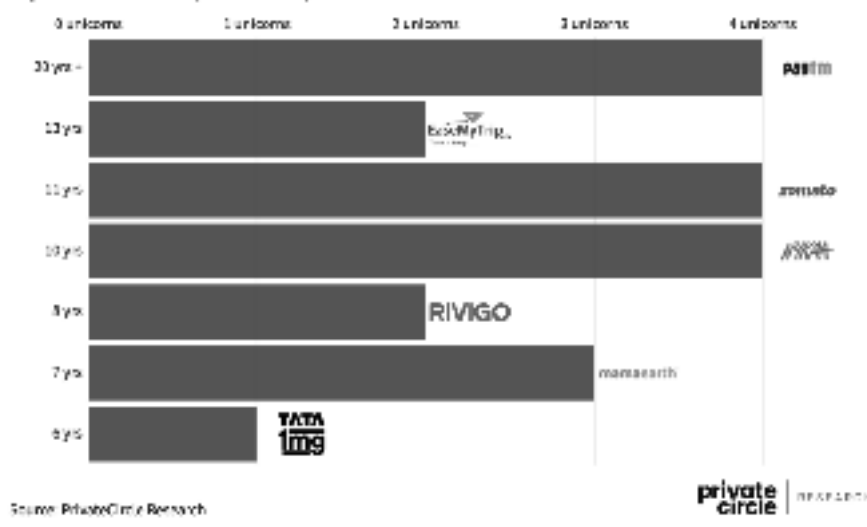


Figure 2: How long it takes Indian unicorns to exit
(Source: PrivateCircle Research)

Cycles of Hype and Collapse

Another problem emerges when exits precede sustained stability. CB Insights reported failure rates increase dramatically when founders leave too early.

In India, the Snapdeal story highlights this hype collapse cycle. Once valued over \$6.5 billion, its founders cashed in during peak funding cycles. But after global competitors entered, Snapdeal crumbled, reducing its valuation to under \$1 billion as employees and

investors were left grappling with the aftermath of aggressive yet vision light strategies.

The Hybrid Model: A Balanced Approach

Not all founder exits need to be destructive. A hybrid approach—where founders remain attached as visionaries while professional managers handle execution—can combine the best of both worlds.

- Flipkart post-acquisition leaned on Walmart's global systems while still retaining Binny Bansal's influence for some time, ensuring smoother transition.
- Infosys, though not a startup in today's sense, provides a telling example of founders transitioning gracefully while retaining board influence to anchor

values. Narayana Murthy's role as a guiding force even after professional CEOs took over illustrates why cultural continuity matters.

- Globally, Google's Page and Brin's model with Sundar Pichai offers a roadmap for Indian startups, especially unicorns, considering second generation leadership.

CONCLUSION

The exit gambit has become an unavoidable chapter in startup evolution. From Flipkart to Uber, Ola to Dropbox, professional leadership has often proven critical to achieving operational stability. Yet, the same gambit has

gone wrong in cases like Housing.com, WeWork, and Snapdeal, where loss of vision and cultural erosion derailed outcomes.

For Indian startups, the stakes are even higher. With growing global investor attention, governance expectations, and thousands of young employees depending on stability, the timing and structure of founder exits matter more than ever. Premature or

opportunistic exits risk creating fragile bubbles that implode, while thoughtful transitions can transform ambitious ventures into enduring enterprises.

Ultimately, founder exits are more than management moves—they are value decisions. The future of India's

innovation ecosystem will depend on whether such exits prioritize long term resilience over short term wealth. Done right, they could mature Indian startups into global giants; mismanaged, they risk deepening cycles of hype and disappointment.

Startup	Founder(s)	Founder Exit Timing	Post Exit Leadership	Impact on Business and Culture
Flipkart	Sachin Bansal, Binny Bansal	Exited around Walmart acquisition (2018)	Walmart professional management	Stabilized operations but perceived loss of entrepreneurial agility and culture.
Zomato	Deepinder Goyal	Multiple role reductions over time	Professional managers and founder involvement	Leadership handovers caused operational turbulence but founder's return helped refocus long term vision.
Ola Cabs	Bhavish Aggarwal	Gradual operational role reduction	Professional CEOs brought in	Enabled diversification into electric mobility and fintech; improved governance amidst regulatory challenges.
Snapdeal	Kunal Bahl, Rohit Bansal	Partial exits during peak funding phases	New leadership teams	Sharp valuation collapse and market share loss after founders scaled back; highlighted risk of premature exits.
Paytm Mall	Vijay Shekhar Sharma	Founder involvement reduced post launch	Professional managers	Struggled to compete with Amazon and Flipkart, facing valuation and market share decline.



Europe's CBAM and the US's 'friendshoring' strategies are especially challenging to emerging economies, such as India.



Trade Tussle

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ABSTRACT

The rising use of tariffs and non-tariff measures and the growing protectionist and geopolitical conflict in every corner of the world result in changes in the global economic framework. Trade driven primarily by national security and resilient supply chains creates an imbalance in global trade. Europe's CBAM and the US's 'friendshoring' strategies are especially challenging to emerging economies, such as India. This piece aims to unpack the intricacies of global trade as it pertains to new policies influencing India's labour-intensive export sectors—textiles and gems. It will also discuss the diplomatic and self-reliance strategies India is using to counterbalance these policies. The issue at hand is that of a fine line between what is good for national interest and what is in the best do that of open and multilateral trade which we will also look at India's efforts to which they are putting out to many markets and as a result are putting less of an egg in one basket. Also, we will look at the contradiction of high tariffs which they have and at the same time India's 'China Plus One' strategy that is very much to do with which global value chains they are trying

to attract, also we will look at the issue of how to improve their own competitiveness which is what is driving there push for domestic structural reforms.

KEYWORDS: Tariff, Global Trade, Friendshoring, Export, Policies.

A NEW ERA OF PROTECTIONISM

The current years have shown that the logic of free trade can be overridden by geopolitics, insecurities and vulnerabilities exposed by a crisis. Today, governments manage an economy and deploy tariffs, quotas, and regulations as instruments of foreign policy.

The US has been the most salient example of this change. Tariffs that were once used sparingly became the centrepiece of Trump's trade policy and the US now seeks to establish supply chains only with 'trusted partners', which cuts off countries that take independent or non-aligned positions in foreign policy. India has been directly affected: In 2025 Washington introduced a 50 per cent tax on some Indian imports which also saw an additional 25 per cent punitive tax from India's continuous buy of discounted Russian oil. The US also urged the European Union to put in place similar tariffs against Russia which presents how economics and politics have become one. India as a player very much a part of global markets but also a proponent of strategic autonomy must protect its economy at home while also maintaining policy independence. We look at the present state of global trade and what it means for India beyond just reporting facts, we look at the strategy behind protectionism and what those policies do economically.

OBJECTIVES OF THE STUDY

The objective is to find out the motivating factors behind CBAM and friendshoring being put forward. While these policies are put forth as climate action or supply chain resilience measures, they also play into the role of trade barriers which in turn favour domestic industries. Also, we see that these policies which also include the U.S. reshoring of supply chains are presented as climate solutions or improvements in

supply chain stability but what they in fact do is act as trade barriers which in turn benefit home grown industries. Also, in this study we look at the what these policies do for India, which will be looked at sector by sector and also in terms of macroeconomics. We will look closely at how these policies play out in the most vulnerable sectors such as steel, aluminium, cement, fertilizers, textiles and petroleum refining. These industries which are very much in the path of international regulation are at the cross ways of climate policy, geopolitics, and trade competitiveness. In the end the paper looks at what India can do as a policy response which may include strengthening of the home-grown industry through the 'Atmanirbhar Bharat' initiative, the pursuit of Free Trade Agreements, and also to some degree at which we may see a China Plus One approach play out as a strategy to attract global investment.

The guiding questions are: How will India manoeuvre through protectionist policies while at the same time protecting its export markets? What policy options are there to reduce vulnerability? Also, can India turn these disruptions into opportunities for strategic autonomy and industrial upgrade?

REAL WORLD EXAMPLES

To look at real world examples of protectionism and their play in India's economy, at present we see that the EU's CBAM and U.S. trade actions are very much at play which directly affect the country. The Carbon Border Adjustment Mechanism (CBAM) is a climate-based tariff which is put in place to stop 'carbon leakage'. It requires importers of carbon intensive products to report their emissions and to buy CBAM certificates. This is very much an issue for India. The steel industry which accounts for almost 90 per cent of India's exposed exports to the EU is very much in the cross hairs.

The emissions monitoring, reporting, and costly restrictions are burdensome. Notably, the penalties steep, 10 to 50 euros for every ton of unreported emissions and 100 euros for every ton of CO2 emissions for those without CBAM certificates. These discourage

India from competing in Europe and divert trade. India remarked and is looking to the WTO regarding the discriminatory nature of CBAM. For India, the US tariff hike presents another challenge. US tariffs on India exports are 50 per cent, and punitive duties on imports of Russian oil are further trade restrictions. Exports to the US decreased from 8.01 billion dollars in July 2025 to 6.86 billion dollars in August. This decrease in exports affects the labour-intensive and highly competitive textiles and leather sectors the most, along with Vietnam and Bangladesh. It has been seen that multinationals which had India as a manufacturing hub have put on hold their investment decisions. We see this in the delayed projects by Posha and Cradlewise. The refiner segment in India is also very much at risk. EU sanctions on refined products which are a result of Russian crude oil is to put at risk Indian exports to the tune of USD 14-15 billion. In these instances, we see that protectionism which may be put forth as a climate or security issue is greatly affecting India's trade prospects.

A SHIFTING GLOBAL ORDER TRADE

Restrictions are more than a temporary policy response; they indicate a longer-term shift in how countries understand international trade. More countries are operationalizing trade on a geopolitical level and less on a multilateral basis. The WTO's failings as a trade referee are leading to the rise of regional trade blocks and bilateral trade agreements. This is both a challenge and a caution for India. Besides competitiveness, access to large markets is now contingent on compliance with the foreign political and environmental norms of market countries. This is another uncertainty for Indian exporters.

COMPARING GLOBAL EXPERIENCES

India is not the only economy adjusting to this climate. Southeast Asian nations like Vietnam and Thailand—once prime destinations for global supply chains—have seen investors hesitate amid geopolitical pressures. Brazil's agribusiness faces new checks under Europe's climate-driven import rules. Even China,

despite its vast resources, is forced to reconfigure supply chains in response to 'friendshoring' initiatives. These experiences highlight a key lesson: resilience lies in diversification. India will need to broaden its markets, strengthen links with Africa, Latin America, and West Asia, and reduce its dependence on the U.S. and EU.

CONCERNS BY SECTOR

Various Indian sectors, regions, and industries face different forms and levels of exposures. Carbon-related trade measures have placed heavy industries, including steel, aluminium, and cement, at the frontline. These sectors will need to invest in low-emission technology to remain competitive. Investments will need to happen, no matter the cost. For the labour-intensive sectors—textiles and leather—the challenge is one of meeting compliance. Proof of adherence to sustainable and ethical labour practices is increasingly a requirement from global buyers. Those producers who renew early—by switching to clean energy, transparent reporting, and sustainable materials—are most likely to keep their contracts. Those who fail to comply will likely stop competing.

THE ENERGY PUZZLE

India's increasing reliance on Russian oil has sparked opportunities for affordable imports but also invites penalties within Western markets. Billions of dollars' worth of economically refined oil products face tariff complications in Europe and the United States. Concomitantly, this reliance underscores the need for securing and diversifying one's energy portfolio. India's transition to renewable energy may paradoxically be expedited by protectionist barriers. With restrictions on fossil fuel exports, there is an influx of cross-border investment into solar, wind, and green hydrogen initiatives in India. If this transition is well-managed, there will be potential for long-term gains.

POSSIBLE STRATEGIC RESPONSES

India needs to tread a middle path between defence and development.

Domestic Industrial Growth: The 'Atmanirbhar Bharat' program must do better than just import substitution. We should see put in place supports for advanced manufacturing which includes the tech like semiconductors, clean energy equipment, and pharmaceuticals which in turn will reduce our dependency and open up export options.

Trade Agreements: We are in the middle of talks with the EU and UK and also have recent agreements with the UAE and Australia which present a chance to secure market access. However, we must also push for terms that which do not see environmental standards used as a way to hide trade barriers.

Global Supply Chain Reorganization: As many firms move out of China, we see an opportunity for India to put in place a reliable supply chain hub. It must improve logistics, simplify regulations, and ensure stable policy environments to capitalize on this opportunity.

Coalitions in International Bodies: Although the world's faith in the WTO is declining, India should still put forth challenges to discriminatory practices and form partnerships with other developing countries to push back against unfair rules. Turning Strain into Opportunity.

What we see today as a setback may in fact be a catalyst for industrial upgrade. In textiles we may experience out of export volumes but from that may come a shift into high value products like technical fabrics and smart textiles. In energy we could see that the application of

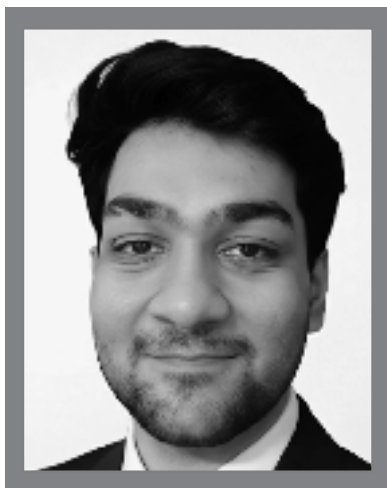
sanctions plays out to be a stimulus for investment in alternative fuels and bio-energy. Should these changes be guided by steady policy and large-scale private investment India may put in place a foundation to be a more resilient, innovative, and global player.

CONCLUSION

Higher tariffs, drop in exports, and delay in investments. But these also put into sharp focus the need for change and renewal. India's future in this order will play out on the stage of how quickly it diversifies markets, modernizes industries, and adopts sustainability. If it is able to transform present challenges into engines of reform the current trade tussle may well become the start of India's rise as a strong global economic player.

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Over the last five years, several structural and behavioural forces have driven the rapid normalization of micro-debt in India.

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BNPL and The Debt Spiral: Understanding the Impact of Micro-credit on India's Young Borrowers

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ABSTRACT

The rapid rise of Buy-Now-Pay-Later (BNPL) platforms has reshaped short-term consumer finance in India, offering clear merits: expanded financial inclusion for thin-file users, instant point-of-sale liquidity, frictionless onboarding (minimal paperwork), short-term interest-free options for planned purchases, and a low-cost route for some users to begin building a formal credit history. While offering convenience through frequent low-

ticket loans, gamified incentives, and minimal visible costs, these design features can also foster impulsive spending. This, in turn, may lead to users taking on multiple loans from various providers and underestimating the associated repayment risks. This article uses secondary data, published studies, regulatory documents and anonymized case vignettes to weigh BNPL's consumer benefits against its harms for two vulnerable groups: (a) students and early-career thin-file borrowers, and (b) individuals who use BNPL primarily to establish a credit footprint. We document how apparent advantages can convert into cumulative indebtedness, credit-score deterioration, and measurable financial anxiety, and conclude with targeted policy and product reforms—classification as regulated credit, age/income calibrated limits, mandatory real-time reporting, and marketing constraints—to preserve BNPL's benefits while protecting fragile borrowers.

KEYWORDS: BNPL, Micro-debt, Financial Inclusion, Loan Stacking, Youth Indebtedness, Financial Anxiety.

SCOPE AND APPROACH

This analysis focuses on India, especially youth between the ages 18-25 years, using a literature review of studies and reports, secondary data, global parallels and de-identified borrower case insights. Key sources include recent industry reports, academic studies, and regulatory documents specific to the Indian industry. Any illustrative borrower examples are treated as anonymized vignettes or drawn from secondary accounts.

MICRO-DEBT: THE NEW FINANCIAL FRONTIER FOR INDIA'S YOUTH

Micro-debt describes the use of small, unsecured credit lines for everyday consumption. What makes this form of borrowing different from traditional debt is its frequency, low ticket size, and invisibility: each loan looks small and manageable on its own, but when multiple small obligations from several such lenders stack up, they create a

snowball effect. BNPL is beneficial in its own right, it helps young individuals build a credible credit history. It democratizes credit, allowing large purchases like electronics or furniture to be broken down into manageable, interest-free instalments.

Over the last five years, several structural and behavioural forces have driven the rapid normalization of micro-debt in India. Primarily technology and distribution: smartphones, UPI, and app-based onboarding let fintech companies issue credit within seconds with minimal paperwork. Secondly, the product design markets the product as 'interest-free' or 'low-cost,' which reduces psychological friction and makes borrowing feel like a convenience rather than a loan. Finally, the market is structured in a manner that legacy credit channels are limited for many young borrowers, so BNPL becomes their first experience of formal credit.

The user profile for micro-debt in India is skewed. Adoption of this credit channel is highest among students, early career professionals, and Gen Z, groups that exhibit digital fluency but lack financial experience. These are borrowers with little to non-existent credit history; for them, BNPL is the easiest route into credit. These products are embedded at the point of sale, e.g., the checkout section of e-commerce carts, and they become the go-to option for impulse purchases and

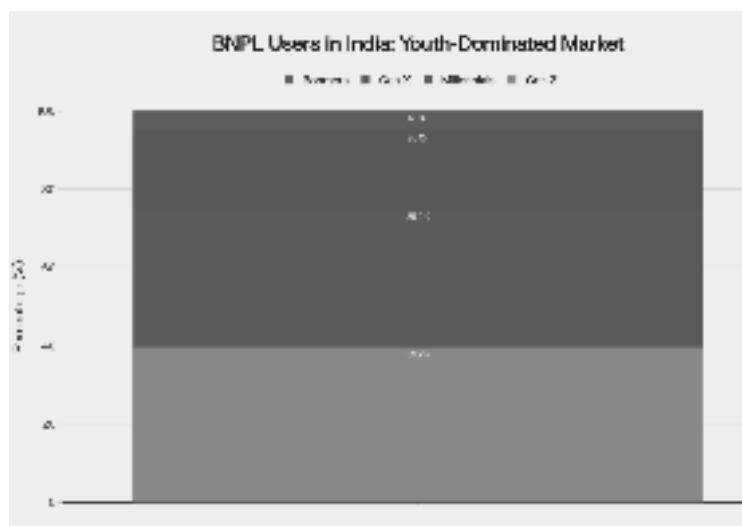


Figure 1: BNPL Customer Demographics
(Source : YouGov)

providing short-term liquidity. A survey conducted by YouGov shows that the highest intent to make a BNPL purchase is exhibited among the age group of 18-35 [2]. This study also showed that 53 per cent of BNPL users in the focus group explained using it as a means of financing unplanned and impulsive purchases.

THE SOCIAL DRIVERS OF BORROWED SPENDING

The rapid adoption of BNPL platforms among young individuals is not just a matter of convenience; it's deeply tied to peer pressure and what they see on social media (which more often than not turns out to be a facade). Young adulthood, often fuelled by peer-to-peer comparison, creates an environment where keeping up with trends becomes a significant financial burden on individuals [3]. When a BNPL option is seamlessly integrated into an e-commerce checkout or a food delivery app, it capitalizes on this impulse, turning a fleeting desire into an immediate transaction. More than just a payment method it fuels the 'act first, think later' mentality.

THE UNSEEN DANGERS OF UNCHECKED DEBT

The problems caused by micro-debt are worsened by two systemic features. The first is loan stacking; users borrow small amounts across multiple platforms without any single lender seeing the whole picture. While recent regulatory measures have improved reporting to credit bureaus, the total indebtedness of inexperienced borrowers often remains hidden from the users themselves, who may not track their multiple obligations. The second feature is pricing opacity; late fees, conversion fees, and high interest on outstanding EMI balances

can turn a small purchase into a large cost over time. When coupled, these factors raise the probability that multiple small loans would become unaffordable for the borrower, especially when they are in early stages of their career and might not have a corresponding income to back these liabilities.

Micro-debt fosters short-term thinking, leading consumers to undervalue future repayments and neglect savings. This cycle of small obligations erodes financial resilience, making young, indebted individuals vulnerable to delinquency from unexpected expenses like medical bills or job loss.

THE PSYCHOLOGICAL TOLL OF DIGITAL DEBT

The burden of digital debt is not merely financial; it carries a significant psychological toll. Persistent mental stress caused by debt can lead to a host of mental health issues and symptoms, including anxiety, panic attacks, low self-esteem, decision-making uncertainty, and disturbances in sleep. A CRED survey found that 79 per cent of Indian credit card holders find debt stressful. A landmark study of tertiary students in Chandigarh provides a strong evidence-based connection between BNPL usage and mental stress.

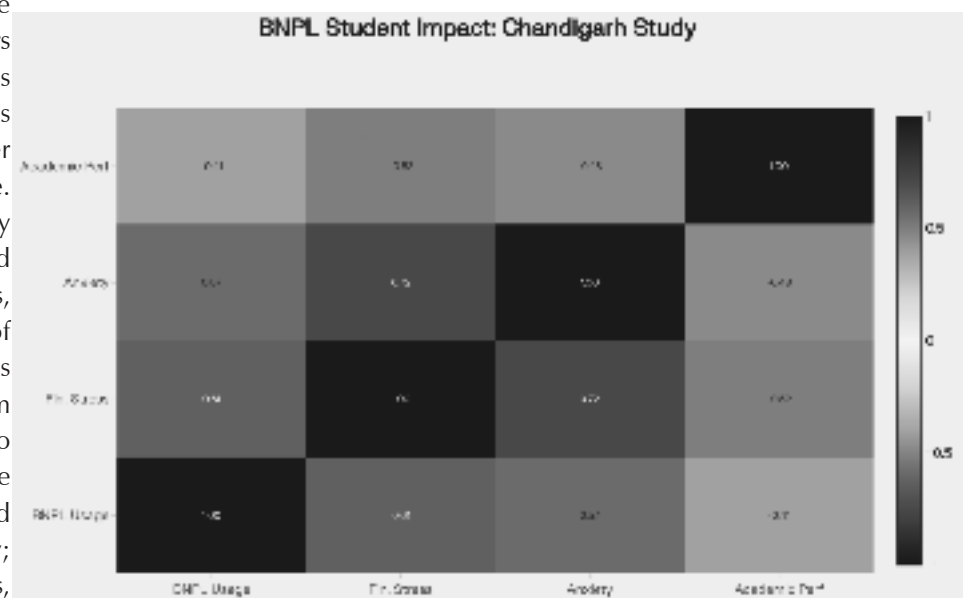


Figure 2: Psychological Impacts on Students
(Source: ScienceFrontier - International Neurology and Neurological Research)

The Chandigarh study also established a correlation of 0.61 between frequent BNPL use and higher financial anxiety and depressive symptom scores. The anxiety caused by digital debt also translates to academic and professional downfall. The study observed that heavy users in the sample saw their academic performance fall, with an observed GPA decline of roughly 0.38 points, of which financial stress explained about 40 per cent.

These are significant educational and life outcomes. Stress undermines concentration, reduces study time, and prompts students and young professionals to take on more work or loans, further degrading academic performance and trapping them in a debt cycle.

THE SLICE MODEL

Slice, the Indian fintech sweetheart, has rapidly gained popularity among the youth of the country, especially young and impressionable college students, by providing them credit card and BNPL services through a sleek mobile app. This app is designed to provide instant credit to a demographic often overlooked by traditional banks. With its easy application process and features tailored for small, frequent transactions, it has positioned itself as a modern financial tool for the digital generation. But for many of its young users, this convenience comes with a hidden cost.

Slice exemplifies how BNPL platforms are engineered to capture the youth market with a mission to 'redesign the financial experience for millennials and GenZ.' The company's marketing strategy is meticulously crafted to resonate with its target audience with an average age of just 22.

Slice's business model relies on making credit not just accessible but habitual. Its revenue comes from fees paid by merchants, interchange fees on card transactions, and interest from users who opt for longer repayment plans. Crucially, many users are unaware that each transaction is structured as a formal

term loan, a detail often hidden by the app's seamless interface. The app's design is a masterclass in behavioral engineering:

- **Frictionless Payments:** It promotes frequent use and dependency with the help of features like 'scan and pay,' which are designed to make Slice the user's primary payment tool.
- **Gamified Incentives:** The company offers personalized discounts and instant cashback features, which helps create a powerful reward loop. This incentivizes spending and is known as the 'Slice Spark.' The company has its own analysis, which identifies a 'robust and sophisticated Incentive program' as essential to having an edge over competitors.
- **Normalizing Credit:** 'Creducation'—a proposed feature with a premise of providing transparency on credit scores while being framed as financial education—also serves to normalize the concept of credit and debt within the app, which further reduces the psychological barrier to borrowing among its audience.

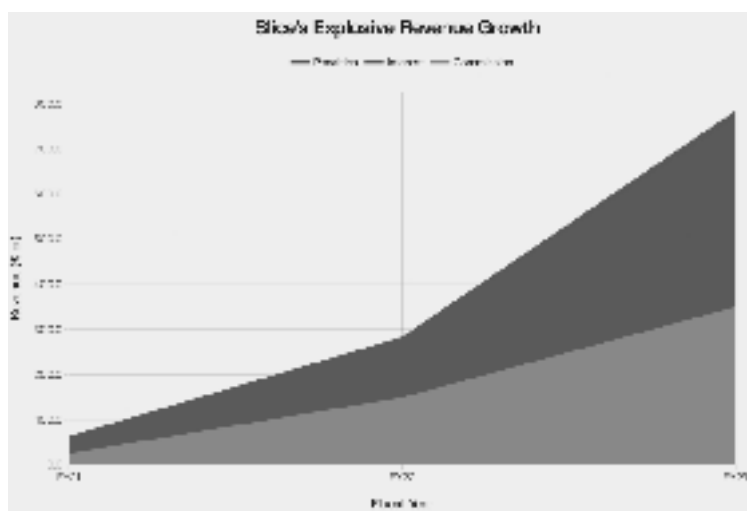


Figure 3: Slice Revenue Growth FY21-23
(Source: Entracker)

THE PSYCHOLOGY OF 'FRICTIONLESS' DEBT

The power of Slice lies in its sophisticated application of behavioral psychology, which deliberately minimizes the cognitive friction associated with spending and borrowing.

- **Debt as a Lifestyle:** BNPL services have tapped into the 'subscription lifestyle' familiar to the youth of the country. They have done this by reframing a loan as a smarter way to pay. A series of small payments feels no different than a monthly Netflix subscription, which has transformed debt from a significant liability to a simple part of daily routine.
- **The Science of Overspending:** Such platforms are designed to exploit biases that encourage overspending.
 - * **Instant Gratification:** Users get instant satisfaction while making purchases, but the pain of paying comes later and is partitioned into smaller, less intimidating amounts.
 - * **Illusion of Affordability:** It is true that a 1,00,000 phone seems much more affordable when presented as 10 payments of 10,000. This causes a false sense of affordability in the minds of the users.
 - * **Psychological Distance:** The abstract, digital nature of the transaction creates a 'psychological distance' from the actual expenditure, making the borrowed money feel less tangible and encouraging more impulsive decisions.

KLARNA: A CAUTIONARY TALE OF GLOBAL SCALE

While Slice chose regulatory integration, global BNPL pioneer Klarna provides a powerful case study in the risks of pursuing growth through product diversification and aggressive lending. Klarna has demonstrated impressive expansion, with its revenue growing 25 per cent year-over-year to \$823 million in Q2 2025 and its active user base reaching 111 million globally. Its expansion in the U.S. market has been particularly aggressive, with Gross Merchandise Volume (GMV) surging by 37 per cent.

However, this growth has come at a staggering cost. The company's financial reports reveal a business under significant strain, with its Q2 2025 net loss widening to \$53 million from \$18 million in the prior year. A primary driver of this loss is a dramatic 64 per cent surge in provisions for credit losses, which reached \$174 million in the second quarter alone. This followed a Q1 where credit losses had already hit \$136 million, a 17 per cent year-on-year increase. Klarna attributes these rising provisions to 'mix effects,' particularly the rapid growth of its longer-term (6-36 months) 'Fair Financing' products, which carry higher interest rates and significantly greater credit risk.

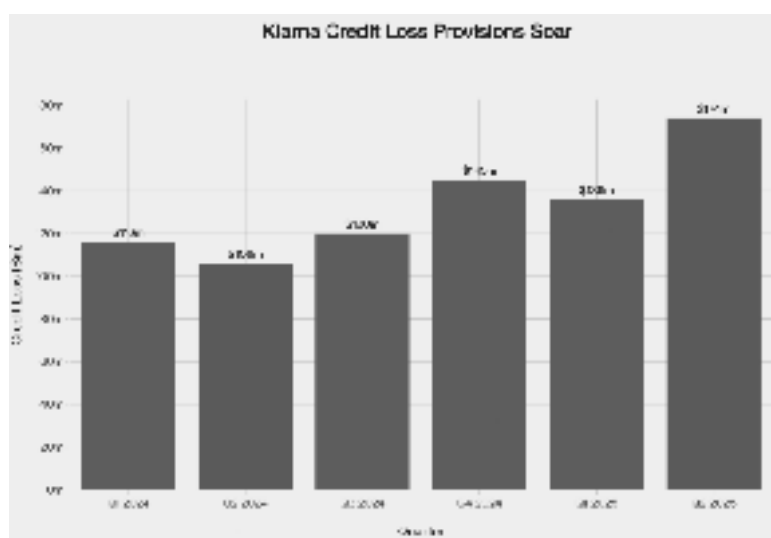


Figure 4: Klarna Credit Loss Provisions
(Source: investors.klarna.com)

Klarna's financial turmoil is a direct and powerful warning for the Indian market. The huge credit losses reported by a mature, global leader underscore the inherent fragility of a model built on fast, often under-collateralized, credit. This is not a hypothetical threat; it is the documented reality for the industry's pioneers. This situation can easily become the fate of young Indian BNPL players if they pursue aggressive, high-risk growth strategies in a market with low levels of financial literacy. Such a path could trigger systemic credit risks in the broader financial services industry, disproportionately harming the most vulnerable consumer segments and destabilizing the very ecosystem these platforms helped to build.

THE CREDIT SCORE TRAP AND RISING INDEBTEDNESS

One of the most serious harms caused by BNPL is the negative effect on the credit score of young adults. Now, BNPL providers are required to report repayment behaviour to credit bureaus like CIBIL, making the risks more explicit for inexperienced borrowers.

- A single missed payment can be reported, causing a user's CIBIL score to drop by 50 to 100 points—a significant blow for someone just starting their financial life.
- Even with timely payments, the proliferation of numerous small, short-term loans can lower the average age of a user's credit accounts, which may be interpreted as a sign of risk and lower their score.

The boom in BNPL has coincided with an alarming surge in unsecured debt among young adults.

- Outstanding dues on credit cards have skyrocketed from 87,686 crore in March 2019 to nearly 2.7 lakh crore by June 2024—a staggering 24 per cent CAGR. [4]
- Credit card defaults have worsened, climbing to 1.8 per cent by mid-2024, a trend explicitly linked to young millennials and Gen Z who are 'sold on BNPL schemes.'

GROUND-LEVEL EFFECTS: THE HUMAN COST

Beyond the statistics lies the hard truth of a traumatized youth that fell for this attractive trap without realizing that what they were getting would lead to a string of traumatic incidents.

- A 20-year-old student, borrowed a measly sum of 3,000 from Slice. When she was running behind on some payments, the company's recovery agents had begun intimidating her by contacting her family and friends, even going as far as to threaten her about showing up to her college.
- In a devastating incident in Bengaluru, an engineering student died by suicide at a young age of 22 as he was being harassed relentlessly by recovery agents of digital lending apps, including Slice. The

agents had threatened to release intimate and personal photographs if the loan that had ballooned from 30,000 to 46,000 was not repaid.[8] [9]

These events are not isolated incidents; they are part of a string of incidents fuelled by companies like Slice, who have, in the past, used the practice of accessing borrowers' contact lists to shame them into repayment, weaponizing social stigma. While new regulations aim to curb these practices, the risk of harassment remains a powerful psychological threat for young borrowers.

POLICYMAKER PERSPECTIVES

Regulators have voiced their concerns about the accumulation of consumption debt on the younger generation via BNPL and Credit Cards. In December 2024, RBI Deputy Governor Michael Patra warned that 'BNPL schemes and credit card spending facilitate immediate consumption, especially for younger generations, and lower their savings.' He further noted that this trend could weaken the transmission of monetary policy, and at the same time raise risks of household debt stress. Official concerns are highlighted by these comments: accessible micro-loans could lead to over-indebtedness and undermine the financial stability of young adults.

A PATH FORWARD: PROTECTING THE NEXT GENERATION

These detrimental practices have flourished due to a lack of regulation, a gap that is now being addressed. Although the RBI has recognized the dangers and implemented measures, such as the Digital Lending Guidelines in August 2022, a more resolute and thorough strategy is still critically required to fully safeguard at-risk borrowers.

A path forward requires a multi-pronged strategy:

Formal Classification of BNPL as Credit:

It is absolutely vital that BNPL products are being labelled as Loans under RBI regulations, it shall require standardized disclosures at checkout (total cost of credit, late fees et al.)

Age & Income based credit limits:

It is crucial that students receive differentiated treatment compared to working professionals with stricter thresholds, due to their lack of financial literacy, making them more vulnerable to fall into debt traps and make uninformed decisions. E.g.: Students under the age of 21 years shall only have a quarterly limit of 20000- 30000, further linking BNPL limits verifiable sources of income such as stipends, part-time salaries et al.

Prevention of loan stacking:

Regulate BNPL with a real-time shared credit database, similar to credit cards, to track all transactions. Mandate instant reporting of BNPL loans and defaults to credit bureaus. Restrict new BNPL approvals for borrowers exceeding a predefined obligation threshold.

Marketing Regulations:

This means restricting targeted ads, particularly to minors and students, similar to alcohol and tobacco. Gamified incentives like cashbacks should be banned to prevent irresponsible spending. Finally, clear disclaimers stating 'BNPL is a loan. Missed payments affect your credit score' are crucial for consumer awareness.

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Boundaries Beyond: The Historic India-Pakistan Rivalry in the Midst of Political Chaos and Security Hurdles

Madhuram Nangalia
Department of Commerce (Morning)

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The on-field
antics and off-
field drama prove
one thing that
sports diplomacy
is not enough to
achieve cultural
harmony and
unity.

”

ABSTRACT

The historic and exciting India-Pakistan rivalry has been fraught with political tensions and security challenges. The recent Pahalgam terror attack has raised questions about the role of sport in unifying cultures and its neutrality. The public called for a complete boycott of India-Pakistan matches even in ICC tournaments. The Indian team in the World Championship of Legends tournament made headlines when they decided to withdraw from the semi-final match scheduled against Pakistan. Although India participated in the Asia Cup, it did not go down without its fair share of controversies, including the handshake snub, provocative war-related celebrations, refusal of the trophy in the final, and heated exchanges and banter, the Asia Cup 2025 had it all. While multinational tournaments such as the Asia Cup and ICC tournaments aim at celebrating sport and bridging the political divide, they failed to achieve it underscoring the intertwined web of politics and sport.

KEYWORDS: Cricket, Sports, Politics, BCCI, ICC, Diplomacy.

INTRODUCTION

The India-Pakistan rivalry is one of the most intense and deadliest rivalries in cricket, and the 2nd oldest after the historic Ashes rivalry between England and Australia. Whether it was the Rawalpindi Express steaming in with his hair flying, firing Kookaburra cannonballs, the Bowl-out decider at the 2007 T20 World Cup, and the nail-biting last ball finish at the MCG 2022 T20

World Cup, numerous historic scenes are etched in this rivalry. Not to forget the PR around every game from the 'Mauka-Mauka' ads, matchday special offers, on-field aggression and gestures, this rivalry has it all. It's not just a game, but 2 sides fighting to assert their dominance for national pride and glory. However, these games have been instrumental in bringing the culture of these two neighbours together. Numerous cross-border attacks and acts of terrorism have time and again questioned the role of sports in ensuring cultural harmony and neutrality, with the most recent incident being the Pahalgam Attack on 22nd April, 2025, where a group of armed militants from the Pakistan side of the border attacked a group of tourists who were peacefully enjoying their vacations.

Background of Asia Cup 2025

Due to the tense political relations between India and Pakistan as a result of the Pahalgam attack and the drone attacks, there was much likelihood that the Asia Cup would be suspended. After considering all the factors, the Board of Cricket Control in India (BCCI) deemed it safe and reasonable to participate in the Asia Cup. However, the venue was shifted to the United Arab Emirates (UAE). The decision to participate in the tournament has brought mixed reactions from the fans. Some fans questioned the fairness of the decision while others viewed this with enthusiasm celebrating the game. The BCCI argued that there was no basis for India to drop out of the tournament or the match considering the matches were played in the United Arab Emirates and there were no significant security risks determined.

Can multinational tournaments in cricket offer a platform to bring two conflicting nations together?

Taking into account the developments, I personally feel that it is not enough to bring the two cultures together. The Pahalgam Attack shattered the mutual respect and trust that the Indian players and boards had with the latter. In order for sport to bridge the divide, there needs to be at least some level of mutual respect and security between the two nations. The immature and provocative gestures in the games haven't made this any better. Despite desperately trying to keep sports separate from politics, they are both intertwined. A country can't participate in a match and pretend as if there is nothing wrong when the soldiers and civilians are constantly paying the price as a result of the actions of the other nation's policies.

CONCLUSION

The decades-old India-Pakistan rivalry has been instrumental in bringing the cultures of these two nations together and numerous glorious and iconic moments are etched in it. However, the border and terrorism issues have always questioned this with the Pahalgam Attack being the focal point, permanently altering the narrative and background behind this rivalry. A match isn't enough to bring the two cultures together. It is the values and mindset which can achieve so. The on-field antics and off-field drama prove one thing that sports diplomacy is not enough to achieve cultural harmony and unity.



Beyond Tax Cuts: Evaluating the Economic and Social Impact of GST 2.0

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Poor households
spend around
60–65 per cent of
their limited
budgets on staple
foods, which are
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exempt or taxed
very low under
GST.



ABSTRACT

This paper critically examines the impact of GST 2.0 on India's economic landscape, focusing on its implications for revenue, consumption, and price transmission. The reform introduces a simplified two-slab structure with significant rate revisions, including exemptions for essentials like health and life insurance, while raising taxes on luxury and 'sin' goods. Although expected to cause a short-term fiscal loss of approximately 48,000 crore annually, projections suggest this will be offset by improved compliance, tax buoyancy, and consumption-led growth. However, the distributional impact reveals a dual reality: affluent households gain more from reduced GST on discretionary goods, while low-income groups, whose consumption is largely staple-based, see minimal benefit. A key challenge remains whether businesses will pass on tax cuts to consumers, especially after the sunset of anti-profiteering rules. The study highlights that while GST 2.0 can stimulate growth, its inclusivity depends on effective enforcement and addressing inequality.

KEYWORDS : GST 2.0; Consumption Growth; Tax Buoyancy; Revenue Impact; Anti-Profiteering; Income Inequality

THE PRICE MATH

In the new two-slab structure, some items were moved to a lower slab and some to the upper slab. For example, individual health and life insurance will have zero GST, down from 18 per cent. For special items, a 40 per cent tier has been added too. Items like carbonated drinks, caffeinated beverages, and high-cc cars and motorcycles will attract 40 per cent GST compared to 28 per cent before. 'Sin' items that are considered harmful for society, like pan masala and cigarettes, would attract this rate too. (See Chart 1)

GST 2.0 is expected to cause a short-term net revenue loss of approximately 48,000 crore annually, though this figure is considered 'fiscally sustainable' by the Ministry of Finance and may be offset by increased consumer spending, improved compliance, and tax buoyancy in the long term. States have expressed concern about this loss, as consumption patterns differ across regions, but the government is betting on consumption-led growth to compensate for the immediate fiscal impact. Further, this revenue loss isn't spread evenly across states either. Some states rely more on GST than others, with dependency up to 50per cent. According to SBI's forecasts, however, states might wind up benefiting financially even after these rate reductions due to the special revenue-sharing structure. Due to the 50-50 sharing arrangement and tax devolution, states ultimately receive roughly 70.5 of every 100 in GST collected. SBI estimates that states could receive 4.1 lakh crore through devolution and at least 10 lakh crore in state GST in FY26.

THE DUAL REALITY ABOUT CONSUMPTION

The Household Consumption Expenditure Survey (2023–24) indicates that the lowest 5per cent of Indians in rural areas spend approximately 1,677 monthly per individual, whereas in urban areas, the consumption reaches 2,376 per month per individual. Simultaneously, the highest 5per cent in rural areas and urban centres spent approximately 10,137 and 20,310, respectively, on monthly consumption. That represents a difference of over ten times.

Poor households spend around 60–65per cent of their limited budgets on staple foods, which are mostly either exempt or taxed very low under GST. Hence, GST cuts on non-essential items do not meaningfully affect their core spending. In contrast, wealthier households spend more on goods and services that attract GST, such as packaged foods, electronics, personal care, travel, and entertainment. Thus, they are the primary beneficiaries of GST 2.0 rate cuts. For low-income daily wage earners, price reductions on items like shampoo or smartphones are unlikely to increase buying because their main concern is affordability of staples, not luxury or discretionary products.

Consumption growth lubricated by GST cuts mainly benefits those who already have disposable income, as demand elasticity is higher among the affluent but almost inelastic among the bottom half of society limited by poverty. Without addressing income inequality, the effectiveness of GST 2.0 in triggering meaningful, widespread consumption growth remains limited and should not be seen as a complete economic solution.

On the contrary, over the following four to six quarters, economists estimate that the GST reduction will contribute between 1per cent and 1.2per cent to India's GDP growth. The consumption multiplier effect, as economists refer to it, is the foundation of this reasoning. People are more likely to spend money when taxes are reduced and put back into their pockets. Businesses make money from that spending, which in turn generates jobs, more revenue, and yet more spending. Moreover, there is a significant role of debt for servicing the consumption needs of people (See Chart 2).

According to an NIPFP analysis, GST rate reduction has a higher fiscal multiplier (-1.08) than personal income tax (-1.01) and corporate tax (-1.02). This indicates that lowering GST rates has a greater influence on increasing demand and economic activity, making it a more effective instrument for encouraging consumption-led growth.

In parallel, income tax relief measures outlined in the Union Budget 2025, such as larger standard deduction and refund thresholds under the new regime, went into effect during FY25. This increased disposable earnings. This policy mix, together with earlier RBI interest rate reduction in 2024 (the repo rate was reduced to 6.25per cent by February 2025 and has remained stable since), is predicted to release the consumption multiplier.

THE ISSUE REGARDING RATE TRANSMISSION

There is a primary concern whether businesses will pass on the reduced Goods and Services Tax rates to consumers, particularly for the new two-tier slab system of 5per cent and 18per cent for most goods and

services. While the GST Council's reforms aim to stimulate consumption and boost household income by lowering prices on essentials and goods like electronics and vehicles, concerns exist that the benefit of these cuts might not fully reach consumers. Businesses face challenges in accurately quantifying and communicating the rate benefits, leading to potential confusion and increased compliance costs, as seen with previous reform phases.

One of the examples, inter-alia includes the UK VAT on hospitality which was cut from 20per cent to 5per cent during COVID but press reporting and some academic work documented that many firms signalled they would pocket some or all of the tax cut rather than passing it fully to customers.

To deter businesses from keeping the extra money when tax rates were reduced, the Government introduced anti-profiteering rules. These rules made it compulsory for companies to pass on the tax-cut benefits to consumers. The rules mostly affected FMCG companies (like packaged goods makers) and the construction sector.

But from the start, these rules were controversial. The main problem was that there was no fixed method to calculate how much benefit had to be passed on to customers. As a result, companies struggled to figure out the right price after a tax cut. They had to keep detailed records and explain their pricing decisions, which increased paperwork and compliance costs. If they failed to show compliance, they faced penalties. Many businesses argued that the rules created confusion and unnecessary red tape. Several companies even challenged the rules in court. Finally, in the 53rd GST Council Meeting (22 June 2024), the Government decided to end these rules. A sunset date of 1 April 2025 was fixed, meaning that after

this date, the anti-profiteering law would no longer apply.

With two GST slabs being removed, people are asking if businesses will actually lower prices for customers, since the anti-profiteering law is no longer in force. The Government hasn't brought that law back, but it has made it clear that companies are expected to pass on the benefit of tax cuts. To help with this, the Department of Consumer Affairs has allowed manufacturers to revise the MRP of unsold stock. Companies can update the printed price by stamping, sticking a label, or reprinting it online but the old MRP must still be visible and not covered up. This permission is valid until 31st December 2025. Under the Consumer Protection Act, 2019, customers have the right to know about price changes and be protected from unfair trade practices. That means businesses must inform consumers as soon as new prices are applied. The Department of Pharmaceuticals also issued similar instructions on 12 September 2025. Even though the GST anti-profiteering rules are inactive, the Government is signalling that it won't tolerate profiteering. If needed, it may use other laws like the Consumer Protection Act to ensure businesses pass on the benefits of GST rate changes to customers.

A commendable example for the rate cut benefit pass on to consumers include Revant Himatsingka's (also known as Food Pharmer) whey protein brand 'Only

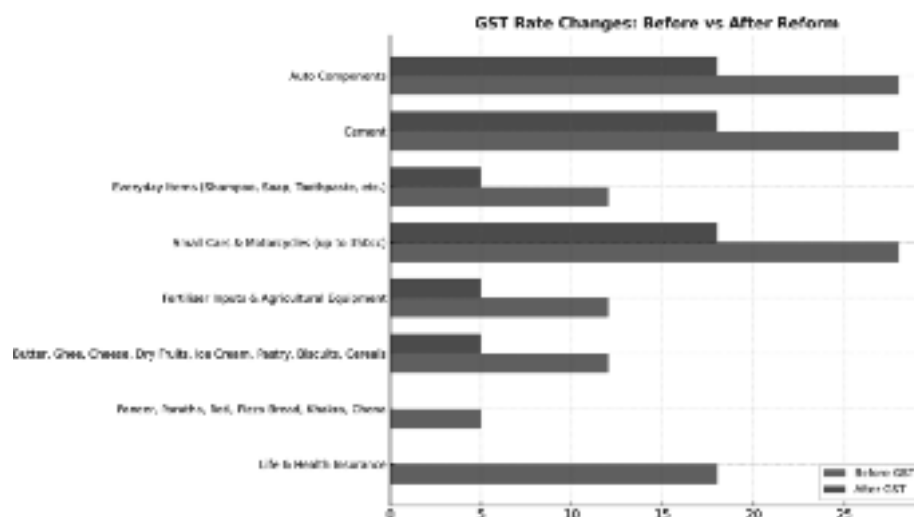


Figure 1: GST Rate Changes vs After Reform
(Source: The Valuation School Research)

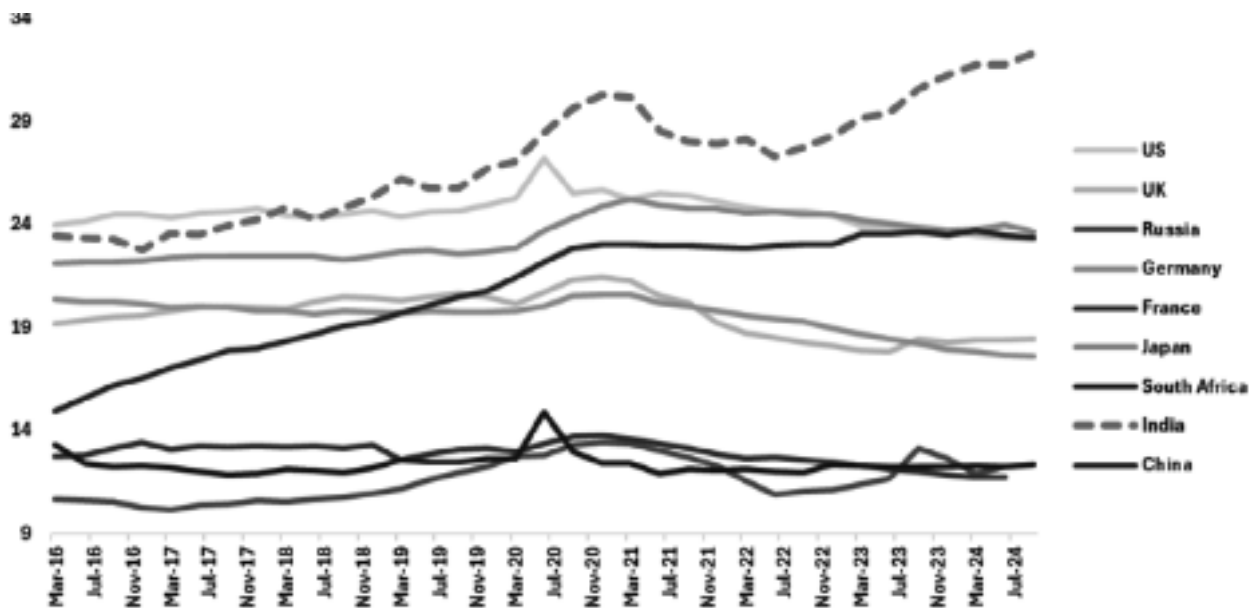


Figure 2: Non- Housing Household
(Source: Marcellus Investment Managers)

What's Needed'. On the 20th of September, he released a post on Instagram urging consumers not to buy his protein for the next two days as he wanted to pass on the entire tax reduction benefit to all the consumers as the tax on protein dropped from 18 per cent to 5 per cent. He further wrote 'This means, on Monday instead of 2799 INR per kg, are protein will cost 2491 INR per kg. I want to thank the government for making protein more affordable in India! I also want to encourage companies to not do a 5-7 per cent reduction in price and pass on the benefit to consumers entirely. You've helped me build this protein, and I will make sure that any such benefits are fully passed down to you'.

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Only then can the arduous process of restoring reputational capital (Rebuilding Trust) begin with any hint of credibility.

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The Corporate Crisis Trifecta

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Atishay Pandya

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ABSTRACT

‘Crisis management is not just about damage control; it is about value preservation, strategic recalibration, and reputational restoration’

In today’s era of Hyper-transparency, corporate scandals are no longer short-lived reputational hiccups - they have become existential shocks that can undermine brand credibility, unsettle leadership, and threaten company’s survival. This paper proposes the Corporate Crisis Trifecta, a framework positioning that recovery hinges on the interplay of three pillars: Securing Capital for financial Survival, Forging Strategy for a new corporate direction and Rebuilding Trust through stakeholder communication. The framework is applied to the case of Volkswagen’s Dieselgate Scandal, which cost the company over \$33 billion and catalyzed a fundamental strategic pivot

towards electric mobility, supported by sweeping rebranding campaigns. The analysis shows that piecemeal responses fall short - true resilience in the 21st century demands an integrated approach. Ultimately, the Trifecta demonstrates that crisis recovery is not damage control, but a re-engineering of the corporate future itself.

INTRODUCTION

In today's volatile business landscape of instant information and digital accountability, a corporate crisis is no longer an episodic anomaly but a potential extinction-level event. PwC Global Crisis and Resilience Survey 2023 noted that 100% of Australian Organisations experienced some kind of disruption in the last 2 years. A Single Crisis, amplified by 24/7 media cycles, can erase decades of brand reputation and vaporize billions in market capitalization. Traditional, siloed approaches to crisis management - where teams operate in isolation - are profoundly inadequate for the level of complexity of threats.

This paper successfully argues the need for a holistic approach, a framework we term the 'Corporate Crisis Trifecta'. Our Central thesis is contingent on the synergetic interplay of three domains: Financial Stability, Strategic Direction and Brand Reformation. These pillars are mutually constitutive: marketing cannot legitimize hollow strategies, strategy cannot be executed without fiscal oxygen, and finance alone cannot provide assurance in the eyes of the Stakeholders.

To validate this, the study leverages the Volkswagen 'Dieselgate' Scandal - a crisis which brought a global giant to its knees. Yet, VW's rebound through its 'Together - Strategy 2025' provides a compelling real-world illustration of the Trifecta in action.

Literature Review and Theoretical Framework

In today's fast-paced business environment, crises have moved beyond temporary reputational issues to become serious turning points that can undermine an organization's legitimacy and ongoing operations. Current research focuses too

much on the signs of recovery and storytelling, often overlooking the financial structures and strategic choices that influence how well communication with stakeholders can be trusted.

Two main theories guide this area of study: Attribution Theory and Situational Crisis Communication Theory (SCCT). Attribution Theory (Heider, 1958; Weiner, 1985) looks at how people assign blame. It suggests that stakeholders view crises based on factors like responsibility, stability, and control, which affect the severity of reputational harm. This shows that crises are not fixed events but social constructs that media coverage and cultural expectations can amplify. Building on this, SCCT (Coombs, 2007) provides a practical approach for aligning organizational responses with stakeholder views. It identifies three main strategies: deny, diminish, and rebuild, each tailored to the perceived level of responsibility. However, SCCT has its limits. For instance, a rebuild strategy only works if it is backed by actual financial resources and meaningful changes. Without these, even the best-crafted apology can seem insincere or superficial.

Together, Attribution Theory and SCCT emphasize the symbolic aspects of recovery but also highlight a significant drawback: words alone cannot solve structural issues. An apology without compensation feels meaningless, a strategic shift without funding stays a hope, and financial recovery without earned reputation often goes unnoticed. The Corporate Crisis Trifecta addresses this gap by framing crisis recovery as an integrated process. Financial Stabilization supports organizational survival, Strategic Direction sets the path for operational change, and Brand Reformation



Figure 1. How emotions drive reputation during a crisis.
(adapted from Coombs, 2007).

rebuilds stakeholder trust. By connecting communication to broader financial management and strategic actions, the Trifecta provides a clear view of resilience, showing that recovery depends as much on an organization's ability to act decisively as on its skill in communicating intentions.

The Corporate Crisis Trifecta Framework

A multi-faceted crisis ignites a chain of problems that threaten a company's existence. To address the gap identified in the literature, this paper proposes the Corporate Crisis Trifecta, a framework of integrated solutions beyond a mere checklist with each pillar directly addressing a different aspect of the threat.

The Existential Threat of Insolvency

The immediate threat of financial collapse, plummeting market capitalization and the burden of fines and litigation create a significant risk of insolvency.

Solution: The first pillar focuses on securing the fiscal oxygen required to fund the recovery through effective liquidity management, Investor Relations, and Cost Containment.

The Vacuum of Leadership and Direction

A crisis of integrity undermines trust in leadership and vision. Lack of a credible path forward will cause organization to drift.

Solution: This pillar, a proactive function, represents the intellectual blueprint to fundamental change for the company's future. It conducts a root-cause analysis, holds leaders accountable and defines a clear strategic shift.

The Erosion of Public Trust

Beyond financials, a crisis erodes years of brand reputation and public trust, severing the company's connection with customers and society.

Solution: The public-facing pillar leverages marketing and communication to launch 'Rebuild' Strategy,

initiating Authentic Communication, Stakeholder Engagement, and Narrative Transformation.

CASE STUDY : VOLKSWAGEN

To Validate this framework, this paper will conduct an in-depth analysis of one of the most significant corporate scandals of the 21st Century: Volkswagen's 'Dieselgate.' For years, under the banner of its 'Clean Diesel' marketing, German Automaker Volkswagen (VW) concealed illegal 'defeat devices' in more than 11 million vehicles worldwide. This software manipulated emissions tests to meet U.S. Environmental Protection Agency (EPA) standards, hiding the fact that in real-world driving, the cars emit nitrogen oxides (NO) at levels up to 40 times the legal limit.

This premeditated, systematic fraud was publicly exposed by the U. S. Environmental Protection Agency (EPA).

The revelation triggered an immediate and catastrophic crisis: VW's CEO reigned, stock prices plummeted, and its globally trusted reputation and integrity was shattered, costing the company tens of billions of dollars.

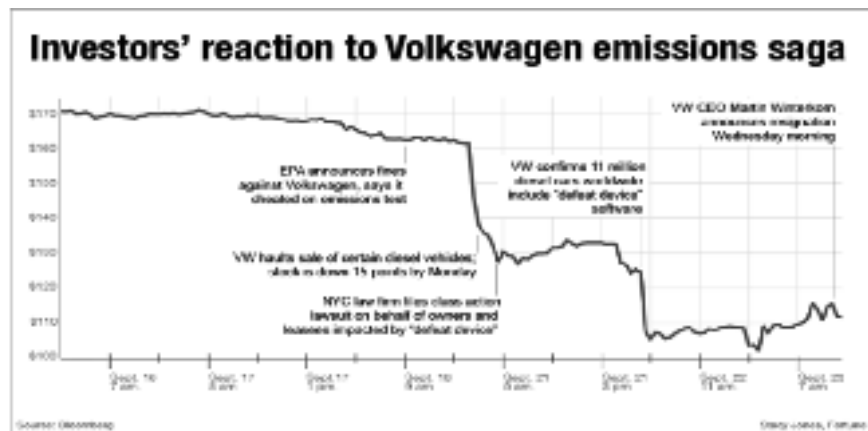


Figure 2: Timeline of Volkswagen's tanking stock price
(Source: fortune.com)

Pillar 1: Financial Response : Penalties, Market Shock, and Emergency Support

When the emissions scandal came to light, Volkswagen was hit like a truck. Almost overnight, lawsuits started

piling up and regulators across the world closed in. In the U.S., the penalties were especially heavy, and other countries weren't far behind, each adding to a financial mess that only seemed to grow bigger by the day. The market didn't wait around either. Investors panicked, and VW's stock sank fast, erasing a huge chunk of the company's value within days. The crash not only hurt confidence but also made it harder and more expensive for VW to borrow money. With its image in pieces and its cash flow under pressure, the company suddenly looked a lot more fragile than anyone had expected.

Pillar 2: Strategic Pivot : Leadership Change and Electrification Volkswagen's way forward really started with two moves: changing who was in charge and changing what the company stood for. The CEO stepped down almost right after the crisis went public, a gesture that made it clear someone at the very top was taking the fall. It was also a signal that VW knew business as usual couldn't continue.

After that, the company turned the page and tried to sketch out a very different future. Electric cars, software, and digital technology weren't just buzzwords anymore, they became the pillars of VW's recovery. New units were set up to handle battery development, partnerships were struck, and money began flowing into projects designed to prove that VW wasn't stuck in the past.

Pillar 3: Communication and Marketing Reformation : Apologies and EV Branding

How VW spoke to the world also changed dramatically. At first, it was all about damage control. The company ran apology ads, executives gave public statements, and the overall message was one of regret and responsibility. The goal was simple: acknowledge what had gone wrong and try to stop the bleeding of trust.

But once the immediate crisis cooled a little, the tone shifted. VW started to rebuild its image by tying the brand to sustainability and cleaner mobility. The spotlight moved to its new electric models, which were positioned not just as cars but as proof that the company was moving in a different direction.

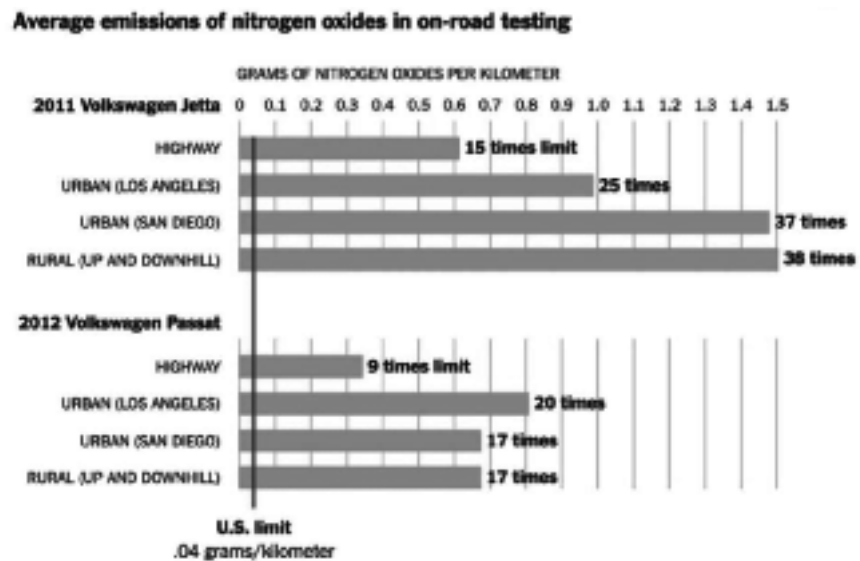


Figure 3: Average emissions of nitrogen oxides in on-road testing
(Source: Primary Data)

The Synergy of the Trifecta

The Volkswagen case exemplifies how the Trifecta functions as a synergetic system rather than a linear checklist, with each element reinforcing the others. VW's multi-billion-dollar strategic transition to electric Cars (EVs) would not have been possible without the financial stability provided by its bridge loan. In turn, the marketing campaign to rebuild trust would have been dismissed as hollow spin without credible proof of this new strategy.

Ultimately, the repaired confidence is crucial for long-term financial survival, emphasizing the framework's

dynamic feedback loop. The case demonstrates that financial strength, strategic clarity, and public trust are not separate goals but fused components of a single, successful recovery.

CONCLUSION

A Corporate crisis is a 'Zeitenwende', German term that literally translates to an epochal shift, that invalidates old orthodoxies and renders a return to the past obsolete. In such moments, piecemeal solutions and siloed tactics are mere palliatives against an existential threat. This paper has contended that the crucible of a contemporary crisis necessitates a unified, threefold response. The Corporate Crisis Trifecta offers this cohesive model, demonstrating that fiscal solvency (Securing Capital) is the bedrock upon which a new corporate trajectory (Forging Strategy) must be built. Only then can the arduous process of restoring reputational capital (Rebuilding Trust) begin with any hint of credibility.

However, this framework's true power extends beyond mere survival, transforming a crisis from a situation to be managed into a strategic inflection point - a valuable opportunity for profound metamorphosis. By treating financial, strategic and reputational imperatives as a single, indivisible whole, the Trifecta provides a way to harness the substantial energy of a corporate failure, directing it towards fundamental reinvention. This shifts the focus from damage control to revival.

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Perception or Structural Reality?

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Sponsorship Turnover in Indian cricket is not about superstition but about the volatile interplay among economics, public perception and culture, business models and commercialization of sport.



THE ECONOMICS BEHIND INDIAN CRICKET TEAM'S SPONSORSHIP TURNOVER

ABSTRACT

Behind the so-called 'jersey-jinx' lies a harsh fact: Indian Cricket team sponsors are falling into trap not because of fate, but due to fragile business models.

The Indian Cricketing world has become increasingly dogged by the notion of a 'sponsorship jinx,' whereby companies investing heavily to adorn Team India's kit purportedly suffer reverses shortly afterwards. Examples like Sahara's collapse through regulatory scrutiny, Byju's financial pressures, and Dream11's regulatory obstacles have done much to spread this notion of 'sponsorship jinx'.

The Indian Cricketing side has a dominant presence in the global sporting arena. In September 2025, it was announced by Apollo Tyres to secure the sponsorship rights to the team's shirt in a landmark deal worth ₹579.06 crore (approximately \$66 million), marking an increase of 62per cent from the previous deal with Dream11 worth ₹358 crore, which was brought to an early end following regulatory changes to the online sports betting sector.

The jump is a proof of the increasing economic significance of Cricket inside India. The total Indian sports sponsorship market reached ₹16,633 crore during 2024 and Cricket captured an 85per cent share and thus proved its undisputed dominance in the sports financial scenario inside India.

The so-called 'jersey-jinx' denotes a clear picture: sponsorship turnovers in the Indian Cricket team are caused due to reasons other than by luck, that include fragile business strategies. Although performance during matches provides brand popularity, overreliance upon unsustainable sponsorship

strategies and perceptions can cause revenue stream volatility. The 579 crore jersey sponsorship agreement with Apollo Tyres is a case in point for why even profitable deals are vulnerable to fissures in initial business planning and suggests commercial viability is as much contingent upon sound economic infrastructures as upon brand appeal.

KEYWORDS : Indian Cricket Team, Dream 11

INTRODUCTION

Everyone has heard the story of King Midas- everything he touched was turned to gold. Similarly in the current scenario, corporate brands sponsoring the Indian cricket team often consider the BCCI as Midas, believing their value will increase the moment they agree on sponsorship pact with the Board. However, most of them end up failing miserably for reasons beyond cricket. The past trends have portrayed that aspiring brands come in with huge fanbase, pleasing announcements and skyrocket deals. They become the 'stars' on the Indian cricket jersey, being highlighted in the national spotlight. But too often it ends up in turbulence.

What surfaces is a clear pattern: sponsorship from BCCI is a risky affair. The brand enjoys limelight and national exposure. But all too often, the spotlight reveals fissures: financial weakness, regulatory challenges, overstretched. Criticizing the alliance as unlucky is an understatement. It is as if the cricket board attracts sponsorships from brands like Midas, yet the brands undergo downfall and receive a curse instead. The glamour brings out the brands in hordes, yet too many of those alliances are spectacular failures.

The problem for the BCCI is to identify a sponsor capable of withstanding such persistent glare. For brands, the takeaway is equally straightforward: do not be blinded by the glitters. It is certain to get noticed — but as for it achieving enduring success is another matter altogether.

The so called 'jersey-jinx' attempts to disclose a harsh fact- The Indian cricket team sponsors falter not because of fate but due to faulty business modes.

Sponsorship Turnover in Indian cricket is not about superstition but about the volatile interplay among economics, public perception and culture, business models and commercialization of sport.

THE 'JERSEY JINX' PHENOMENON AND ITS RATIONALE- IN A NUTSHELL

Sponsorship Jinx', better known as Jersey Jinx, is the belief that the corporate houses that become the Indian cricket team's official jersey sponsor are doomed to experience serious financial, regulatory, and reputational trouble in the future. It is not a curse of the supernatural kind, but rather a trend observed over the decades: India's shirt sponsors — brands that paid enormous sums for on-shirt visibility— tended to struggle thereafter. The jersey sponsorship of the Indian team is one of the highest revenue-yielding and highest-profile sports sponsorships in the world. Its logo is seen by millions of people throughout each game.

Despite the BCCI being the wealthiest cricket board in the world, it has been connected to a popular controversial aspect, called 'jersey jinx'. Board of Control for Cricket in India (BCCI) has partnered with certain extremely lucrative corporations over the past. That is not unusual because partnering with the Indian Cricket Team grants corporations tremendous leverage in the form of surreal brand exposure to an enormous crowd, creating immense brand awareness and reliability among the customers, especially youngsters. The brands seek to benefit from the pre-existing trust factor of the Indian team with the intention of raising their own reputation and credibility. The enormous coverage and engagement potential gives the brands a desirable return on investment (ROI). It is, however, unusual that each one of India's jersey sponsors after handling the Indian team have been subjected to grave difficulties, and Dream11, the most recent jersey sponsor, emerged as the newest victim.

The flourishing popularity of cricket entices both ambitious and risk-taking companies to invest substantial sums in sponsorship fees. Following extensive profile, corporations of this kind are subject to increased public, regulatory, and financial oversight.

Several of them get trapped in business dilemmas, which include shutdowns, downfalls, facing legal suits and several other related factors. This recurring pattern is what brought about the development of the 'jinx' tag.

Beginning with Wills (ITC) in the early 1990s, a number of major sponsors encountered difficulty shortly during their sponsorship tenure. As it kept reappearing, it was nicknamed 'Jersey Jinx' by the press and the fans. The sponsorship 'jinx' of the Indian cricket team is not supernatural, it is symbolic. Brands often sponsor the Indian cricket jersey at their peak, before internal and external pressures reveal vulnerability. The jersey, therefore, is not merely a curse but rather a mirror. It reveals whether a brand is capable of thriving beyond the spotlight of the nation.

RATIONALE BEHIND THE JINX

Industrialist Harsh Goenka highlighted the risks involved with cricket sponsorships with one tweet which went wildly popular on X (formerly Twitter). His tweet read, 'Want to test your brand's survival skills? Forget the stock market. Try sponsoring the Indian cricket team jersey!' The industry players involved described this situation as the 'jersey jinx.'

These comments followed days after the government introduced the Promotion and Regulation of Online Games Bill, 2025, and fantasy gaming giant Dream11 ended its 358-crore front-of-jersey deal with the Board of Control for Cricket in India (BCCI).

At the cultural level, cricket in India has for a long time operated as more than a sport; it gets labeled as a 'religion,' in which myth and destiny mingle with performance. Fans get used to encapsulating cricketing

success with a sense of omens—Sachin Tendulkar's 'lucky' gloves, MS Dhoni's 'midas touch,' or the national fixation upon numerology in jersey numbers. Against this cultural context, the suggestion that corporate sponsors may get cursed comes naturally as part of the script of destiny running cricket.

Simple narratives fit the psychology of humans. Nobel laureates Daniel Kahneman and Amos Tversky illustrated how humans prefer narratives which make erratic events significant. They would rather subscribe to 'the jersey is cursed' than acknowledge complicated issues like debt, regulation, or volatility.

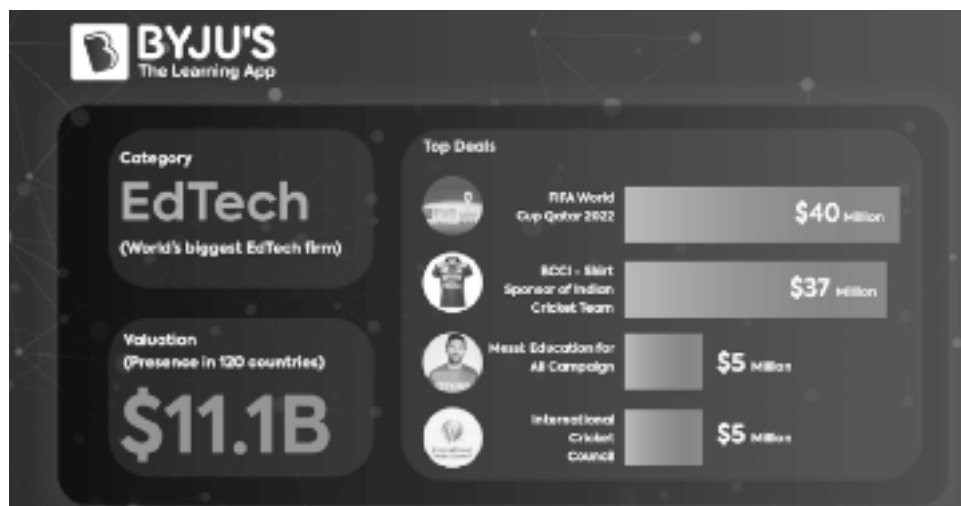


Figure 1: Byju's Burnout- \$87 million in Sponsorships- a Costly Overreach which dried up its financial resources
(Source: Primary Data)

The sensationalization of media matters a lot. News cycles depends on sensationalism: a headline announcing 'Byju's falling prey to the jersey curse' stirs up more interest than a debate over debt restructuring. In the year 2019 when Byju's held the sponsorship, several media channels presented the losses of the edtech company as a furtherance of the curse, although analysts cited aggressive acquisitions and unrealistic valuations. The consistent reporting by print, television, and social media of the superstition narrative cements the 'sponsorship jinx', so it persists with each successive sponsorship cycle.

Ultimately, superstition instills a sense of comfort as it is easier to condemn 'bad luck' than to acknowledge that India's business landscape, just as India's cricket team sponsors, can be fragile. In this context, the jinx does not merely reflect narrative about sport—it is an approach of securing hope. Such jinx fulfills cultural, psychological and social narratives which frigid economic data is unable to accomplish and persist such fulfillment.

CASELETS



Figure 2: The sponsors of the Indian cricket team over the years
(Source: Primary Data)

1. ITC LTD (WILLS and ITC HOTELS) (1993-2001)

Overview:

BCCI's maiden major sponsorship came in 1993, when Wills and ITC Hotels divisions of its owner company, ITC Limited, enrolled as the jersey sponsor. It lasted up till 2001, after which new legislation enacted by the government prohibited cigarette companies from sponsoring sports, and ITC withdrew. The Wills logo first appeared on the first colored jersey of the Indian cricket team at the 1996 Cricket World Cup, and it was a moment of pride for the fans. It was the principal lead sponsor, also known as the sleeve sponsor, of the team.

The World Cups were then sponsored by business houses, and Wills again sponsored the 1996 event. Wills was a lead sponsor and carried India through two World Cups and two mini-World Cups before ICC took over the sponsorship rights of the event in 1999. And for those years of their partnership, Wills was the buzzword across the country among viewers, offering the brand a lot of exposure, getting noticed among viewers at the stand and more at home in front of TV sets. The laws surrounding surrogate advertising started getting tougher, and thus Wills was forced to end its sponsorship of the team.

Key statistics:

The deal was worth 35 lakh per Test and 32 lakh per ODI.

Economics and Business Inferences:

- The economics and terms of sponsorship deals were modest given the multi-crore partnerships of today. ITC used the national reach of cricket to get early brand loyalty. It provided unparalleled national publicity at little expense.
- Exit was only regulation-driven: Government restrictions on tobacco advertising made continued sponsorship impossible. It was not only a marketing choice but a risk-management choice, balancing exposure and compliance. Regulatory tail risk (tobacco ad ban) demonstrated that a successful, highly publicized sponsorship would be unilaterally terminated.

- Such exit established the tone for future sponsorship deals — balancing exposure, brand relevance, and sector-specific legal risk.

Takeaway:

Regulation can end even a successful partnership between a brand and a sporting team overnight. Visibility and Popularity of a brand can not define and assure its longevity.

2. SAHARA INDIA (2001-2013)

Overview:

It was in 2001 that Sahara secured the rights of sponsorship, and their logo began appearing on the Indian cricket jersey. Sahara India first appeared as the national team's shirt sponsor in 2001 and, for more than a decade, was closely associated with Indian cricket's golden period.

Sahara India was the lead jersey sponsor of the Indian national cricket team from 2001 till 2013, a period of significant progress for the team; nevertheless, the relationship ended since the organization was facing serious financial and legal challenges, including allegations of illegitimate fundraising from investors. During this partnership, the Sahara symbol adorned the jerseys at both the 2003 World Cup and the successful 2011 World Cup; however, the eventual collapse of the sponsor meant its exit in 2013.

Sadly, Sahara's goodwill was not enough to shield them from regulatory bouncers hurled at them by SEBI due to dubious fund-raising schemes. The diverse ventures of such a conglomerate company eventually experienced a fatal collapse. Forced to repay thousands of crores to investors, Sahara watched its empire collapse like house of cards. Founder Subrata Roy even traded in the luxurious owner's box for prison time, and Sahara quickly withdrew from the field of sponsorships, demonstrating that not all innings end on a good note.

Key statistics:

The per match sponsorship fee was fixed at Rs. 3.34 crores per each test, odi and t20 match.

Economics and Business Inferences:

- The sponsorship showed the value of lasting presence and brand growth through continued affiliation. Longevity was achieved because Sahara was financially robust and aligned with BCCI's long-term vision.
- Emphasized even large-scale sponsorships are at risk of corporate governance and regulatory problems. Sahara India sudden exit was prompted by poor governance and regulatory problems, rather than

poor market performance — differences with BCCI and subsequent legal investigation rendered continuation impossible.

Takeaway:

Longevity of a brand can build its legacy, but lapses in company's governance, and regulatory and administrative issues can quickly wipe out such legacy completely.

3. STAR INDIA (2014-2017)

Overview:

Star India, the television network, had bagged Indian team sponsorship rights for a period of four years, from January 1, 2014, to March 31, 2017. Star was also title sponsor of BCCI for its international and domestic matches until March 31, 2014, and did also have broadcast, internet and mobile rights of Indian cricket until March 2018.

Star India's case is an exception to the common trend of 'curse' stories, as the company did not suffer failure. Instead, it was an intentional business move of withdrawal due to escalating competition in regards to sponsorship rights, driving prices to exorbitant numbers. It chose not to renew the contract and instead narrowed down its resources to focus on acquiring the much more profitable broadcasting rights to both Indian Premier League (IPL) and international cricket, acquiring it through an unprecedented bid. Their withdrawal highlighted another kind of hardship: unsustainable and prohibitive cost related to sponsorship itself.

Key Statistics:

Star India's bid was worth Rs.1.92 crores per match for bilateral series and Rs. 61 lakhs per match for ICC sponsored tournaments.

Economics and Business Inferences:

- Sponsorship utilized cross-promotions with Star's cricket broadcast rights.
- They planned to exit — contract term concluded and marketing considerations for Star changed.

Focused on profits from sponsorship as well as broadcast rights.

- Portrayed that sponsorship from adjoining businesses is better than over-extension.

Takeaway:

Having both the broadcasting rights and the jersey sponsorship rights provided great short-term exposure for Star, but there wasn't any core business requirement, and hence, this alliance between Star India and BCCI was never meant to last long.

4. OPPO (2017-2019)

Overview:

In 2017, Chinese telecom giant Oppo bagged sponsorship rights through an impressive bid of 1,079 crore for a period of five years. The contract displayed the pinnacle of Indian smartphone market expansion and also Chinese players' aggressive marketing strategies.

Oppo, one of China's leading technology businesses, who once was an Indian mobile giant, partnered with Indian cricket for three years from 2017 to 2020. However, as tensions in India-China relations escalated, there was immense pressure on BCCI to release their principal sponsors. Eventually, Oppo was forced to withdraw due to growing pressure, and this saw BCCI sever sponsorship links with a profitable sponsor who had wished to continue supporting Indian cricket for long.

Key Statistics:

According to the sponsorship deal, Oppo was paying BCCI Rs 4.61 crore per bilateral match and Rs 1.56 crore for an ICC event game.

Economics and Business Inferences:

- Oppo presumed that there would be extensive publicity to support driving telephone sales in India; however, those expenses were too great in comparison to profits realized.
- In 2019, Oppo transferred the sponsorship rights to BYJU'S because the sponsorship became financially

unsuitable— not because Oppo was structurally fragile, but because they understood that the money could be better used in direct advertising and retail push.

- Oppo pulled out because of unfavorable economic and geopolitical terms, as it realized that the sponsorship was unsustainable and provided low returns, and furthermore there was presence of political tensions between India and China.

Takeaway:

When overpriced sponsorship deal undermines its value and geopolitical tensions degrades the element of trust, even the biggest sponsorships crumble.

5. BYJU'S (2019-2023)

Overview:

Byju's acquired the sponsorship at the height of its clout. As India's most valuable startup and leading player in the world's ed-tech market, having its logo on the jersey symbolized India's new-age tech economy's arrival. The sponsorship also continued through the pandemic, which at first saw tremendous growth for online education sites.

The collapse of the Byju's deal was as sensational as the subsequent decline of the company. The post-Covid world re-opened and the ed-tech sector slowed down considerably. The spotlight shone brightly on Byju's over questionable accounting practices, large-scale retrenchments, and growing financial strains. ED had put out a lookout circular against founder Byju Raveendran, and searched the company's premises. The deal with the Board of Control for Cricket in India (BCCI) concluded in an acrimonious fashion over alleged defaults, and in fact, saw it being taken to court by the BCCI. The jersey sponsorship fell as one high-profile victim of the larger meltdown in the ed-tech segment.

Key Statistics:

Byju's sponsorship deal fees were Rs. 4.61 crores per bilateral match and Rs. 1.56 crores per ICC match.

Economics and Business Inferences:

- Byju's pulled-out of sponsorship deal due to financial pressures and governance controversies which underlined the financial fragility of startups in long-term sponsorships.
- Sponsorship strategy of Byju's was prestige-oriented, not cashflow-based, which led to such downfall that even the popularity offered by cricket could not counter liquidity and compliance demands.

Takeaway:

Huge popularity and visibility are not enough to cover fragile financial resources of company. If the funds of company dries up, the sponsorship ends.

6. DREAM 11 (2023-2025)**Overview:**

Online fantasy sports platform Dream11 became the lead sponsor during mid-2023 with a three-year agreement. Like Byju's, it was one of the Indian tech startups of the new age that were flourishing as digital business houses. The Real Money Gaming (RMG) segment was booming and the partnership appeared a natural extension.

The 'curse' reared its head once again, this time in the form of a substantial regulatory intervention. Seeking to avert fears of addiction and financial risks, the Government of India announced a blanket prohibition of all online fantasy gaming websites, slated to be implemented in August 2025. With the prohibition of its core business model, Dream11 has announced the shutdown of all real-money games activities on the platform. With the removal of its chief revenue stream, continuation of a multi-crore sponsorship should become unrealistic. Dream11 backed out of the deal, the second occasion where a sponsor has had a truncated tenure as a result of a wide-ranging governmental ban, as with ITC two decades ago.

Key Statistics:

The Sponsorship fees were Rs 3.5 crore for bilateral matches and around Rs 1.5 crore for multilateral

fixtures, specifically in the ICC and ACC tournaments. It paid a sponsorship fee of around Rs 358 crores for a 3-year deal.

Economics and Business Inferences:

- Economics appeared feasible since fantasy gaming businesses were rapidly growing and generating good cash flows.
- However, the Online Gaming Regulation Bill of 2025 prohibited real-money gaming sponsorships of sports and compelled an early withdrawal.
- This reveals that ROI of sponsorship in emerging, regulated markets isn't merely a function of money spent — it's correlated with policy risk.

Takeaway:

Dream 11's exit from sponsorship deal is evident of the fact that when laws change, even the most stable and the strongest sponsorships can disappear overnight.

FROM VISIBILITY TO VULNERABILITY- THE SPONSORSHIP EFFECTS

Sponsorship income from the Indian cricket team does not come from perception or popularity of a company, but from a multi-dimensional combination of structural realities. The frequent occurrences of the withdrawal or pullout of sponsors from cricket in India symbolize more than myths, they instead indicate underlying economic vulnerabilities that often go unnoticed until a crisis arises. A highly conclusive predictor of the trend includes the substantial value of the sponsorship contracts, Regulatory factors and the financial burden which they leave on the concerned firms.

For instance, OPPO India managed to win the bidding for the sponsorship rights of Team India for 1,079 crore (≈ US\$150 million) for a span of five years from April 2017—five times the previous Star India bidding. The deal required payment of the order of 4.61 crore for every bilateral match and 1.51 crore for every match during ICC events. Such amounts set a precedent which many sponsors struggle not only to equal but also from a profitability standpoint.

A further illustrative instance is Byju's, which in late 2023 faced allegations from the BCCI regarding a failure to remit ₹158 crore in outstanding sponsorship payments. This failure initiated insolvency proceedings, highlighting the manner in which disproportionate obligations in relation to revenue, cash flow, or overall financial stability can push even well-regarded brands to a critical juncture.

At the same time, the longstanding legal and financial issues of Sahara offer another data point. The company had been directed by SEBI in 2011 to pay back nearly ₹25,163 crore to investors, but by 2023, just around ₹138 crore had been made in actual refunds despite huge sums deposited. That reveals how even financial giants synonymous with cricket have vulnerabilities not only in the sphere of brand image, but also in compliance with regulations, with liquidity, and with transparency.

The Promotion and Regulation of Online Gaming Act passed by the Indian Government in 2025 outlawed real-money online gaming and advertising, impacting platforms such as Dream11 right away. This political change compelled Dream11 to terminate its ₹358 crore sponsorship agreement early, exemplifying how extrinsic regulatory mechanisms can change sponsorship scenarios dramatically. The BCCI reacted by putting out bids for new sponsors, bidding for agreements at larger valuations, exemplifying how compliance and governance form part of sponsorship stability.

Cricket Corners India's Sports Media Spend

Cricket's share of spend increased from 85% to 87% in 2023

Media Spend (\$ million)	2022	2023	Increase
Cricket	1,534	1,651	13%
Emerging Sports	265	249	-1%
Total	1,799	1,900	11%

Source: Group M Media - India Sports Sponsorship Report

Bloomberg

Figure 3: A report by Bloomberg showing Cricket's influence in sports sponsorship spending in India
(Source: Primary Data)

Market dynamics also impact sponsorship churn. As per a report by Bloomberg, Cricket influences the sports



Figure 4: A report showing the recent sponsorship rates set up by BCCI for the new sponsor Apollo Tyres
(Source: Primary Data)

sponsorship market of India, which stood at ₹16,633 crore in the year 2024, commanding a share of approximately 87 per cent of all sports sponsorship spending.

Big-ticket contracts like Apollo Tyres' ₹579 crore jersey deal demonstrate the huge sums value brands are prepared to pay for the unparalleled reach cricket offers into audiences. These deals don't happen by chance—there's meticulous valuation of exposure, audience attention, and potential ROI.

These cases as a group exhibit a consistent pattern: companies making big, public sponsorship commitments commonly overestimate their ability to fulfill such promises. Overly optimistic valuation, overreliance on external capital (especially by startups), turbulence in the external regulatory environment (as in fantasy sports or investment regulatory hurdles), and expectations for quick payback all come together to make many such

agreements inherently unstable. Cricket sponsorship operates thereby as a test of stress—the moment of increased prominence quickly becoming a moment of increased risk.

THE DAWN OF NEW ERA OF SPONSORSHIP- APOLLO TYRES LEADS THE WAY

When Apollo Tyres became the Indian cricket team's jersey sponsor in September 2025, it meant more than just adding a new sponsor to be displayed on the Indian cricket team's crest — it showed a return to stability. After years of risky sponsorships from edtech and fantasy gaming companies, the advent of a local industrial brand indicated that sponsorship was moving back to established industries with stronger financial stability.

Public opinions formulated Apollo's case as a stable move in the national interest. The views of Cricket analysts were contrary to Apollo's arrival with the adverse scenarios of BYJU'S financial struggles and Dream11's regulatory exit. In view of some people, Apollo signifies a revival of the days when enduring Indian companies such as ITC and Sahara utilised cricket to build reputation and national reach.

The deal is one of the largest so far, worth about 579 crore for three years, which means approximately 4.5 crore for each match. The reasons why Apollo is investing are clear: cricket gives Apollo a lot of visibility in Tier-2 and Tier-3 cities where there are many cricket fans and a high demand for tyres. In contrast to startups that want quick fame, Apollo's sponsorship is directly linked to strengthening its brand and growing its market. Apollo Tyres is improving its brand image through good faith and perseverance, both in India and at global level. Through international matches played by Indian cricket team, Apollo Tyres gains brand image in international markets it is determined to enter. Further, Apollo Tyre's strong financial position assures that the sponsorship deal is viable, which gives a very little scope for it to collapse under financial or regulatory strains. Ultimately, for the BCCI, this deal induces a sense of belief that after years of sponsorships

turnover, the trust in sponsorship deals can be cemented.

CONCLUSION

The chest of the jersey of the Indian cricket team is arguably one of the most popular sponsorship spots in India. It affords unparalleled exposure, reaching tens of thousands of passionate fans the globe over. Yet a review of the corporate fates of its lead sponsors reveals a fascinating but not uncommon pattern. From governmental embargoes through spectacular financial setbacks, the firms advertised on the storied blue jersey have frequently faced adversity, leading many to wonder about the so-called 'Team India Jersey Curse.' It's not a tale of superstition but one of risk laden business wagers running into hard realities of the market.

Sponsoring India cricket team places an organization center stage of public attention while also exposing it to intense analysis. This undertaking involves generating huge financial investment as well as a strong and sustainable enterprise structure. As Apollo Tyres becomes the new lead sponsor of Indian Cricket team, it will be well aware that it is not merely purchasing advertising arena but a high-stakes gamble for which the exposure is unparalleled but the potential pitfalls have been historically strong.

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Festivonomics of Durga Puja: A Cultural Catalyst in the Vibrant Economic Growth of West Bengal

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The festival season also generates large-scale temporary employment, sustaining livelihoods of artisans, service providers, small traders and workers of the unorganized sector.



ABSTRACT

Durga Puja, the grand annual festival of West Bengal, is not only a cultural and religious celebration but also a major driver of the state's economy. Recognized by UNESCO in 2021 as part of the "Representative List of the Intangible Cultural Heritage of Humanity," the festival stimulates wide-ranging economic activity that spans across sectors such as handicrafts, idol-making, decoration, textiles, retail, hospitality, tourism, transport, food, and entertainment. Small-scale artisans and local businesses witness a significant rise in demand, while corporate houses and global brands capitalize on heightened consumer spending during this period.

The festival season also generates large-scale temporary employment, sustaining livelihoods of artisans, service providers, small traders and workers of the unorganized sector. Furthermore, Durga Puja boosts domestic and international tourism, with Kolkata emerging as a congregation of cultural tourism and global attention.

Beyond its religious essence, Durga Puja serves as a vibrant economic engine, contributing substantially to the Gross State Domestic Product (GSDP) of West Bengal and reinforcing the integration of culture with commerce.

In this article, the theme of analysis is focused on the impact and importance of Durga Puja on the economy of West Bengal. It aims to highlight the invaluable contribution of one of the world's largest festivities, on the shadowed lives of poor artisans and seasonal workers. It effectively concludes that while festivity may indicate a huge squander of wealth and money, it still forms the only source of food for innumerable stomachs of the informal sector.

KEYWORDS: Durga Puja, West Bengal, UNESCO Intangible Cultural Heritage, Idol-making, Employment, Cultural Tourism, Economic Engine.

ECONOMIC DIMENSIONS OF DURGA PUJA

The economic impact of Durga Puja is multidimensional, encompassing both formal and informal sectors, and spanning across several industries including handicrafts, hospitality, tourism and so on. The festival stimulates the creative economy, which includes idol-making, pandal construction, decoration, lighting, textiles, and handicrafts. According to a study conducted by British Council in 2019, the creative economy comprising Durga Puja in West Bengal was valued at approximately 32,377 crore, contributing nearly 2.58% to the state's GDP. This figure highlights the festival's substantial role as a seasonal economic engine.

Idol-making and handicrafts constitute the core of the festival's creative economy. Artisans dedicate several months to meticulously crafting idols, employing traditional techniques that have been passed down through generations. This industry sustains the livelihoods of thousands of families, particularly in semi-urban and rural areas, and serves as an important channel for preserving intangible cultural heritage.

Apart from idol-making, pandal constructions and intricate decorations constitute a significant segment of the festival's economic activity. Elaborate thematic installations, designed and constructed by teams of carpenters, painters, decorators, and electricians, attract significant footfall from both domestic and international tourists. These temporary setups stimulate demand for raw materials, lighting, fabrics, sound systems, and ancillary services, creating extensive economic ripple effects across multiple supply chains.

Retail, Hospitality, and Consumer Expenditures:

Durga Puja also generates substantial retail and consumer demand, manifesting in heightened sales of clothing, jewellery, household goods, and festival-specific paraphernalia. Local markets, shopping malls, and e-commerce platforms experience remarkable surges in transactions, with consumer expenditure

often extending to weeks before and after the festival. The food and beverage sector similarly experiences pronounced growth, encompassing street vendors, catering services, restaurants, and seasonal food stalls. Traditional Bengali cuisine, sweets, and festive delicacies contribute significantly to revenue generation, while simultaneously reinforcing regional culinary identity.

Transportation and logistics sectors also benefit, as the influx of pilgrims and tourists drives demand for public and private transport, freight services, and urban mobility solutions. Collectively, these sectors illustrate the festival's capacity to integrate multiple industries into a cohesive seasonal economic ecosystem. In 2023, the retail sector alone accounted for about 33,000 crore of the total Puja economy, with retail businesses in apparel, footwear and home appliances experiencing significant growth.

Employment Generation and Social Implications:

An important dimension of Durga Puja's economic significance is its role in employment generation, particularly in the informal and unorganized sectors. The festival offers temporary employment to artisans, carpenters, electricians, decorators, labourers, food vendors, security personnel, and sanitation workers. For many families, the seasonal income earned during Durga Puja constitutes a critical component of their annual earnings.

According to reports from Government of West Bengal, the festival creates employment for more than 300,000 individuals, providing income, skill enhancement, and opportunities for upward socio-economic mobility. Consequently, Durga Puja functions as a vital instrument for poverty alleviation, particularly for marginalized communities dependent on seasonal labour. This dual role, as a cultural celebration and a livelihood generator, evidently highlights the festival's complex socio-economic significance.

Tourism and Cultural Commodification:

Durga Puja's allure extends beyond regional and national boundaries, attracting domestic and international tourists. The festival's elaborate thematic pandals, intricately crafted idols, and vibrant cultural

performances position Kolkata as the nucleus of cultural tourism. In 2024, the state welcomed over 18.5 crore visitors during the Puja season, many of whom timed their travel to coincide with the festivities. Hotels, guesthouses, and homestays experience near-full occupancy, while visitors' expenditure on local attractions, transportation, and souvenirs contributes further to regional economic activity.

Cultural events, including music, dance, and theatrical performances, provide additional employment for artists, technicians, and support staff. The global visibility of Durga Puja through media coverage and social platforms enhances Kolkata's reputation as a cultural capital, facilitating both tourism growth and investment in related industries. The festival thereby exemplifies the interconnection between heritage-based cultural activities and economic development.

Community Participation and Social Cohesion:

Community involvement remains central to the organization and execution of Durga Puja. Local

committees, neighbourhood associations, and volunteer groups collaboratively oversee pandal construction, cultural events, and charitable activities. This participatory model fosters social cohesion, strengthens networks for economic collaboration, and ensures that the festival's benefits are locally embedded.

Community engagement promotes accountability, sustainability, and cultural continuity, reinforcing the symbiotic relationship between economic development and social capital. Local clubs and committees organize the festivities, fostering a sense of unity and collective purpose. These community-led initiatives not only enhance social cohesion but also contribute to the local economy through the procurement of materials, hiring of services, and organization of events.

Integration of Modern Marketing and Digital Platforms:

The festival economy has increasingly integrated



*Figure 1: Community Celebration and Societal Involvement enhances devotion towards the Almighty and enriches grandeur of Durga Puja Festival.
(Source: World News Centre at India).*

modern marketing strategies and digital platforms. Corporates, startups, and local businesses leverage Durga Puja for promotional campaigns, brand visibility, and direct consumer engagement. Social media amplifies visibility, allowing artisans and small businesses to showcase their products to a global audience. E-commerce and online platforms provide supplementary revenue streams, enhancing market access and democratizing economic opportunities. This interplay between traditional cultural practices and contemporary digital technologies exemplifies the adaptability of the festival economy to modern commercial imperatives.

Resilience of Traditional Economies:

Durga Puja also illustrates the resilience and adaptability of traditional economies in the face of modernization. Despite the proliferation of global brands, the festival continues to prioritize local craftsmanship, cultural authenticity, and creative ingenuity. The synergy between tradition and modernity ensures the sustainability of seasonal economies that thrive on artistic expression, consumer engagement, and cultural participation. The festival effectively demonstrates that heritage-based industries can catalyse economic diversification, foster entrepreneurship, and drive innovation, highlighting the broader developmental potential of cultural festivals.

Environmental and Infrastructural Challenges:

Despite its economic benefits, Durga Puja poses significant environmental and infrastructural challenges. Idol immersion in rivers and lakes often leads to water pollution, while the widespread use of non-biodegradable materials, synthetic paints, and plastics exacerbates ecological strain. To address these concerns, initiatives promoting eco-friendly materials, controlled immersion sites, and recycling practices have emerged. However, the harmonisation of economic growth with environmental sustainability remains a critical policy challenge.

Urban infrastructure also faces substantial pressure during the festival. High population density, increased traffic, and the concentration of festival-related activities strain public services, sanitation, and

emergency management systems. Effective urban planning, crowd management, and investment in public amenities are essential to ensure both the safety and comfort of residents and visitors. Recent efforts in Kolkata, such as traffic rerouting, pedestrian zones, and systematic waste management, demonstrate the potential for festivals to initiate improvements in urban governance and administration.

Economic Equity and Inclusive Growth:

While the festival generates substantial economic gains for urban businesses, corporate entities, and affluent communities, these benefits are not uniformly distributed. Artisans and seasonal labourers, despite their critical contributions, often receive low wages and operate under precarious employment conditions. Addressing these inequities necessitates policy interventions, including fair wage regulations, social security provisions, and skill development programs. Ensuring the economic benefits of Durga Puja reach all participants involves reinforcement of both social justice and cultural sustainability, thereby highlighting the festival's role as a medium for inclusive economic growth.

Integrating Tradition with Economic Growth: The Enduring Impact of Durga Puja:

Durga Puja represents a compelling convergence of culture, religion, and economy. Beyond its devotional and ceremonial significance, it functions as a major economic driver, stimulating widespread employment, consumer spending, tourism, and entrepreneurship. The festival's recognition by UNESCO in 2021 has further enhanced its global profile, attracting investment, tourism, and media attention. Nonetheless, achieving sustainable growth necessitates careful management of environmental, social, and infrastructural challenges. Inclusive policies, eco-friendly practices, and equitable distribution of economic benefits are essential to maximize the festival's developmental potential. Durga Puja exemplifies how cultural heritage can be harnessed as a vehicle for economic prosperity, providing livelihoods, promoting commerce, and reinforcing West Bengal's identity as an epicentre of vibrant cultural and economic traditions.

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The growing utilisation of the US sanction has led to other countries perceiving the dollar as a tool, and it is instigating a strategic shift toward de-dollarization.

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The Unravelling Hegemon: The Evolving Trajectory of the us Dollar's Global Dominance

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ABSTRACT

The supremacy of the US dollar, which came into place following World War II and was consolidated by the petrodollar arrangement, has given the United States of America a significant economic and geopolitical privilege. This "exorbitant privilege" has allowed for cheap borrowing and an immense instrument of financial sanctions. But this single-polar system is confronted by a surging phenomenon of De-Dollarization. The growing employment of

sanctions by the United States has encouraged countries to pursue increased financial sovereignty. This trend can be seen in the diversification of central bank reserves, the spread of bilateral trade agreements in local currencies, and the creation of alternative financial infrastructure. Although the decline of the dollar will be slow as a result of its deep network effects, the world is shifting towards a multipolar financial system with far-reaching consequences for the world economy and power balance.

KEYWORDS: World War II, De-Dollarization

EXECUTIVE SUMMARY

The United States dollar has persistently remained at the center of the international financial order for more than eight decades, a staged position that has been justified by historical incidents and conscious policy. This hegemony began in the post World War II era, and was formalized by the Bretton Woods Accord, and was later underpinned by the de facto petrodollar system. The superiority of the dollar has given the United States considerable economic and geopolitical influence, commonly called an "exorbitant privilege," with advantages like cheap borrowing and the potent instrument of financial sanctions.

Yet, a convergence of economic and political elements is currently posing a threat to this unipolar monetary system. The growing utilisation of the US sanction has led to other countries perceiving the dollar as a tool, and it is instigating a strategic shift toward de-dollarization. It is occurring in the form of currency diversification in the reserves at the central banks, an expansion of bilateral local currency trade agreements, and alternative financial infrastructure development to circumvent the dollar-dominated system. Though the dollar's network effects and the absence of a single, viable replacement currency ensure the decline is gradual, not sudden, the direction is certain. The globe is converging on a multipolar monetary system, one that will have far-reaching implications for the global economy and the distribution of geopolitical power.

The Foundation of Supremacy: The Dollar's Ascendancy in the Post-War Order

The Aftermath of World War II: The Crucible of Economic Hegemony

Following World War II, the US had a strong industrial economy and a large share of the global gold reserves. Strategic utilization of currency by the US government during the war, for instance, changing coins to save industrial metal and creating special "Hawaii" notes to keep cash out of enemy control, anticipated its subsequent application of currency as a tool for geopolitical influence.

The Bretton Woods Accord: The Accidental Pillar of Dollar Dominance

The Bretton Woods Agreement of 1944 established a new monetary system where member states signatory to the agreement fixed the value of their currencies against the US dollar, which was fixed against gold at \$35 an ounce. While previous suggestions had considered a more multilateral system, the dollar was chosen to be the anchor currency on grounds of pragmatism, as there was no other currency that was as stable and convertible into gold.

This further solidified the dollar at the center.

The Exorbitant Privilege: The Benefits and Burdens of Financial Hegemony

The Petrodollar System: A New Anchor

By the late 1960s, an excess of dollars made it impossible for the US to back its currency with gold, so there were speculative runs.

President Richard Nixon ended the convertibility of the dollar to gold in 1971. To preserve its standing, the US initiated the unofficial "petrodollar" system, reaching an agreement with Saudi Arabia and other OPEC nations to sell oil in dollars. This spawned chronic worldwide demand for the dollar, with surpluses re-investing in US assets.

The Power Mechanisms: Seigniorage and Sanctions

The reserve status of the dollar offers two important advantages: seigniorage (cost savings on money creation) and geopolitical leverage in the use of sanctions. As a majority of international transactions are in dollars and clear via the US banking system, the

government can freeze accounts and grab assets. But the application of sanctions has generated a backlash. The freezing of Russian reserves in 2022 was a "wake-up call," encouraging countries to pursue "greater autonomy" from the US.

The twofold nature of the dollar's supremacy both a major benefit and an intrinsic burden is one of the defining characteristics of its function.

The Ebbing Tide: The Multi-Front Challenge to Dollar Dominance

The Motivations for De-dollarization

De-dollarization is motivated by economic independence and resilience, as well as decreased exposure to US policy whims. Sanctions as a foreign policy instrument have encouraged nations to insulate their assets from possible future sanctions. The BRICS nations are chief supporters of such a turn, as they are actively challenging the need for dollar-denominated trade.

The Rise of Alternatives: Currency Diversification and Bilateral Agreements

The decline from the dollar is evident in central banks diversifying reserves and an increase in bilateral trade arrangements. The dollar percentage of international reserves declined from 71.5 per cent in 2000 to under 60 per cent in 2022. Nations such as China, Brazil, India, and the UAE are paying for trade in local currencies to avoid the use of the dollar. These arrangements reflect a concerted move by various countries to establish a parallel economic system.

The below graph, using IMF figures, presents a numerical overview of the trend in global currency reserves, showing the dollar's declining share over the last two decades in a steady but slow manner.

The dollar supremacy challenge reaches into the financial plumbing, as alternative systems to the SWIFT messaging system appear. China's Cross-Border Interbank Payment System (CIPS) facilitates direct settlement in yuan. Blockchain-based systems such as

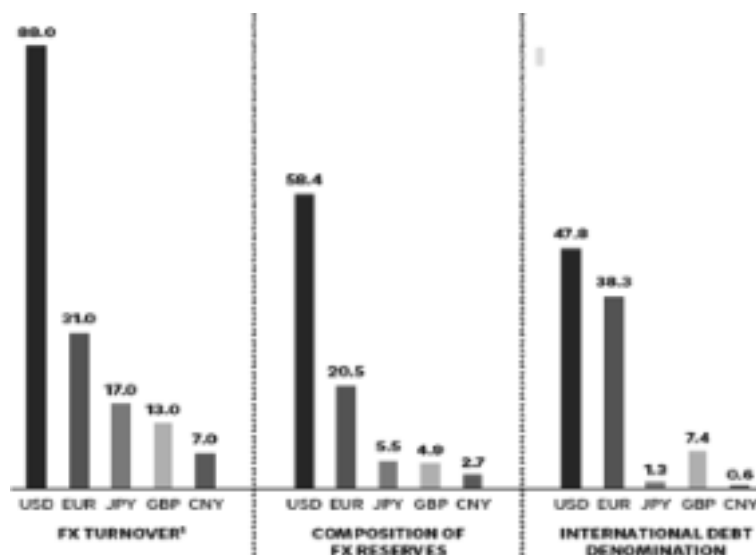


Figure 1 : Building Parallel Infrastructure: Alternatives to SWIFT
(Source: Primary Data)

RippleNet and Central Bank Digital Currencies (CBDCs) provide a mechanism for direct settlement,

eliminating conventional intermediaries and cutting fees. This unbundling of financial products heralds a departure from the unified, combined system that has long supported dollar supremacy.

The Birth of a Multipolar World: Consequences for the International Order

Economic Consequences for America

An end to America's "exorbitant privilege" would translate into higher borrowing costs and higher-priced imports, which may lead to domestic inflation. On the other hand, a declining dollar may make US goods more attractive abroad and price competitive, benefiting manufacturing industries and reducing the trade deficit.

The Rebalancing of Global Economics

A multipolar system would benefit the global economy by diversifying the risks of currencies and lessening reliance on US monetary policy "spillover effects". It would also produce more equitable and efficient world trade as nations pay in their own currency, eliminating conversion fees.

Geopolitical Realignment and New Balance of Power

The strongest effect of de-dollarization is the realignment of global power. Without the leverage afforded by the dollar, the US would have fewer sanctions to impose. New economic groupings such as the BRICS New Development Bank are already challenging institutions led by the US, and the result is a new multilateral international order in which power is more dispersed.

CONCLUSION

Trajectory and Adaptation in a Changing World

The evidence is that the supremacy of the US dollar is in a process of gradual but irrevocable diminution.

It is the consequence of the rise of new economic powers and strategic resistance to the dollar as a foreign policy instrument.

Although a near-term collapse is highly improbable considering the dollar's entrenched network effects and the robustness of US markets, the globe is transitioning

from a unipolar to multipolar world, with multiple currencies and financial systems coexisting. This will imply that both the US and others must adapt to a new monetary environment and a more balanced global economic and political order.

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Article on International Affairs Bordered Dreams

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The world sees India as a reliable partner specially because of its democratic values, youth population and contribution in innovative growth.

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ABSTRACT

India's global position has expanded over the past decade with strong economic growth, diplomatic goodwill and vibrant diaspora. Yet international mobility for Indians remains tough and challenging. Indian passport ranks 75th in the world causing trouble for Indian migrants creating heavy paperwork, high fees and delayed Visa procedure. Due to this, students miss academic deadlines, professionals face delay in international projects and professional growth and families suffer from uncertainty. These problems dilute India's diplomatic goodwill. However, slow and gradual improvements such as e-visas and visa-on-arrival have made the process easier, still we have a long mile to go.

KEYWORDS: India, Visa

For India, the dignity of its citizens should be India, being the most populated country, 4th largest economy and 7th largest country in the world, stands at a pivotal moment in its global journey. Over the past decade, the country has expanded its global outreach and engagement through deepening ties with major powers of the world of all the blocks whether it be western or eastern, capitalist or socialist. Due to this, India has expanded its trade and technology partnership and has emerged as a leading voice of Global South and developing countries. The Prime Minister's warm interaction with leaders of United States, Russia, Europe, Africa and Asia and the diplomacy done by External Affairs Ministry have placed India in the global spotlight. India's effort for peacekeeping, growing economic strength and the presence of a vibrant diaspora of over 30 million people have shaped its international

image. India has been a guest in G7 summits and have even hosted the G20 summit in 2023, showcasing India's ability to lead the world on crucial issues like climate change and global trade. The world sees India as a reliable partner specially because of its democratic values, youth population and contribution in innovative growth.

This idealistic global recognition should have touched the lives of ordinary Indian tourists, creating stronger educational partnerships with foreign universities for Indian students and having easy trade agreements and business travels for Indian professionals. However, behind these celebratory headlines lies a quieter but significant problem faced by ordinary Indian citizens every year which is the struggle to get a visa. Despite having a positive image in headlines and a promising future, the Indian Passport ranks 75th in the world, even below some small underdeveloped countries. The process of securing a visa still remains a long-drawn battle marked by long paperwork, high fees and frequent rejections. Sometimes Indian migrants which mostly include students, workers and professionals even face bias and face stereotypes and discrimination. The entire experience to obtain a visa remains uncertain and stressful. This diplomatic goodwill should have opened new doors of opportunities for India but still many doors are closed tightly not going to be open lately. Due to the loss of opportunities and aspirations, India's soft power is affected. Indian students lose chance to get global exposure and innovative skills which can help them to even lead India in specialized sectors. Indian professionals face delays in international projects and professional growth and other Indian tourist have to pay more to get the same experience as other foreigners. This hampers people to people connection and even result in discrimination faced by Indians abroad, undermining the goodwill the Indian Government has made abroad for years. However, the image and goodwill of a country is not only in the government's hand but also require ordinary citizens to be responsible and mindful of their activities on foreign land. A large base of illegal Indian migrants has tarnished India's global reputation resulting in stricter security checks for Indians. Even those educated and legal Indian migrants lack basic civic sense, creating a lot

of problems for local authorities of foreign countries. Due to these individual habits, the entire 1.4 billion people of India is stereotyped and discriminated created difficulties for ordinary citizens and creating a bad reputation for the country. Apart from these individual concerns, the government should also fast-track the visa process using advance technology and infrastructure. Even the Indian Government should do visa relaxations for foreign nationals, which as a reciprocal effect would help Indian nationals to obtain visa faster. These steps would help Indian students, workers and families to travel with confidence and dignity.

Even though, India stands at 75th position in passport rankings but all is not bleak. In recent years, there has been small but significant changes. Countries, mainly from South East Asia and East Asia, have eased its visa process for Indians by providing visa-on-arrival and e-visa facilities specially for Indian students. The United States of America has also promised to expand its visa processing centers in India which will help to reduce waiting time. Even Gulf nations have eased visa processes for Indian workers. The Indian Government is also using its economic and trade deals to make the passport stronger especially with Australia and United Kingdom for students and professionals. Even Indians are also strictly following the rules of the foreign land and maintaining basic civic sense to change the existing stereotypes and discriminatory practices. Despite these progresses, the road ahead requires a blend of diplomacy, technology and reciprocity. The Indian Government should demand rights for its citizens in bilateral talks with other countries just like trade and security in foreign policy. India should also expand visa relaxations for countries that ease rules for India. Even many Indian-origin people have political and economic power in foreign land which can be used to make friendlier visa regimes. Lower fees on visas should also be considered for middle-class people and governments should publish standard guidelines for visa processes, making it simple and easier for ordinary citizens.

India's rise on the global stage empowers its people to chase and fulfill their dreams. A nation's influence is measured by the dignity and confidence with which its

citizens move across the world. If the goodwill which India has earned in diplomacy can be channelized into reforms of visa processes, it would open new opportunities for Indian students, workers and families resulting in same ease and respect as the people of other countries. The dream of easier travel is not merely about convenience but also about equality, opportunity and recognition. It's high time the world should open its door for India and Indians should capitalize on India's goodwill.

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Reservation in India: Recalibration or Enhancement?

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Reservation aims at bringing the inequality gap and aims at removal of discrimination faced by the masses.



ABSTRACT

Reservation aims at bringing the inequality gap and aims at removal of discrimination faced by the masses. It has been essential in efforts to tackle deep-rooted caste systems, educational disadvantages, and the lack of representation for marginalized groups. While this system has opened doors for Scheduled Castes (SCs), Scheduled Tribes (STs), and Other Backward Classes (OBCs), recent demographic changes, economic growth, and new forms of inequality require us to critically reassess its structure. The Indian Constitution, through Articles 15 and 16, supports affirmative action to achieve real equality. Key court decisions, from Champakam Dorairajan to Indra Sawhney and Janhit Abhiyan, highlight a persistent conflict between equality of opportunity and protective measures. The principle established in Indra Sawhney, which calls for a review every ten years, emphasizes the importance of using data for adjustments. Keeping a fixed reservation policy can lead to inefficiencies, dilute benefits due to the "creamy layer," and neglect other disadvantaged groups not included in traditional classifications. This essay contends that we should not abolish reservation policies, but instead, adapt them dynamically using solid evidence of social, educational, and economic disadvantages. Regular adjustments are essential to uphold both constitutional equality and democratic justice.

INTRODUCTION

India's Constitution is a transformative charter seeking to overcome inequalities inherent in a deeply stratified society by taking affirmative action. Reservation policy, as spelled out in Articles 15(4), 15(5), 16(4), and 16(4A) of the Constitution, was initially imagined as a temporary but forceful

instrument for upraising historically deprived groups—with an overwhelming focus on Scheduled Castes (SCs), Scheduled Tribes (STs), later followed by Other Backward Classes (OBCs). Based upon Article 46 of the Directive Principles of State Policy, Constitution framers perceived reservation as an essential means for fostering educational and economic progress of disadvantaged groups. Yet, a quarter-and-a-half century-plus since attaining independence, in excess of over seventy-five years since its formulation, this policy remains mostly in its formative structure with periodic judicial modifications but without a periodic reassessment reflecting shifts in social circumstances. Such a state gives rise to a profound constitutional and democratic question: should reservation remain an absolutist entitlement or be amenable to periodic review in order for it to remain legitimate, efficient, and consistent with ideals inculcated in the Constitution?

CONSTITUTIONAL BASIS FOR THE REVIEW

The jurisprudential foundation for periodic review lies in the constitution's own structure. Articles 15(4) and 16(4) are enabling provisions rather than hard guarantees. These articles permit the State to take special measures in cases of "inadequate representation" or "social and educational backwardness." Such conditions are inherently empirical and changing, requiring continuous review. In *Indra Sawhney v. Union of India*, the Supreme Court, in its strong ruling, stated that backwardness cannot be assumed indefinitely. It also ordered that lists of backward classes should be reviewed every ten years. Formulation of the "creamy layer" doctrine in *Indra Sawhney* was made for ensuring continuous benefit accruing otherwise to the socially progressive members of backward classes does not take place. However, political inaction since then has meant a serious lack of systematic reviews so that reservation framework remains vulnerable both to over-inclusion and under-inclusion.

JUDICIAL EVOLUTION OF RESERVATION

Judicial developments highlight the need for fine-tuning. In *M.R. Balaji v. State of Mysore*, the Court

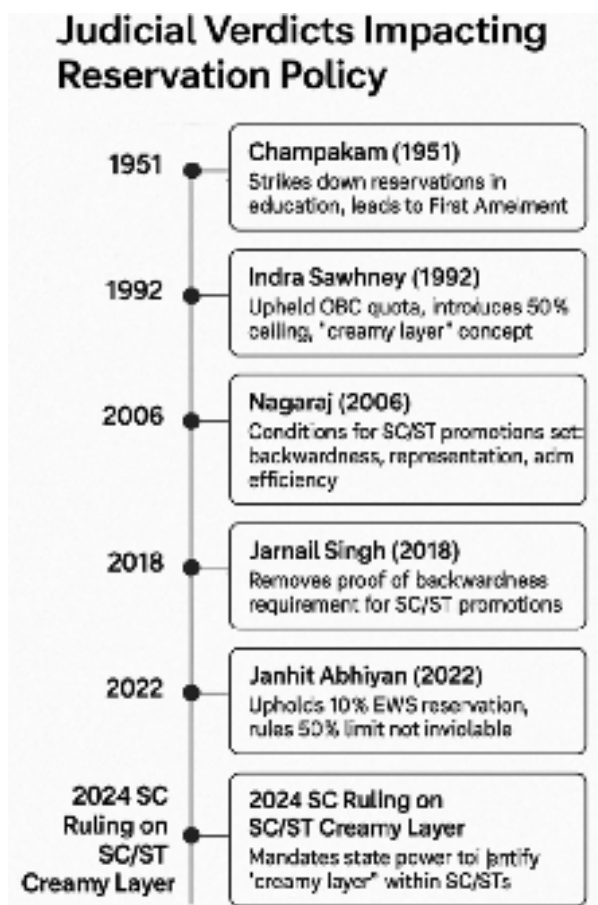


Figure 1: Judicial Verdicts
(Source: Primary Data)

cautioned not to make caste the only test of backwardness, while stressing the multifaceted nature of disadvantage. *M. Nagaraj v. Union of India* further made it obligatory for States to collect "quantifiable data" on backwardness, underrepresentation, and administrative effectiveness before implementing reservation in promotions. Most recently, in *Jarnail Singh v. Lachhmi Narain Gupta*, the Court once again vindicated evidence-based identification in lieu of presumptive theories of backwardness. These cases show a judicial trajectory which acknowledges reservation as an adaptable device based on socio-economic proof rather than a static right based on caste. These cases showcase and highlight the need for reassessment of the entire reservation framework while acknowledging the relevance of revisionary measures.

CONSTITUTIONAL AMENDMENTS

The constitutional amendments further exemplify the inherent adaptability within the established framework. The 93rd Amendment (2005) to the Indian Constitution brought forward Article 15(5), that furthered reservation rules to private unaided educational institutions. The 103rd Amendment (2019) introduced Articles 15(6) and 16(6), creating a 10per cent quota for Economically Weaker Sections (EWS) outside the usual categories of Scheduled Castes (SC), Scheduled Tribes (ST), and Other Backward Classes (OBC). In the case of *Janhit Abhiyan v. Union of India*, the Supreme Court upheld the EWS quota, confirming that economic criteria can be used to identify disadvantage. This decision demonstrates an evolving judicial acknowledgment that the concept of social justice is dynamic and responsive to changing socio-economic conditions. Nevertheless, the EWS quota prompts more profound inquiries regarding whether periodic assessments are not only desirable but also imperative to reconcile the conflicting claims arising from caste and class disadvantages.

EMPIRICAL BASIS: DATA DEFICIENCY AND THE NEED FOR REVIEW

Empirical research supports the need for recalibration. The Mandal Commission Report (1980) provided the foundation for OBC reservations, but much of that data is now outdated. Modern-day research shows intra-caste differentials, such that reservation benefits are monopolized by dominant sub-castes within overarching categories. The 2017-established Justice Rohini Commission on studying sub-categorisation within OBCs highlighted how some sub-groups dominate a lion's share of reservation benefits while some are grossly underrepresented. Moreover, the principle of administrative efficiency in Article 335 emphasizes a need for affirmative action that aligns with institutional merit. The Supreme Court decision in *M. Nagaraj* supported this constitutional balance, cautioning against the unchecked increase of reservations without empirical evidence. Periodic reviews allow for a check on the State ensuring that the

dual objectives of equity and efficiency remain in congruence, ensuring constitutional validity.

COMPARATIVE PERSPECTIVE

From a comparative stance, affirmative action measures in jurisdictions like the United States and South Africa are revisited at intervals when sunset clauses or judicial review are used to ensure such provisions are kept grounded in current needs as opposed to historical momentum. India's inability to instil systematic review threatens reservation with becoming a political tool as opposed to a constitutional imperative. Indeed, constitutional morality, as articulated in *Navtej Singh Johar v. Union of India*, requires interpretation of right and policy to change over a period so as to accommodate aspirations for an egalitarian society.

CONSTITUTIONAL MORALITY

It is imperative to note that periodic review does not call for a discontinuation of reservations, but their renewal. Persistence in discrimination on the basis of caste, educational disempowerment, and economic marginalization is a reality not in question as a number of reports by the National Commission for Scheduled Castes and Scheduled Tribes testify. But diversity within marginalized communities, as also the rise of newer groups in disadvantageous positions calls for more refined policy interventions. Such reinterpretation ensures the constitutional guarantee of substantive equality in Article 14 and 21 is protected against devolution into tokenism.

Moreover, all such a framework for recalibration would require formalization through a permanent statutory mechanism, which may function under the aegis of a National Commission for Backward Classes (NCBC). Such a commission would perform decade-wise reviews of reservation policy in light of up-to-date socio-economic information. That would foster a depoliticized scientific method in determining beneficiaries in line with the constitutional aim of balancing group entitlements with values of democratic fairness.

CONCLUSION

Reservation in India is neither an unfrozen entitlement nor a dispensable concession but a constitutional instrument of social change. Reservation should remain a way to achieve equality rather than a goal in itself, as the Supreme Court envisioned in *Indra Sawhney*. Equality before law as a constitutional directive contained in Article 14 needs a continuous balancing acts when read in conjunction with protective discrimination enumerations in Articles 15 and 16. A reservation policy that is dynamic based on data and subject to periodic review alone can strike a harmony between historical injustice and the needs of social justice and democratic governance in contemporary times.

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The Tangibility Tax: Why Cash Still Whispers to a Digital India

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The eloquent whisper of currency in a digital India is not a lament for the past but a clear market signal. It is a rational response to the real costs of a maturing digital ecosystem.



ABSTRACT

India presents a striking paradox: it leads the world in real-time digital payments, with the Unified Payments Interface (UPI) processing over 20 billion transactions monthly, yet Currency in Circulation has surged to over 38 lakh crore. This article explores this dichotomy through the concept of the 'Tangibility Tax,' the cumulative financial, technical, and psychological costs incurred when using digital systems. Frictions like transaction failures, rampant digital fraud, settlement delays, and privacy concerns make the continued reliance on cash a rational choice for millions. Cash persists not as a relic, but as a vital tool for the rural Economy, a psychological anchor for spending, and a necessity for the digitally excluded. The analysis concludes that India's path forward is not a cashless society, but a resilient 'less-cash' hybrid model, where a more robust and inclusive digital ecosystem coexists with the enduring reliability of physical currency.

KEYWORDS: UPI, Economy, Cash, Currency

THE GREAT INDIAN PAYMENT PARADOX

India stands at a fascinating and paradoxical juncture. On one hand, it is the undisputed global leader in digital payments, a revolution spearheaded by the Unified Payments Interface (UPI). The numbers are staggering: in August 2025 alone, UPI processed over 20 billion transactions valued at 24.85 lakh crore. India now accounts for nearly half of all global real-time payment transactions. On the other hand, physical cash is not just surviving; it is thriving. As of May 2025, Currency in Circulation stood at a formidable 38.40 lakh crore.

This phenomenon is not a sign of technological failure but a sophisticated response from a discerning population. The enduring appeal of cash can be explained by the 'Tangibility Tax': the cumulative and often hidden costs (financial, technical, psychological, and social) that consumers and merchants incur when they opt for digital transactions over the tangible certainty of cash.

THE UPI REVOLUTION AND ITS HIDDEN COSTS

UPI's success is rooted in its design as a public good. Built on an open architecture and backed by a government policy of zero Merchant Discount Rate (MDR) for UPI, it eliminated the primary cost barriers for users and small merchants, fueling its explosive adoption. However, this rapid, subsidized growth has placed immense strain on the ecosystem, creating significant frictions that constitute the Tangibility Tax.

For merchants, the costs are direct. While UPI is free, card payments still carry an MDR of 1-3 per cent, a significant cost for businesses with thin margins. Furthermore, settlement delays of one to two days for digital payments can impair the cash flow of small businesses that rely on daily liquidity.

For all users, the most palpable tax is the system's unreliability. The digital infrastructure, struggling to keep pace with exponential growth, is frequently plagued by outages. Major disruptions, like the five-hour outage on May 12, 2025, bring commerce to a standstill, making a backup stash of cash a prudent necessity. These failures are not random glitches but symptoms of a complex, interdependent architecture where a failure at any single point, from the front-end app to the bank servers or the central NPCI switch, can stall the entire system. This is compounded by a severe trust deficit. The transition to digital has opened a new frontier for financial crime, with reported fraud losses surging 715 per cent to ₹21,367 crore in the first half of fiscal year 2024-2025. Sophisticated scams like 'digital arrest,' where criminals impersonate law enforcement to extort money, and platform glitches, such as one that cost MobiKwik ₹40 crore in September 2025, have eroded consumer confidence. The instant and irreversible nature of UPI transactions, while a feature,

also makes it a perfect tool for fraudsters. Finally, every digital transaction creates a data trail, imposing a tax on privacy that the anonymity of cash avoids.

THE ENDURING AND RATIONAL APPEAL OF CASH

The persistence of cash is not just a reaction to digital frictions; it is also driven by the powerful 'pull' of its unique attributes. Cash remains the lifeblood of India's vast rural economy, which is currently experiencing a robust consumption recovery fueled by strong agricultural output and government schemes. For many small businesses and farmers, cash is not just preferred; it is required for paying suppliers and laborers, creating a continuous cycle of liquidity.

Beyond its economic utility, cash exerts a powerful psychological influence. The physical act of handing over banknotes creates a 'pain of paying,' a tangible sense of loss that acts as a natural brake on impulsive spending. Digital payments eliminate this friction, giving rise to 'Spendception,' a diminished psychological resistance to spending. This is supported by data showing 74.2 per cent of users reported their spending increased after adopting UPI.

Most critically, cash is a lifeline for those on the other side of the digital divide. For millions, especially in rural areas, inconsistent internet connectivity remains a significant barrier. This divide is particularly pronounced along gender and age lines. With lower smartphone ownership and societal norms that often designate financial matters as a male domain, many women fear making a costly digital mistake. Similarly, many elderly citizens remain hesitant due to a lack of familiarity and a heightened fear of fraud. For these vulnerable populations, cash is not a choice but a low-risk necessity, offering reliability and control in a digital world not yet designed for them.

Forging a 'Less-Cash' Hybrid Future

The path forward is not a battle between cash and digital but a journey toward reconciliation. The goal should not be a 'cashless' society but a 'less-cash' one, where the Tangibility Tax is systematically reduced. This is already underway through targeted innovation and human-centric policymaking.

Initiatives like UPI Lite for offline transactions and UPI 123PAY for feature phone users are designed to bridge the connectivity and accessibility gaps. To combat fraud, the ecosystem is deploying Artificial Intelligence and Machine Learning to detect anomalies in real-time, with regulatory initiatives like MuleHunter.ai targeting networks of fraudulent accounts. The RBI's

2025 Digital Lending Guidelines represent a crucial policy shift toward consumer protection, mandating transparency through Key Fact Statements (KFS), requiring explicit user consent for data collection, and establishing robust grievance redressal mechanisms.

India's journey, while unique in scale, offers lessons when compared with other emerging economies. In stark contrast to UPI's public infrastructure model, Kenya's M-Pesa was a private sector innovation led by a mobile network operator that flourished in a light-touch regulatory environment. The cornerstone of M-Pesa's success was not just its technology but its creation of a vast and trusted network of human agents for cash-in and cash-out services. This network served as a vital bridge between the digital and physical worlds, a critical lesson showing that the most successful digital systems often work with, rather than against, the existing cash ecosystem. This underscores that innovations that intelligently mimic cash's most valued attributes, like offline access and simplicity, are the ones most likely to succeed.

The eloquent whisper of currency in a digital India is not a lament for the past but a clear market signal. It is a rational response to the real costs of a maturing digital ecosystem. It calls for the construction of a superior alternative, one that is not just convenient but also resilient, inclusive, and trustworthy. In this hybrid future, a robust digital infrastructure will power the formal economy, while cash retains its vital role as a pillar of inclusion, a guardian of privacy, and an essential fallback in times of uncertainty.

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In India, the emergence of leagues such as the Indian Premier League (IPL) has accelerated this shift, drawing increasing attention from investors and corporations.

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Beyond the Pitch: The Financial Anatomy of Sports Franchises

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ABSTRACT

‘Sports franchises compete on the field and compound off it.’ Over the past two decades, the commercial structure of professional sports has undergone a significant transformation. Franchise-based leagues, centralised revenue models, and expanding media rights have repositioned sports franchises as economically relevant investment vehicles. In India, the emergence of leagues such as the Indian Premier League (IPL) has accelerated this shift, drawing increasing attention from investors and corporations. Due to the availability of reliable data, this research focuses exclusively on the Indian Premier League (IPL).

This study examines sports franchises through a financial lens, focusing on the valuation growth of IPL franchises and their role as alternative investment

assets. Using secondary data since the league's inception, the research analyses long-term valuation trends, risk–return characteristics, and revenue-driven growth, alongside a comparative assessment with traditional assets such as equities and gold. Further, the study employs correlation analysis to assess the diversification potential of sports franchise investments within modern portfolios. By integrating valuation analysis with investment metrics, the research seeks to determine whether sports franchises can serve as viable long-term investments beyond their entertainment value. The findings contribute to the limited academic literature on sports finance in the Indian context and offer insights into the intersection of sport, ownership, and capital in an increasingly financialised sporting ecosystem.

KEYWORDS: IPL, Sports

INSIDE THE REVENUE ENGINE OF THE IPL

The Indian Premier League (IPL) operates on a multi-stream revenue model, which has been central to its remarkable financial success and high franchise valuations. The league's revenue streams can be broadly categorized as follows:

1. Broadcasting Rights:

The IPL's most significant revenue source is the sale of broadcasting and digital streaming rights. Networks and OTT platforms pay substantial amounts to acquire exclusive rights, making this the 'cash cow' of the league. For instance, the 2023–2027 media rights were sold for 48,390 crore (~\$6 billion), contributing nearly 50 per cent of the league's total revenue.

2. Franchise Fees and Revenue Sharing:

Franchise owners pay an initial entry fee to acquire teams, which has grown exponentially since 2008. In addition, a portion of revenue from sponsorships, media rights, and ticket sales is shared with the league, ensuring a balanced financial ecosystem.

3. Sponsorships:

Corporate sponsorships form a major revenue stream, with brands like Tata and Vivo, investing heavily for association with the IPL. Sponsorship deals are structured to include league-wide branding as well as team-specific endorsements.

4. Match-Day Revenue:

Revenue from ticket sales, VIP seating, hospitality packages, and in-stadium advertising supplements the league's earnings. While smaller than broadcasting and sponsorship revenues, match-day earnings play a vital role in engaging local fanbases.

5. Merchandise and Licensing:

Official team merchandise, such as jerseys, caps, and memorabilia, generates additional revenue. Licensing deals with retailers further enhance profitability while strengthening fan loyalty.

6. Player Endorsements and Brand Collaboration:

Player-related revenues arise through brand endorsement deals and, in some cases, transfer-related arrangements. While these revenues are comparatively lower in magnitude, star players significantly enhance franchise brand value, sponsorship appeal, and overall commercial potential.

The IPL's revenue model combines high-growth media-driven income with stable centralised distributions, resulting in strong valuation appreciation despite seasonal performance variability. This structure

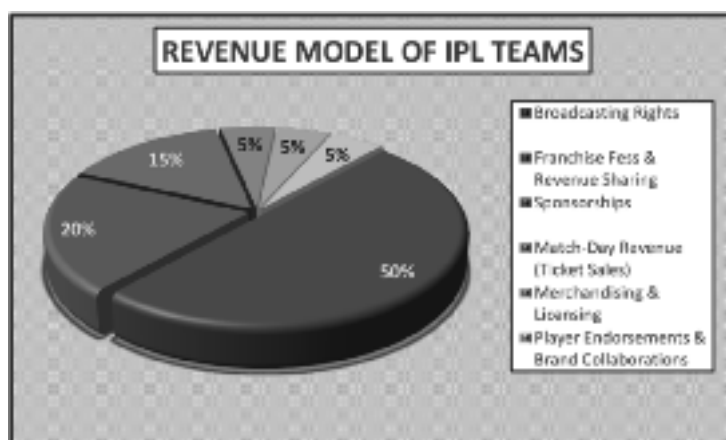


Figure 1: Revenue Model of IPL teams
(Source: Primary Data)

positions IPL franchises as hybrid investment assets—blending characteristics of entertainment businesses and long-term financial investments.

BEHIND THE SPOTLIGHT: RISKS OF SPORTS FRANCHISE INVESTMENTS

While sports leagues offer tremendous development opportunities, they also offer tremendous risks. It is important to understand the challenges and intricacies of running and keeping the leagues afloat in an ever-evolving sports ecosystem.

1) Team and player performance risk

Leagues are at risk of underperformance by teams that can result in fan disappointment and lower revenue. Mumbai Indians had their worst ever season in 2024, ending at the bottom of the league with only 4 wins in 14 games. This left the fans dejected, and also affected the ticket sales and merchandising revenue.

2) Financial risks

It is very costly to run a team and teams need to spend heavily on players' wages, team management and running the stadium. Thus, at times, they struggle to make money from ticket and merchandise sales.

3) Regulatory and Political Risks

ISL had encountered some regulatory problems in its early years with the approval and regulation of its franchises. Additionally, the imposition of sudden tax increases by the government or strict foreign investment regulations can harm the profitability of these leagues.

4) Brand Image and Reputation Risk

Controversies and scandals greatly impact the reputation of the league and sponsorship contracts. One of the largest controversies in the Indian Premier League (IPL) history was the 2013 IPL spot-fixing scandal. It greatly harmed the reputation of the league, suspended high-profile players like Sreesanth and most importantly, banned two high-profile teams CSK and RR resulting in financial losses to broadcasters, sponsors and other stakeholders.

5) Fan Engagement and Market Risk

Fan commitment risk occurs because of a decline in the interest of the audiences, saturation of leagues such as in the case of T20 cricket and shifting interests of the audiences. Football, unlike cricket, is yet to gain popularity in India, and ISL risks not contributing much to its fan base.

6) Economic Risk

Ticketing revenue, merchandise, and sponsorship arrangements are hit greatly during the financial crises such as in the 2020 Covid 19 pandemic. Even PKL 2020 season was postponed as a result of the COVID-19 pandemic.

THE WINNING CURVE: GROWTH TRENDS AND RETURNS

This study focuses on analysing the growth trajectory of the Indian Premier League (IPL) from its inception to its current position, with particular emphasis on franchise owners' return on investment (ROI) and the evolution of media and broadcasting rights. Although leagues such as the ISL and PKL have also shown growth, the lack of consistent and reliable data limits their inclusion. Similarly, the Women's Premier League (WPL), launched in 2023, has demonstrated early promise but remains in a nascent stage. Consequently, this study confines its scope to the IPL, examining its growth over a 16-year period from 2009 to 2025.

Valuation in this context can be broadly classified into three categories:

i. Valuation of the IPL Ecosystem:

This represents the total value of all IPL-related entities and stakeholders, including franchises, sponsors, broadcasters, and the broader league brand.

ii. Stand-alone Brand Valuation:

This reflects the intrinsic value of the IPL brand, independent of franchises, sponsorships, or partnerships.

iii. Business Valuation:

This assesses the IPL based on its financial performance, including revenues, costs, and long-term business sustainability.

For the purpose of this study, the analysis is based on business valuation.

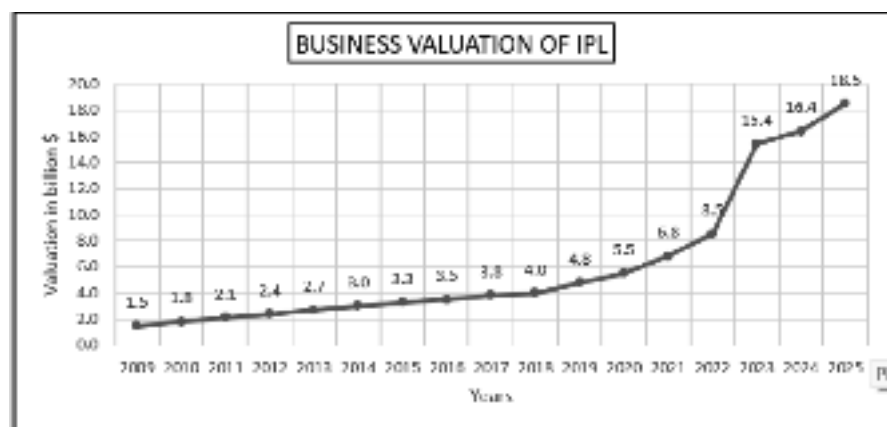


Figure 2: IPL Business Valuation Trend Highlighting Exponential Growth
(Source: Primary Data)

The brand value of IPL increased cumulatively by 1133.33 per cent in 16 years with the compound annual growth rate (CAGR) of 17 per cent. Additionally, the stand-alone brand valuation of IPL increased from \$3.4 billion in 2024 to \$3.9 billion in 2025 with a YoY growth rate of 13.8 per cent.

Moreover, the significant increase in business valuation from 8.5 in 2022 to 15.4 in 2023 is due to the lucrative broadcasting agreements of BCCI for the period 2023-2027 for a record 48,390 crore (approximately \$6 billion). Moreover, the addition of two new teams—Lucknow Super Giants and Gujarat Titans in IPL in 2021 witnessed record bids of 7090 crores and 5625 crores

by RPSG group and CVC capital respectively. These record bids elevated the overall value of the league and highlights the financial appeal and investment worthiness of IPL.

The media rights of the IPL recorded nearly a threefold increase compared to the previous cycle. This surge in

valuation reflects the league's expanding fan base, growing international appeal, and strong ability to generate stable and recurring revenue streams. Since broadcasting rights contribute approximately 50 per cent of the IPL's total revenue, this escalation significantly enhanced the overall league valuation and led to an almost twofold increase in franchise valuations in the subsequent financial year.

Further, the return on investment (ROI) for IPL franchise owners has been computed in this study. Owing to data availability and consistency, a 13-year period up to

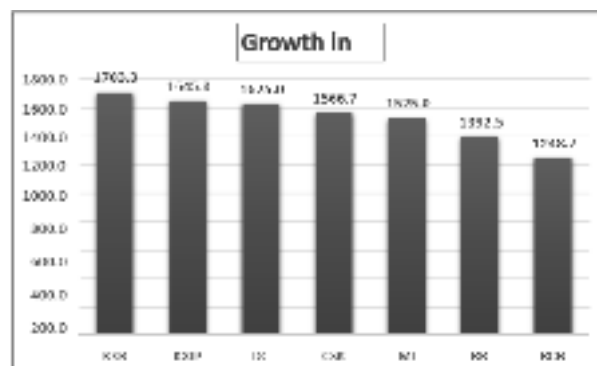


Figure 3: Growth in Business Valuation of IPL Franchises over a 13-year period
(Source: Primary Data)

Teams	Amount Invested in 2008 in million \$	Business Valuation in 2022 in million \$	ROI in per cent
MI	111.9	1300	1061.8
CSK	91	1150	1163.7
RCB	111.6	1025	818.5
KKR	75.1	1100	1364.7
DC	84	1035	1132.1
RR	67	1000	1392.5
KXIP	76	925	1117.1

Table 1: ROI of the franchises over a 13-year period
(Source: Primary data)

2022 has been considered, ensuring a more reliable and accurate assessment. The ROI calculations are based on the business valuation of the franchises. Such high returns on investment indicate that IPL franchises have evolved into highly profitable investment assets.

Additionally, the growth of IPL franchises has been analysed over a 13-year period, based on their business valuations in 2009 and 2022.

The bar graph indicates that KKR recorded the highest growth at 1703.3per cent, followed by KXIP at 1645.3per cent, while RR and RCB, though comparatively lower, still exhibited substantial growth. This exponential rise in franchise valuations reflects the increasing popularity of the IPL, driven by lucrative media rights deals, expanding sponsorships, and rising fan engagement. Moreover, in terms of brand valuation, Royal Challengers Bangalore (RCB) emerged as the most valuable IPL franchise, with a brand value of approximately \$269 million.

OLD MONEY VS NEW PLAY: TRADITIONAL ASSETS COMPARED

This study compares the returns generated from sports franchise ownership with those from traditional investment assets, namely gold and the stock market. Real estate has been excluded from the analysis due to the unavailability of consistent and verifiable data. The comparative assessment is conducted over a 13-year period from 2009 to 2022, selected based on data reliability and continuity.

Gold

Gold is widely recognised as a safe-haven asset, particularly in the Indian context, where it holds both cultural and financial significance. Historically, gold has demonstrated relatively stable appreciation, especially during periods of economic uncertainty and inflationary pressure. Accordingly, this study examines the trend in gold prices over the 13-year period from 2009 to 2022 to facilitate a comparative evaluation of returns. Gold prices increased by 263.24per cent during the period from 2009 to 2022, translating into a compound annual growth rate (CAGR) of 10.43per cent over the 13-year horizon.

Stocks

Equity investments generally offer higher return potential compared to gold, albeit with greater risk. For

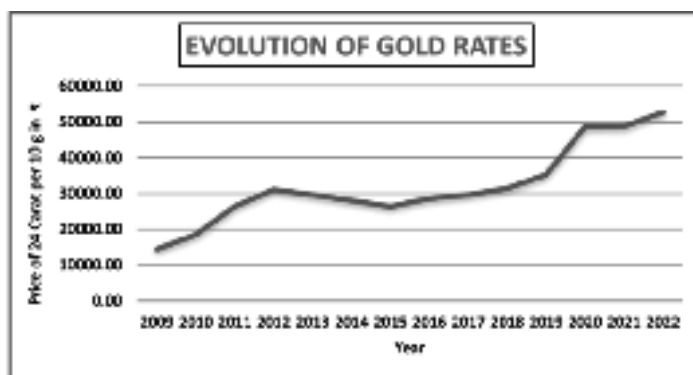


Figure 4: Evolution of 24-Carat Gold Prices in India from 2009 to 2022
(Source: Primary Data)

the purpose of this analysis, India's benchmark equity index—the BSE Sensex—has been used. The Sensex (Stock Exchange Sensitive Index) comprises 30 large-cap, actively traded companies across diverse sectors, and is widely regarded as a barometer of the overall performance and health of the Indian stock market.

This study examines the growth of the Sensex over the 13-year period from 2009 to 2022 to facilitate a comparative assessment of returns. During the period from 2009 to 2022, the BSE Sensex recorded a cumulative growth of 248.36per cent, corresponding to a compound annual growth rate (CAGR) of 10.08per cent over the 13-year period.

For comparative purposes, the CAGR of each IPL franchise has been calculated over the same 13-year horizon, based on their business valuations in 2009 and 2022.

Teams	Compounded Annual Growth Rate (CAGR)
KKR	24.92per cent
KXIP	24.60per cent
DC	24.49per cent
CSK	24.16per cent
MI	23.92per cent
RR	23.11per cent
RCB	22.16per cent

Table 2: CAGR of IPL Franchises
(Source: Primary Data)

The analysis indicates that, over the 13-year period, the CAGR of IPL franchises is more than twice that of traditional investment assets such as gold and the stock market.

The following section presents a comparative analysis of returns, based on the CAGR of all three investment assets. The table presents the value of a hypothetical 10,000 investment across three asset classes as of 2022. The findings indicate that an investment in an IPL franchise (illustrated using Kolkata Knight Riders (KKR)) would have appreciated to 180,391.34 over a 13-year horizon, reflecting a total return of 1703.3 per cent. Although investments in gold and equities also generated positive returns during the same period, their performance was substantially lower when compared with the magnitude of returns achieved through sports franchise ownership.

Investment Asset	Amount Invested in 2009	Value in 2022 as per the CAGR
Gold	10000	36318.84
Stocks (Sensex)	10000	34850.54
Sports Franchise (KKR)	10000	180391.34

Table 3: Investment Value Comparison Across Asset Classes
(Source: Primary Data)

CRICKETING CORRELATIONS: THE WILD CARD ASSET

This study investigates the role of sports franchises in investment portfolios by examining the correlation between the rate of change in IPL business valuation, gold, and equity markets. The analysis aims to determine whether investments in sports franchises provide distinct diversification benefits or mirror the performance of traditional assets. The Pearson correlation coefficient is

employed to quantify these relationships and assess their implications for portfolio risk management.

Correlation with gold

Correlation analysis was conducted using the percentage growth of gold prices and IPL business value over the past 16 years to facilitate a comparative assessment of their growth trends. The Pearson correlation coefficient was calculated to be 0.13, indicating a very weak relationship between gold and IPL business value. This observation is further supported by a scatter plot of the percentage changes, which exhibits a near-horizontal distribution with no discernible slope, demonstrating a lack of systematic association between the two variables. These findings suggest that fluctuations in gold prices have minimal influence on IPL business valuation, implying that investments in IPL franchises operate largely independently of gold market movements. Consequently, IPL teams may serve as a potential vehicle for portfolio diversification for investors seeking to mitigate exposure to traditional asset classes such as gold.

	Gold	IPL Business Value
Gold	1	0.13
IPL Business Value	0.13	1

Table 4: Correlation Matrix Between Gold Prices and IPL Business Value
(Source: Primary Data)

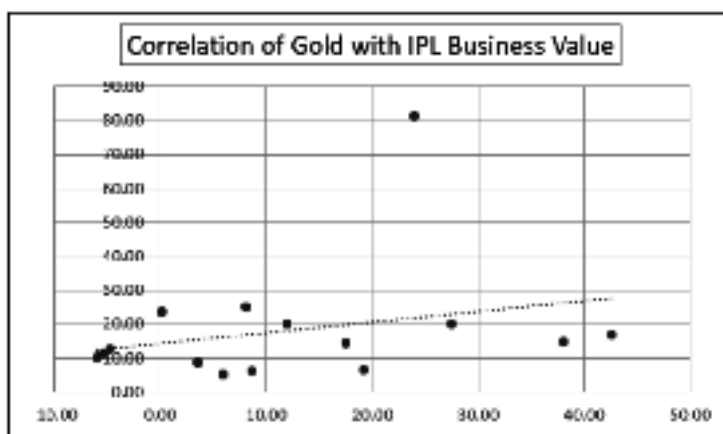


Figure 5: Scatter plot demonstrating the correlation
(Source: Primary Data)

Correlation with Sensex

The correlation analysis was performed using the percentage changes in Sensex and IPL team brand values over the past 16 years to assess the alignment of their growth patterns. The Pearson correlation coefficient was calculated to be 0.05, which is effectively negligible, indicating an almost non-existent linear relationship between stock market movements and IPL franchise valuations. This observation is further supported by a scatter plot, where the points are widely dispersed and the trendline is nearly horizontal, reflecting the absence of a meaningful slope. These findings suggest that the valuation of IPL teams does not move in tandem with the Sensex, highlighting their potential as a diversification instrument for investors seeking to mitigate exposure to stock market volatility.

	Sensex	IPL Business Value
Sensex	1	0.05
IPL Business Value	0.05	1

Table 5: Correlation Matrix Between Sensex and IPL Business Value
(Source: Primary Data)

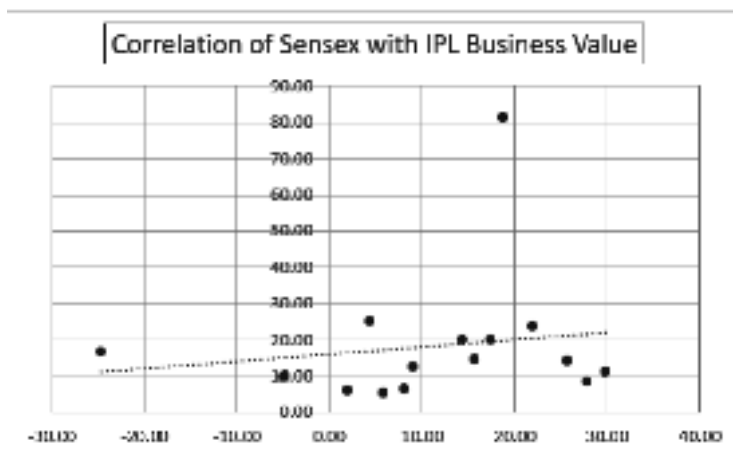


Figure 6: Scatter plot demonstrating the correlation
(Source: Primary Data)

Thus, the correlation analysis shows that IPL brand values exhibit an almost negligible relationship with gold (0.13) and the Sensex (0.05), indicating that the appreciation of sports franchises follows an

independent trajectory, largely uncorrelated with conventional assets. While stocks are influenced by corporate and macroeconomic fundamentals, and gold by broader economic factors, sports franchises derive their value from brand strength, league popularity, and media rights. This divergence in value drivers suggests that sports franchises have low correlation with traditional assets, offering potential portfolio diversification benefits. Consequently, investing in sports franchises provides a unique opportunity to reduce risk by including an asset class that behaves differently from stocks or gold, reinforcing their role as an alternative investment in a diversified portfolio.

THE BILLION-DOLLAR SPIN: CASE STUDIES IN IPL OWNERSHIP

Case study 1: The Financial Power of IPL ownership

Over the years, the Indian Premier League (IPL) has evolved into a billion-dollar sports industry. Kolkata Knight Riders (KKR) represents one of the most successful franchises, not only due to on-field performance but also because of its substantial financial returns to its owners. In 2008, Shah Rukh Khan, along with Juhi Chawla and Jay Mehta, acquired KKR for \$75.1 million. Between 2008 and 2022, the franchise's valuation increased manifold, reaching an estimated value exceeding \$1.1 billion.

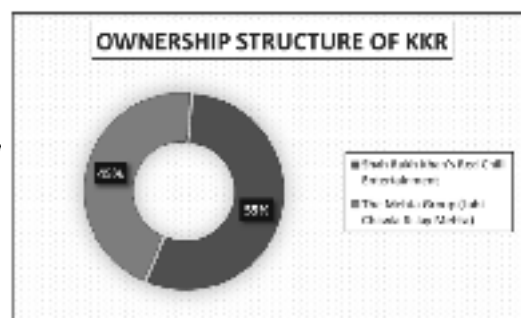


Figure 7: Ownership composition of Kolkata Knight Riders (KKR)
(Source: Primary Data)

The following analysis assesses the financial performance and brand-equity impact of IPL ownership on Shah Rukh Khan and Juhi Chawla.

Shah Rukh Khan (SRK)

Popularly known as the 'King of Bollywood,' Shah Rukh Khan has successfully expanded his influence beyond cinema to build a diversified business portfolio. His net worth stood at approximately 1,500 crore in 2009 and increased to about 7,300 crore by 2024, making him the wealthiest actor in Asia. This growth is partly attributable to ventures such as Red Chillies Entertainment and his stake in KKR. Reports suggest that SRK earns approximately 250–280 crore annually from KKR through broadcasting rights, sponsorships, and merchandise. The franchise's strong financial performance, reinforced by KKR's third IPL title in 2024, has contributed to a significant increase in his net worth, highlighting his strategic acumen as a sports investor.

Juhi Chawla

Despite stepping away from mainstream cinema after 2009, Juhi Chawla's financial growth has remained robust. As of 2024, her estimated net worth is 4,600 crore, making her the wealthiest Indian actress. A substantial portion of her wealth is linked to her investment in KKR, where rising franchise valuation and brand strength have played a key role in wealth accumulation. Her stake in KKR exemplifies the long-term financial benefits of sports franchise ownership.

Overall, the ownership of Kolkata Knight Riders has been a significant driver of wealth creation for both Shah Rukh Khan and Juhi Chawla. Beyond their cinematic success, their investment in KKR has positioned them as prominent sports entrepreneurs. The sharp rise in franchise valuation and consistent revenue generation underscores the profitability of IPL team ownership as a high-return sports investment.

Case study 2: The Global Footprint of IPL Franchise Owners in Sports investments

Following the success of the IPL, franchise owners have increasingly diversified their investments into other domestic and international sports leagues. Kolkata Knight Riders (KKR) was the first IPL franchise to invest in an overseas T20 league, setting a precedent for global expansion. Subsequently, several IPL franchise owners have extended their presence across international cricket leagues, strengthening their footprint in the global sports ecosystem. In addition, the owners of Delhi Capitals (DC) have diversified beyond cricket by investing in leagues such as the Pro Kabaddi League (PKL) and the Indian Super League (ISL).

In the accompanying figure, black boxes denote ownership or investment by IPL franchise owners across various sports leagues. Each marked box represents the presence of an IPL owner in the corresponding league. This pattern underscores how the commercial success of IPL franchises has encouraged owners to leverage brand strength, operational expertise, and capital to diversify into multiple sports properties worldwide. As franchise valuations continue to rise and professional sports leagues become increasingly lucrative, sports team ownership is emerging as a compelling alternative investment avenue within diversified portfolios.

OWNERS OF TEAMS	IPL	WPL	SA20	ILT20	MLC	GPL (M & W)	THE HUNDRED (M & W)	COUNTY CHAMPIONSHIP	PKL	ISL
RR	■		■			■				
LSG	■		■				■			
SRH	■		■				■			
CSK	■		■		■					
KKR	■			■	■	■				
MI	■	■	■	■	■		■			
DC	■	■	■	■	■		■	■	■	■

Figure 8: Ownership presence of IPL franchises across global leagues
(Source: Primary Data)

THE FINAL OVER: FROM SPORTING GLORY TO FINANCIAL STRATEGY

Indian sports franchises have evolved from purely entertainment-driven entities into credible investment assets with significant wealth-creation potential. The evidence from IPL franchise valuations demonstrates that these entities offer an attractive balance of high returns, manageable risk, and enduring fan-driven value, positioning them as a distinct asset class within modern investment portfolios. While risks such as performance uncertainty, regulatory constraints, and market volatility persist, the structural strength of the IPL—supported by long-term media rights, sponsorship growth, and global commercial expansion—has significantly enhanced the financial resilience of sports franchises.

Crucially, the correlation analysis reveals that sports franchise valuations move largely independent of traditional assets such as gold and equities, underscoring their potential role as effective portfolio diversifiers. Beyond financial performance, strong fan engagement reinforces brand equity, sustains merchandising revenues, and supports long-term franchise viability. As Indian sports leagues continue to mature and attract broader investor participation, sports franchises are no longer merely passion-driven holdings; instead, they represent a strategic and profitable investment opportunity capable of delivering both financial returns and diversification benefits.

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MS. SUSHMITA SEN

Actress and Miss Universe

Taken by the Editorial Board

YT. So our first question is, with the rise of digital platforms and audiences, embracing more of a layered and unconditional narrative, so this Indian entertainment industry has taken a bold new turn. So as an actress, what is one turn that you think is the most creative in this landscape?

SS: Brilliant question. For one, I think, you see, there's always been unmeasurable potential in all aspects of storytelling. And I'm not even talking about platforms right now. I'm purely saying in terms of actors, directors, editors, music directors, sound recordists, everything that go into making a film, writers, the list is endless. But all of this potential, especially in a country like ours, where you have such a young population, They were not getting, they were not being able to break through the ability that they possessed but not be able to get into the market where all of these people, the big names that you know for the last 25 -30 years, they had a monopoly over the market. Today, creativity has gone past that market. Now there is true potential that is getting an opportunity to explore. That's why also with digital and the internet and the

globe becoming such a small place, All of you young people are absorbing and taking in content from around the world. I mean, you guys are watching Korean soap operas for crying out loud. So you kind of know now the kind of content that you would like to watch. And then when you see Indian cinema or the American platforms or any platform, including YouTube, coming up with short films to full -length films to any format of storytelling, where we are exploring new concepts and trying to dare to be different. that was not acceptable earlier but today that has become a global phenomenon and India at the Oscars, India at Emmys, India in everybody's fingertips today is watching content that they like and you cannot monopolize creativity. So I think long enough answer but in a nutshell I think that's been the biggest move is the fact that there is innovation and global presence. Like we have seen there are a lot of different films on YouTube that have progressed and moved on to OTT platforms because of their popularity. And that is a very good answer. So moving on with the next question.

YT: Ma 'am, we have seen that you have balanced big blockbusters with powerful character - driven roles across decades. However, you could slip into a genre that has always tempted you, maybe something you rarely explored. What would it be and why?

SS: Well, thank you for the compliment. So basically, I started my life and career at your age because I won Miss Universe when I was 18. But if you ask me, I feel like as an actor and a creative person, I have just started. Like when I get into a workshop before filming something, doesn't matter the genre. I'm like this excited kid who's been given the candy store and said, pick what you want from here and make what you want from here and do it to your taste and liking. But personally, I feel of all of the films I've done, I haven't even scratched the surface of various genres. But the one that I really, really want to explore is action. And the funniest thing is, I will turn 50 this year. And this couldn't be a better time for me to get into, let's say, the official training mechanism of Maathai. I've always wanted to do action which is very hand -to -hand. It's raw. And to be able to not cheat it, but to do it myself. And so I am getting ready, and if you know the word manifestation, I have been manifesting that genre for a while, so we should get there soon.

YT: Ma 'am, after sharing screens with so many remarkable co -actors, is there any one simple moment or piece of advice from a fellow actor that you still carry with you today?

SS: Okay, so my fellow actors are all very naughty people and all of them have been fantastic actors to work with also because they bring to the table very different kinds of strengths. Salman would bring the rawness of just being himself. Half the time I would joke that I couldn't hear the dialogue that he just said because he forgot it and he just mumbled the line. And then he would dub it so perfectly that you would think, I remember he mumbled, but it sounds like he said the line there. So you learn how to be a little adventurous, a little childlike when you work with a Salman. With a

Shah Rukh, for example, you learn how to control the energy of a room. And that is a big part of uniting an entire team to give their best, to bring the best out of a film. So other than doing your lines and being stressed about your actions and your lighting and your everything, your performance, you also pay attention to the light dada who's sitting on the roof and staring at you. You learn to have tremendous spatial awareness. This came from working with Shah Rukh. Ajay Devgn, I learned intensity from. Every actor didn't really have to say anything. They were just being themselves. And through that, as an actor like me, who is like a sponge, I absorb energies. I picked up a lot. But I think one of the best things I ever learned is from my director. who said, people always say, enter into the character, try and be this other person. But remember that if Vasu is playing a character and Vasu is not a part of that character, then he'll look like a caricature. He'll never look like a real person on screen. So Vasu or Rushabh or Emmanuel or Prisha, they have to bring themselves into a role. Therefore, when I learned that and I learned that pretty late in my career, Arya happened. And I allowed Sushmita Sen to be a part of her journey. And that's why she became so believable, because you never lied in that character. You brought the truth. So that's a huge learning as an actor. You cannot, you can lie to a friend, to your parents, to the society. You cannot lie to yourself and you cannot lie to a camera. It catches it.

YT: In so many ways, Arya mirrors strength and resilience. As a woman, a mother, and a fighter yourself, where does she end and you begin?

SS: Actually, that's exactly what I was talking about earlier. Arya is an extension of Sushmita. And I think this is also because of a brilliant director like Mr. Ram Madhwani. who realized very quickly that the way Arya was written before I confirmed it as an actor, was a very different kind of Arya. In her character traits, in her arc as a person, everything changed the minute they casted me. Because Mr. Ram Madhwani said, no, we have to bring in the

truth and the only way that's going to happen is our Arya was never vulnerable because we're getting a strong woman to play her. So let a strong woman feel vulnerable at times, but let her not be someone who was very vulnerable and then she found strength, which was the original script of Arya. So, yeah, she's definitely an extension of myself. As long as I begin, she never ends.

YT: So ma 'am, as someone who has seen the industry evolve, how do you view the current opportunities and representation of female actors in Indian cinema today?

SS: I think it's fantastic compared to the 90s that I come from. At that time, we were like, You know you have in a frame the hero and some furniture, we were one of them. We were one of the furniture pieces that had to look very nice and pretty and dress up nice and do one song and maybe one sad scene in which you had to show all of your acting powers. 90s was like that. It was all about your look and that song. which I personally as an actor found very frustrating because I was not doing anything different. I was always just the sidekick of the hero. And so I gave up acting for about eight years. The reason I came back was because the world was changing. I would not say that the female actors today have it all. They don't. This is work in progress. I know for a fact that the Western world, who we seem to mimic many a times on a social level and creative level, they are still struggling with trying to get their women to have equal pay, equal positioning and opportunity, but they are a little ahead of us. We still have to get there, but we are work in progress. Today, okay, for example, From the time I've rejoined the film industry or come back to the art of cinema, I've seen a kahaani being released with Vidya Balan. This was unheard of back then, you know, because the distribution market and everyone would say, female -led films don't work. There was only one iconic actor who, for a period of six to eight months, that's it, back in the 80s and 90s, early 90s, had made a market for herself. And that was Ma 'am Sridevi. Other than that, there was never a market for a female -led film

or any content female -led. I think the biggest change today is what you watch with brilliant directors is usually led by content. It is not led by a gender. It is not led by the hero or the female lead. To have that I would have to say a big thank you to OTT and to the digital world, because if this was left only to single screens and multiplexes, you would still have the same five heroes with their market showing up as blockbusters. You would not have what you have on OTT, and you would also not have an occasional saiyyara, you know. This is all happening because this generation is open to so much more. So it's good. Good for women. I'm really happy to be still an actor and to be able to see this live. But honestly, in my lifetime, it would be wonderful to see women command the kind of creative freedom and the pay parity to be equal. So it would be lovely to see that. We have a long way to go, guys.

YT: If you could plan the most remarkable dinner, like just you and three other women who could be in the past or the present, who would you invite and what would you like to learn from them?

SS: You know what I would like? I would like to have lots of women there because you know I'm someone who's from when I was from when I can remember actually I remember being a person who's always been has lived an inspired life Like I often say this, from a paanwala to a president, everyone inspires me because I'm just someone who likes to observe life and learn from it and when I see people who, so that's why I say I would like a really big table with lots of women on it because I've met such incredible women and they're not necessarily famous. They're just women who've lived a very authentic life and made a difference to all of us. lives without making a big show show of it. But if I had to choose three, I'd go back to my childhood because I would go back to people who inspired me at a time when I was very moldable. But I'm going to be greedy and just add a few names, OK? So I was most inspired by Mother Teresa growing up. And I'm one of those lucky

people who got to meet her before she passed away. So it was a big wish fulfillment. And I could not just meet her, I could feel her energy and the kind of contribution and the love of the idea that you can be Albanian and come and make a difference to millions of lives in a foreign country and make it your own. And so humanity has no geographies. I learned that from her. And I would love to learn more. So she's on the table. I would love to have Madonna, would you believe it? Because growing up, my kaku, my uncle, would send me, you know, VHS tapes of her from the US, of her shows. So she had done a documentary, which I had received. And I'm not going to use all of the language that was in it, but what amazed me about her at a very young age, when I was very young, was she was like five foot nothing, she is five foot nothing, but she could command 150,000 people with the power of her audacity, not even her voice, I'd say her audacity. I had not seen someone that hardworking in the ability, so I'm not even talking about Madonna the musician, I'm talking about Madonna the audacity. So I was very inspired by that because I could see a person who was so different and was celebrating the fact that she was different. She didn't want to belong to a crowd. So she would be on the table. And, oh my God, it's a long list, but I would from today's times also take Malala Yousafzai. Her life has inspired me in ways that a young person could have that much courage, that much courage. Whether she was conferred with a Nobel Prize or not is very secondary. What is incredible is that when my daughters go to school and they learn about her contribution to education and empowering lives through it, she could have so easily been consumed by what happened to her. Instead, she went and turned it on its axis. Now that inspires me. That kind of potential just totally inspires me. Jane Fonda. Huge, huge fan of this lady. And I met her when I was 18 years old, your age, in Egypt for a United Nations conference. And when I heard her speak and her husband Ted Turner speak, he doesn't count because this is a female table, but still, they inspired me to better my language and to be a better public speaker. So a lot of things that has

allowed me to connect with people and make a difference in my own life have come from people that have inspired me along the way to do so.

YT: So ma 'am, at 20, we all believe the funniest things about ourselves. So what is the one belief that 20-year-old Sushmita held that makes you smile still?

SS: So for me at 20, I think that hasn't changed. You know, have you heard of this term, the arrogance of youth? Have you? Okay, so when you're that young, you think you're invincible. And it may not be the funniest thing, but I promise you that idea that I was going to be invincible, like this, nothing's going to touch me. Anything I touch will turn to gold. My private jets, my this, my that, you know, when you are that age, you want to be doing so many things. And you know that you're going to do them because, you know, you don't even have to work for it half the time. So you just get it. But then you learn, oh, these are dreams worth having and making a difference with. They're only worth when you work towards them. Because you don't want anyone to ever tell you, I gave it to you. You want to say, I earned this. I made it myself. So I think at that age the funniest thing I believed about myself was I am invincible. Hence the arrogance of youth.

YT: Ma 'am, so the next question is decades from now when someone hears the name Sushmita Sen, what is the one word of feeling you hope instantly lights up in their mind?

SS: I don't think it'll be their mind, I think they'll smile. I hope and pray the first thing they do is smile and that's enough. I came into a world where I think we all have but in my awareness I feel like the one thing that I want to leave people behind which is true, you know, you'll do great things in your life, you'll have a very famous name, you'll have a body of work, lots of money, maybe you will be famous and both infamous, doesn't matter. At the end, the only thing people remember is the feeling. And I hope and pray to God that when that happens and

they think of me decades from now, the first thing they do is smile. Even before they ask, who was she? What did she do? Where was she from? They just smile and then my job is done.

YT: Ma 'am, by embracing motherhood on your own terms, you have redefined it's meaning. So what is one lesson that your daughters have taught you that have deeply shaped your perspective?

SS: Thank you so much for the answer ma 'am. Moving on to the next question. Yeah. So ma 'am, by embracing motherhood on your own terms, you have redefined it's meaning. So what is one lesson that your daughters have taught you that have deeply shaped your perspective? Beautiful question again. So my daughters have at various stages taught me different things. And without trying to teach it, just by virtue of them being in my life, I was a very impatient teenager. And I became even more impatient in my 20s, because I was like, hey, time is going by, I have so many things to do and la -da -da -da -da, you know. Suddenly I became a mom at 24. And my Renee, she taught me, my elder child is called Renee, and she taught me patience. I learned that at a very young age, not that I've mastered it, I can be pretty impatient even at 50, but it taught me that concept for the first time. Then I realized your heart can beat outside of you, that suddenly someone else can beat priority in your life. And all of that came through my children. But in a nutshell, to sum it up, they gave me purpose. They gave my life purpose. Otherwise, given how carefree and completely globetrotting I was, I would probably not be a very stable person. They grounded me in a way that I am so deeply grateful for. Of all the roles in my life that I've played and continue to play, being a mum is the one that comes the most naturally to me.

YT: Ma 'am your unrivaled spirit and zeal to transcend all the boundaries has been an inspiration for so many of course including the people at St. Xavier's College Kolkata. What message would you like to give to them?

SS: Oh boy. Firstly, my first messages as it is you guys are way ahead of me for me to advise both in terms of the era you're living in and the fact that you're more educated than I am. I'm a 12th pass and then I graduated in life. I never went to a university or a college or so I am that prime example of you God chooses a certain path and you walk that path with absolute conviction, okay? So, I don't know about advice, but I would tell you this, that you have to always remember that there's a word called balance. And whatever you choose to do in your life, always strive to come to the center. When you go to right, come back to center. You go to left, come back to center. And the only way you can do that is to Shut out the noise of people and the world and even your parents, peers, the society, your best friends, everyone telling you who you are. Get to know yourself. And this is what I believe in the most, that if you are in touch with who you are, you become a rock solid support to yourself and to the people that you love and to the society and the world at large. So be authentic. Don't follow. You were born to be a leader. So lead yourself into that greatness. Don't wait to win something for them to announce you a leader. You're already one. Acknowledge that and Prisha, I hope you change the world in ways that we cannot see today. Emmanuel, I so pray to God that you and I, we can remain invincible forever. Vasu, when are we taking that picture? And Rusabh, you have a very, very, very, very deep soul, Rusabh. You're going to do great things in your life and you're going to come back and tell me these stories. And I'm coming for that game when you own that team. Thank you so, so, so much for this wonderful conversation. I was expecting it to be this marvelous because you guys are amazing. But yeah, if I could leave you with exactly what I was saying as a very loving message. This has helped me in really strong stead in the past and it's something I truly believe in which says that if you don't stand for something you fall for everything. So stand for something and that something has to come from you and once you find it hold on to it so that you're always in balance and then have a great life. Have an invincible life.



MR. HARBHAJAN SINGH

Cricketer and Member of Parliament

Taken by the Editorial Board

YT: A bowler's career is not remembered just by the number of wickets that he takes, but also by those special dismissals that you leave that have an everlasting imprint on your career. So, which wickets in your career do you remain the most vivid in your memory and what makes them stand out in your career?

HS: Well, for me, to just pinpoint one wicket and say this was the best wicket or this changed my career will be very difficult for me to, you know, kind of choose one wicket. So, I've taken so many wickets with the grace of God and with all of you people's blessings.

But the most satisfying wicket I can tell you is when I got Steve Waugh out in 2001 because he used to be my childhood hero and playing alongside with him was a big, big occasion for me to be able to get him out was a big, big moment for me and of course that gave me so much of confidence going forward and that made me believe that if I can get people like Steve Waugh, I can get anyone out.

YT: Sponsorships, endorsements and media rights play a huge role in the financial ecosystem of cricket. So, as a player, how did you balance the commercial demands with maintaining your focus on the game?

HS: I think it's a very good question. You know, when I was growing up, obviously I come from Jalandhar, a very small little town and, you know, for me, you know, coming on a big stage and when you do well, a lot of things happen, you know, around you and your career, you know, which kind of take your focus away from the game. You know, obviously I had very, very good seniors who could always advise me on that, that you know, whatever you are getting as an endorsement or, you know, people knowing you or they want you to be part of their brand, it is just because of your cricket and make sure that due to cricket, when everyone is coming close to you, just make sure that that remains at the top and if that goes down, these people will not be seen around you because they will try and find new people, you know, who will do well.

So, it's a part and parcel, you know, endorsement and everything, you know, the money, but, you know, the main focus should be to play for India and to be able to do it for many years, you know, what can you do? You know, how hard you can work on your game to get better every day to sustain there and keep winning games for India, that is more important than you know, these money, endorsement, these are via products. So, I've never kind of, you know, got really attracted towards the endorsement and the money because my motive was to play for India, you know, that shouldn't change, you know, and it never changed, you know, I always wanted to play for India and money, cars, house, everything was, you know, via product. So, you know, I kept it like that and I would advise all the young guns also, you know, who are making their careers, not just in cricket but when you're doing something special in your sports or even in study or even anywhere else, just make sure that, you know, nobody or nothing could take your focus away from what you want to achieve in life and that should never change, you know, and if you want to be a doctor, you know, how you can be the best doctor of India, you know, for that you have to continue to work hard in your journey to get to that level. So, all these things should never distract you to get you to where you want to be. So, the focus should be there at all times. So, the moment focus shifted, you know, then all these things will become heavier on you and it will try to pull you down.

So, the idea is to keep moving, keep moving forward and keep moving upward and the only way we can do that is if we continue to work on our journey on the process to become what we want to become.

YT: So, do you think that fame and all the factors are the adjusting point for most of the young generations, like personally speaking, when I was young, like most of the boys used to say that I want to become a cricketer when I grow up. So, but most of us at that time didn't think about

playing for the country and playing the sport. Originally, we always thought of the popularity because cricket being a very popular sport and seeing high-profile players like you, we used to think that they are getting the fame. So, do you think that the fame point is the attracting factor for most?

HS: Sir, the core group who is working hard towards the development and the points you stated is fine. But most of the people who want to pursue cricket, are they attracted towards the fame or the real motive of playing cricket for the country? Well, I don't know.

It is very personal. As you rightly mentioned, you were running after that fame. You wanted to become famous while playing cricket.

For me, my motive was to play for India. There are two totally different things in terms of the way you were thinking and the way I was thinking when I was at your age when I started playing cricket. My idea was to be a successful cricketer was the biggest thing for me.

That I want to be the cricketer. Not to become famous, but I want, because I like doing this and I want to make a name for myself in this. Everything else is very secondary or not even secondary. What you have, what you don't have and whether you have money, whether you have support. But the only thing in my hand was how I can work on my game to get better. I never thought that just because this game I play and this is a very famous game, I will become famous, people will know me. It's a by-product. You will get that. But don't start your career on thinking that one day I'll become famous just because I played this game.

No, you played this game because you wanted to play and you wanted to do something in life and that's what gives you the satisfaction. It is end of the day, your satisfaction. If you like getting famous, you know that is a different thing. But there are other ways also to get famous but if you want to be a cricketer, if you want to be a doctor, if you want to be an engineer, if you want to be someone who is

productive, then you'll have to work hard. You can't just wake up in the morning and feel that one day I might be a cricketer or one day I might be the best doctor in the country or one day I might be the best businessman. Those are your dreams and do dreams which is good but let's work towards your dreams to achieve those. I always say that dream big big dreams but dream while you are awake because when you dream while you are sleeping, when you wake up in the morning, those dreams fly away. But when you are dreaming during the day, your mind is there, your conscious mind is there, you want to achieve that, you want to get there, then you will start working towards it. Only when you work towards it, you'll know the path to get to that place where you want to be.

YT: Behind every successful sportsperson, there lay the guidance of mentors, the support of family and the inspiration of role models. As you look back, who were the people who most influenced your path in those formative years and what was the most valuable lesson they gave you that still stayed with you over the years?

HS: For me, my father was the biggest hero. He left us in 2001. I think that was the moment when I was at my lowest in my life but it was my dream to play for India and without my father's support and my family's support, I don't think I would have reached where I am today.

I think that was always going to be there and I always say that no one achieves alone. There is a team, there is a force behind you which is to push you to achieve your own goals and of course my mother, my sisters, they all sacrifice a lot just for me to achieve my own goals. So my father was my real heroes and my support system was my sisters, my mother.

You know, they continue to give me that comfort or whatever I need to become you know, in life. So, you know, I, you know, say like thousand of times if I say thank you to them every day, it will be less. It will be less even if I say thank you a thousand times because what they have done, they do a lot less.

And for me, my family, they were my pillar of my strength.

YT: So my question is that we all know that cricket is as much about temperament as it is about skill and the movement of pressure can easily test a player's emotion. How did you manage to stay composed and focused instead of giving in to the frustration during the matches?

HS: See, very nice question. You know, as a player, there will be frustration.

There will be expectation. There will be always people looking to do you, do things, you know, how they want you to do. And, you know, as you know, in any game, whether cricket or any sports, you know, you can't predict results, what can happen. And the opponents can give you different challenges during the day, no matter how hard you have prepared yourself. And they also are there to compete with you. So there are times, you know, when I've gone through bad frustration in the game, not having the best of the day and nothing is working out. You know, easy catch being dropped on your bowling or you playing some reckless shot and getting out. And, you know, those things are bound to happen. But you can only control the controllable. You know, I can tell you today because I'm no longer playing the game. I'm a retired player. But I wish, you know, I, you know, kind of did better in those situations. Of course, as you play, you learn and then you move on. And then again, there are new challenges which teaches you a lesson every day. So cricket or any sports, you know, teaches you a lesson every day. Sports is such a beautiful thing. You know, it teaches you how to, you know, behave when you are winning. And also how to behave when you're losing. And how to behave when you're achieving. And how to behave when you're not achieving. So it kind of, you know, keep you humble at all time. And the best thing you can do is just work hard and be ready for those pressure situations. And one thing which we all should do during those pressure situations,

do what you know is the best. You know, if I bowled, say, 100 balls off-spin. I'm an off-spinner. And I bowled 20 balls Dusra. So in pressure situation, what would I do? Even though Dusra was my best weapon. But I will not use that because I bowled only 20% of that. And my practice for that is only 20%. So I would do something which I have done again and again, which is my normal off-spin. You know, think right in those pressure situations. Take a little bit more time. There's always a time. We always say, nahi nahi time nahi hai, bahut jaldi mein tha. There's always a time. Think. Whenever you're feeling the pressure, think a little more. And then you take your decision whether it is good or bad. Once you take the decision, go ahead fully hearted with that. You know, even if you've taken the wrong decision, but it's okay. Back yourself and then you'll see more often you'll be on the winning side. Sir, we have seen that in a lot of matches, there is sledging from behind the wickets by the wicket keeper, etc. While you're batting. So, how did you keep your composure at that time? And which match do you think that tested your composure the most? And so, just for that, adding on to that, we have also seen many follow-ons and the send-offs that player gives to the batsman and the aggression that the players internationally are adopting. So, is that the best way or the strategy? See, it didn't matter to me. To be honest, if people were talking around me and trying to sledge me, you know, I was always like, ears are closed. Ears are closed, mind is open. What to do? Focus on target. The way Arjun hit the target, he focused on the target. He didn't see what was here and what was there. And that's the difference. In an achiever, he targets what he wants to achieve. But most of us, what we do is, we start seeing different things, you know, around that target. Then we distract. That means, once you're distracted, your concentration is gone. You're not thinking right. And then you're making a mistake and you ended up getting out. Or, you know, you didn't want to be in that situation later on and you regret. So, the idea was to keep the focus on what is the job in front of me. Why I'm here in the middle? Why these people are shouting? It's their job. Why I'm here? That is where

my focus should be and my concentration should be. So that's all that matters. To me, I tried my best to concentrate as hard as I could and think of those areas where I needed to work on. And, you know, most of the time, you end up finishing on the winning side. If you do things right, it's a small thing, but it's a very hard thing. Concentration, it's a very, very small thing, but it's the most hardest thing to concentrate. So, no matter what people are saying around you, you know, let them do what they're doing or saying you're a student or even, you know, people who are trying their ways to achieve something in life, you know, there will be people who will create those negative things around you and try to pull you down. But if we'll, you know, shift our focus towards them, that means that's all they wanted. So keep walking straight and keep running straight. Don't look here and there. And someone gave me very good advice. Have you ever seen a horse? It's tied from here like this. It's tied from here so that it doesn't get distracted. Here and here. Both sides. So all he sees is in front of him. So whatever is there in front of you, just focus on that and look to achieve that rather than if you look around here and there, that means we are getting distracted. That's why when a horse runs straight, no one runs faster than it. So if you tell a horse to look here and there, then it will get distracted and it won't be able to run faster. So that's the mantra of life. Just keep looking forward, keep looking straight, keep your eyes on the target, you'll get there.

YT: Injuries often kept players away from cricket for long periods, making it challenging to return at full strength. How did you advise young cricketers to approach such setbacks in a way that allowed them to recover fully and adapt effectively when they return to the game?

HS: It's a mind game. Injuries are bound to happen. It is going to happen. When you're playing sports, till the time you're playing, it is continually going to be there. So that's not going to change. What we need to change is our mindset. How are we going to make a comeback? You get injured, it's okay. While

trying something or doing something, you got injured. Nobody likes to get injured, but once you're injured, what are you doing about it? That is the time that discipline comes into the game. How much discipline a person has. If there is an injury, from physiotherapist to strengthening and making sure that you're eating right and doing the right sort of exercise for you to get back on to the path. Whether you're doing that or not. A lot of people, when they get injured, they lose their somewhere ahead. They think, why this happened to me? Why this happened? I was doing so well. So stop complaining about it. Take it on your chin. It's okay to be injured. That's not the end of the road. Look forward. How are you going to make a comeback? And work towards it. If you think that way, often people have seen good doctors have given 3 months or 6 months for you to return into the game. But if you're focusing right, if you're working on your fitness, your diet, and also your mental strength that I want to be there. You're thinking towards there. And you're almost there. In 3-4 months a person comes back. But the one who was told that he'll be back in 4 months, but if he's not thinking properly, he won't come back. You look at Rishabh Pant. I'm just giving you his example. He's gone through a very, very bad accident. Thankfully, nothing happened. He survived. And after that, a lot of people were actually doubting that if he'll be able to make a comeback. His leg is broken. There are fractures in different places. And whether he'll be able to ever play for India or not. Because as a wicketkeeper, squatting will be a difficult thing. But when he decided that everything is possible, and I will do it. You know, he played I think 8 or 9 months or a year he was back playing again. And more motivated to do well. That is a mindset everyone should have in life. It's okay. Setbacks happen to make you a better person. To make you a better athlete or you know, achiever. Because you don't want to let yourself fall from those setbacks. You have to get up from those setbacks. If the setbacks are big, I'll get even bigger than that. So no setback comes to me next. So Rishabh Pant and many other people become examples. They become examples for other people. If he can, I can also do

it. So hats off to Rishabh Pant for keeping that mind frame. I want to get back there. And I want to show the world that this is doable. And how he's done it is a commendable job. Your advice is truly that of a seasoned player. But as someone who has been a part of the game for so long, and even in earlier phases of your career, were there any injuries or situations as such that truly tested that mental strength of yours? Or maybe tested your discipline and focus? Yeah, I got injured a couple of times which kept me kind of away from the game for about 6-8 months. Those are difficult times. You feel very alone. You feel frustrated when you watch the game and you're sitting at home and you know that you want to be there. But you can't really do anything about it. So those are very frustrating times. But those are the times which make you the person you are and the fighter you are. Rather than thinking on those terms, work towards it so that you recover in time or before time to get back into the game. So when I got injured in 2003, I had about 10-15 stitches here. I don't know if you see the line here. At the moment, my ligament was torn. This was my bowling arm, bowling hand. Bowling hand was completely swollen. I was so much in pain. I couldn't even open the nub. So imagining spinning the ball was the impossible thing. So I had to go through the surgery and that surgery took place. After that, it was a process which I needed to follow and work towards it to make a comeback in the right frame of time. It was a frustrating time but as you rightly said, you need good advice, good people around you, positive people around you at that time to push you to get better and get back at the game. So luckily in my case, I had good people around me. You always should have people who are pushing you to achieve something rather than saying, why this happened to you? It's okay. That's his plan. That's God's plan. So whatever he plans is always right. So I believed in that and I got better and started playing again and the moment I started playing again, I was again winning games, again winning Man of the Matches. Everything happened for a reason. It comes and tells you you need to work. You need to be more disciplined. You need to still

work harder than the others to get to that level. There will be obstacles in life whether you are a sportsman or not. In any life, even in your studies. But that is the time to push yourself. No, I don't want to lose. I am here to win in life. No matter what. Nothing can pull me down. The only thing that can pull you down is your own mindset. The moment you will start thinking that I can't do it, that is it. But the moment everyone is saying that I can't do it and you have thought that I will do it, then no one can stop you. That's why I say always believe in yourself and believe in that God that I will work hard or I will work hard and he will give the result. So people who work hard and believe in God always move forward in life.

So no matter what happens to you all, in life, in any difficulty, everything has time. That too will pass. But you have to keep yourself right.

That this will pass and I will come at the top again.

YT: Sir, we all know that you have played for different franchises, formats and ever-changing teammates. So, how do you quickly adapt with your role and gel with new teammates?

HS: It's not a big deal. As a professional cricketer, you play in different teams. You kind of adjust to those places where you go to. So, it's not a big thing, you know, going from one team to the other team and getting mingled there. If you're a person who likes talking or like mingling with people, you know, it becomes very easy. So, the more people you meet, you know, obviously a different mindset, you get to learn new things. So, I always look forward to meet new people and to understand, you know, how they approach their life and their cricket. But luckily for me, I played 10 years with Mumbai Indians and then afterward, I went to Chennai Super Kings for 2-3 years and then to Calcutta. So, it wasn't the biggest shift because all three teams, you know, I played with. You know, I think I know most of the people since I played a lot of international cricket. So, it wasn't a big deal for me. It's a big, big thing, you know, it's like you're representing your country, you know, when you go

and play the Olympics, nothing gets bigger than that. You know, for any sportsman and our game is not in that. So, this is like the biggest moment for those who will participate. You know, I think nothing can be bigger than this when you go out there and represent your country. Yes, when you're playing for BCCI, yes, even though we say it's an Indian team, but if you look at it, it's a BCCI team. Which obviously holds the rights for the Indian cricket team, it's called India. But when it comes to the Olympics, it's a big moment. You know, you won't have like 10 teams playing in the Olympics. There'll be hundreds of teams playing. So, winning from 10 and winning from 100, it makes a huge difference. So, that's why the players who will play in the Olympics, I think they should see it as, you know, the lifetime moment of their life and just make it count. Just go out there and win it for India, you know, that will be the most satisfying moment. You know, I think it will be the good fortune of everyone who will get a chance to play in the Olympics. Thank you so much, sir, for the wonderful answer. We move on to the next question. Being a part of the same team and sharing the highs and lows of cricket often leads to friendships that go far beyond the game. And many players have formed bonds that last a lifetime.

YT: Can you tell us about one such connection that you made during your career that you still cherish today?

HS: Yeah, I have a lot of friends that, you know, they are like my family. Someone like Ashish Nehra, I used to go to Delhi and, you know, spend a lot of time at his house. We are like brothers, you know, even though he's living in Goa, I live in Punjab and Mumbai. But we often talk over the phone and, you know, we share that special bonding. So, our love for each other is still intact. We share that bond with Yuvraj and Zaheer Khan as well. So, the players who play with you, that bonding is still there. That bond lasts for a lifetime. It's not a friendship, it's a brotherly love. Sir, it was wonderful to know about these different friendships that you had.

YT: IPL has become an important part of every cricketer's career. And it offers intense competition and exposure to international cricket. Sir, what do you think is the biggest insight and learning that you had gained from IPL? And how had it influenced your game?

HS: See, the biggest thing of IPL was to be able to share the dressing room with the opponents which you used to play against. And now suddenly they were your teammates. And you kind of get to know them, you know, their ideas, how they go about their business, when they're playing for their country. And it's just bringing everyone together in one platform. And learning from each other was the biggest take, I would say, from IPL. And of course, it's a great source of income for those players who were not able to play for India or for their respective states. But they were still able to get a chance in the IPL. And sharing the dressing room with the likes of great Tendulkar, Vaughan, Ganguly, and many other greats. And, you know, it was a big, big thing at that point of time. And now you see, the cricket has changed in India due to IPL. We have so much of a talent, a big pool of talent, where, you know, Team India can play three different formats in different countries. You know, still, you'll be able to beat those opponents. So, you know, IPL is probably the best thing that happened to the Indian cricket. Thank you, sir, for the answer. I want to follow up with this question.

They won't specify any specific player or team of the IPL. Sir, but just before the India vs New Zealand series, so one of the very famous IPL franchisees had provided grounds of training to one of the players, who was a part of the New Zealand team. And he was allowed to train in that particular camp two months prior to the India vs New Zealand series, which helped him a lot in getting sort of very good grounds. And he had performed fantabulous in the series. So do you think that the IPL franchisee giving such grounds of training over the national interest to the outsider player is fair enough on the part? I don't think that any IPL franchisees, they have any ground, you know, they can give it to any other team. I don't see

that anyone has that ground. But yes, if they have given it, then I feel that ground, how many days have they been given for practice facilities, what have they been given? But any team comes to India, or when we go abroad, we also get practice sessions. And, you know, they were training in India, they will get some ideas about our condition. But still, you know, they can come and meet them, just, you know, practicing in those two months. I think the simplest answer for this was that they played better cricket than Team India. And of course, it was a learning for India, you know, and they learned quickly and move forward. And hopefully, next time when they come, or we go there, we'll be able to beat them there in their backyard and also when they come here.

YT: Sir, we know that fans continue to celebrate your contribution years after your debut. And that is also the case for the students at St. Xavier's College. What message would you like to share with them about pursuing their passion and leaving a positive mark in whatever they choose to do?

HS: To all the people who are listening to me, all I want to say that do dream big, as I mentioned earlier in this conversation. And while you're dreaming, make sure you're awake and work towards your dream. You will achieve everything in life. Don't ever doubt yourself. And don't let others let you feel that you can't do it. So you continue to work hard and be focused in life. And may God be with you all to achieve your goal. That's all I can say. And sky's the limit. You know, it's up to you how much you want to fly, how much you want to, you know, try achieving it. You know, there's no end to it. So continue to work hard, continue to get better and be the best human being of yourself. To try to be the best human being that you can be and try to help people. You know, that is what I would like to see in all of you.



MS. MANIKA BATRA

Indian Table Tennis Player

Taken by the Editorial Board

YT: You have broken many stereotypes in Indian sports by putting table tennis in the spotlight. How did you stay motivated while pursuing a sport that was still growing in prominence in India?

MB: Uh, to be honest, from where I come from, table tennis was never a headline sport. There wasn't much funding, barely any brand endorsements and hardly any media attention. It was a humble space, quiet and overlooked, I would say, things started to shift after my Commonwealth Games medals, and even more so after the Olympics. You know that visibility changed a few things, but, but the core of my motivation, that never dependent. Depended on how mainstream the sport was. I was always surrounded by table tennis, lovers, coaches, training partners, my family, people who played or supported the game, not for fame, but for pure passion. That energy always kept me going. I never felt lack of spotlight, because my world was always lit up by purpose. But yes, there were moments when I saw other sports explore at the grassroots level, with, you know, massive fan bases and support systems that made me reflect. I felt a sense of responsibility like it's on me to push table

tennis into that space in India, I want every kid with a rocket to dream as big as a cricketer does. That's what keeps me on this path. The motivation flows from the mission.

YT: Women athletes often break barriers both on and off the court. What is a misconception about women in sports that you wish more people understood?

MB: Let me say this, when a woman chooses to do something, whether it's sport, art, business, anything at all, she gives it everything. It's almost like it's built into us. We are raised to give our best no matter what, and yet, there are so many misconceptions that surround us, one of the biggest being that we are emotionally fragile or mentally weaker. Yes, we, I would say we are emotional, and there's nothing wrong with that, but being a woman in sport isn't about fragility. It's about resilience. We face bias, double standards, questions about our choices, our clothes, our commitment, and still, we show up every single day. Being a woman in sports doesn't come with any you know, leverage. There are no shortcuts, no

soft corners. You have to earn your place with twice the effort and half the recognition. But that's also what makes us, you know, mentally so strong. We don't just train our bodies, we train our minds to carry the weight of both competition and expectation. And I can proudly say that that we do it with quiet strength.

YT: The support of institutions like the Reliance Foundation often extends beyond just infrastructure or funding, it can shape an athlete's mindset, confidence, and long-term vision. In what ways has your association with the Reliance Foundation influenced your journey, both in terms of performance and personal growth?

MB: Uh, my association with the Reliance Foundation has been incredibly empowering, not just for my performance, but for my mindset and overall growth as an athlete. Their support has always felt personal. It's not just about, you know, facilities or funding. It's about belief. When, when an institution as respected as Reliance Foundation believes in your journey, it reinforces your own confidence, I would say, and they have given me access to world class resources helped me stay focused during crucial phases, and most importantly, reminded me that I'm not alone in this pursuit, whether it's mental conditioning recovery or long term planning, they have always had my back, but beyond the court, they have helped me dream bigger. I have started thinking not just about my own matches, but also about the future of table tennis in India. That shift from being an athlete to a change maker is something they have helped me help nurture, and I'm truly grateful for that.

YT: You have trained and competed internationally for years. How do you adjust to different cultures and crowds when you travel?

MB: Competing across the world has taught me how to be open, observant and respectful. I have learned

that adjusting to a new culture doesn't mean changing who you are. It means embracing new energy and allowing yourself to feel part of something bigger. I remember playing in Montpellier, France, where the crowd was incredibly loud and passionate. One day, they were cheering for my European opponent, and the next day, when I played against the Chinese player, the same crowd was chanting for me. You know, that's the beauty of sport. It breaks barriers and builds bridges, even when I don't speak the language or know the customs I connect through the emotion of the game. People everywhere feel joy, attention, pride. It's universal. No matter where I go, someone always comes up to you know, appreciate my game or share their support, that human connection that's what helps me adjust and feel at home anywhere in the world.

YT: International tournaments often create unforgettable experiences beyond the arena. Is there a moment outside of competition, perhaps a cultural exchange, a team bonding experience, or an unexpected encounter, that has stayed with you over the years?

MB: There have been many beautiful moments of the table, but if I had to pick one, it would be my experiences in China. In China, table tennis players are treated like superstars. every time I visit, I'm blown away by the love and attention, not just for the sport, but for me personally. You know, it's overwhelming in the best way. They have such deep respect for table tennis, if they admire a player, they almost worship them. I've had fans waiting outside venues handing me, you know, gifts, drawing sketches and, yeah, even trying to learn Hindi, just to connect. You know, it's a level of passion I've rarely seen anywhere else. That kind of admiration reminds me how far this journey has come. I went from being an unknown young girl in Delhi, to some someone people in another country adore. it. You know, it humbles me and it stays with me always.

YT: Every athlete faces moments of doubt, especially in the early stages. Was there ever a time in your journey when you considered stepping away from the sport and what ultimately reignited your drive to continue?

MB: To be honest, I have never had doubts like that, not even once. I have never thought of stepping down from the sport because I love it. I love my sport. You know, every setback I faced has only pushed me harder. Ups and downs are part of any athlete's career. But you know, they don't define who you are. In fact, you only rise when you have hit the ground, to be honest. And in table tennis, we compete against countries like China, Japan, Korea, Germany, places you know, with Olympic level systems, unlimited support and coaches who are themselves Olympic medalist. You know, think about that. Players are being trained by gold, silver and bronze medal winners. That's the level of experience and legacy we are up against. So whatever we achieve, given our limited resources in India, is always a win itself. I've been India's number one for the past six, seven years, and I, and I intend to keep, keep it that way, but, but even if I lose my ranking at some point, I know it won't last long. I always come back. I always have, and I always will.

YT: Behind every powerful athlete is a personal sacrifice. What is something you have sacrificed that people don't see when you stand on the podium?

MB: Um, of course, people, you know, people see the medals, the national anthem, playing the victory smile, but they don't see the moments. I have had to give up just to get there. I honestly don't even remember the last time I celebrated my birthday with my family, Diwali, my favorite festival, comes and goes while I'm in some you know, other country, playing a tournament, preparing or competing in some tournament. It saddens me to the core so much, and I miss my family so much at that time. And you know, on Rakhi, I miss my brother and sisters deeply. I, you know, miss the

warmth of home, cooked meals, the laughter of celebrations, the feeling of, you know, simply being home. Yeah, these, these may seem like small things to everyone, but they are everything to me. So when I stand, you know, on that podium, it's not just about to win on paper, it's a celebration of all those little sacrifices that built me. Every medal holds the silence of moments I missed and the strength I gained from choosing purpose over comfort, and that's what you know, makes each win deeply personal.

YT: You have played in halls packed with screaming crowds and almost empty arenas, what is harder: handling wild home crowd pressure or silence that makes every point feel heavier?

MB: Nice question. Honestly, I still haven't figured that one out. Sometimes I, you know, I crave the energy of a loud cheering crowd. It pumps me up, gives me that, you know, extra boost, but other times I just want silence, the piece to focus. So in that sense, I have realized that both situations have their own, pros and cons, and as it leads, at least we are taught early on not to let external factors like noise or silence get into our nerves, but let's be real. It. It does affect you. It has affected me too at times, so I have stopped putting one over the other, whether you know it's a roaring home crowd or an almost empty arena at the end of the day, your biggest opponent is always your own mindset.

YT: With all the global leagues and formats you have seen, if you had the chance to shape a world-class table tennis league in India, what elements would you bring in to truly captivate fans and elevate the sport's profile?

MB: Um, I've seen and played in so many leagues around the world, and even in our own Indian League, UDT, it's been a great step forward for the sport. But if I had the chance to create a new league, I would definitely add a few bold tweaks to keep things exciting and fresh for viewers. First, I would introduce timed sets.

Imagine a 10 minute match where the player with the most points at the end wins, regardless of sets and ya, so you have to finish that match in 10 minutes, and you have to win. You know how many points you can win for yourself. It, you know it could. It would create urgency, strategy and thrill in every second, second I would love to include men versus women showcase matches. I think that dynamic would be super entertaining and break a lot of stereotypes, plus it celebrates skill over gender and third to you know, spice things up. I would introduce a rule where, where? If a player misses a sir, the opponent gets two points instead of one. Just imagine the pressure and intensity in those moments. You know, table tennis is already such a fast, dramatic sport with a few playful rule changes and the right storytelling, we can make it a truly gripping experience for fans across all age groups.

YT: You have overcome intense competition, setbacks, and the pressure of performing on the world stage. After everything you've learned

through that journey, what message would you share with the students of St. Xavier's College (Autonomous), Kolkata who are still trying to find their path, both in sport and in life?

MB: There's something I heard recently in a round table with Tom Hanks that really stayed with me. He said, I wish I had known this too shall pass. You know, if you're feeling low, confused or stuck, this too shall pass. And if you are feeling great like you know all the answers this too shall pass, whether things are falling apart or falling into place, time has a way of balancing it all, that perspective has changed the way I look at every high and low in my life, and it really helped me a lot in my journey. So to every student still finding their path, don't rush at all. Be kind to yourself. Allow space for failure, for silence, for growth, the pressure to you know, have it all figured out is just noise. Focus on becoming better, not perfect. Keep showing up, keep believing in yourself, and always remember whatever moment you are in right now. It's just a moment. It will pass, and what's meant for you will find you.



MR. HARISH BHIMANI

Indian Artist and Writer

Taken by the Editorial Board

YT: You are widely regarded as ‘One of the Most Recognisable Voices of India.’ While having a powerful voice is one aspect, mastering the art of voiceover requires technical expertise as well. Could you share how you trained yourself in the finer nuances of this craft?

HB: Thank you for your kind words. Look, larynx, the voice box, is something one is born with. But taming, refining, cultivating it are options rarely employed. As for my learning the craft, it happened rather dramatically! In my early days, after I had taken a treacherous plunge into the voice world - post a Chemical Engineering degree, an MBA and a stint with a leading global MNC - I was still a ‘Regular Voice’ in a tearing hurry to becoming a ‘Professional Voice’ – little knowing what that really involved! At that time, as even today, there was no institute, no courses - not even dubious money-spinning workshops - to guide me on my path. As a last resort, I approached the then reigning voice artiste Sam Berkeley-Hill - a remnant of the British Raj, an Anglo-Indian - to take me under his tutelage. But he told me point blank, in his rather high-pitched voice, and not in a

soothing tone, “Why should I teach you?! If I do, you'll overtake me in three years!” In my greenhorn naiveté, I took this as a rare compliment by a doting veteran – at least 25 years my senior! But no, he was dead serious! After enduring his less-than-warm hospitality – not a glass of water offered - as I descended the narrow, dimly-lit stairs of his cramped Colaba dwelling, his diatribe echoed in my ears, “Why should I teach you... you will overtake me in three years,” much like an offended protagonist in an over-the-top climactic movie scene! Wonder, if Eklavya felt the same way when Guru Dronacharya, in the epic Mahabharata, refused to make the tribal archer his disciple! But I almost heard myself retort, “Why three years? I'll overtake you in three months!” I didn't know how though. In that disturbed state of mind, on my hour-long journey back home, I hammered out an all-encompassing study program - pronunciation, tone, timbre, pitch, voice projection, expression, all without losing spontaneity! The only problem was that I was the Course Designer, the Teacher, the only Student, as also the Grading Examiner! And what do you know, that set of exercises has

stood me in good stead to this day - 50 years on! I have used the same 'syllabus' for coaching sessions of Voice Artistry. And I am loath to share that 'algorithm', because I believe that practice and prayer should remain private. So, in a manner of speaking, I inadvertently followed Shakespeare's dictum, a la King Lear, "Mend your speech a little, lest you may mar your fortunes." The learning process, of course, continued - and continues to this day. No one taught me, but I kept learning from several stalwarts in their own genre - without ever being formally inducted - again, like Eklavya! And yes, I did keep the three-month promise! Sometimes, a sordid episode can work as a trigger for a much-needed traction. I must admit that I was tempted to tell Mr Berkeley-Hill that he was right in his 'overtaking' surmise. But I let it pass, as I was brought up to respect age. I seriously believe that when you stop enjoying the process of learning, the end of your professional journey is well in sight.

YT: With a career spanning more than 28,000 recordings across genres, how do you usually prepare before entering the recording booth? Does your approach change depending on the type of assignment - whether it is a narration, dubbing, advertising or an audio book?

HB: Preparing for a recording is an internalisation process - quite like an actor's, only less perceptible and more personal. For a voice artiste, there are no sets, movements, lighting, costumes or co-actors to lean on. Perhaps that is why audio performance is called 'Voice Acting' while screen performance often becomes reacting. Apart from 'One of the Most Recognisable Voices', 'Samay', 'Timeless Voice' and such monikers, I have been - hopefully justifiably - called the 'most moldable voice' which must be because my real guide before starting a recording is the script - its words, the emotions contained in them - and what the writer seems to want to convey in between the lines. I also keep in mind the age group of the target audience. It was, in fact, this very 'moldability' that won me the most

defining assignment of my life — the voice of Samay in Mahabharat. To illustrate how vital it is to prepare for a recording, I will let you know that for the Mahabharat's Samay, now considered an iconic recording, we took 3 sessions of 4 hrs each to determine tone, pace and pitch of the delivery! And how singularly fortunate I was, that the sessions were being directed by the legendary triumvirate - the veteran filmmaker B R Chopra, screen writer and novelist Dr Rahi Masoom Raza and the celebrated poet-lyricist Pt Narendra Sharma. But, of course, this doesn't happen in every project. But prepare we must. So, how do I prepare for a recording? Post an initial reading of the script, of course, under my breath, I humbly submit myself to the director, because I only have the script, he holds the entire vision. The emotional quotient of a recording comes from a strange combination of confidence and humility - the humility to accept that the script is supreme, not the voice, however decorated that name might be.

But all said and done about the prep, one of the most important components of voice recordings is spontaneity. That is why, narration is a bit of a tightrope walk - because conscious preparation and spontaneity are an oxymoron - contradiction in terms! How can you sound spontaneous if you are already over familiar with a script? Therefore, If the script is cleanly written — free of grammar and syntax hurdles — I actually read it for the very first time on the mic, live, as we record. I did exactly that this morning for a recording meant for posterity - for a museum. My logic is simple: the first reading of anything evokes a pure, instinctive emotional reaction. A voice artiste must catch that fleeting moment and transmit it gently into the microphone. Basically, my ultimate prescription is that "Don't just read a script, tell a story."

YT: You began your journey as a young freelancer working as a photographer, writer, and radio artist to support your education. In today's world, where financial independence is often

delayed, how important do you think it is for young people to become self-reliant early on?

HB: To put things in the right perspective, I didn't choose to work early - I was forced to, in order to pay for my management studies. We were not a family struggling to survive, but my father firmly - if mistakenly - believed that these 'new-fangled' management courses could not make anyone a manager. According to him, "You must work your way up a corporate ladder!". So, with few options left, I turned my hobbies income streams - so that I could work in short bursts that didn't derail my demanding academic schedule. I didn't realise that I was actually testing my suspected artistic skills if they were of any acceptable professional standards! So, out I went with photography (restricted to mgt. school events & candid portraiture), writing two articles a month for a technology periodical, and recording youth radio shows. This continued till I received a loan scholarship to complete the rather demanding curriculum. Ironically, the same education helped me venture into these very hobbies - now at a truly professional level! But to answer your question about financial Independence early on, in my opinion, no, I don't see it as a virtue worth nurturing - unless there is a dire financial crunch in your family. If not, focus on your studies, focus on your future, remind yourself that this is the only chance to gain some real theoretical knowledge.

YT: Your narration in B.R. Chopra's Mahabharat remains iconic. The re-telecast during the COVID-19 lockdown was met with massive enthusiasm, even among younger audiences. How do you see the values and messages of the Mahabharat resonating in today's social and cultural context?

HB: Mahabharat is acknowledged as the world's greatest epic. It is said that every plot in the world literature can be found in the Mahabharat. What Mahabharat doesn't have, probably, does not exist! Like the Godfather franchise is sometimes

referred to as the Mahabharat of crime stories! You ask about the youth connect. Consider this. Today's streaming youth icon Netflix has produced a web series called Kurukshetra - and in English too! Oh, BTW, they have morphed the Samay of the TV serial into Ved Vyas of the web series! (and which too has been narrated by me) See, even the American entertainment conglomerate thinks that the epic will connect with Gen-Z. Now, how does Mahabharat resonate in today's social and cultural context... Notwithstanding debates on its historicity, the Mahabharat is deeply relevant today. Remember, what the Samay propounded early on... ("...aur yah ladaai har yug ko apne-apne Kurukshetra mein ladani padti hai, kyonki har yug ke Satya ko vartamaan asatya se joojhna padta hai...") "And every era will have to fight its battle in its own Kurukshetra, because the verity of each age must contend with the burgeoning falsehood in its midst." And this is exactly what we see happening even today the world over - whether it is Russia-Ukraine, Israel-Hamas or our own country! And this is just one aspect. And what about the mainstay of the Mahabharat - 'blind' love for a son? This is deeply ingrained in the present-day Indian polity, for all to see and suffer!

So yes, Mahabharat is very much relevant today, and I think it will remain so, given the human penchant for conflict and filial infatuation.

YT: Artificial Intelligence is now producing human-like voices. Do you see AI as a threat to professional voice artists, or do you think it opens up new possibilities for the industry?

HB: Every new technology seems like a messenger of doom - from typewriters to calculators to computers to email and the Internet - although they end up giving more than what they snatch. But yes, AI voice feels truly disruptive - more than just a loud wake-up call.

Let me quickly explain how. IVRs - Interactive Voice Responses - are machines that speak like humans. These are commonly called 'prompts'

(not to be confused with the elaborate questions you need to frame while conversing with an AI platform). And would you believe that nearly 75 per cent of prompts are no longer being recorded by voice-over artistes? They're generated by AI. Which means: any recording that does not require emotional input will increasingly be outsourced to machine. But there is a certain monotony about machine speaking which creates ennui – boredom. And yet, an AI voice is often preferred to an untrained human voice that might sound uneducated or simply uncouth. AI, in that sense, has raised the floor - and with it the ceiling. You can hear this uplift in hundreds of YouTube videos that now sound more polished - elevating our browsing experience. Actually, more than AI voice, AI writing is becoming the real disruptor. When you ask AI to write, it researches, thinks, composes in multiple styles, and gives you so many alternatives that it becomes difficult not to accept its suggestions. And, of course, using AI for writing isn't labelled plagiarism. As for new possibilities — yes, VO artistes will need to expand their skillsets and leave repetitive work to AI. In the long run, this will push professionals to use their innate talent more fully, thereby raising the standard of their output. My word to existing voice professionals is this: unless you cultivate your own individual 'X factor', I'm afraid your work may soon be usurped by a smart machine. In matters of sheer speed of reading (data), comprehension and logic-aided response, we can't beat AI even at an elementary game of Solitaire! But take heart — human-led projects will continue to need human inputs, because every leader wants to add their own voice to the process. And yes, like every technology, AI will be misused — just as mobile phones and digital payments have been. But being entirely electronic, it will soon develop its own checks and balances. Look at YouTube: it threw up massive IP issues initially, but gradually solved them — automatically, at scale.

Look, man invents machines so he can delegate repetitive labour and free himself for creativity - and invent even more machines! But this time,

we've created a machine that is itself creative, because it can 'think'. But can it think better than its inventor? Theoretically, improbable — but with today's (neural network) technological velocity, not impossible. So, the only practical path forward is to use AI to your advantage, ride the wave, and keep honing your craft. In a sense, AI seems to live by a Hindi idiom: *Maan na maan, main tera mehmaan*. Come what may — I am here to stay.

YT: You have seen the evolution of Indian media for decades. How do you feel the role and importance of voice artists have changed from the radio era to today's digital-first world?

HB: Oh, what a journey of audio technologies! From 2-inch-wide magnetic tape weighing nearly 3 kilos for just 10 minutes of audio, to 1/4-inch spools, to magnetic digital, to the early digitals — and now the present-day AI that dares to challenge human capability!

With so many technologies in play, the voice has become a true instrument of free speech. "Have idea, will speak!" But when media multiplies, we often fill the space instead of elevating the content. YouTube and similar platforms suddenly opened up a massive universe of voice recordings — but with minimal budgets for voices. As a result, voice artistes couldn't hold their price lines, and a whole new breed (really, a new horde!) of voices entered the fray. In this duel of quality versus quantity, mediocrity had a field day. And who came to the rescue of the fastidious listener? Ironically, the very AI that is also an existential threat to the voice industry! Today, in the gush of content, we largely hear two kinds of voice-overs — either clinically clean delivery (thanks to AI) or rendition of genuine distinction. Gone are the oafish, untrained, uncultured non-voices. Is this good or bad? Well, both - good for listeners, not so good for voice artistes. AI is throwing the gauntlet - it's for voice artistes to pick it up.

As for the good old radio - there was once an era when there was, well... only Radio! And yet, more

than a hundred years later, it has adapted beautifully and co-existed with every new medium. Radio continues — and will continue — because it remains a ‘live’ electronic friend: an informer, a reminder, a music buddy. Technology may change; companionship does not. The role of human voice will certainly become more important - but only if it rises above the synthetic voice. Voice artistes will have to work harder to convey what lies ‘between the lines’, rather than merely vocalising words that contain information. Ultimately, voice will rule, simply because people will read less and hear more. But beware - synthetic voice (AI) is working tirelessly to sound increasingly real. You have, of course, heard of deepfake!

I see the universe of communication expanding so dramatically that more and more human voices will be required - except for routine announcements.

YT: Today, many young voiceover artists rely heavily on social media platforms to showcase their talent. What is your advice to emerging artists who want to stand out in this crowded digital space?

HB: What the youth has today, by way of resources, we didn’t have even a hundredth of - whether it is content-creating technology, editing interfaces, or platforms to showcase ideas. So go right ahead, strut your stuff, be unabashedly narcissistic! But don’t go overboard and inundate social media just because “Jo dikhta hai, woh bikta hai.” Only what is seen, sells — but be seen with dignity. Make the best use of the ecosystem without constantly harping on “I, me, myself.” That can quickly slip into cheapness. Be selective. Be short, but sophisticated. Your language is your personality. And understand the timeless value of rarity. Remember, where speaking is concerned, you are paid for class - for something out of the ordinary - because ordinarily, absolutely everyone speaks.

YT: Back in the 1980s, you seamlessly transitioned between radio and television, both of which demanded very different presentation styles. What skills or mindset helped you adjust to both so effectively?

HB: When I started out, in the mid-seventies, the then recently-coined term Prime-time (in India) was already upon me even as I was floundering in my new profession - which I could hardly define yet! My entry-to-attainment phase (AKA ‘struggle period’) in the voice industry was, mercifully, 3½ months - against an accepted average of 3-5 years. My then already ‘established’ colleagues deridingly, almost to vent their envy, called me ‘that new Sunday prime-time guy’. My prime-time journey began with TV news and radio shows simultaneously. And yes, I did some serious flitting between these rather coveted assignments on a daily basis. And these tasks did have varying, sometimes contrasting demands – a matter-of-fact yet involved delivery for TV news to writing & elevating serenity of hosting a Yoga show – with the venerable Yoga Guru Dr Hansa Yogendra – anchoring India’s first Music Talent Contest TV show – Lehr Lehr Sangeet – to the tightrope walking of radio-TV commercials to documentaries, corporates and planetarium narrations to controlled emoting in radio plays to writing dialogue for prime time TV serials (Khandaan, Subah, Inkaar, Sukanya...) and to say nothing of the live music stage shows - topped by the peerless Lata Mangeshkar in 21 countries! And I wasn’t unaware that my elite audience in the various genres comprised industry captains & a growing rank of well-wishers & detractors. How I ‘transitioned’ between the diverse demands of media and segments was essentially because I couldn’t have enough of the exhilarating experience that my chosen profession was affording me, and I wanted to do my best every time, everywhere! I still don’t know if there is an established skillset to battle this rather baffling variety of presentation styles, but yes, tweaking one’s mindset definitely helps. I did it by

sometimes consciously reminding myself (moments before cameras or tape rolled or curtains went up) that, “Hey, at this moment, what is that ‘extra’ that only I have but my audiences don’t and which I am about to present to them? And right now, this audience is the most important entity in my life. Lemme give my best.” And really, the very next moment, I would be pleasantly assertive. If it was a newscast and I’d be Informative without being condescending. If it was a documentary narration and so on. Soon, this became second nature. And it better be, because on the performance level I mostly did not have the luxury of retakes - except for the tedium-inducing endless retakes for TV commercials. I have always believed that the more you think, the more you rehearse, the less spontaneous (and more stylized) you become.

To be honest, in the middle of my performances, live or otherwise, I have often asked myself if I am thoroughly enjoying the experience!

YT: With decades of experience, you have seen fame, recognition, and the evolution of media. If you were to imagine the ‘future voice of India,’ what qualities beyond talent would you hope it carries to inspire the next generation?

HB: Look, voice artistes are traditionally ‘disembodied’ voices. They have a voice out of the ordinary... a style, grace, panache but not a name. Because if they did, the message that their voice carries might be diluted. And yet, a name to the voice imparts them fame! And that fame comes from being seen and discussed, not just heard. In India, no voice artiste of tomorrow can be really successful unless he’s good at both Hindi and English - which would be in addition to another chosen Indian language, if at all. Working in and for studios in the US, I have learnt that they seem to think that we are battling with multiple languages, whereas I think we are blessed. Let me take a minute to tell you that while recording documentaries (in global English) in an LA studio, a Hollywood director was flabbergasted

to learn that English was not my first, not my second, It was actually my 3rd (in fact, the 4th language, if you count my mother tongue Kutchi). He disarmingly said, “Hær(r)ish, never embarrass an American by asking how many languages he knows. Well, barely one!”

But at the same time, I would also caution that since we in India deal with multiple languages, our communication tends to be deficient. We tend to use recently-heard words rather than those that express our thoughts! Voice professionals will have to train themselves to think in the language they are communicating in. From my experience of recording globally, I can say with some license that the Indian English today is considered one of the most comprehensible English and, in fact, accepted as global accent. That is why English is a very important component of any voice-over artiste of India. Decades ago, a Canadian pop philosopher Marshall McLuhan had said, “The medium is the message.” It cannot be truer than today. So, please tailor your message according to the medium. If the attention span is getting shorter, design your content in the least possible words – to first gauge interest, and then deal with details. What is needed apart from talent? Empathy and humility. Humility to keep you grounded, to accept supremacy of the script over one’s voice - however valuably branded it might be. And empathy, belief in the script at hand is essential to be able to convey the soul of the subject contained ‘in between the lines’ of the script. In short, not just a great voice, but a complete communicator.

YT: Your voice and work have inspired generations. As you interact with young students today, especially those at institutions like St. Xavier’s College, Kolkata, what message or advice would you like to share with them as they begin shaping their own careers and identities?

HB: Advice? Awww... Look, you’re a high-IQ bunch. But really, please think seriously about how not to choose your career. When you’re standing at a life-

changing crossroads, don't go by trends or by loose 'drawing-room advice,' especially from people who agree with everything you say. Use both head and heart — which really means having a thorough discussion with yourself, almost mercilessly interrogating yourself. Then speak to someone you truly believe is a well-wisher, not someone who compulsively distributes free advice. Many will tell you that money is not important — particularly, if you belong to a well-to-do family. But I beg to differ: monetary compensation is also a gauge of appreciation of your knowledge and performance hitherto. And if you make a wrong career decision,

don't let it shame you. You may lose a couple of years, but you will gain through the rest of your life. Remember, even God, Google, and Gandhi can sometimes make mistakes (not necessarily in that order!). So can you. Er, so did I! My parting word: in a world that is becoming more and more competitive, you may want to consider a short life-mantra — Perform or Perish. Look, you are the most important person to yourself. So, focus on yourself... until the world focuses on you.

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Analyzing Critical Thinking Among Management Students – The Role of Demographics

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Critical thinking
paves the way for
making a critical
analysis of a
phenomenon
which prevents a
hasty decision

”

ABSTRACT

Critical thinking plays a vital role towards improving the quality of all aspects of life, social, personal, professional et al. In the field of management studies, critical thinking fosters management acumen that determines the success of the management professionals and the organization. It can equip the future management professionals to maintain objectivity in their perspective, analytical in their outlook, find an appropriate solution to a problem and to maintain scientific temperament in their functioning. A survey method using the critical thinking inventory was used to collect data which was processed and analysed using correlation, regression, chi-square and T-tests. The study found that correlation statistics proved moderately strong inter-relationship between the variable's analyticity, self-confidence, inquisitiveness, cognitive maturity, open-mindedness, systematicity and truth seeking. Regression tests conducted proved that analyticity has the highest impact on critical thinking skills. Chi-Square test proved that gender has no relationship with critical thinking skills. T-test proved that only standard level of students, i.e., BBA/BMS or MBA had a significant relationship with critical thinking skills but gender, institution type and affiliation did not have any relationship with critical thinking skills of students. Based on the study, the paper has

recommended strategies for enhancing the level of Critical Thinking of the management students.

KEYWORDS: Critical thinking, analyticity, problems solving, objectivity, decision making.

INTRODUCTION

Critical thinking is essential for success in all aspects of life. In professional life, it enables one to make the right judgement and enables one to obtain cooperation of the colleagues. In personal life, critical thinking enables one to have clarity of thinking rather than being quidded by one's own prejudice. As far as social life is concerned, it enables one from not being led away by others' opinion, whims and fancies. In general, critical thinking enables one to have objectivity and to have reasonable goal and vision of life. It has become, of late, a felt need of fostering of critical thinking at various levels of education including in management studies.

THE IMPORTANCE OF CRITICAL THINKING

The Importance of Critical Thinking is spelled out below:

- a. Efficiency in problem of solving: Critical thinking enables one to perceive a problem or crisis or a challenge from different perspective in order to arrive at an appropriate response. By diversifying the components of a problem, one is lead to find solutions. It also enables one to adapt a creative way of handling the crisis, challenge, conflict or a problem so that an individual climbs up the ladder of success by making a proper mental, physical and psychological adjustment. One, thus, finds fulfillment in life and problem solving becomes a way of life.
- b. Well thought out decision making: Critical thinking paves the way for making a critical analysis of a phenomenon which prevents a hasty decision. After obtaining critical view and objectivity of a problems, a clarity can be obtained. Further after considering the pro and cons of the choices of possible decision, one can finally arrive at a decision which results in maximum benefits and advantages.
- c. Objectivity in evaluation: Critical thinking leads towards making a thorough critical assessment of a phenomenon. Prejudices get eliminated in the process of critical analysis and thereby objectivity is established. Further, other aspects such as relevance and practicality make the processes of evaluation more meaningful and fruitful.
- d. Effective communication: Critical thinkers are better equipped to express their ideas from different perspective to understand a narrative objectively rather than having one sided view. Besides being coherent and logical, they put forward their ideas convincingly rather than satisfied with the prejudiced views or going by a crowd mentality like attitudes.
- e. Overcoming bias and stereotype: Critical thinking is a process of getting into an objectivity of one's understanding rather than being led away by one's own bias et al. It also enables to evaluate other's understanding such as whether they been guided by their own prejudice or being influenced by others' sentiments. A genuine and in-depth critical analysis relieves one from one's own bias and stereotype thinking and acting.
- f. Academic Progress: A student well-grounded in critical thinking skill will have a better comprehending and retention ability. He/she will make an effort to clear doubt or any ambiguity regarding the subject taught. As a result, clarity is obtained and it enables the students to be successful in their academic endeavors.
- g. Relevance and lifelong learning: Critical thinking is not one time exercise. It has to be carried out in all the situations of life and which is required for making decisions and judgments. As numerous factors affect and impact human life, critical evaluation is needed to make a proper and relevant conclusion and decision. Hence critical thinking is an ongoing process and better learned by making a sustained efforts throughout one's life.
- h. Problem solving: Life especially professional life is a continuous process of comprehending problems and solving them successfully. Critical thinking enables a person to approach a problem

comprehensively rather than being totally affected by it. When a person critically analyses a problem, and the ways and means putting an end to it also becomes very vivid. Hence a person with a critical thinking attitude can find solution easily for any problems he/she may be confronted with.

- i. Professional enrichment: Critical thinking attitude makes a person well balanced rather than being jubilant over a success or gets completely boxed down at failures. Success is taken with the proper measure so as to build further success in life. Failures are adequately dealt in order to turn them into success. Critical thinking, thus, eventually results in professional enrichment.
- j. Ethical Consciousness: Engaging in critical analysis makes a person ethically more consciousness. Ultimately critical evaluation is done on the basis of right or wrong, good and evil or beneficial or harm. In this process, one is lead towards making value judgement. It, thus, makes a person more ethically conscious.
- k. Cognitive ability: Continuous objective critical evaluation fosters the cognitive ability. A person becomes intellectually grown and his/her thinking becomes more and more refined. As a consequence, a person's perception becomes sharpened and is able to comprehend things with an at most clarity. Understanding gets boosted up and the intellectual life of a person grows leaps and bounds which enables a person to comprehend things with greater degree of clarity and express them convincingly palatable with the high sense of rationality and clarity.
- l. Scientific inquiry: Any critical consideration within the frame work of rationality, leads to scientific enquiry. Critical thinking often takes in to consideration the cause-and-effect mode evaluation and goes beyond it to propose a viable solution to a problem. People embarking on critical thinking often follow a systematic methodology of logically based cause and effect and their thinking, consideration, proposal and conclusion follows a certain scientific temperament.

CRITICAL THINKING SKILL FOR MANAGERS

Critical thinking skill plays a vital in the life of the management professionals as it involves critical and objective consideration to arrive at a judgement which benefits the employees, employers, managers and the whole organization. Such an analytical approach benefits the managers and entrepreneurs who have to face unforeseen circumstances. It enables them besides tackling the problem to evolve a frame work to avoid such circumstances but at the same time safeguard the interest of the stakeholders such as the proprietors, employees and the customers.

Managers in particular are exposed to varied challenges given the todays multidimensional business environment. To cope up with the challenges, defuse crisis and to find solution to the problems, they have to employ critical thinking strategies. For the success of business firms, administrative professions, financial and human resource management et al, the managers, CEOs and directors should have a good critical thinking skill besides having a good leadership quality. However, critical thinking has not received adequate consideration as an important discipline in the management studies. To control risk, increase productivity, to manage the workforce successfully in the constantly changing scenario, the managers and the top management professionals should think creatively and employ the following the processes: -

- a. Critically evaluating operations: More efficiently the executives organize the structures of the organization, the better the organizational tasks are accomplished. Critical thinking plays vital part for the evaluation of the present operation and to adapt to a most appropriate method to obtain the needed and continuous success in the constantly evolving organizational structures. To achieve such success, the executives have to gather the data of the present operating system and analyze them critically to assess their monetary value in order to eliminate the weakness and infuse impetus to operation. Alternative system should be put in place which should be evaluated. Thus, continuous gathering of data and evaluating them becomes part of the system as long as the operation continues.

- b. **Assessment of Employees:** Dealing and interacting with the employees play a vital role for taking the organization forward. The executive officers and the managers have to have special skill to motivate and utilize the maximum human resource, talents and ability of the employees to stair the growth and success of the organization. Critical thinking at times can become a big challenge in a particular context. However, it can help the managers to introspect to become aware whether their expectation is achievable and to put themselves in the shoes of the employees. Taking into consideration, their professional enhancement and welfare will enable the executives to have a realistic expectation and have mutual understanding and cooperation. It should not however rule out of the possibility of legal dealing with the erroring employees and should be resorted to after having done thorough and impartial analysis.
- c. **Periodic analysis of customer service:** The degree of customer service determines the success of an organization. The higher the customers' satisfaction, the better the prosperity and success of the company. The executive officers and managers thus have to constantly strive to enhance the customers' satisfaction. Regular, periodic and critical analysis of production leads to improve the quality and communicating it creatively through the media can get help to get the confidence and trust of the customers, which eventually boost up the brand of the product. Hence critical analysis becomes the secret of success mantra of an organization.
- d. **Futuristic Critical thinking:** The ever-growing virtual world poses a great challenge upon the training of the future executives and managers as it has opened up the avenue of extending the functioning of the organization not just in one or two countries but in multinational context. Officials at the helm of such organization should have an extraordinary administrative skill which involves dealing with the employees and customers of multiple ethnicities, cultural contexts, attitudes and temperament et al. A minor mistake on the part of the top executives will cost a heavy damage and at times complete

closure of the firm. The executives have to be on their toe constantly critically evaluating their function, work culture and the employees' satisfaction and to adapt an appropriate technology to modernize the productive function to withstand the market competition and the customers' choices.

REVIEW OF RELATED LITERATURE

Preeyapha Wangmanee (2024) pointed out that contemplative study did not affect the students in their critical thinking but only a slight improvement. But it did enhance significantly the English-speaking skill of the students whereas Vince S. Pagutayao and Trisha Mae Z (2024) revealed that the students' psychological factors indicated a significant association with their critical thinking attitude. Muhammad Jamil, Maria Anwar and Muhammad Jafar Ali (2024) considered that crucial thinking skill was essential for 21st century learning. Ninety percent of the students used techniques especially questioning (95per cent) to foster students' critical thinking skill. But only 14per cent of them were convinced that students acquired critical thinking skill while 44.7per cent contradicted the notion.

Muhammad Jami, Faiza Abdul Hafeez and Noor Muhammad (2024) highlighted that critical thinking ability was essential in the preamble in order to improve the skills of problem solving and application of concepts. Over all, the Physics curriculum integrated the elements for developing critical thinking abilities for better learning outcome, teaching methods and assessments. Muhammad Jami, Tahira Batool Bokhari and Javed Iqbal, et al, (2024) indicated that preparing curriculum was essential for realizing 21st century skill. Consequently, the national curriculum for Mathematics (2006), Pakistan, was poised to develop critical thinking whereas Izunna Shedrack NWUBA, Abigail Mgboyibo OSUAFOR, and Sussan Onyebuchi EGWU, et al. (2024) concluded that experiential learning approach based on gender-inclusive strategy enhanced students' critical thinking.

Si Mohamed Chanai (2024) revealed that the treatment groups fared well than the control group in having the motivation for critical thinking skill learning. They were

also a positive correlation between the motivation of the treatment and that of level of critical thinking but Preeyapha Wangmanee and Thailand Sukanya Kaowiwattanakul (2024) revealed that contemplative method enhanced students' English-speaking ability significantly. But for the slight progress, the method did not have significant on critical thinking skill of the students.

Rasim Basak and Eda Yucel (2024) concluded that both critical thinking and creative thinking could be fostered by implementing curriculum that supported them. Along the curriculum also needed a specific educational strategy and Mitashree Tripathy (2020) suggested that through critical thinking a better workplace management and personal development could be achieved. Thiri So (2024) revealed that for the purpose of infusing more critical thinking, Bloom's Taxonomy and Bloom's Revised Taxonomy could be applied. On the contrary, the text books were found to have more lower-thinking skills than higher-order thinking skill and Muhammad Zikrullah and Azhari (2024) were of the opinion that for the past three years, the publications did high light the critical thinking abilities.

Huirong Liu (2024) showed that in colleges, a straightforward way might be followed in teaching critical thinking instruction. Furthermore, the educators would in future also follow more adaptable and comprehensive methodologies for teaching critical thinking instruction. Anggit Grahito, et al. (2024) indicated that though there was decline on the research of study of critical thinking from 2020 to 21, significant increase was found from 2011 to 2020. Topics researched had close relation to critical thinking skills were higher-order thinking and educational measurement. But innovative learning models like inquiry and discovery learning models linked to critical thinking skill had not been widely studied.

OBJECTIVES OF THE STUDY

1. To examine the level of critical thinking among management students.
2. To check if level of critical thinking depends upon Gender (male and female students)

3. To compare the level of critical thinking based upon various demographic variables
4. To recommend strategies for enhancing the level of critical thinking among management students

RESEARCH METHODOLOGY

In order achieve the purpose, the investigator undertook study for which he followed the survey method. First, he constructed the personal data form meant for management students of BBA and MBA with the details of name, Gener, nature of the institution such as urban or semiurban, Nature of the institution (Boys, girls, Co-education), Type of institution (Government, Private, Self-financed) Father's and Mothers' Income and Annual Family Income. For collecting data, Critical Thinking Inventory validated by M. Arockiasamy and Arockiasamy M.S. Selvaraj (2013) was chosen. The inventory had seventy statements under seven dimensions: i. analyticity, ii. self-confidence, iii. inquisitiveness, iv. cognitive maturity, v. open-mindedness vi. systematicity and vii. truth seeking. The inventory was based on five-point rating scale: i. always, ii. often, iii. sometimes, iii. rarely and v. never. A Google survey form was created incorporating the personal data and the critical thinking inventory and was sent to several management institutions in India. The data was analysed from the 102 respondents via SPSS version 23. The tests conducted are correlation, regression, chi-square and T-test.

It is observed that the number of male respondents exceed the number of female respondents, in the proportion 52:48. Most of the respondents belong to the age of 22 years and 21 years, followed by other age categories.

Correlation Test

It is important to find out the relationship between the seven factors as well as to examine the hypotheses of the present research model. To this end, correlation test by using SPSS version 23 was done. The table.1 indicates correlation between all the variables (analyticity, self-confidence, inquisitiveness, cognitive maturity, open-mindedness, systematicity and truth seeking) used are positive and significant, thereby,

confirming, our original hypotheses made in the literature. The correlation statistics has been presented in Table.1.

Demographic Construct	Classification	Population Statistics	Percentage
Gender	Male	52	0.52
	Female	50	0.48
	TOTAL	102	1.00
Age	17	10	0.09
	18	10	0.09
	19	18	0.18
	20	16	0.16
	21	20	0.20
	22	28	0.28
	TOTAL	102	1.00

1: Demographic Statistics
(Source: Authors' own computations)

Regression Analysis

A "multivariate regression analysis" has been undertaken to probe into the various "hypotheses" and to find the "inter-relationships" between them. A "regression test" would serve the purpose of finding the "degree and direction of relationship between the variables".

Predictors: ANT, SC, INQ, CM, OM, SYS and TS ---
Dependent Variable: CT

Model	R	R Square	Adjusted R Square	Std. Error of Estimate
1	.876 ^a	.543	.686	.70412

Table 3: Model Summary
(Source: Primary data)

Predictors (Constant), ANT, SC, INQ, CM, OM, SYS and TS

Factor	ANT	SC	INQ	CM	OM	SYS	TS
ANT Pearson Correlation		0.749**	0.773**	0.598**	0.764**	0.692**	0.568
Sig. (2-tailed)	1	.000	.000	.000	.000	.000	.000
N	102	102	102	102	102	102	102
SC Pearson Correlation	0.749**		0.788**	0.665**	0.712**	0.728**	0.512
Sig. (2-tailed)	.000	1	.000	.000	.000	.000	.000
N	102	102	102	102	102	102	102
INQ Pearson Correlation	0.773**	0.788**		0.603**	0.616**	0.705**	0.615
Sig. (2-tailed)	.000	.000	1	.000	.000	.000	.000
N	102	102	102	102	102	102	102
CM Pearson Correlation	0.598**	0.665**	0.603**		0.547**	0.584**	0.543
Sig. (2-tailed)	.000	.000	.000	1	.000	.000	.000
N	102	102	102	102	102	102	102
OM Pearson Correlation	0.764**	0.712**	0.616**	0.547**		0.789**	0.501
Sig. (2-tailed)	.000	.000	.000	.000	1	.000	.000
N	102	102	102	102	102	102	102
SYS Pearson Correlation	0.692**	0.728**	0.705**	0.584**	0.789**		0.572
Sig. (2-tailed)	.000	.000	.000	.000	.000	1	.000
N	102	102	102	102	102	102	102
TS Pearson Correlation	0.568	0.512	0.615	0.543	0.501	0.572	
Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	1
N	102	102	102	102	102	102	102

Table:2. Representation of Correlation Matrix
(Source: Authors' own computations)

Coefficients

Model	Unstandardized Coefficients B Std. Error	Standard Coefficients Beta	t	Sig.
1 (Constant)	.512.414		21.102	.000
ANT	.471.084	0.671	5.286	.000
SC	.393.043	0.418	3.202	.000
INQ	.345.051	0.482	3.672	.000
CM	.484.063	0.576	4.378	.000
OM	.472.061	0.552	4.432	.000
SYS	.470.061	0.545	4.457	.000
TS	.468.060	0.542	4.398	.000

Table. 4: Regression Test
(Source: Primary Data)

a. Dependent Variable: CT**Chi-Square Test**

It is an important objective of our current research study to explore the relationship between demographic variables of the respondents and their perception towards critical thinking skills. Chi-Square Test would help us to see whether the observed frequencies in the data results are supporting the relationship or not.

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	2.331 ^a	4	.782
Likelihood Ratio	2.377	4	.769
Linear-by-Linear Association	1.634	1	.843
N of Valid Cases	102		

Table.5: Gender and Perceptions towards Critical Thinking Skills
(Source: Primary Data)

The Chi-Square value is greater than 0.05, in this case it is 0.782, hence, there is no significant relationship between gender and critical thinking skills of the students.

T-test

A "T-test" will be helpful in the determination of a possible significant difference between the means of

two groups. The results have been captured in below table, which shows there is no significant difference in the context of "gender", "institution type" and "affiliation". This is proved by the "level of significance" or "P-value" which is greater than 0.05 in all 3 cases. Only "standard level" which means standard to which students belong i.e., either BBA/BMS or MBA has a significant relationship which is evident by its significance level which is lesser than 0.05.

Constructs Category of school		N	Mean	SD	df	Sig(2-tailed)	Result
Gender	Male	52	3.550	.809	.206	.213	NS
	Female	50	3.756	.820			
Standard Level	BBA/BMS	52	3.430	.647	.093	.000	S
	MBA	50	3.537	.816			
Institution Type	Boys	04	3.668	.611	.214	.217	NS
	Girls	18	3.882	.622			
	Co-Educational	80	3.544	.749			
Affiliation	Private but Aided	56	3.260	.661	.225	.224	NS
	SelfFinanced	40	3.485	.740			
	Government	06	3.213	.512			

Table.6: T-test
(Source: Author's Calculations)

INTERPRETATION, DISCUSSION AND FINDINGS

Correlation test helps us to understand the association or inter-relationship between variables. The table.1 shows that the correlation between all the variables (analyticity, self-confidence, inquisitiveness, cognitive maturity, open-mindedness, systematicity and truth seeking) used are positive (no negative influence) and significant (<0.05).

A "multivariate regression analysis" has been undertaken to probe into the various "hypotheses" and to find the "inter-relationships" between them. A "regression test" would serve the purpose of finding the "degree and direction of relationship between the variables". The value of R square indicates that the six predictors or variables (ANT, SC, INQ, CM, OM, SYS and TS), explains 54.3per cent variations on CT skills. It explains the rationality of this model. As evidenced by the above table, "analyticity" (ANT) has the highest association with critical thinking skills with its standardized coefficients (β) being ($\beta=0.671$), which is followed by cognitive maturity ($\beta=0.576$). Gender has no relationship with perceptions towards critical thinking skills as evidenced by its "chi-square" value which is ($0.782 > 0.05$), making it insignificant.

So far, the first three objectives of the study, to examine the level of critical thinking among management students, to check if level of critical thinking depends upon Gender (male and female students) and to compare the level of critical thinking based upon various demographic variables have been achieved. The fourth and the last objective of recommending strategies for enhancing critical thinking among management students are listed: -

STRATEGIES FOR ENHANCING THE LEVEL OF CRITICAL THINKING

There are varied views with regard to teaching of CT as a separate subject or teaching it as an integrated part with other subjects. Gelder (2005) favored teaching the theories CT, related vocabulary and specific skills. On the other hand, William and Worth (2001) made an investigation in teaching CT skill as a separate subject and incorporating it with other subjects. The result indicated the first option yielded more promise in fostering CT skill whereas the second option resulted in marginal improvement. However, implementing in the academics the first option has its own limitation as only

certain students studying CT skill will benefit and the teachers have to be specially prepared for it. The students following a general course will be deprived of improving their CT skill.

After a quarter century work and experiments on CT theory and pedagogy, Halpern (1999) has made a claim that teaching the theoretical elements alone does not enable the students to master CT skills. Theoretical input should be coupled with provisions of practising it in different contexts for the students to gain more comprehensive understanding of the theory and how to apply it. Such a stand suggested CT skill should be goal of each course. Halpern (1998) has suggested a taxonomy of CT skills for a class room instruction. It is consisted of five skills: a) Verbal reasoning: It is a skill to comprehend and defend against the persuasive techniques, b) Argumentative analysis skill: It is a skill arriving at a conclusion with a supporting reason, c) Hypothesis testing: It is an intuitive skill which enables people to explain, predict and control events, d) Uncertainty: It is a skill of using cumulative, exclusive and contingent possibilities to arrive at a decision, e) Problem solving skill: It is a skill of generating, selecting from other alternatives and judging them to make a decision. Further a modified Pacione's (1990) modified taxonomy of CT skills suggested six main skills: i) Interpretation, ii) analysis, iii) evaluation, iv) inference, v) expiation and vi) self-regulation.

The followings are strategies which teachers irrespective the discipline especially in management studies can implement to foster critical thinking skills: -

Critiquing Journal articles: Lawrence et al. (2008) suggested critiquing journal articles to foster critical thinking skill. Teachers ask the students to understand the journal articles at multiple perspectives followed by asking questions about the perspectives. The students then have to be asked to find out whether the author has cited sufficient evidence and research to support the claims. Finally, the students can be guided to make a value judgement as to whether the author is biased or justified in his/her claim.

Questioning: Pithers and Soden (2000) recommended the questioning technique to foster CT in a class room situation. Student first are encouraged to reflect on the

main ideas of their thinking, understanding and analyse these ideas. In the processes of analysing their ideas, similarities and dissimilarities can be brought to the light. Assumptions related to the ideas are further deeply looked in to. Then alternatives to support their views are encouraged. Finally, by classifying the assumption and verifying the data or information that substantiated the idea, the students can be gradually coached towards critical thinking skills.

Classroom Discussion. Hansen and Salemi (2012.) found classroom discussion as an effective means of fostering critical thinking skill. In discussion, students can be asked to produce their own answers to a set of general questions and give their own interrelation of the questions. They are then asked to evaluate their peers' answers and interpret them. The following step can be followed for success of the discussion: i) set a goal of the course, ii) collecting materials, iii) framing questions for the discussion, iv) setting the dynamics of the discussion and v) setting responsibilities and evaluating performance.

Reading Strategy: It is the easiest strategy to promote CT in a classroom situation. Pithers and Soden (2000) highly recommended it. Students are initially asked to read a brief article carefully and cull out the claims made by the author. Then they are asked to investigate the validity of these claims by making cross sectional reading and from the verified knowledge they have acquired over a period their studies. Thus, arriving at the validity and implementing their suggestions for rectification and adding up to make the claim more valid will enhance their critical thinking ability.

Writing Activity: Writing strategy is commonly used in order to promote critical thinking ability. Condon and Kelly-Riley (2004) asserted that writing as an act of critical thinking. Cohen and Spencer (1993) prepared an explicit model for using writing for critical thinking. Students could generate ideas as they begin their writing. Further they make ideas clear by basing further valid and convincing clarifications and notifying relationship between those ideas. Writings of expressing one's opinion, argumentative writing, review writing, analytical writings, and appraisal writings are different types which paves the way for

critical writing expression of one's conviction, conclusion and judgement which are the fruits of the critical thinking process.

Problem Based Learning: Pither and Soden (2000) recommended problem-based learning for developing in students CT. It makes the students critically analyse the existing problem in order to find a solution. In contrast, the lecture method or the tutorial methods just enable the students' memorization without having the chance to critically understand a phenomenon. In the former method, the students are required to analyse the main issues related to the problem. By doing so, they have to suggest ways and means of resolving the problem. Further evaluation of proposals at hand will eventually enable them to choose the most appropriate and effective solution to the problem.

Peer Review: It is the most effective way of promoting critical thinking as a group in a class room situation. First a student proposes his findings, understanding and responses to a situation to be tackled. Then other students express their opinions and points out flaws in the understanding and responses. Thus, peer review elucidates a wide range of opinions. Every new idea contradicting and contrasting arguments open up the doors of multiple way of approaching the issue. Students regularly trained in peer review learn the cooperative way of learning and of cooperative way of responding to an issue without getting totally addicted to one's own opinion which may at time be erratic or not so effective.

CONCLUSION

The study of critical thinking skill of the management students has highlighted the need of integrating the critical thinking skill in the management curriculum. The study has concluded that correlation statistics proved moderately strong inter-relationship between the variable's analyticity, self-confidence, inquisitiveness, cognitive maturity, open-mindedness, systematicity and truth seeking. Regression tests conducted proved that analyticity has the highest impact on critical thinking skills. Chi-Square test proved that gender had no relationship with critical thinking

skills. T-test proved that only standard level of students, i.e., BBA/BMS or MBA had a significant relationship with critical thinking skills but gender, institution type and affiliation did not have any relationship with critical thinking skills of students. These conclusions achieved the objectives of the study and has indicated certain knowledge gap for which strategies of integrating the critical thinking skill in to the management curriculum has been recommended. Further study of this category needs to be done at the school level and at work place level so that the humanity is enabled to have contended life in this fast-changing global scenario.

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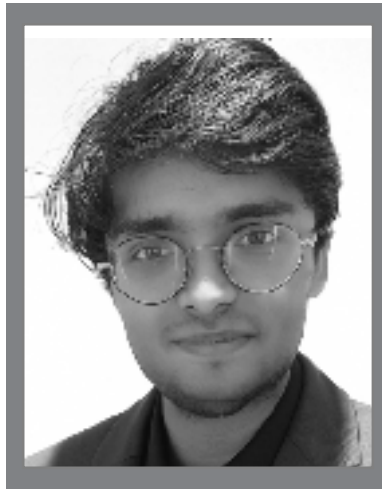
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By Integrating emerging digital tools like cryptocurrencies and decentralized finance systems in the banking system can facilitate more secured & faster transactions.

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Analyzing Customer Perception: A Study on Application of Metaverse in the Banking Sector

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Abhisek Gupta
Department of commerce

ABSTRACT

This research paper discusses how the application of Metaverse can change the banking industry and the impact it can have in serving the customers. It

talks about how banks can use innovative and technical things like metaverse, AI, Non-fungible tokens (NFTs), blockchains, and smart contracts to provide better services and revolutionize the banking services.

This paper uses some methods involving surveys to find some key aspects that make banking more useful and user-friendly due to Metaverse. We have also presented statistical analysis to analyze how customers with respect to their different age groups and occupations expect from the initiation of Metaverse and what the banks & financial institutions can do to assist them. The study found that customers experiences and satisfaction with the metaverse banking can be greatly impacted by how easy it is to navigate the Metaverse, how their personal information can be secured and how they can have more personalized interactions with the banks. Banks have to keep up with the web3.0 technology, which is the next step in the evolution of the internet to reduce waste and support the circular economy.

KEYWORDS: Customer Satisfaction, Metaverse, Usability, Virtual Reality, Fintech, Artificial Intelligence (AI), Blockchain, Revolution in Banking Industry

INTRODUCTION

Metaverse Banking, which is the application of metaverse in the banking industry, is the combination of normal banking with the advanced technologies, by inserting tools like metaverse platforms, artificial intelligence (AI), blockchains, smart contracts and other emerging technical tools. It aims to provide a more user-friendly, personalized, secured and convenient banking experience to the users.

Like an online game, a user enters a virtual bank branch (by his avatar) using a VR headset. Then he/she interacts with a virtual banker to avail various facilities such as investment opportunities, loans et al and completes transactions seamlessly in real-time. The Bank/ financial institution will use AI chatbots to serve customers by solving their queries & to provide them required services. Such gamified techniques in the metaverse will encourage users to learn about financial products and manage their finances better in an interesting & friendly manner just like an online game.

This application can have various Key Features such as virtual bank branches can be created using metaverse where customers through their customized avatars can interact with the banking staff to access the required services. Banks can provide more effective financial advice by providing AI-driven Chatbots to provide solutions regarding investment, borrowings and other real-time support to the customers as per their needs and preferences. By Integrating emerging digital tools like cryptocurrencies and decentralized finance systems in the banking system can facilitate more secured & faster transactions. This will facilitate cross-border banking & financial transactions without much complexity. Thus, it will reduce geographical barriers in banking & financial sector. Banks can provide to consult financial advisors, apply for loans, manage investments through virtual reality (VR) or augmented reality (AR) platforms at any time & place. It will have advanced authentication methods like face recognition, voice identification, and even brain-wave sensing for securing customers sensitive information and transactions.

However, this innovation may be affected by some challenges. There will be limited accessibility to especially, older generations, people from remote areas and other non-tech savvy users. They may find metaverse banking complex and can face difficulty in navigation which can create low trust in virtual environments, and they may hesitate to adopt metaverse banking due to concerns about security, fraud and the lack of physical branch interactions. To develop such innovation, banks need to invest heavily in advanced infrastructure such as Virtual Reality, Augmented reality, Artificial Intelligence, Blockchain technology and reliable internet connectivity to provide immersive and secure services by which the banks may face difficulty in generating immediate profits. Such virtual environments may also increase the chances of cyber risks, hacking, identity thefts, and frauds which could make security a critical concern. So, users may be skeptical about sharing personal and financial data. Moreover, this can face regulatory and compliance issues as there are lack of clear global regulations for financial transactions in virtual spaces which may create uncertainty for banks and customers. Compliance with KYC and data protection laws will be a significant challenge. It may create difficulty in determining

applicable laws in cross-border transactions. Hence, such challenges may negatively impact the preference of the public over metaverse banking

Overall if we look, it can play a very pivotal role in revolutionizing the banking industry if the challenges will be properly addressed by banks. It can provide more efficient and effective services to users by making banking more user-friendly and interactive.

CURRENT ADOPTION OF METAVERSE BY BANKS

JP MORGAN became the first bank in the world to enter the metaverse in February 2022. They opened a lounge in Decentraland, a popular blockchain-based metaverse that led the path towards virtual banking environments. Many other prominent banks are also exploiting this opportunity such as HSBC opened a metaverse branch in the Sandbox blockchain gaming environment in March 2022 which provides a creative space for users to build, own, and monetize virtual experiences. Similar to Decentraland, the Sandbox features tradable virtual land., Standard Chartered opened a metaverse branch in the Sandbox in April 2022, and Sygnum Bank opened a branch in Decentraland, representing New York's Times Square.

In the Indian Context, Union Bank of India was the first Indian Bank which launched a virtual banking experience called Uni – Verse, an open banking sandbox environment and metaverse virtual lounge. Punjab National Bank's launch of "PNB Metaverse," a virtual branch powered by Kiya.ai, offers customers an immersive banking experience. Bank of Maharashtra through its Mahabank Metaverse provides a virtual branch where esteemed customers of the Bank can access the Metaverse environment from anywhere through Web browsers.

LITERATURE REVIEW

Literature reviews that were done by different authors between 2022 - 2024 focuses on the effects of metaverse on developing the banking sector by providing various innovative features to users for better experience and the overall impact on economy.

Zainuri, M, et al., (2022) proposes a suitable definition for metaverse banking that includes the important elements of metaverse banking and sheds light on its impending potential from distinct aspects. It tells how it can revolutionize banking services. Vakiti, J. L. (2023) addresses concerns about such development in fintech. It discusses on the emergence and progression of fintech in the metaverse banking sector and the challenges it can face like in serving non-tech savvy users.

Article of Bhattacharya, S. (2024). outlines the opportunities on initiation of metaverse in banking. It prescribes strategies for banks and financial institutions to succeed and also highlights the challenges they need to overcome to succeed. Asadi, A. R., & Ghasemi, S. (2024). explores perspectives on the ideal metaverse from user experience, business, and national levels, considering both academic and industry viewpoints by emergence of virtual reality (VR), augmented reality (AR), and mixed reality (MR) technologies.

OBJECTIVES OF THE STUDY

The objective of this study is-

1. To assess perspective of people on the basis of different age groups and occupations regarding application of metaverse in banking sector on various factors
2. To provide valuable insights and suggestions on the basis of customers perspectives to banks and financial institutions so that they can work accordingly.

RESEARCH METHODOLOGY

The research methodology of this research paper entails collection of Primary Data by sending Questionnaire through Google Form Link to the respondents. The purpose was to evaluate how application of metaverse can impact in providing valuable financial services to users. A survey was conducted by sending questionnaires to people and total 164 responses were collected. Following are the stats about the respondents on the basis of age group and occupation –

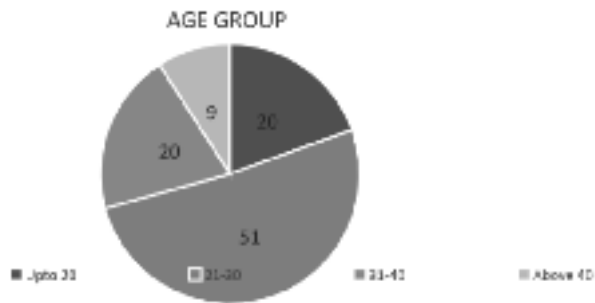


Figure 1: Age group
Source: Researchers' Calculation



Figure 2: occupation
Source: Researchers' Calculation

- The methodology have used Convenience sampling with stratified representation technique to target people from different age groups, occupations. Then the questionnaire was designed which is qualitative in nature as the objective is to analyze the perception of people and it consists of almost closed-ended questions to gather their perspective on various aspects like –use, security, personalization, challenges, future and the overall effect and customer satisfaction.

Sections include: Demographic Information (Age group and Occupation), Familiarity with this Concept, Usability, features, Challenges, Future of this application et al.

- The questionnaires were generated through google form and it was distributed via email and social media platforms. We have collected 164 responses

and descriptive and inferential statistics were made by statistical charts and analysis were made based on responses received from respondents.

These are some questions which were asked to the respondents and the respective responses provided below –

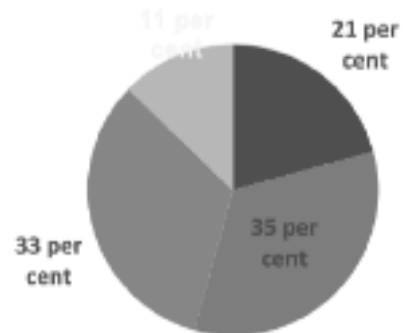


Figure 3 : familiar Familiarity with the concept of 'Metaverse Banking
Source: Researchers' Calculation

It was seen that most of the respondents (33per cent) are somewhat familiar & then secondly 33 per cent are heard of it and not familiar. Some are very familiar (21per cent) whereas still there are some people (11per cent) which are not familiar at all.

Which feature of Metaverse banking do you find most beneficial?

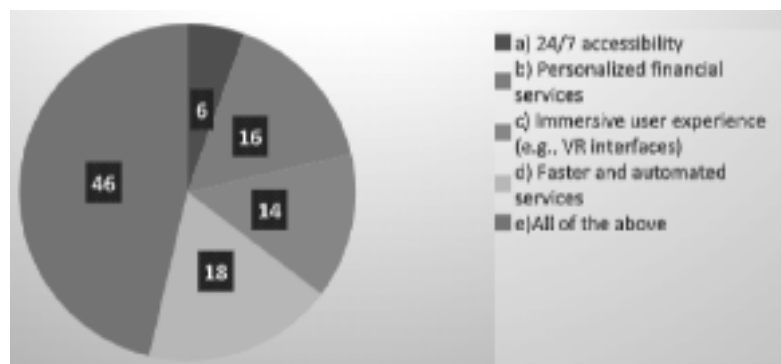


Figure 4: features of metaverse banking
Source: Researchers' Calculation

More than half of the respondents find all the features beneficial. If we'll consider individually then, most people liked - Faster and automated services as most beneficial feature.

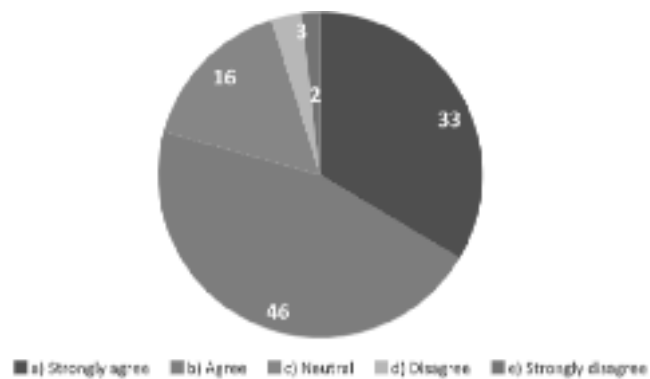


Figure 5 : financial literacy through interactive tools
Source: Researchers' Calculation

More than 3/4th of the total respondents believe that Metaverse banking can enhance financial literacy.

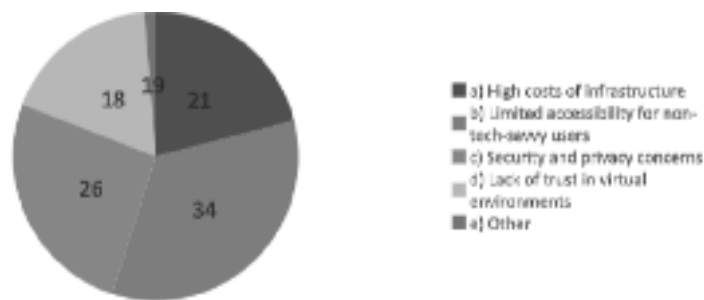


Figure 6: Challenges which metaverse banking may face
Source: Researchers' Calculation

Most of the respondents are of the opinion that Limited accessibility for non-tech-savvy users is one of the biggest challenges that could hinder the success of Metaverse banking.

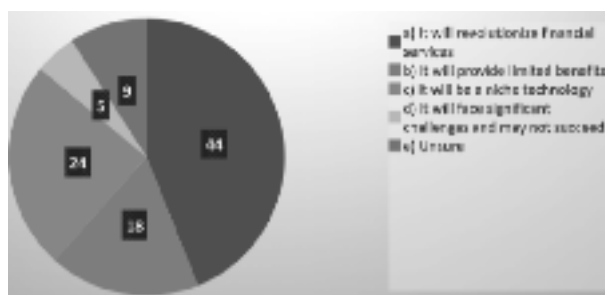


Figure 7: Overall perception about its future
Source: Researchers' Calculation

It was agreed by most of the respondents that it will revolutionize financial services. Secondly many believe that it will be a niche technology.

STATISTICAL ANALYSIS

For robust statistical analysis, tests like Chi square test, Fisher's Exact Test and phi & Cramer's V Test were done. Chi square test is a statistical hypothesis test which is used to find out if there is a significant association or relationship between two categorical variables. In this test, two hypotheses are considered which are Null hypothesis (H0 - no relationship between the variables) and Alternate (H1 - existence of significant relationship) which lead to two errors – Type 1 error : rejection of null hypothesis and Type II error : fail to clear null hypothesis. In chi-square test if the p-value is less than 0.05 then the null hypothesis (H0) will be rejected which will indicate presence of significant relationship but if p-value is more than 0.05 then we will fail to reject the null hypothesis which will signify that there is no significant relationship. As the sample size is not large, Fisher's exact test is done to provide more accurate and reliable results. Along with it, Cramer's V Test is done to find out the level of association between the variables or to determine how strong is the relationship. Criteria for Strength is determined as follows:

Cramer's V value	Level of association
0	No
0.1 to 0.3	Weak
0.3 to 0.7	Moderate
0.7 to 1.0	Strong

Following are the combination of variables that we have used for the desired tests :

Age Group and Occupation vs.

- Awareness/Familiarity level regarding the concept of Metaverse Banking (How different age groups and Occupations have what level of awareness regarding the concept)

- ii. Improvement in engagement (whether metaverse banking can lead to more customer engagement as compared to current time)
- iii. Willingness/Preference to Use Metaverse Banking (Do people from different age groups have different opinions regarding preference.)

1. Age Group vs Awareness/Familiarity level regarding the concept of Metaverse Banking

(here H₀ - no significant relationship between Age Group and Awareness/Familiarity level)

	Value	df	Exact Significance (p-value)
Pearson Chi-Square	20.973 ^a	9	.011
Fisher-Freeman-Halton Exact Test	18.987		.010
Cramer's V Test	0.301	--	--

Since the Pearson Chi-square test's p value is coming $0.011 < 0.05$ shows existence of significant relationship between Age Group and Awareness/Familiarity level. Hence null hypothesis (H₀) will be rejected. Even if Fisher's Exact Test confirms the significance ($p = 0.010 < 0.05$), making the result more trustworthy. But, Cramer's V test value is 0.301 (between 0.3 to 0.7) shows moderate level of association.

It can be seen that people in the age group 31-40 followed by 21-30 are more familiar as compared to other age groups.

2. Age Group vs Improvement in Customer engagement

(here H₀ - i.e no significant relationship between Age Group and opinion on Improvement in Customer engagement)

	Value	df	Exact Sig. (2-sided)
Pearson Chi-Square	23.037 ^a	9	.005
Fisher-Freeman-Halton Exact Test	24.207		.001
Cramer's V Test	0.28		

The Pearson Chi-Square test is slightly above 0.05 ($p = 0.04$), which shows that it is not conventionally significant. To provide reliability we'll consider the Likelihood Ratio) and Fisher's Exact Test p-value is coming 0.001 indicate a significant relationship. But as per Cramer's V = 0.28, shows that the association is low indicating that Age has little influence regarding

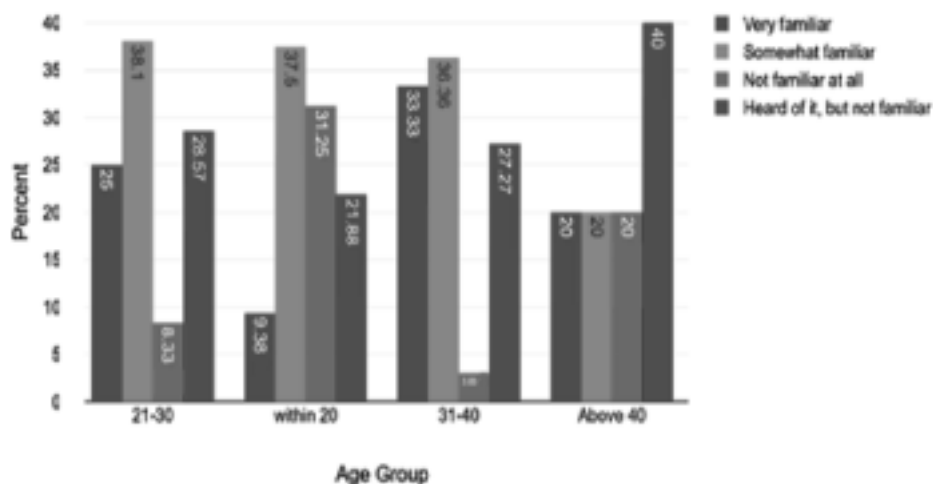


Figure 8: Cramer's V test value
Source: Researchers' Calculation

perception on improvement in Customer Engagement, but it is not strong.

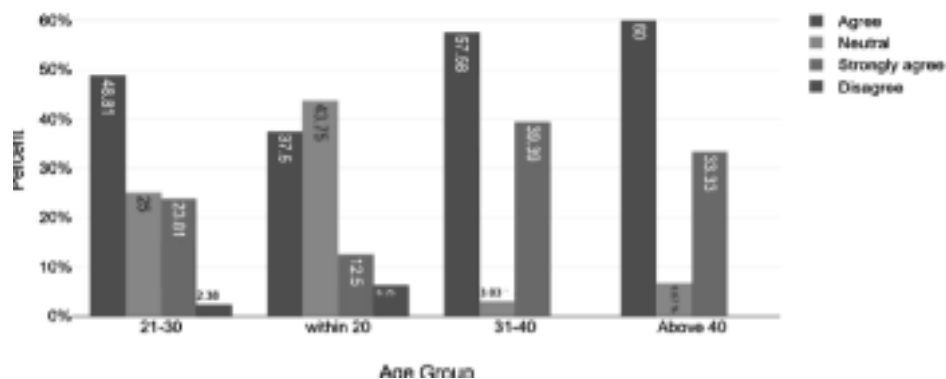


Figure 9: Age influence regarding perception on improvement in Customer Engagement
Source: Researchers' Calculation

Here, It can be seen that quite people in all the age groups are strongly agree and believe that metaverse banking can lead to Customer Engagement.

3. Age Group vs Willingness/Preference to Use Metaverse Banking

(here H0- no significant relationship between Age Group and Willingness/Preference to Use Metaverse Banking)

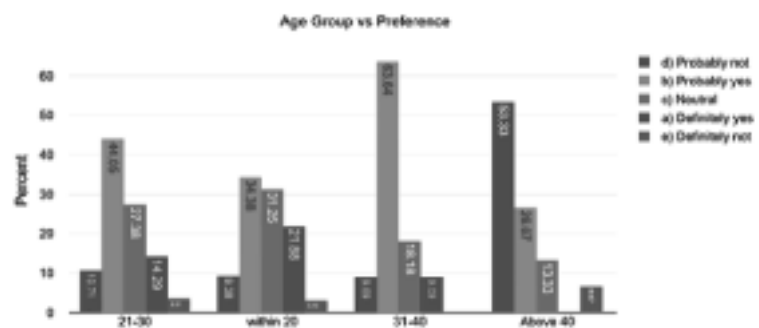


Figure 10: Age group VS preference
Source: Researchers' Calculation

	Value	df	Exact Sig.
Pearson Chi-Square	30.85	12	.002
Fisher-Exact Test	16.820		.001
Cramer's V Test	0.51		

It is shown that quite people all the age groups may prefer and some will definitely prefer except the people above 40.

(NOTE – We got only one response from “other” category of occupations. So we are not considering it because reliable and accurate results cannot be generated.)

There is a statistically significant relationship between Age and Preference as the value < 0.05 across all tests. The Fisher's Exact Test ($p = 0.005$) supports this finding, confirming reliability. The level of association strength is moderate as the value of Cramer's $V = 0.51$ which indicates that age has a good impact on preferences.

4. Occupation vs Awareness/Familiarity level regarding the concept of Metaverse Banking

(here H0- no significant relationship between Occupation and Awareness/Familiarity level)

	Value	df	Exact Sig.
Pearson Chi-Square	24.39 ^a	9	.018
Fisher-Freeman-Halton Exact Test	22.63	3	.011
Cramer's test	0.312		

There is a statistically significant relationship between Occupation and Familiarity Level ($p < 0.05$). Fisher's Exact Test confirms reliability, as expected counts are low. The association is moderate (Cramer's $V = 0.312$), meaning Occupation has a noticeable impact on Familiarity Level.

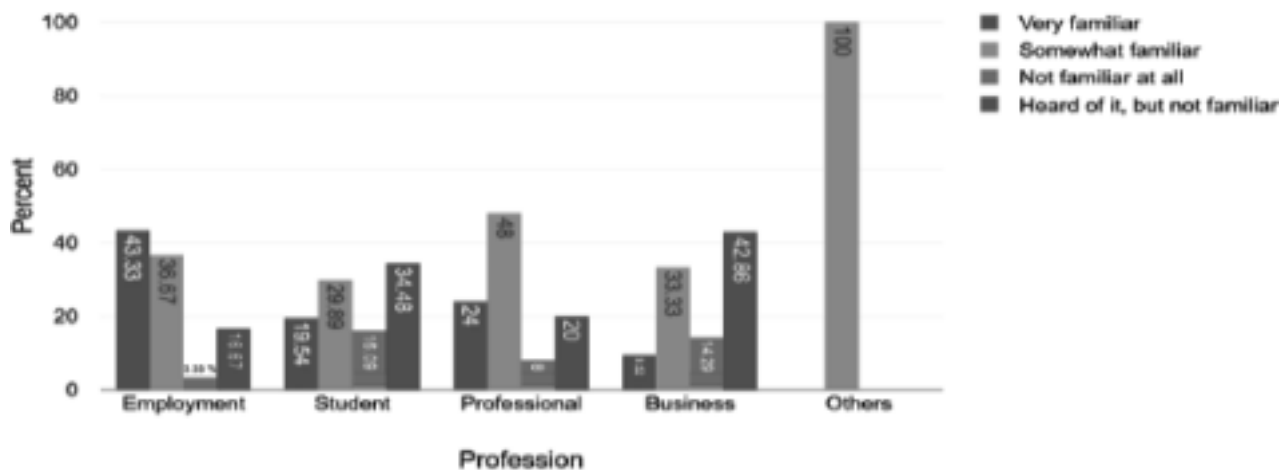


Figure 11: relationship between Occupation and Familiarity
Source: Researchers' Calculation

This concept is well familiar to many people who are engaged in employment and profession (mostly who are in corporate sector) are very familiar with the concept where as there are quite number of students who are not familiar at all.

5. Occupation vs Improvement in Customer engagement

(here H0- no significant relationship between Occupation and opinion on Improvement in Customer engagement)

	Value	df	Exact Sig. (2-sided)
Pearson Chi-Square	25.11	9	.014
Fisher-Freeman-Halton Exact Test	21.871		.002
Cramer's V	0.28		

There is a statistically significant relationship between Occupation and Familiarity Level ($p < 0.05$). However, Value of Cramer's V test is 0.29 which indicates that the level of association is weak and Occupation has some influence on the view regarding improvement in Customer Engagement, but the effect is not strong.

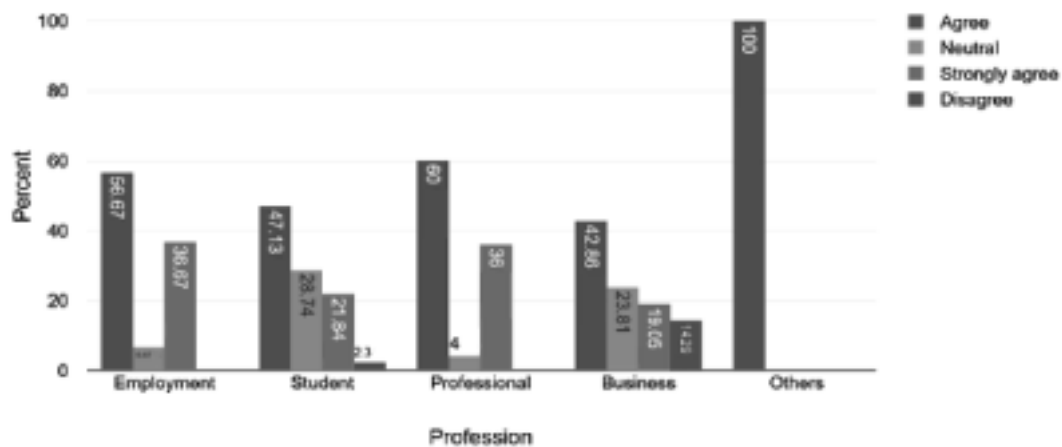


Figure 12: Occupation vs Improvement in Customer engagement
Source: Researchers' Calculation

It is agreed by Quite proportion of people of all occupations that metaverse banking can lead to improvement in Customer Engagement. Where as many students and some business people are neutral and even few disagree.

6. Occupation vs Willingness/Preference to Use Metaverse Banking

(Here H0- no significant relationship between Occupation and Willingness/Preference to Use Metaverse Banking)

	Value	df	Exact Sig.
Pearson Chi-Square	17.711 ^a	16	.119
Fisher-Freeman-Halton Exact Test	17.670		.055
Cramer's V	0.12		

Since, the chi-square value is coming 0.119 > 0.05 which shows that there is no significant relationship and hence null hypothesis will not be rejected.

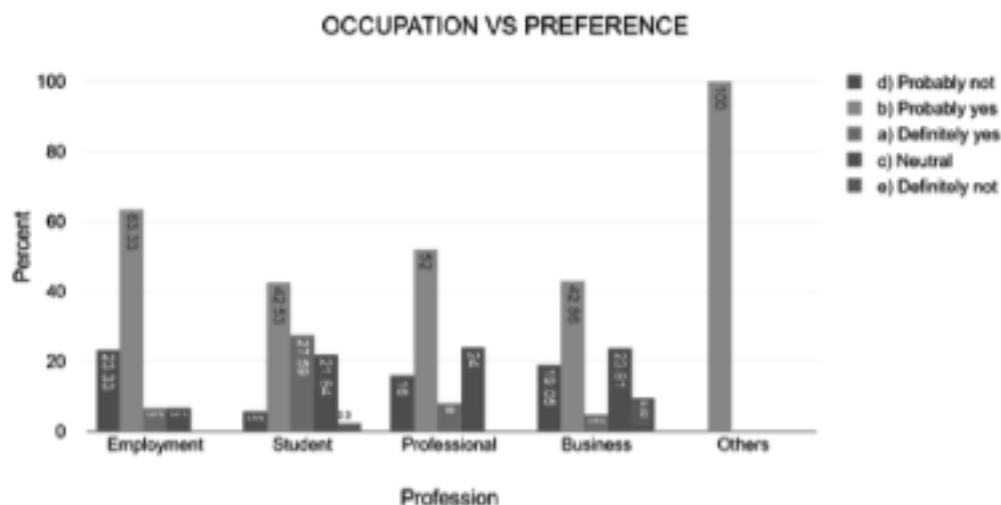


Figure 13: Occupation vs preference
Source: Researchers' Calculation

Here, It can be seen that that significant proportion of people from all occupations can probably prefer metaverse banking over traditional banking. Students are more interested in this new feature.

SUMMARY OF FINDINGS

1. Awareness of this innovation is limited, as it is a very novel concept. Therefore, before collecting responses we have explained it in a very understandable manner to get better reliability for the research.
2. Younger generations, especially Gen Z, showed greater interest as this will make banking more interactive and hence it indicates growth potential if addressed through education and accessibility, while older individuals (40+) exhibit lower enthusiasm.
3. Many believe that due to its innovative features, metaverse banking can make banking more interesting, and can lead to improvement in customer engagement.
4. Senior respondents are primarily concerned about privacy security and technological complexity, making its adoption challenging for non-tech-savvy users who may struggle with navigation and may not prefer it.
5. Despite these concerns, many respondents believe that the application of Metaverse has the potential to revolutionize the banking sector.

CONCLUSION AND RECOMMENDATIONS

This study regarding customer perception on the application of Metaverse in banking reveals both opportunities and challenges in the adoption of this emerging financial technology. Since, awareness of Metaverse banking remains limited but still Gen Z and millennials exhibit greater interest to use such innovation which shows great potential. The findings suggest that factors such as security concerns, digital literacy, automation and faster transactions, ease of navigation and trust in virtual transactions will play a

crucial role in shaping the willingness of banking users to adopt this technology.

Statistical analysis tools such as Chi-square and Cramér's V tests are used which confirms that factors such as age group and occupation have a significant influence on awareness, perception regarding improvement in customer engagement in banking, and willingness to use Metaverse banking services. The study highlights that while the technology is seen as innovative but engaging non-tech-savvy users, connectivity, security concerns and regulatory uncertainties remain major barriers to its widespread acceptance.

Thus, the findings will recommend the banks and Financial Institutions to emphasize on creating awareness, enhancement of security, robust connectivity, providing ease of navigation and creating interfaces to bridge the gap between early adopters of new innovation and users who are hesitant to switch to such technology.

In conclusion, Metaverse banking have immense potential to revolutionize the banking industry and is projected to grow exponentially but its success depends on how well banks can educate, address the challenges and adapt the platform to meet the expectations of diversified customers.

Further researches can be done regarding long-term studies on adoption rates and case studies of banks that have implemented Metaverse services to provide a better understanding of how feasible it is in practice.

LIMITATIONS OF THE STUDY

Here are some limitations of the paper:

1. **Low Sample Size** – only 164 responses were collected due to a low time span and hence, the findings on basis of such limited sample size may not be fully representative of the broader population. A larger sample can provide better statistical reliability.
2. **Low Awareness of Metaverse Banking** – Many respondents were not much familiar with the concept, which may have influenced their

responses. This can affect the reliability of in depth perception analysis.

3. **Lack of Real-World Experience** – Since Metaverse Banking is still in its early stages and has not been developed much to become applicable for proper use. So, responses are based on hypothetical understanding rather than actual experience regarding usability.
4. **Completely based on perception of users** - The study heavily relies on self-perception of people, which can be subjective in nature and may be influenced by limited prior knowledge
5. **Technological and Market Evolution** – As innovations like Metaverse evolve rapidly due to the dynamic environment, the findings might become outdated and can't last long because of new advancements in technology.

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CRM should be treated as a holistic strategic approach rather than a mere technological tool.

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The Influence of Customer Relationship Management on Cross-selling and Upselling Strategies in Marketing

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ABSTRACT

This study examines the influence of Customer Relationship Management (CRM) on the effectiveness of cross-selling and upselling strategies in marketing. It analyses how CRM-driven data collection, segmentation, and personalisation enhance customer retention, perceived value, and sales performance in both online and retail contexts. Using primary survey data from 317 respondents in India and applying descriptive statistics and chi-square analysis, the research finds a significant relationship between personalised CRM-based offers and customers' likelihood of purchasing upgraded or complementary products. The findings highlight that effective CRM implementation—supported by timely communication, value-based pricing, and targeted recommendations—strengthens customer satisfaction, increases revenue, and fosters long-term loyalty.

KEYWORDS: Customer Relationship Management (CRM), Cross-Selling, Upselling, Customer Retention, Personalisation, Sales Performance, Marketing Strategy

INTRODUCTION

The dissertation explores how Customer Relationship Management (CRM) influences cross selling and upselling strategies in the contemporary marketing environment. As businesses strive to increase revenue and retain customers in a competitive marketplace, these two sales strategies—cross-selling, which involves recommending complementary products, and upselling, which focuses on offering higher-end versions of a product—have become indispensable. The effectiveness of these strategies relies heavily on the ability of businesses to engage customers in a relevant and personalised manner, and this is where CRM plays a transformative role. CRM systems enable the collection, analysis, and application of customer data to generate targeted recommendations, enhance the shopping experience, and foster loyalty.

CRM TOOLS AND APPLICATIONS

The study highlights how CRM tools have evolved to

provide businesses with a cohesive view of customer behaviour, allowing them to personalise offerings both online and in-store. Examples include Customer Data Platforms that unify purchase history and demographic details; loyalty and reward systems that incentivise repeat purchases; marketing automation platforms that deliver tailored email campaigns; e-commerce CRM integrations that suggest “frequently bought together” items or premium upgrades; predictive analytics that segment customers based on value, churn risk, or engagement; and AI-enabled chatbots that recommend complementary or upgraded products in real time. Through these tools, businesses can deliver data-driven insights, build customer retention, segment their audience for targeted offers, and automate marketing triggers that ensure timely engagement.

CRM IN ONLINE VS. RETAIL MARKETING

The research also examines differences in CRM application between online and retail marketing. In online environments, CRM makes extensive use of AI-powered recommendations, retargeting advertisements, personalised campaign management, loyalty programs, and automation. By leveraging purchase and browsing history, online platforms can display highly relevant products, promote higher-value alternatives, and encourage bundling. In retail settings, CRM is implemented through loyalty cards, membership programs, in-store events, SMS and email notifications, point-of-sale integrations, and trained sales staff who provide tailored recommendations. Both contexts share the same goal: building long-term relationships that convert occasional buyers into loyal customers.

EVOLUTION OF CRM

The evolution of CRM is traced from its traditional form to its modern digital capabilities. Historically, cross-selling and upselling relied on face-to-face interaction, printed catalogues, and generic discount offers, with customer preferences recorded manually—making it difficult to track behaviour or reward loyalty effectively. In contrast, today's CRM systems integrate with digital

platforms, employ real-time data analytics, and support omnichannel marketing, allowing businesses to deliver highly personalised and timely offers across multiple customer touchpoints.

NATURE OF THE PROBLEM

The research identifies a key challenge: although CRM systems generate a wealth of customer data, many companies fail to translate these insights into effective cross- and upselling initiatives. Common pitfalls include a lack of personalisation, insufficient staff training, poor timing of offers, overemphasis on short-term profits, and inadequate resource allocation—particularly among smaller firms that cannot invest in advanced CRM tools. These shortcomings can lead to missed opportunities, customer disengagement, and a negative brand image. The study therefore positions effective CRM execution as the bridge between raw data and successful sales conversion.

LITERATURE REVIEW

The literature review draws from multiple authoritative sources:

1. Peppers & Rogers (1993) highlighted personalized marketing's role in enhancing cross selling and up-selling through CRM systems.
2. Sharma & Sheth (2004) emphasized CRM's data-driven potential to identify customer preferences, enhancing sales relevance and loyalty.
3. Kumar & Shah (2004) discussed how loyalty-building via CRM drives repeated and higher-value transactions.
4. Stone & Woodcock (2014) illustrated CRM's transformative power in modernizing retail and online engagement.
5. Nguyen & Simkin (2017) examined ethical concerns surrounding intrusive personalization, underscoring the need for balance.
6. Reinartz, Krafft & Hoyer (2004) provided a framework for measuring CRM effectiveness in cross-selling and up-selling.

OBJECTIVES OF THE STUDY

1. To analyse the role of Customer Relationship Management (CRM) in enhancing customer data collection and segmentation.
2. To explore the impact of Customer Relationship Management (CRM) on Customer Retention and Loyalty in Cross Selling and Up selling.
3. To evaluate the effectiveness of Customer Relationship Management (CRM) in tailoring Cross-Selling and Up-Selling offers in Online and Retail Marketing.
4. To investigate the relationship between Customer Relationship Management (CRM) integration and sales performance in Cross-Selling and Up-Selling.
5. To examine customer perception and satisfaction with Cross-Selling and Up-Selling efforts powered by Customer Relationship Management (CRM) systems.

RESEARCH METHODOLOGY

The study's objectives were to analyse CRM's role in customer data collection and segmentation, assess its impact on retention and loyalty, evaluate its effectiveness in tailoring offers in both online and offline contexts, investigate its relationship with sales performance, and examine customer perceptions of CRM-driven cross- and upselling efforts. To achieve these objectives, a primary survey was conducted across India, yielding 317 valid responses over three weeks. The respondents are the students. Descriptive statistics (means, standard deviations, and graphical analysis) and inferential statistics (Chi-square tests) were applied. The respondents were informed of the study's aims, and anonymity and confidentiality were maintained.

Analysis and Key Findings

Inferential Analysis – Chi-Square Test

1. A Chi-Square test was conducted to examine the relationship between customers' reactions to being offered an upgraded product (up-sell) and their perception of the product's value relative to its price.

Test Result:

χ^2 Tests			
	Value	df	p
χ^2	183	12	<.001
N	317		

Figure 1: p value results
(Source: Primary Data)

Hypotheses:

- Null Hypothesis (H_0): No relationship exists between customer reaction and perceived value vs. price.
- Alternative Hypothesis (H_1): A relationship exists between customer reaction and perceived value vs. price.

Conclusion:

Since the p-value is less than 0.10, the null hypothesis is rejected. This indicates a statistically significant relationship. Customers perceive that the higher price of an upgraded product is justified by the added value, suggesting that effective pricing and value communication are crucial in up-selling strategies.

2. A Chi-Square test was used to assess the relationship between offering a complementary product and the customer's likelihood of purchasing it.

Test Result:

χ^2 Tests			
	Value	df	p
χ^2	183	12	<.001
N	317		

Figure 2: p value results.
(Source: Primary Data)

Hypotheses:

- Null Hypothesis (H_0): No relationship exists between offering a complementary product and likelihood of purchase.

- Alternative Hypothesis (H_1): A relationship exists between the two. Conclusion:

Since the p-value is less than 0.10, the null hypothesis is rejected, indicating a statistically significant relationship. Customers are more likely to purchase a complementary product when it is offered, confirming the effectiveness of cross selling.

Business Implications:

Use bundling and targeted product recommendations to boost sales.

Adjust pricing strategies for complementary products to increase purchase likelihood.

INTERPRETATION AND OBSERVATIONS

From these insights, the study concludes that personalisation is the most powerful driver of conversion. Timely offers, especially during checkout or relevant seasonal periods, significantly improve sales outcomes. Customers are more receptive to upselling when they perceive clear value differences between the standard and premium options. Social media and mobile apps should be prioritised as engagement channels, and over-targeting should be avoided to prevent disengagement. The findings suggest that businesses should invest in segmenting customers more precisely, training staff in CRM usage, rewarding loyalty through points and exclusive offers, and aligning premium pricing with perceived benefits.

CONCLUSION

The research demonstrates that CRM integration into cross-selling and upselling strategies enhances short-term profitability and builds long-term loyalty. Companies that successfully combine personalisation, staff training, and optimal channel selection can achieve higher customer retention and sustained growth. CRM should be treated as a holistic strategic approach rather than a mere technological tool.

LIMITATIONS AND FUTURE SCOPE

The study acknowledges certain limitations, including its short-term focus, the absence of an analysis of specific CRM platforms, and its restriction to the Indian consumer base. Future research could explore the long-term impact of CRM on loyalty and profitability, conduct

comparative studies of specific CRM tools, and examine its application in niche markets such as luxury goods, B2B services, or subscription models.

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It is found that except music or sound effects, all the other forms of subliminal advertisements, considered in this study, do not affect the purchase decision of different genders divergently.

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The Impact of Subliminal Advertising On Consumer Purchase Decisions Across Genders

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ABSTRACT

"In the world of advertising, there's no such thing as a perfect product, but there is such a thing as a perfect message." – Jay Abraham

In the current landscape where everything is evolving at a breakneck speed, there has been a rise in the clutter in the advertising space, where the marketers are in an intense competition to grab consumer's attention, win their trust and develop brand loyalty. However, this is a mammoth task. On the hand, the presence of numerous brands for the same product put the consumers in difficulty in choosing the best for themselves. But here come the marketers who are actually trying to build emotional connection, directly or indirectly, with the consumers in order to serve their own interest. Subliminal advertising is one such strategy used by them. However, the subliminal cues used to approach the subconscious mind of the consumer are successfully perceived by them but the impact of various form of subliminal cues may differ amongst the different gender.

KEYWORDS: Subliminal Advertising, Consumer Purchase Decision, Gender Differences, Sensory Marketing, Influencer Marketing, Colour Psychology, Music in Advertising, Consumer Behaviour

BACKGROUND OBSERVATIONS

Ever noticed the logo of Baskin Robbins where the pink part tries to represent the thirty one flavors of ice cream available? Or do you remember the use of Airtel ringtone in the climax scene near the Pangong Lake in the Bollywood movie three idiots? Or whenever you enter a Belgian Waffle store, the pleasant bakery like smell diffused around make you feel hungrier triggering to make an order?

Today is the world with a lot of competitions around us and marketers go all the way to get a slice in the target consumers' mind whether it is through direct means or

indirect means by capturing attention in this cluttered environment and making an emotional connection.

Brands not only restrict themselves to this four dimensional world rather some of them choose a furtive or stealthy battle front called the subconscious mind of the consumers. This is the world of subliminal advertising where companies don't just compete to grab consumers' attention rather aims to influence them without even making them realize the same, by subtly embedding the message into the media which bypasses the conscious mind and slips straight into their subconscious mind of the consumers. While the effectiveness of subliminal advertising has been in debate since long, leading to questions on the ability of such advertisements to influence consumer thoughts, perceptions and their purchasing behavior. However, over time it has been proved that these subliminal cues used by the marketers to advertise their products do influence the consumer behavior.

Among the behaviors exhibited by the consumers over time, gender identity has always played a significant role influencing it. Apart from the differences in social, economic, cultural and personal upbringing of individuals, various other biological and psychological factors shapes their decision making. Thus, indicating difference in behavior exhibited by consumers of different genders. This leads to a juncture questioning about the correlation between gender and subliminal advertisements.

REVIEW ON BACKGROUND LITERATURE

The review of literature has been presented below in Table 1 in order to get a holistic picture of the broad understanding in the area of research.

TITLE	AUTHOR AND YEAR	OBJECTIVE	FINDINGS
Impact of subliminal messages in television(TV) Advertisements on consumer behaviour	Shakeel Ahmad Sofi & Dr. Fayad Ahmad Nika (2018)	To empirically assess how subliminal messages in TV advertisements affect the buying behavior of young Indian consumers	The study reveals that exposure to subliminal advertising significantly influences purchase intentions and compulsive buying tendencies among young consumers.

Does Subliminal Advertisement Affect Consumer Behavior? An Exploratory Comparative Analysis Between Marketing and Non-Marketing Professionals	Dr. Yasir Ali Soomro (2018)	To compare perceptions of subliminal advertisements' effects on consumer behavior between marketing and non-marketing professionals	The research indicates significant differences in how marketing and non-marketing professionals perceive the impact of subliminal messages in advertisements.
Subliminal Messages in Advertising: Do They Really Work?	Senka Borovac Zekan and Ivone Zekan (2021)	To determine public awareness of subliminal messages in media and their perceived ethicality.	The study finds that many individuals recognize subliminal messages as influencing instincts and emotions, raising ethical concerns about their use in advertising.
The Effect of Subliminal Advertising on Consumer Attitude and Buying Intention	Geovani Agnesia Somantry (2014)	To investigate how subliminal advertising in movies affects consumer brand awareness, attitudes, and purchase intentions.	Higher brand awareness influenced recall rates, attitudes toward the product, and purchase intentions. Products closely integrated into movie scripts were more easily recalled, and positive attitudes toward product placement correlated with higher purchase intentions.
How gender identity affect consumer behaviour : Overview and historical analysis	Lily Ye, Mousumi Bose, and Lou E. Pelton	To review the historical development of gender identity concept and its impact on consumer behaviour	Gender identity has more impact on consumer behaviour as it becomes increasingly explicit over the past.
Impact of gender on consumer Purchase behaviour	Swarna Bakshi (2012)	To study the difference in the behaviour of men and women during the process of making purchase decision due to variation in upbringing, socialization, and other social, biological and psychological factors.	At every stage of consumer purchase decision, the behaviour depicted by men and women is completely opposite and in order to gain competitive advantage marketers have to look and capture this difference in the best possible manner.
Gender differences and Consumer behaviour of millennials	Radojka Kraljević, and Zrinka Filipović	To examine the gender differences in consumer behaviour of students – generation y.	The study identifies gender differences in purchase behaviour, loyalty, price sensitivity and shopping habits. Women are more sensitive to price than men. They also belong more to the loyalty programs and use more loyalty awards schemes.

RESEARCH GAP

This paper has limited precedence so far, thus, raising concern over the literature gap to exist, especially with context to Indian scenario. Existing paper have extensively covered areas such as the impact of gender on consumer behavior, whether there is any effect of subliminal advertising on consumer behavior, if yes then what are those effects, how it shapes the buying intentions, what are its effect when broadcasted through different media and so on. But there still lies a question whether gender has an effect on the subliminal messages advertised by the marketers.

OBJECTIVES OF THE STUDY

The salient objectives of this paper are listed below:

- To determine the influence of organic influencer promotions on different genders.
- To study the influence of subliminal advertising in the form fragrance on different genders to make purchase decision.
- To study the influence of subliminal advertising in the form color scheme on different genders to make purchase decision.
- To study the influence of subliminal advertising in the form of music on different genders to make purchase decision.

MODELING A CONCEPTUAL FRAMEWORK

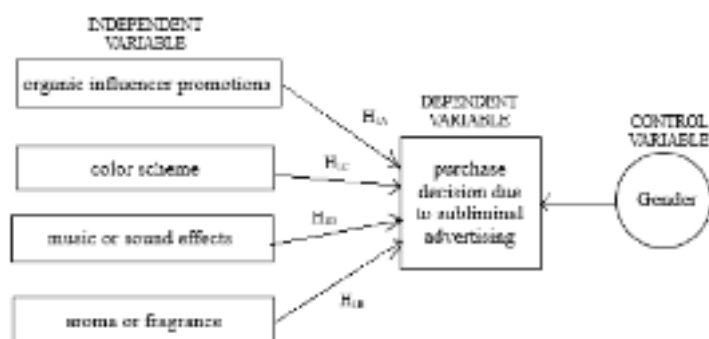


Figure 1: Research Model for the Present Study
(Source: Primary Data)

We shall conclude this segment by designing a conceptual or theoretical framework which shall outline the basic hypotheses used in this study.

Purchase decision influenced by the subliminal advertising is the dependent variable to be studied, whereas organic influencer promotions, aroma or fragrance, color scheme and music or sound effects are the independent variables which will be studied by taking gender into considerations as the control variable.

RESEARCH METHODOLOGY

The research carried out is descriptive in nature. In order to fulfill few of the objectives of the research, following are the alternative hypothesis (H1) which has been formulated:

H1A: Organic influencer promotions have different impact on purchase decision of different genders.

H1B: Subliminal advertising in the form of fragrance have different impact on purchase decisions of different genders.

H1C: Subliminal advertising in the form of color scheme have different impact on purchase decision of different genders.

H1D: Subliminal advertising in the form of music have different impact on purchase decision of different genders.

Finally, 208 respondents were chosen for the study's sample. A systematic questionnaire was given to 248 respondents in total, out of which 40 were incomplete. The sampling design and data collection technique has been discussed subsequently.

SAMPLING DESIGN AND TECHNIQUE

Sample frame: The responses were collected using a structured questionnaire circulated through instant messaging and social media apps like Whatsapp and Instagram.

Sample size: The sample size, as discussed, is of 208 respondents out of which 109 are female and 99 are male.

Sampling Analysis: The responses collected for this study has been processed using Microsoft Excel. Data has also been presented in the form of pie charts and graphs for reaching reasonable conclusions.

INTRODUCTORY OVERVIEW

The purpose of analyzing data is to gain a better understanding of the components essential for the further study.

Table 2: Frequency Statistics of Gender Distribution

Particulars	Frequency
Male	99
Female	109
Total	208

The above Table 2 is represented in the form of a pie chart in Figure 2 in order to get an understanding of the descriptive of the study.

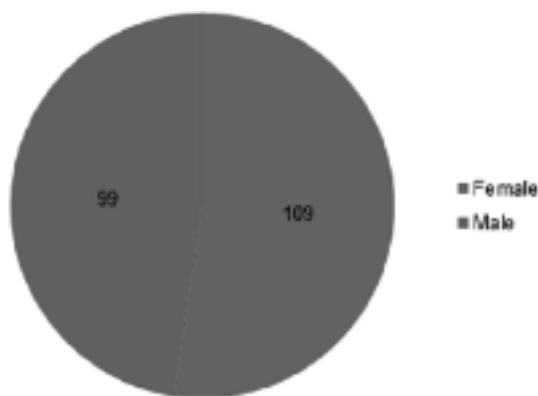


Figure 2: Gender distribution across respondents
(Source: Table 2)

Table 3 represents the frequency statistics for age bracket of respondents. Majority of them are from the age group of 20 to 30, which is the phase of young adulthood. People of this age bracket are more prone to various forms of advertisements. However, a sizable proportion of them also are of age below 20 years.

Table 3: Frequency Statistics of Age Distribution

Particulars	Frequency
Below 20	61
20 to 30	130
31 to 45	12
45 and above	5

The above table has been visually represented in the form of a column graph in Figure 3.

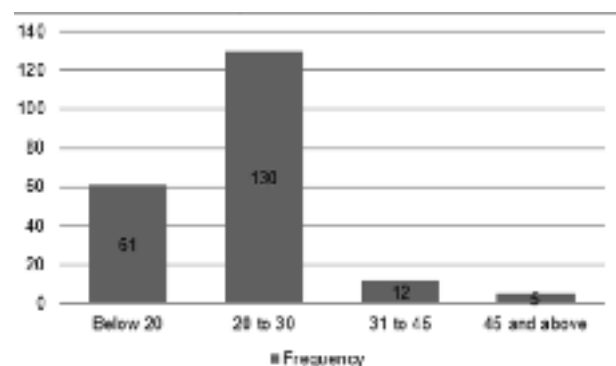


Figure 3: Age distribution across respondents
(Source: Table 3)

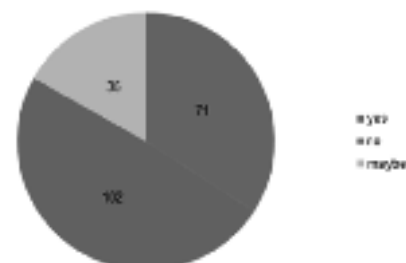


Figure 4: Percentage of people aware of the concept of subliminal advertising
(Source: Primary Data)

A majority of the respondents, i.e. 49per cent of them, were unaware of the concept of subliminal advertising. However, about 16.8per cent of them had an unclear idea of the use of subliminal cues by the marketers and 34.2per cent of the respondents were acquainted with this concept. (Figure 4)

ANALYZING THE IMPACT OF SUBLIMINAL ADVERTISING IN VARIOUS FORMS ON DIFFERENT GENDERS

The basic object of the study is to analyze the influence of subliminal advertising on different genders. Such advertisements can be in the form of organic influencer promotion, aroma or fragrance, color scheme, music or sound effects, or any other form. According to the above mentioned objectives, the analysis of the effect of organic influencer promotions, aroma or fragrance, color scheme and music or sound effects on the different genders are exhibited in Segment 1, Segment 2, Segment 3 and Segment 4 respectively. To study the correlation in between these variables, chi square test has been opted for.

Segment 1: Analyzing the effect of organic influencer promotion on purchase decision of different genders

OBSERVED VALUES				
Row Labels	Maybe	No	Yes	Row total
Female	19	27	63	109
Male	19	37	43	99
Column total	38	64	106	208

EXPECTED VALUES			
Particulars	Maybe	No	Yes
Female	19.91346	33.53846	55.54808
Male	18.08654	30.46154	50.45192

COMPUTED VALUES			
Particulars	Maybe	No	Yes
Female	0.041902	1.2747	0.999695
Male	0.046134	1.403458	1.100675

X square	4.866564205
df	2
p value	0.08774836

Table 5: Chi square test to detect the correlation between organic influencer promotions and gender
(Source: Primary Data)

As showcased in Table 5, the p value is 0.087 which is greater than significant value of 0.05. Hence we accept the null hypothesis and reject the alternate hypothesis (H1A). This indicates that there exists no correlation between gender and organic influencer promotions, i.e. purchase decision of different genders are not affected differently because of such promotions.

Segment 2: Analyzing the influence of subliminal advertising in the form fragrance on purchasing decision of different genders

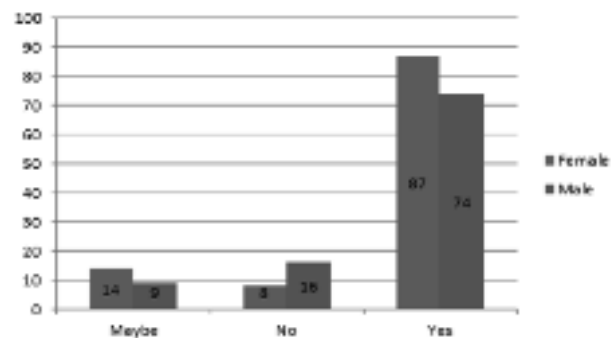


Figure 5: Percentage of respondents feeling triggered due to aromatic cues
(Source: Primary Data)

Aromatic cues used by the marketers significantly appeals to both males and females, with women being slightly more responsive or triggered towards them.

OBSERVED VALUES				
Particulars	Maybe	No	Yes	Row Total
Female	27	26	56	109
Male	24	29	46	99
Column Total	51	55	102	208

EXPECTED VALUES			
Particulars	Maybe	No	Yes
Female	26.72596	28.82211538	53.4519231
Male	24.27404	26.17788462	48.5480769

COMPUTED VALUES			
Particulars	Maybe	No	Yes
Female	0.00281	0.276327228	0.12146796
Male	0.003094	0.304239069	0.13373745

X square	0.841675318
df	2
p value	0.656496669

Table 6: Chi square test to detect the correlation between subliminal advertising in the form fragrance and gender (Source: Primary Data)

Table 6 shows that the p value is 0.656 which is greater than significant value of 0.05. Hence we accept the null hypothesis and reject the alternate hypothesis (H1B). This indicates that there exists no correlation between gender and subliminal advertising in the form of aroma or fragrance, i.e. purchase decision of different genders is not affected differently.

Segment 3: Analyzing the influence of subliminal cues in advertisements in the form color scheme on purchase decision of different genders

OBSERVED VALUES					
Particulars	Moderately	Not at all	Significantly	Slightly	Row total
Female	41	7	27	34	109
Male	42	12	22	23	99
Column total	83	19	49	57	208

EXPECTED VALUES				
Particulars	Moderately	Not at all	Significantly	Slightly
Female	43.4951923	9.956731	25.67788462	29.87019
Male	39.5048077	9.043269	23.32211538	27.12981

COMPUTED VALUES				
Particulars	Moderately	Not at all	Significantly	Slightly
Female	0.1431419	0.878025	0.068073719	0.570981
Male	0.15760068	0.966714	0.074949852	0.628656

x square	3.48814199
df	3
p value	0.32230332

Table 7: Chi square test to detect the correlation between subliminal advertising in the form color scheme and gender (Source: Primary Data)

As shown in Table 7, the value on computation comes to 0.322 (approximately) which is greater than 0.05. Thus, this exhibits no correlation between gender and subliminal cues used in advertisements using colors.

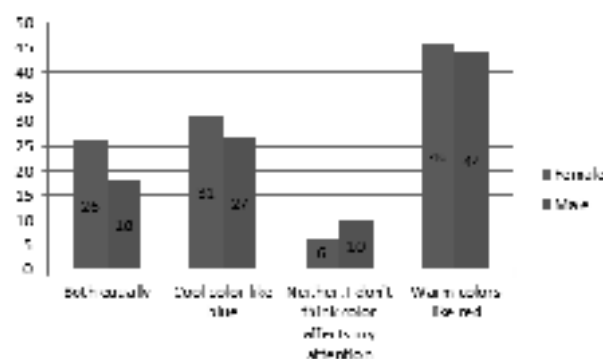


Figure 6: Impact of different tones of color on different genders (Source: Primary Data)

As depicted in Figure 6, both males and females are attracted towards warm colors like red and orange than cool colors like blue, green and purple. Few of them have equal response towards them and a small proportion of them don't find colors to be significant in grabbing their attention.

Segment 4: Analyzing the influence of subliminal cues in advertisements in the form music on purchase decision of different genders

OBSERVED VALUES					
Particulars	Not at all	Slightly	Moderately	Significantly	Total
Female	18	25	54	12	109
Male	33	19	38	9	99
Total	51	44	92	21	208

EXPECTED VALUES					
Particulars	Not at all	Slightly	Moderately	Significantly	
Female	26.725962	23.057692	48.21153846	11.00480769	
Male	24.274038	20.942308	43.78846154	9.995192308	

COMPUTED VALUES					
Particulars	Not at all	Slightly	Moderately	Significantly	
Female	2.8490053	0.1636139	0.694984812	0.089997732	
Male	3.1367836	0.1801406	0.765185298	0.099088412	

X square	7.9787995
df	3
p value	0.0464519

Table 8: Chi square test to detect the correlation between subliminal advertising in the form music and gender (Source: Primary Data)

As observed in Table 8, the p value obtained during analysis is 0.0465 approximately which is less than 0.05, indicating that different genders tend to behave differently to subliminal cues in advertisements in the form of music or tunes.

ANALYSIS AND DISCUSSION ON FINDINGS

1. Influencer promotions, currently opted marketing tool by the marketers, where s/he organically promotes the products not explicitly have different impact on different genders.
2. Subliminal cues in the form of aroma or fragrance significantly trigger both the genders but when it comes to purchase decision both the genders are not impacted differently.

3. Subliminal cues in the form of color scheme used do not affect the purchase of different genders differently. Moreover, warm tones like red, orange and yellow appeal more to the consumers than the cool tones like blue, purple and green. But there are consumers are either indifferent towards both the tones and the ones who don't consider color while making such decisions.

4. Sound effects, tunes or music as subliminal cues used by marketers for advertisement affect both the genders differently.

CONCLUSIVE STATEMENTS

The primary aim of this paper was to conclude on the impact or influence of subliminal advertisements different forms on purchase decision of different genders. The forms taken into consideration were organic influencer promotions, color scheme, aroma or fragrance and music or sound effects. It is found that except music or sound effects, all the other forms of subliminal advertisements, considered in this study, do not affect the purchase decision of different genders divergently.

LIMITATIONS OF THE STUDY

The study was carried out in a limited time frame; a more elaborative study would have added more value to the paper.

The number of responses collected for the study was just 208 in number. A larger sample would have given more insightful and accurate results.

The use of random samples was less than that of convenient samples.

Geographical constraint is another imperative limitation of this study. Maximum of the respondents were based out of Kolkata region. Survey in a wide manner would have surely bolstered the worth of the study.

The conclusions are based on the analysis of the responses obtained through the questionnaire so it truly

depends on the transparency and veracity by the respondents.

However, every possible step has been taken to curb all the limitations and ensure that any limitation do not act as a hurdle in order to conclude in true and fair manner.

RECOMMENDATIONS

In order to ace in the current competitive environment, marketers do opt for various strategies to grab attention of the target consumers, gain customers and retain them over time. In this process, subliminal advertising is one of the strategies used. Here are few suggestions to the beneficiaries:

1. Subliminal cues should largely depend on the products. The form of subliminal cue to be added to the advertisement should be centric to the nature of the product.
2. Out of the cues discussed, music can be incorporated to appeal.

FUTURE SCOPE OF STUDY

There's no end of scope for future explorations. Stated below are few ways in which this study can be extended:

Study on other forms of subliminal cues which can be used by the marketers in order to gain and retain customers.

Studying the extent and form of similarity and dissimilarity in behavior exhibited by different genders on encountering different subliminal cues.

Finding out the cues which can appeal more comparatively.

Conducting such research taking other control variables into consideration like income, age, etc

The ethical concerns with regard to this matter.

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2. Does Subliminal Advertisement Affect Consumer Behavior? An Exploratory Comparative Analysis Between Marketing and Non-Marketing Professionals by Dr. Yasir Ali Soomro (2018)
3. Subliminal Messages in Advertising: Do They Really Work? by Senka Borovac Zekan and Ivone Zekan (2021)
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6. Impact of gender on consumer Purchase behaviour by Swarna Bakshi (2012)
7. Gender differences and Consumer behaviour of millennials by Radojka Kraljević, and Zrinka Filipović



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Wipro, a global IT services company took over Capco, a leading management and technology consultancy in the financial services sector, for \$1.45 billion in March 2021.

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The Financial Implications of Takeovers

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Abstract

This study, "The Financial Implications of Takeovers," addresses a research gap in detailed analyses of takeover and defensive strategies, particularly through real-life case studies, as existing literature often focuses on regulatory aspects and theoretical models.

The research employs a quantitative and descriptive methodology, using secondary data from various sources including annual reports and financial statements. Two acquisitions were examined: the IDBI Bank-LIC takeover

(five years of pre- and post-data) and the Wipro-Capco acquisition (three years of pre- and post-data).

The study aimed to analyze the impact of takeovers on firm performance, market capitalization, and key financial ratios. The IDBI-LIC case showed improved capital adequacy and asset quality for the struggling bank post-acquisition, despite ongoing challenges. The Wipro-Capco analysis indicated strong liquidity but declining profitability metrics after the takeover. Findings suggest that while takeovers can enhance certain financial aspects, sustained effort is often needed for a complete financial turnaround, and profitability issues may persist.

KEYWORDS: Takeover, Acquisition, Capital adequacy, Financial ratio.

BACKGROUND OF THE STUDY:

Corporate takeovers are modern versions of ancient kingdom conquests, driven by a shared thirst for power and resources.

Both involve strategic absorption: kings crushed neighbors for land; companies "swallow" others for assets and market share. Though ambition is similar, execution differs: kings used military force, while corporations employ financial and legal tools within regulatory frameworks (e.g., Alexander's conquests vs. Disney-Fox deal). "Disney acquiring Fox for its IP and market share parallels Alexander the Great's empire expansion, swapping military might for financial strategy within legal frameworks.

This parallel invites reflection on power's ethical implications across history.

LITERATURE REVIEW

Johnson, et. al. (2022) in their report have emphasized upon the lifecycle effects of corporate takeover defences. As per the study, they documented that the relation between firm's value and the use of takeover defenses is positive for young firms but becomes negative as firms age

Cain, et. al. (2017) has evaluated upon the relation between hostile takeovers and 17 takeover laws from 1965 to 2014 to understand the underlying legal and statutory frameworks of takeovers.

Puziak & Martyniuk (2012) has executed an article to disclose the prospective strategies which could be used by resistant companies against the attempts of hostile takeovers carried out by their competitors.

Rowoldt & Starke (2016) have highlighted upon the fact that takeover regulation may influence the openness of the domestic takeover market and have addressed the same through the role of government in completion of hostile takeovers by analysing a quantum of 263 hostile takeover bids in Europe and North America during the time frame between 2000-2014.

Eckbo (2009) has examined and reviewed recent empirical studies with respect to takeover premiums and bidding behaviour in corporate takeovers. The review is an overview of the takeover gains, bidder announcement returns, and offer premiums.

Powell (2004) has used a multinomial framework to develop several takeover prediction models wherein hostile and friendly takeovers are predicted separately through sample constructions

RESEARCH GAP

The previous research journals and articles that I have come across during my review are mostly based upon regulatory and government involvements in takeovers. Other reports emphasize upon formulae and hypothesis-based study of takeover bids, premiums, and the flow of underlying lifecycle of such corporate acquisitions. However, detailed researches on the various takeover and defensive strategies are very few and rare. Even if they exist, the quantum of information and explanations provided are not with respect to real life case studies.

RESEARCH OBJECTIVES

To examine the impact of takeover on a firm's overall performance and evaluating its effects on market capitalization

To analyse trends in key financial ratios pre and post takeovers emphasizing the impact on returns of the company.

RESEARCH METHODOLOGY

Research and analysis for this project has been done in as much depth to the extent possible from secondary sources in order to achieve the objectives of this paper. Newspaper articles, various published journal papers official press releases, financial statements and annual reports extracted from the websites of the companies, predictive data of experts, reliable surveys, political and economic reviews, various authorised government and regulatory sites including those of the Bombay Stock Exchange and National Stock Exchange have been used for collecting secondary data. A quantitative and descriptive approach has been adopted.

In this study, two case studies of acquisitions have been examined to analyse the financial impact of such strategic decisions. The first case involves the acquisition of IDBI Bank by LIC, for which financial data spanning five years prior to and five years following the acquisition has been collected from the respective annual reports and financial statements of both entities. The second case focuses on Wipro's acquisition of Capco, wherein financial data for three years before and three years after the acquisition has been extracted from the consolidated financial statements of Wipro.

CASE STUDY OVERVIEW

IDBI-LIC Takeover

The IDBI Bank – LIC Takeover case revolves around the Life Insurance Corporation of India (LIC) taking over a controlling stake in IDBI Bank a public sector bank which was struggling to help the bank overcome from the financial problems which was faced by it. IDBI bank was facing rising bad loans and increasing losses which lead to its instability. The takeover involved LIC making a deal of 21624 crores with IDBI bank to strengthen its

capital base. After the takeover, IDBI bank was classified as a private sector bank by the RBI as LIC was its major stakeholder. LIC, India's largest insurer saw this as an opportunity to expand into the banking sector.

Wipro-Capco takeover

Wipro, a global IT services company took over Capco, a leading management and technology consultancy in the financial services sector, for \$1.45 billion in March 2021. This takeover was Wipro's largest deal and aimed at strengthening its position in the banking, financial services, and insurance sector. Capco's expertise in the financial services helped Wipro diversify beyond IT services into consulting. Despite the hurdles, the deal positioned Wipro by enduring growth in Digital Financial Services.

DATA ANALYSIS AND FINDINGS

The IDBI-LIC Takeover- Unraveled

Fragmenting the consideration

LIC invested a considerable amount of capital into IDBI Bank. As per the press release published by IDBI Bank (PR/1363) LIC invested Rs. 21,624 crores to acquire a majority stake in the bank.

This capital infusion was important for IDBI Bank, which was struggling with financial difficulties, revolving around its non-performing assets (NPAs).

Stake Acquisition: LIC took over a majority shares in IDBI Bank, ultimately holding a considerable portion of the bank's equity. Initially, LIC acquired a 51% controlling stake, which then changed slightly over time. The takeover was done by a combination of preferential allotment of shares, and an open offer.

Share Pricing: The price at which LIC acquired the shares was a significant factor. Reports indicate that LIC acquired shares at an average price of roughly Rs 61 per share.

Change in Shareholding Pattern

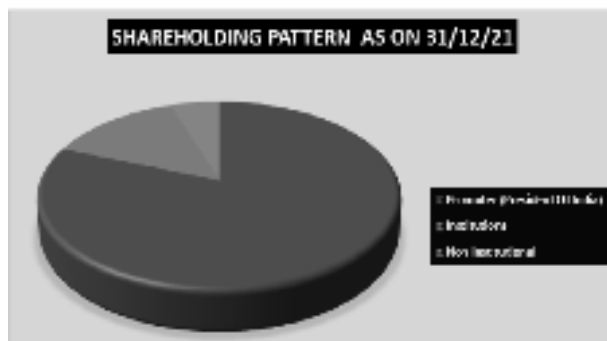


Figure 1 – Pie Chart: Shareholding Pattern of IDBI Pre-Takeover
(Author's calculation)

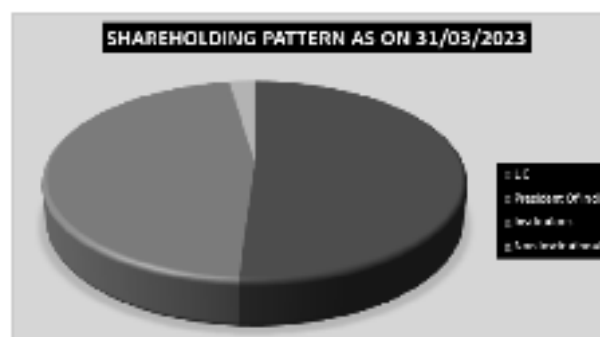


Figure 2 – Pie Chart: Shareholding Pattern of IDBI Post-Takeover
(Author's calculation)

The company was acquired by LIC in FY 2018–2019 after Government of India divested a significant portion of their shareholding. Earlier the Government controlled 80.96% of the total shareholding. After the acquisition The Reserve Bank Of India categorized it as a 'Private Sector Bank'. A change in the company's management coincided with the change in the promoters.

Currently the Government and LIC are in the process of reducing their shares in IDBI Bank as a part of broader privatisation effort but full privatisation remains a key focus.

Annual Results Analysis

Annual Results of IDBI Bank Ltd. (Rs.Lacs)	Mar'14	Mar'15	Mar'16	Mar'17	Mar'18
Interest Earned	2659751	2815399	2805820	2780538	2304625
Other Income	297876	400763	351805	416719	724806
Total Income	2957627	3216162	3157625	3197257	3029431
Expenditure					
Interest Expended	2057604	2240610	2193098	2201944	1737620
Employees Cost	152473	196626	180520	232709	191394
Other Operating Expense	179411	206116	240063	291605	297806
Total Expense	2389488	2643352	2613680	2726258	2226821

Table 1 – Extract of Annual Financial Results Pre Acquisition (Author's Owned Source)

Annual Results Of IDBI Bank Ltd. (Rs.Lacs)	Mar'19	Mar'20	Mar'21	Mar'22	Mar'23	Mar'24
Interest Earned	2210210	2082511	1993176	1829191	2056978	2642613
Other Income	353533	447036	462517	468989	437198	361091
Total Income	2563743	2529547	2455693	2298180	2494176	3003704
Expenditure						
Interest Expended	1616246	1384730	1141421	912941	913923	1223969
Employees Cost	232976	324549	309025	310445	353274	425444
Other Operating Expense	292870	309067	296169	325278	353396	395085
Total Expense	2142092	2018346	1746615	1548664	1620593	2044498

Table 2 – Extract of Annual Financial Results Post Acquisition (Author's calculation)

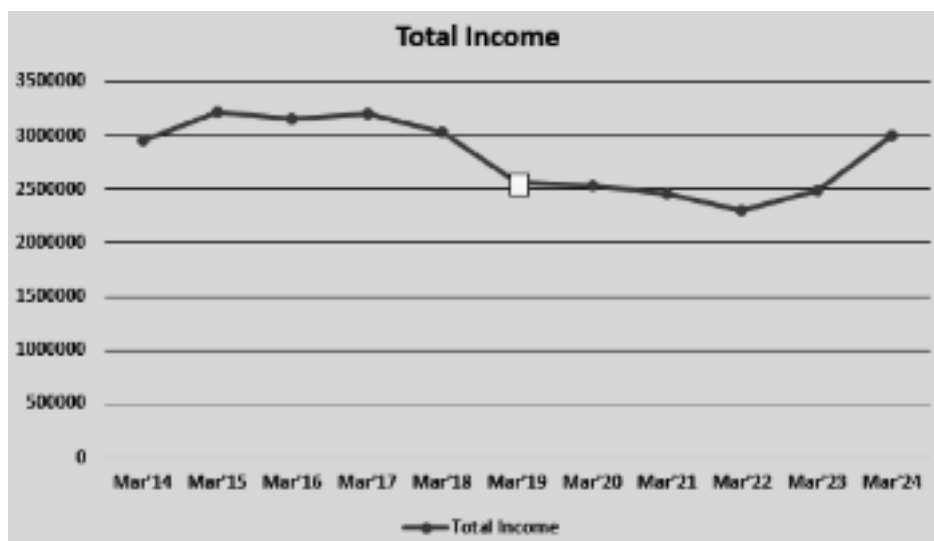


Figure 3 – Line Graph: Total Income (Author's calculation)

Total Income (Figures in Rs. Lacs)

Total Income declined at a normal rate after the year of acquisition up until the year ended March 2022 after which the total income has shown a steady rise over the next two financial years. This trend is expected to rise in the future years.

(The yellow pointer marks the time of takeover of the company)

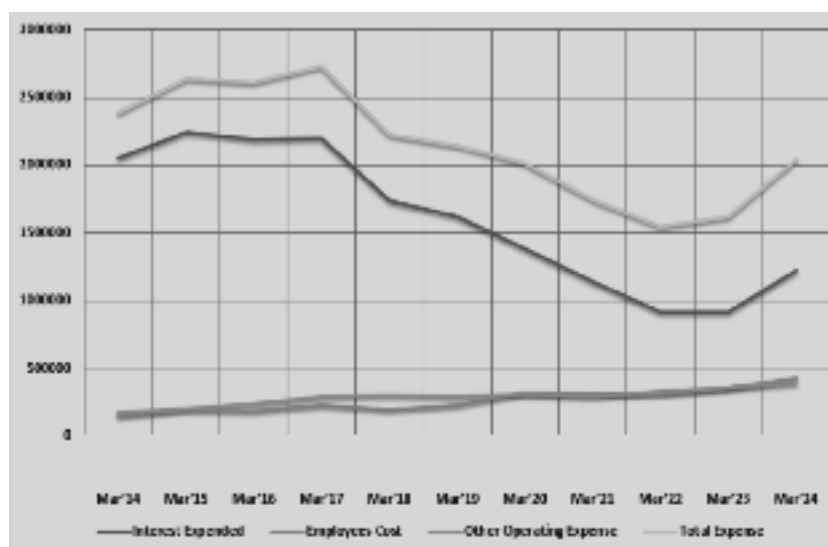


Figure 4 – Multiple Line Graph: Overall Expenses (Author's calculation)

Overall Expenses (Figures in Rs. Lacs)

The Interest Expended has also shown a similar trajectory as the Total Income with decline after the year of acquisition up until the year ended March 2022 after which the expense has steadily increased.

On the other hand both Employee Cost and Other Operating Cost have shown an almost identical trend of steady rise over the years.

IDBI Bank's Financial Transformation: Pre & Post LIC Takeover

IDBI Bank's financial performance before and after Life Insurance Corporation of India's (LIC) acquisition reveals significant changes:

Pre-Acquisition Performance (Before January 2019)

Net Losses: In the fiscal year ending March 31, 2019, IDBI Bank reported a net loss of 15,116.30 crore, a substantial increase from the 8,237.92 crore loss in the previous fiscal year.

Income Decline: Total income decreased to 25,371.53 crore in FY19 from 30,040.11 crore in FY18.

Asset Quality: Gross Non-Performing Assets (NPAs) were at 27.47% of gross advances as of March 31, 2019, slightly improving from 27.95% the previous year. Net NPAs decreased to 10.11% from 16.69% in the same period.

Provisions: Provisions and contingencies increased to 26,879.29 crore in FY19 from 20,501.74 crore in FY18, reflecting heightened provisioning for bad loans.

Post-Acquisition Performance (After January 2019)

LIC completed the acquisition of a 51% controlling stake in IDBI Bank on January 21, 2019, injecting 21,624 crore into the bank

Capital Adequacy: Post-acquisition, the bank's Common Equity Tier-1 (CET-1) capital improved to 9.32% as of December 31, 2018, up from 6.62% a year earlier, meeting regulatory requirements.

Asset Quality Improvement: Gross NPAs declined to 29.67% by December 31, 2018, from 31.78% in the previous quarter. Net NPAs improved to 14.01% from 17.30% in the same period.

Losses: Despite improvements, the bank reported a net loss of 4,918.44 crore in Q4 FY19, narrowing from 5,662.76 crore in the corresponding quarter of the previous year.

Provision Coverage: The Provision Coverage Ratio (PCR), including technical write-offs, improved to 82.88% as of March 31, 2019, up from 63.40% the previous year, indicating a stronger buffer against potential loan defaults.

Conclusion

LIC's acquisition and capital infusion provided IDBI Bank with much-needed financial stability, leading to improvements in capital adequacy and asset quality. However, the bank continued to face challenges, including substantial net losses and high NPA levels, indicating that while the acquisition was a positive step, a full financial turnaround would require sustained efforts over time.

Impact on Market Capitalization IDBI Bank Ltd.

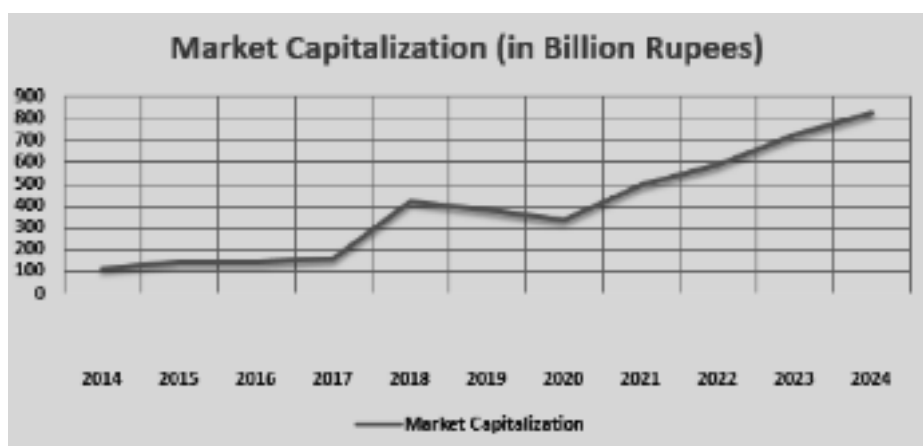


Figure 5 – Line Graph: Share Price Trend of IDBI Bank Ltd.
(Author's calculation)

Canara Bank

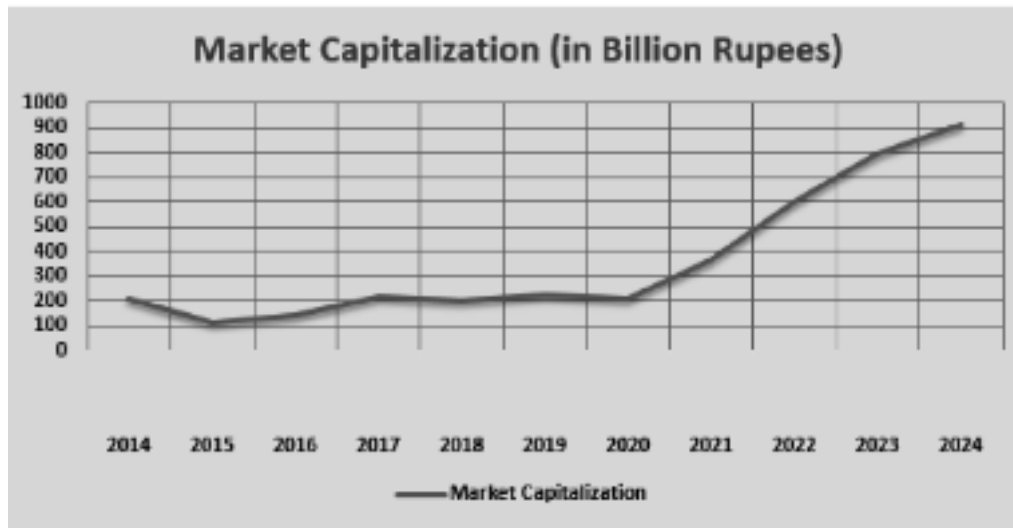
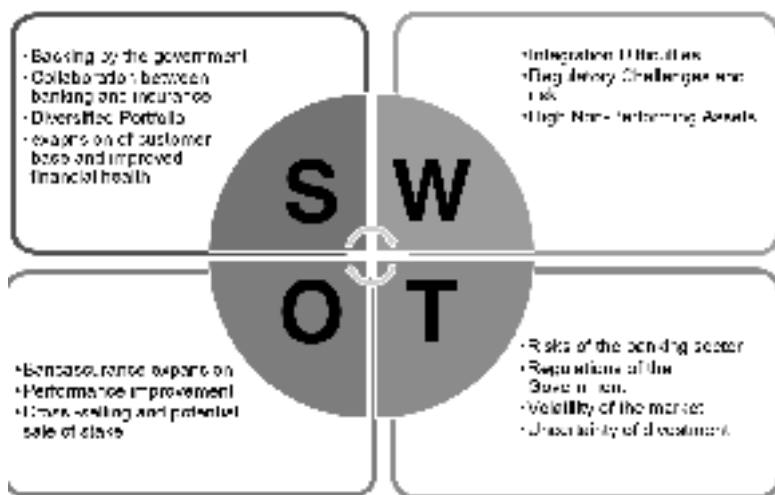


Figure 6 – Line Graph: Share Price Trend of Ambuja Cements Limited (Author's calculation)

Both IDBI Bank and its competitor Canara Bank experienced the COVID-19 shockwave that shook the Indian Banking Sector because of which their Market Capitalization declined in 2020.

Despite this initial shock the Market Capitalization has increased in all the following financial years for both the Banks indicating that post the takeover, IDBI bank has been at par with its competitors.

SWOT Analysis



Collaboration between Banking and Insurance sector: LIC is able to cross-sell insurance products by acquiring access to IDBI's banking infrastructure.

Diversified Portfolio: LIC can boost its penetration by taking advantage of IDBI's retail banking network.

Expansion of Customer Base and improved financial health: By supplying the much needed capital, LIC's investment improved IDBI Bank's financial stability. LIC can boost its penetration by taking advantage of IDBI's retail banking network

Strengths

Backing by the government : Both LIC and IDBI Bank benefit from the strong government backing, which in turn guarantees their economic well-being.

Weaknesses

Integration Difficulties: LIC is an insurance giant whereas IDBI functions as a bank; causing a challenge to put in order their operations and cultures.

High Non-Performing Assets(NPA) : IDBI was struggling with poor loans, which could affect LIC's financials.

Regulatory Challenges and risk: RBI labels IDBI as a private bank whereas LIC remains a public sector entity, creating regulatory challenges. Investing heavily in a struggling bank puts LIC's own financial health at risk.

Opportunities

Bancassurance Expansion : LIC can use IDBI's banking network to apportion insurance products more adequately.

Performance improvement : With LIC's support, IDBI has an chance to clean up its books and return to profitable situation.

Cross -selling and potential sale of stake – LIC and IDBI can cooperate on digital banking and insurance products, accessing fintech innovations. The government's desire to scale down its stake in IDBI Bank could appeal private investment, improving productivity.

Threats

Risks of the banking sector : IDBI operates in a extremely competitive and regulated banking environment, causing risks to profitability.

Volatility of the market: LIC's exposure to IDBI adds risk to its financial performance, having an impact on shareholders and policyholders.

Uncertainty of divestment: The government's plan to sell IDBI Bank could lead to strategic shifts leaving an impact on LIC's long-term control.

Regulations of the Government: RBI and SEBI regulations could create challenges in LIC's ability to operate IDBI Bank as a strategic asset.

T-Test: Paired Two Sample for Means

The following t-test has been conducted to analyse whether any significant difference exists between the means of Ambuja Cements Limited (the targeted company) and Ultratech Cement Limited (the major competitor company).

Year Ending	Market Capitalization of IDBI Bank	Market Capitalization of Canara Bank
March 2024	826.56	914.52
March 2023	725.94	794.43
March 2022	585	604.72
March 2021	498.91	362.64
March 2020	334.39	212.34
March 2019	384.08	227.99
March 2018	423.5	201.64
March 2017	157.63	214.85
March 2016	142.92	142.77
March 2015	142.59	111.02
March 2014	117.32	207.01

Table 5 – Market Capitalization of IDBI Bank and Canara Bank since March 2014 till March 2024
(Author's calculation)

	IDBI	Canara
Mean	394.44	363.0815455
Variance	60797.01	77397.44259
Observations	11	11
Pearson Correlation	0.918829	
Hypothesized Mean Difference	0	
df	10	
t Stat	0.943965	
P(T<=t) one-tail	0.183717	
t Critical one-tail	1.812461	
P(T<=t) two-tail	0.367433	
t Critical two-tail	2.228139	

Table 6 – T-Test Outcome Table (Author's calculation)

Null Hypothesis (Ho): $\mu_{IDBI} = \mu_{Canara}$

Alternative Hypothesis (Ha): $\mu_{IDBI} \neq \mu_{Canara}$

It is a two tailed test to check whether the means of the two companies are significantly different or not.

For 5% level of significance, the critical region is - 2.0017 to 2.0017. The t stat value is 0.943965 which lies in the critical region, therefore failing to reject the null hypothesis.

This implies that there is no significant difference between the means of the two companies.

However, the t statistic value here is positive indicating that the mean of the first group (IDBI) is slightly greater than the second group (Canara).

Wipro-Capco Takeover Ratio Analysis

Ratios	March' 24	March' 23	March' 22	March' 21	March' 20	March' 19
Basic EPS (Rs.)	20.89	20.73	20.73	19	16.67	16.67
Return on Net worth / Equity (%)	14.81	15.8	18.68	17.3	17.56	15.71
Current Ratio (X)	2.58	2.47	2.78	2.4	2.3	2.74
Debt to Equity (x)	0.18	0.1	0.11	0.15	0.17	0.07
Net Profit Margin	12.4	12.6	17.22	15.8	16	13.65

Table 7- Ratios of Wipro Pre and Post the Acquisition (Author's calculation)

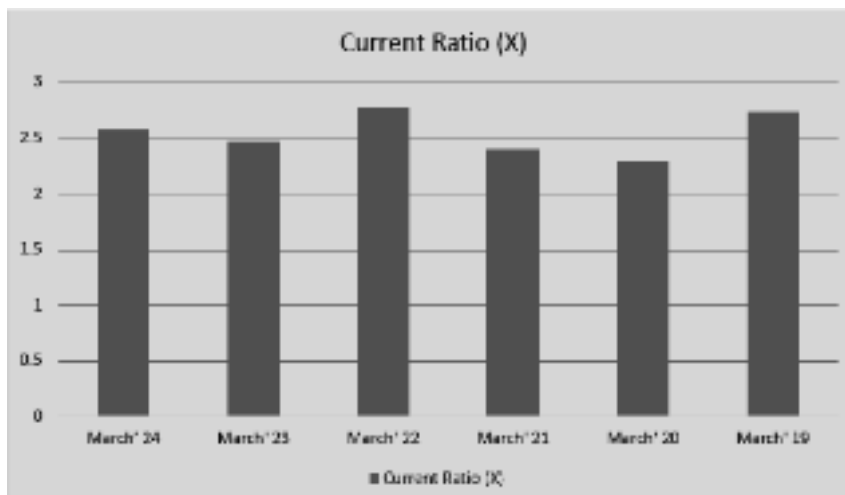


Figure 7 – Bar Graph depicting Current Ratio (Author's calculation)

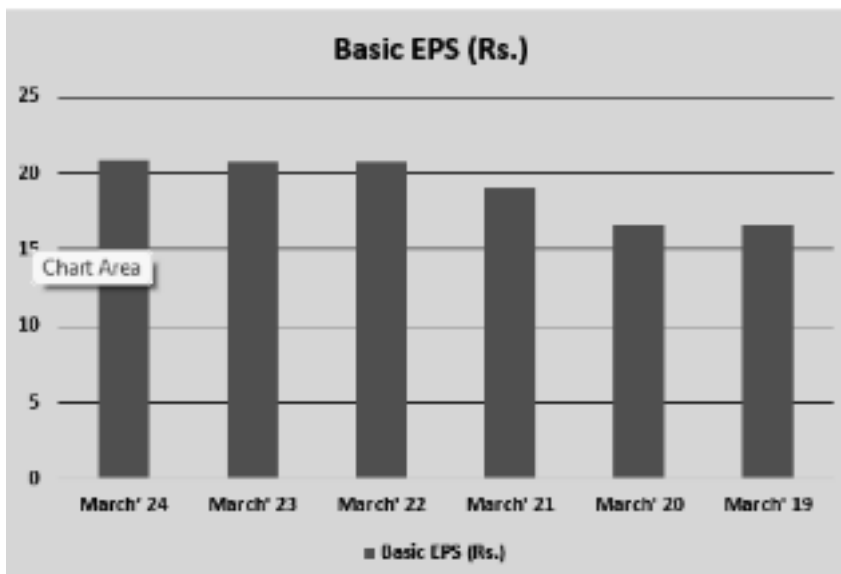


Figure 8 – Bar Graph depicting Basic EPS (in Rs.) (Author's calculation)

As we can infer from the above graph, the Current Ratio of Wipro is at par with the adequate current ratio i.e. 2:1 which suggests that it fulfils the required liquidity to meet the current obligations. The company has done a satisfactory job in maintaining the ratio at an adequate level over the past 6 financial years.

EPS or Earnings per Share i.e. the amount of returns an equity shareholder gets on every share he has held in the company. The above graph shows that Wipro has a positive EPS indicating the profits being reaped by the shareholders of the company since 2019. Post the takeover in the year ended 2021, the company's EPS increased slightly which then has been constant with a nominal increase in the year ended 2024.

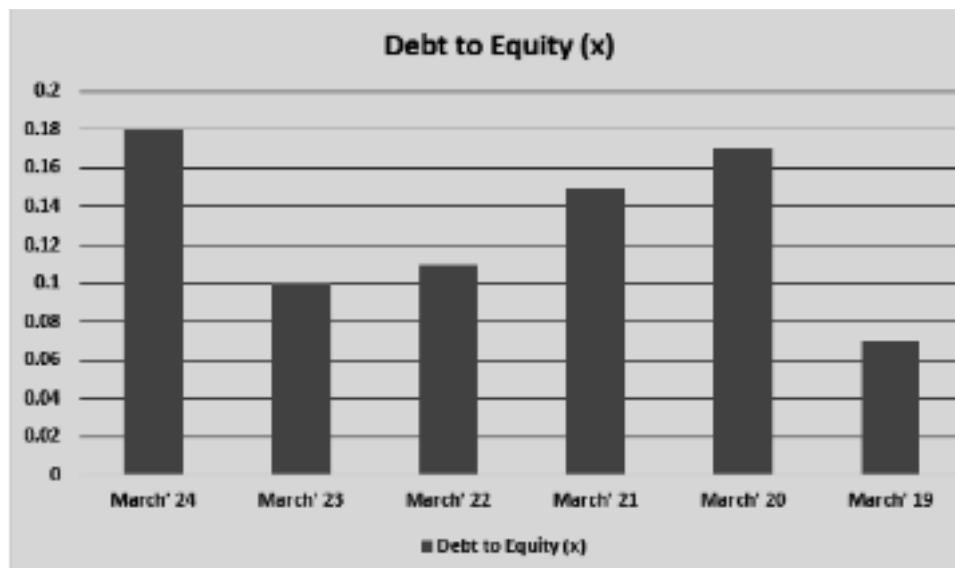


Figure 9 – Bar Graph depicting Debt to Equity Ratio (%) (Author's calculation)

One financial statistic used to assess the company's level of financial leverage is the debt-to-equity ratio. More debt and greater interest payments on the company's debt are indicated by a larger debt to equity ratio. The most striking observation is that the Debt to Equity ratio has been consistently low throughout the entire period. This generally indicates that the company relies more on equity financing than debt financing.

The ratio being the highest in the year 2024 which is still very low. A lower debt to equity ratio means the company has less financial risk, and is less susceptible to interest rate hikes.

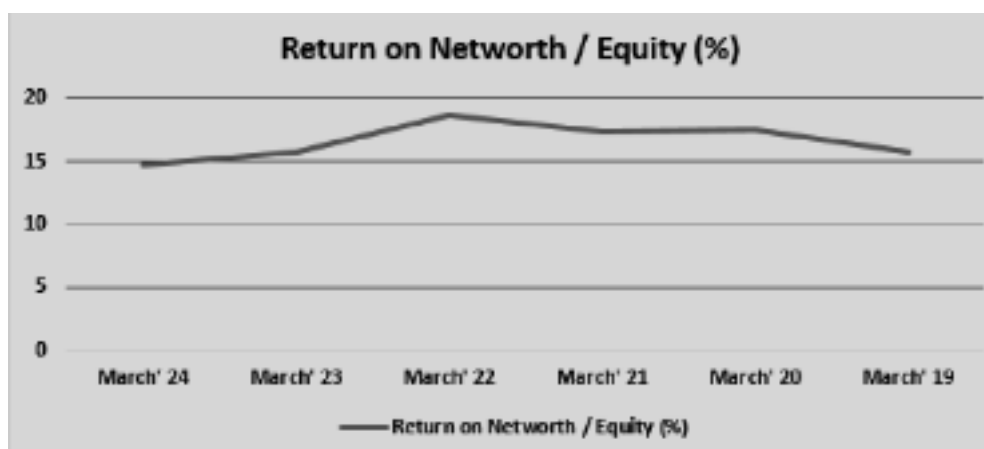


Figure 10 – Line Graph: Return on Networth/ Equity (%) (Author's calculation)

The amount of profit a business makes in relation to shareholders' equity investment is shown by its return on net worth/equity. The bar graph above demonstrates a rising trend in the early years up until the year ended March 2022. Although the parameter has been at its lowest in the past 6 years in 2024 which indicates an unfavourable condition. This indicates that the shareholders haven't been earning as much returns as they used to in the past years.

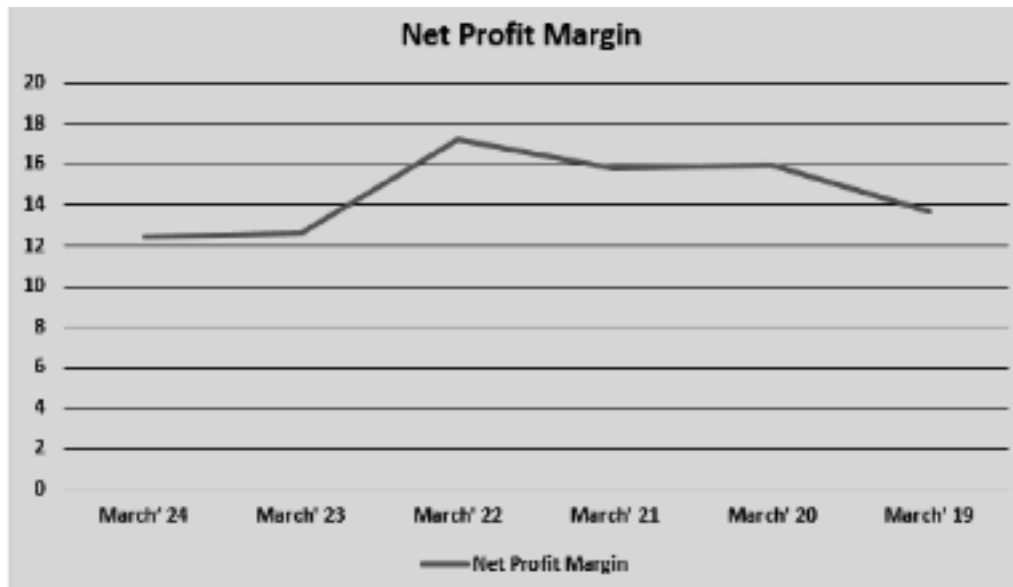


Figure 11 – Line Graph: Net Profit Margin (%) (Author's calculation)

Net Profit Margin indicates the margin of the total revenue that actually remains and is available for the shareholders after the payment of all expenses for that financial year. Over the last six years, the company's Net Profit Margin trend has exhibited or reflected a similar story as the Return on Networth/ Equity with a steady increase until 2022 after which it has declined and has been at its lowest in the past 6 financial years indicating that the companies performance has not been up to the standards of the previous years.

CONCLUSION AND RECOMMENDATIONS

Takeovers affect both financial and non-financial aspects of companies.

IDBI-LIC case shows takeovers don't always mean target company failure.

Ownership shifts lead to new policies by acquirer.

Wipro-Capco analysis shows strong liquidity, weak profitability.

Falling ROE and NPM suggest operational inefficiencies.

Profitability issues need further analysis and strategic action.

Recommendations

Future research on takeovers should focus on:

Cost-benefit analysis: Do profits consistently outweigh expenses?

Failed takeovers: What do unsuccessful bids and defensive tactics teach us?

Financial changes: A deeper look at pre- and post-takeover financial shifts.

Long-term impact: How do takeovers affect innovation and competitiveness?

Cross-industry trends: Are there sector-specific takeover outcomes?

Limitations of the Study

My research has limitations:

Limited data: Case study (IDBI-LIC) is too recent for extensive post-merger financial analysis.

Bias/Uniqueness: IDBI-LIC's government-driven nature and the unique bank-insurer merger made objective comparison difficult.

External factors: Wipro-Capco's impact was hard to isolate due to broader economic influences.

Time constraints: Project timeline prevented in-depth analysis.

Scope for Future Research Projects

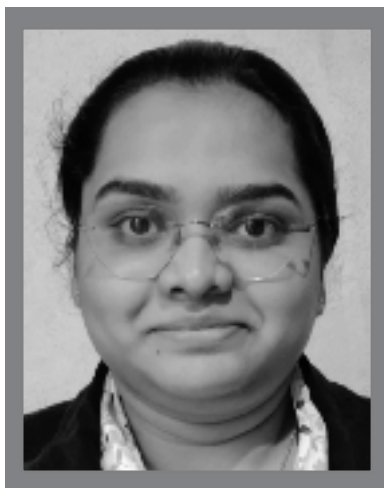
Prioritize:

Cost-Benefit Ratio: Compare takeover costs vs. returns.

Failed Takeovers: Analyze impact of target defenses on performance.

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“

Banks encourage businesses to be more environmentally aware by offering specific incentives.

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Green Banking in India: Strategies, Perceptions, and the Path Toward Sustainable Finance

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ABSTRACT

Sustainable development centers on the notion of addressing current demands without sacrificing those of the future. In the context of green banking, this refers to implementing banking practices that promote constructive harmony between people and the environment. Green banks established with the aim of promoting environmental sustainability, these banks prioritize social and environmental factors in their regular banking

operations. Obtaining a loan would be simpler if the individual has adhered to all environmental safety regulations.

Banks encourage businesses to be more environmentally aware by offering specific incentives. One such way is to reward online banking customers with rate incentives for certificates of deposits, money market accounts, online savings accounts, and more. Apart from this they offer various green products, such as green loans, green mortgages, green savings accounts, green credit cards, and online banking services. Green banking leads to reduced paperwork, fewer mailings, and decreased trips to branch offices. This can reduce the expenses associated with excessive mailings and paperwork, thereby enhancing the efficiency and effectiveness of banks. This also suggests greater profitability. The list does not end here green banking also assists banks in reducing the three main risks they face credit, legal, and reputational risks.

KEYWORDS: Sustainable Development; Green Banks; Risks; Incentives; Banking Operations.

INTRODUCTION

In the twenty-first century, it is evident that society is increasingly worried and concerned about the natural environment, with the business sector and corporations also beginning to support this by changing their practices to enhance greenery as much as they can. When banks implement actions to enhance operations, adopt technology, and modify client behaviors for sustainable development, this practice is referred to as green banking. Green banking refers to the more environmentally friendly practices that aim to minimize the carbon footprint associated with banking activities. Generally, green banking focuses on creating inclusive banking approaches aimed at promoting sustainable development. The initial inclusion of references to Green Banking and Green Information Technology (IT) initiatives occurred in the Reserve Bank of India (RBI) document named Policy Environment. The report stated that banks, similar to other companies, are required to meet their Corporate Social Responsibility to safeguard the environment. Green banking requires an evaluation to determine the environmental risks

associated with investing in any project. Further, green banking primarily encompasses three main parameters, namely operational, technological and acceptance of clients. Green banking combines cost reduction, enhancement of performance, and competitiveness.

Although the terminology may seem unfamiliar, we are in utilisation of green banking products. Certain types of green banking include utilizing online banking rather than visiting branches, opting for online billing instead of sending paper statements or forms, and seeking local banks that support community green initiatives. In addition to these practices, they also encourage investments that are environmentally sustainable and give preference to lending for industries that are eco-friendly or aiming to implement green practices. Green banking merges ecological responsibility with financial efficiency. Although this idea is fairly well-known worldwide, Indian banks are still working to adjust to this shift. There is considerable variation in how various banks are attempting to adopt eco-friendly practices.

In India, green banking has enormous potential in areas like renewable energy, sustainable farming, electric agriculture, green buildings, and other environmentally friendly investment avenues. Green banking provides a unique opportunity for the Indian banking industry to contribute to the economic development of India while still earning additional profits. Banks, however, have to grapple with barriers like low levels of green banking awareness, complex regulations, and exorbitant startup costs. If implemented successfully, green banking has the power to significantly change the Indian economy from its current perspective to one that is much more environmentally friendly. Thus, in the light of the foregoing, this study aims to explore the various green banking strategies and thereby make a comparative analysis of these strategies adopted by various banks in India. The study also seeks to understand and analyse the general public perception towards green banking.

LITERATURE REVIEW

Mani (2011) portrayed banks as corporate citizens with a responsibility to support sustainable national objectives through eco-friendly practices. Institute for Development and Research in Banking Technology

(IDRBT) (2014) emphasized that the purpose of green banking is to ensure banking operations do not adversely impact the environment, leading to the introduction of Green Coin Ratings by the RBI. Douglas (2008) noted that banks had begun disclosing their greenhouse gas emissions, while Sudhalakshmi and Chinnadorai (2014) highlighted the lack of awareness regarding green banking policies in India. Similarly, Bahl (2012) underscored the importance of joint actions between banks and the government to strengthen awareness and adoption, using both internal (newsletters, publications) and external (media, websites, events) communication channels. Collectively, these studies established the early understanding that policy support, awareness generation, and transparency form the foundation of effective green banking.

Recent literature expands this understanding and provides empirical evidence of outcomes. Thapliyal et al. (2025) found that green banking initiatives in India significantly enhance environmental performance and broaden access to green finance, while a case study of the State Bank of India demonstrated measurable gains such as reduced paper use, carbon emissions, and operational costs through digitalization and solar-powered infrastructure. However, research also highlights persistent systemic challenges, including regulatory ambiguity and the absence of standardized sustainability frameworks (Springer, 2025). Meta-analyses suggest that while green banking generally supports profitability, the effect is not always statistically significant across contexts (MDPI, 2025). At a broader level, India is projected to require nearly USD 1.3 trillion in green and sustainability-linked financing by 2030 (Economic Times, 2025), with domestic investors showing one of the highest global appetites for transition funding (Times of India, 2025). Yet, global critiques caution that banks' net-zero pledges often fail to translate into tangible shifts in lending away from carbon-intensive sectors (FT, 2025). These findings suggest that while Indian banks are progressing in integrating sustainability, achieving meaningful transformation will require stronger regulatory enforcement, standardized frameworks, and deeper alignment between financial and environmental goals.

RESEARCH METHODOLOGY

This study adopts a mixed-method approach by utilizing both primary and secondary data to provide a comprehensive understanding of green banking practices. Primary data was collected through a structured questionnaire designed to capture respondents' perceptions, awareness levels, and attitudes toward green banking initiatives. The questionnaire included both close-ended and scaled questions to ensure uniformity in responses and facilitate statistical analysis. Secondary data were sourced from published reports, journal articles, government documents, and institutional databases to supplement and validate the findings from the primary survey. The research instrument, a structured questionnaire, was developed after a review of existing literature to ensure content validity and alignment with the study objectives. The questionnaire was pre-tested on a small sample before final administration, allowing for minor revisions to improve clarity and reliability.

For analysis, the data collected were systematically coded and organized into tables to identify trends and patterns. Descriptive statistical tools such as percentages, averages, and frequency distributions were employed to present the results. Visual representations, including pie charts and bar diagrams, were used to enhance clarity and facilitate comparison across variables. These techniques enabled the study to present the findings in a concise, reader-friendly manner while ensuring analytical rigor.

ANALYSIS AND FINDINGS

DEMOGRAPHIC RESULTS

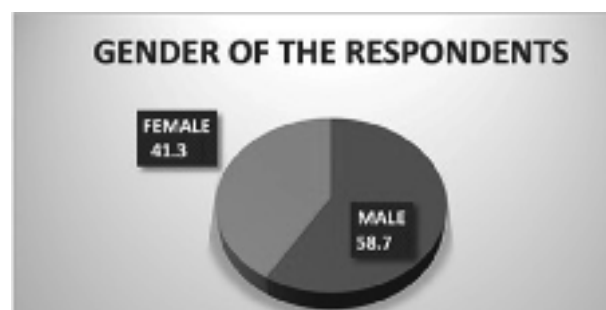


Figure 1: Gender of Respondents
(Source: Author's Own Source)

We observed a small variation between the percentage of male and female respondents. This could be attributed to male dominated financial habits which means that the men's are more often engaged in investment, credits and loan financial activities.

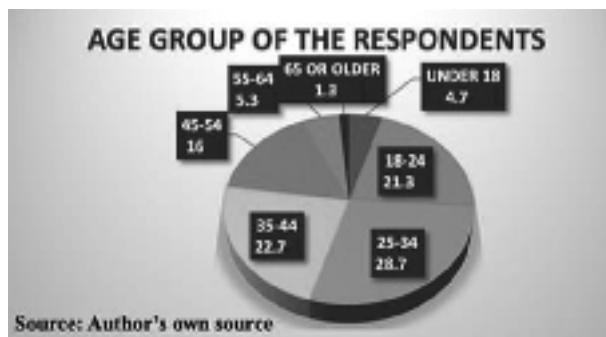


Figure 2: Age Group of the Respondents.
(Source: Author's Own Source)

A variation can be seen in the responses coming from different age groups people which was possibly because of some respondents being less Tech-Savvy and due to lack of awareness.

STUDY OF THE VARIOUS GREEN BANKING STRATEGIES

There are two main areas of study for the tactics used by the green banks –

A. Judicious use of all resources

- There are many opportunities for Indian banks to become paperless because nearly all of them are now computerized and operate on the core banking system (CBS).
- All officials assigned to a single office must have access to common transportation.
- Energy-efficient lighting and fixtures as well as efficient office time management and automation.
- Using energy from renewable sources such as wind solar et al. to power their ATMs and offices.
- Green buildings must house bank offices and staff housing. These structures were constructed with the intention of enhancing the surrounding environment through their associated features.

B. Financing Green Projects

- Green funds are used to prioritize lending to environmentally friendly projects. These businesses operate with social and environmental consciousness.
- Real estate's value and environmental liability are assessed.
- An evaluation of the projects scope and extent of environmental impact.
- To ensure an efficient environmental risk management system production resources and audit programs are physically inspected.
- Evaluating vulnerable populations and displacing project participants in places like wetlands grasslands and coastal regions among others.

COMPARATIVE ANALYSIS OF THE GREEN BANKING STRATEGIES ADOPTED BY VARIOUS BANKS IN INDIA

Different banks are implementing different methods to adopt eco-friendly practices together with seeking ways to differentiate themselves for a competitive edge. The following section presents a comparative analysis of various Indian banks-

1. State Bank of India (SBI)

It was one of the first financial institutions to start producing green power. In Gujarat Tamil Nadu and Maharashtra it put about ten windmills in as part of its green initiative. Green Channel Counters were introduced as an alternative to paper-based banking allowing customers to deposit and withdraw funds from their accounts without having to fill out checks or slips. Following its signing of the Carbon Disclosure Project it is implementing sustainable development practices across the nation in all of its branches.

2. Bank Of Baroda (BOB)

Its efforts to promote green banking include prioritizing lending to eco-friendly projects like biomass air turbines solar power plants installing ATMs in most untapped areas to cut fuel consumption and internet banking.

Like other banks they have since made obtaining a No Objection Certificate from the pollution control board and environmental conservation mandatory.

3. Industrial Credit and Investment Corporation of India (ICICI)

According to ICICI Bank (2014) the bank provides Insta banking which unifies all channels under one roof and enables users to conduct banking at any time and from any location. For auto loans (vehicle finance) they offered a 50 per cent processing fee waiver if the car used non-toxic alternative fuel. This is applicable to the Hyundai Santro eco Omni Versa and Maruti 800 LPG versions. ICICI Home Finance gives buyers of homes in these approved buildings a discounted processing fee.

4. Housing Development Finance Corporation Limited (HDFC)

HDFC has been taking the necessary steps to differentiate itself from other banks and to promote green banking in accordance with waste management. Developing relationships with suppliers for the recycling of paper and other plastics is one method. In order to communicate with its high-net-worth individuals they are moving to electronic statements for retail customers installing Green Data Centers replacing outdated lights with energy-efficient ones and shutting off lights after 11 p.m. Bihar is the state where solar ATMs are being installed.

ANALYSIS OF THE PUBLIC PERCEPTION TOWARDS GREEN BANKING

A questionnaire was circulated amongst 150 respondents and the analysis of the findings are as under:

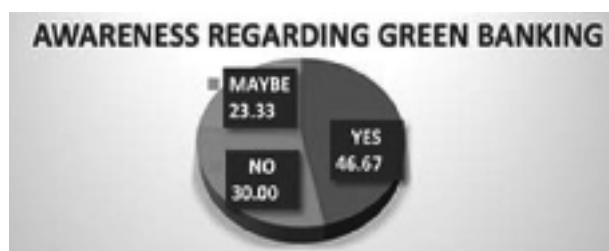


Figure 3: Awareness Regarding Green Banking
(Source: Author's Own Source)

It was noted that 46.67 per cent of the respondents agree to the fact that they were aware of the term green banking. A slight variation can be observed in the number of respondents who answered MAYBE or NO. The awareness of green banking is unevenly distributed among people, with both positive and negative perspectives, although the positive ones appear to be more prevalent.



Figure 4: Use of Green Banking Services or Products
(Source: Author's Own Source)

It was observed that 40 per cent of the respondents have used green banking products or services. However, 50 per cent of the respondents have negatively responded. The reason for this variation could be lack of awareness and understanding amongst the respondents, perceived inconvenience, limited availability of green banking services, higher cost and financial concerns, skepticism and greenwashing, resistance to change among respondents, limited government policies and incentives, and accessibility issue.



Figure 5: Satisfaction from use of Green Banking Services or Products
(Source: Author's Own Source)

Of the respondents who have used the green banking services or products, 45 per cent have been satisfied with the facility. There is a slight variation in their level of

satisfaction - 33.33 per cent were slightly satisfied and 11.67 per cent were very satisfied. Additionally, 8.33 per cent were neutral, meaning they did not observe any change in their satisfaction level while using the green banking products and services. Some respondents did not find their experience with green banking products or services to be positive. These differences in the satisfaction level may be related to the financial gain or cost benefit associated with the fees charged for green banking services, their eligibility requirements, and the financial returns. Furthermore, another variable that can have an impact on respondent's satisfaction level includes customer service quality.

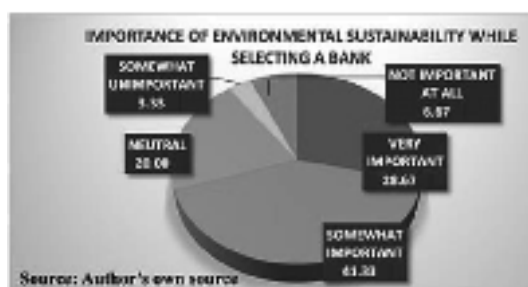


Figure 6: Importance of Environmental Sustainability
(Source: Author's Own Source)

Here, 70 per cent of the respondents concurred that environmental sustainability is important while selecting a bank, whereas 20 per cent were unaware about the importance of environmental sustainability in this context. Some individuals are indifferent to the environment when selecting their banks. The importance level seems to differ and this is most likely due to prioritization for reasons like incorporating sustainability in everyday life, initiatives taken by the bank where ethical concerns are supported in order to gain business, or determining if sustainability is a fundamental concern or at the periphery.



Figure 7: Willing to Pay Higher Fees
(Source: Author's Own Source)

A very small percentage of respondents have consented to pay increased bank fees for green banking facilities, while 20 per cent will not spend an extra cent on green banking services no matter the cost. For some individuals (53.33 per cent), the response is influenced by the fee amount. Thus, it can be seen that individuals are inclined to support a sustainable environment via green banking, but not at financial expenses.



Figure 8: Are Banks Actively Organising Campaigns
(Source: Author's Own Source)

24.66 per cent of respondents concur that banks are actively running campaigns to inform stakeholders about green banking and raise awareness of the green products and services they provide, while 42.67 per cent are unaware if banks are conducting campaigns in this regard or not. 32.67 per cent of respondents rejected the notion that banks are implementing initiatives to inform customers about green banking. There are gaps in the levels of agreement because those who are uninformed of the campaigning feel that banks are not doing much. It may also be that in regions where green banking is developing, sustainability is secondary to profit, so the level of agreement is lower too. Or, if the bank uses less effective methods, such as fine print in brochures, where many people do not notice these campaigns, then they will certainly not see the need to make more effective efforts.



Figure 9: Government Regulations
(Source: Author's Own Source)

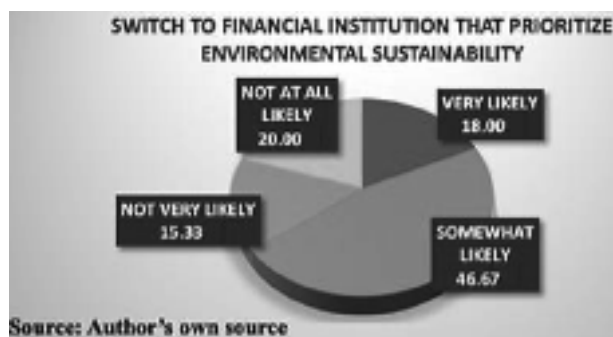


Figure 10: Financial Institution that Prioritize Environment Sustainability
(Source: Author's Own Source)

In this question, 70.67 per cent of those surveyed agreed to the fact that government rules and regulations are important for banks to embrace green banking strategies, whereas 18.66 per cent are unaware if government regulations can assist in the adoption of green banking practices. 10.67 per cent of respondents disagreed and stated that government involvement is not required for the implementation of green banking.

Among the respondents, 64.67 per cent are likely to move to different financial institutions that emphasize environmental sustainability. While 35.33 per cent are not likely to switch to different banks for the sake of environmental sustainability. There exists an uneven distribution among individuals who are inclined and those who are not inclined to transition to other financial institutions emphasizing environmental sustainability, yet the favorable side holds more influence.

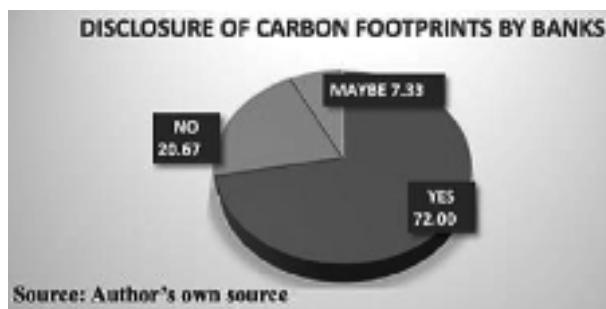


Figure 11: Disclosure of Carbon Footprints
(Source: Author's Own Source)

In this survey, 72 per cent of respondents have agreed that banks should reveal their carbon footprint and environmental effects to customers, whereas 7.33 per

cent are not aware about whether this information should be disclosed by banks. Several individuals concur that banks should not reveal their carbon footprints and effects on the environment to clients. It is evident that the majority are in favor of this, so banks ought to reveal their carbon footprint along with other environmental effects, and this information should be made public.

SUMMARIZED FINDINGS

- Only 46.67 per cent of all the surveyed respondents knew about the concept of green banking.
- Among those who know about green banking, just 40 per cent have used green banking products or services. 45 per cent of them were content with what they received.
- 70 per cent of all respondents in the survey concurred that environmental sustainability is a significant factor in selecting a bank.
- Cross analysis revealed that among the respondents who recognized the importance of environmental sustainability, only 26.67 per cent were prepared to pay more for green banking products or services.
- 75.34 per cent do not believe that banks are making adequate efforts to inform stakeholders about green banking, while a significant 70.67 per cent of individuals feel that government action is necessary in this area.
- 72 per cent believe that data such as carbon footprints and the environmental effects of banks should be made public, enabling consumers to choose which bank to use.

CONCLUSION

Green banking in India is at a crucial juncture where environmental responsibility and financial performance increasingly intersect. The study reveals that while awareness of green banking among the public is gradually improving, adoption and satisfaction levels remain uneven due to limited awareness campaigns, perceived costs, and a lack of strong regulatory

enforcement. At the institutional level, Indian banks are experimenting with a range of strategies—from digitalization and renewable energy adoption to preferential lending for eco-friendly projects—yet the scale and consistency of implementation vary widely across institutions.

The findings highlight that customers value environmental sustainability when choosing financial institutions, though their willingness to pay extra fees for green products is limited. This suggests that banks must integrate sustainability into their core operations and product design without overburdening consumers. Furthermore, transparency in disclosing carbon footprints and environmental impacts can enhance trust and provide customers with informed choices.

For green banking to realize its full potential, Indian banks must go beyond symbolic initiatives and align their strategies with standardized sustainability frameworks, robust regulatory backing, and greater stakeholder engagement. With India projected to require substantial green financing to meet its developmental and climate goals, green banking can evolve from a niche practice into a mainstream driver of sustainable economic transformation.

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“

Financial inclusion helps the individuals to manage finances by availing the financial services such as savings account, credit, insurance.

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Impact of Financial Inclusion in Consumer Behaviour

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ABSTRACT

This research investigates the impact of financial inclusion on consumer and retailer behaviour in the Indian context, with a specific focus on the mediating role of financial literacy. Utilizing a primary data approach with a sample size of 246 consumers and 42 retailers, the study evaluates the effectiveness of government initiatives such as PMJDY, PMMY, and Sukanya Samriddhi Yojana (SSY).

Findings reveal a high level of awareness regarding basic financial products (savings accounts and mobile banking) but identify significant gaps in the adoption of complex services like insurance and microfinance. Correlation analysis indicates that while confidence in understanding financial terms moderately improves service accessibility ($r=0.538$), there remains a weak link between financial confidence and the frequency of product usage ($r=0.048$), suggesting that awareness does not always translate into active utilization. For retailers, digital payments have significantly expanded customer bases and sales volumes, though high transaction fees and security concerns persist as primary barriers. The study concludes that addressing technology exclusion and access exclusion through transparent policies and enhanced digital literacy is vital for achieving sustainable economic growth and fulfilling Sustainable Development Goals (SDGs).

KEYWORDS: Financial inclusion, Consumer Behaviour, Financial Literacy, Digital Banking, Government Schemes, Retailer Growth, Sustainable Development Goals, Financial Exclusion

INTRODUCTION

Financial inclusion is prominent in giving equal chance for society to access financial resources. Financial inclusion allows people to take benefits of financial services and contributes to the process of advancement of individuals' economic and social status. It has lowered the impact of social exclusion and improved the standard of living of the people. World Bank state that financial inclusion can contribute in achieving 7 out of 17 Sustainable developmental goals.

Financial inclusion guarantees that people who have access to necessary financial services helps to enable them to make better financial decisions, even though economic behavior includes a broad range of actions such as saving, investing, spending, and future financial planning.

While the development of the financial system and largely economy relies on inclusive economic strategies and sustainable financial inclusion that enhances individuals' social and economic growth, the factors

that drive this process in rural India remains an area that require further exploration. Some existing research highlights the role of financial advisors in rural areas, which can help people access and utilize formal services such as pensions, insurance and banking. Financial advisors also form as an intermediary, aiding transaction and resolving disagreement between rural customers and traditional financial institutions.

It is a contraction that major proportion of the population in the globalized world are still excluded from the formal financial system. In this research, it indicates the suitable financial services which can enhance household well-being and support small businesses. There are diverse reasons for financial exclusion. The traditional financial system has numerous built-in limitation that had resulted a population being underserved. Digital currency and mobile technology help the underserved population to be included in formal financial system. The evidence has been indicated that the high expenses associated with small average value financial transaction in the traditional financial system makes the transaction unfeasible. Digital and mobile technology can meet the demands of small transactions at a reasonable price. It can also assist in reducing the time, enhancing accuracy and increasing bulk transactions. India adopted mobile technology to address financial exclusion.

CONCEPTUAL FRAMEWORK

Financial literacy

Financial literacy refers to the awareness, knowledge, attitude mindset, behavior and abilities required to acquire and comprehend the financial resources to make informed decision making and achieve personal financial wellness. This type of skill can be developed through having knowledge about finance related podcast, newspaper, authorized and authentic website containing information about financial knowledge.

Components:

1. Budgeting: Acquiring the process of establishing and managing a budget.
2. Saving and investment: Understanding the significance and the fundamentals of investing.

3. **Credit Management:** Understanding the mechanism of credit and effectively handling the debt.
4. **Financial Planning:** Establishing financial objectives to achieve them by making strategies.

Financial inclusion

Financial Inclusion refers to the availability and accessibility of financial products and services and affordable to all individuals, entities and particularly the vulnerable section of the society.

Components:

1. **Access to financial services:** Making sure that the financial products and services are accessed by all individuals in the society. This also means that encouragement of establishing physical banks in the areas with limited services by offering digital financial option.
2. **Affordability:** The financial products and services should be provided at a reasonable price. High cost could create barrier for the low-income groups.
3. **Financial literacy:** It is necessary to educate the individuals regarding the financial product and services which helps to make informed decision about their finances, savings, investment and credit management.
4. **Usage:** It is necessary for all individuals to actively utilize financial services in order to gain financial stability and growth.

IMPACT OF FINANCIAL INCLUSION

COVID-19:

Due to COVID-19, the economy suffered severe setbacks from the COVID-19 outbreak and after the result of the lockdown and social distancing measures affected a wide range of borrower's ability to repay back their loans and faced challenges in survival of many financial institutions. There was recent decrease in repayment rates suffered by various microfinance lenders. This leads Micro, Small and Medium Enterprises (MSME's) without access to finance. Fintech

companies were also affected, investors and venture capital started withdrawing funding.

There was urgent transfer to household and firms by the government through bank accounts and digital payments instead of cash. After the COVID-19 outbreak, people gradually shifted from cash transaction to bank transactions and digital payments generated potential benefit for financial inclusion. Expansion of mobile money accounts allows to simplify the risk sharing among families and friends, and a smooth push-out of government support programs through mobile banking networks.

Pradhan Mantri Jan Dhan Yojana: (PMJDY)

PMJDY was launched in august 2014, as a national mission for financial inclusion by Narendra Modi. PMJDY celebrates its 10th anniversary on 28th august 2024 reflecting a decade's process in financial inclusion. It aimed to cater the unbanked household population into a formal financial system creating an opportunity to manage their financial activities. The scheme is based on the principles of "banking the unbanked, securing the unsecured, funding the unfunded, and serving the underserved. It has also laid a foundation for inclusive economic growth. In 2018, the government focus was shifted of PMJDY Scheme from "Every household" to "every unbanked adult". PMJDY has successfully opened 53.13 crore bank accounts by including individuals previously unbanked in the formal financial system. Out of which female beneficiaries have opened accounts of 29.56 crore.

Addressing the hugely untapped potential of the bottom of the pyramid section of the economy has generated huge success. It enables the banks to know that providing opportunity through financial inclusion by participation in government alleviation program has given banks an advantage. It improved the Current Account and Savings Account (CASA) base by increasing its deposit base through the direct fund transfer scheme of the government.

Pradhan Mantri Mudra Yojana: (PMMY)

PMMY scheme was launched on 8th April 2015 in new Delhi by prime minister Narendra Modi. It aimed to provide financial assistance and institutional collateral

free credit up to 10 lakhs to small entrepreneurs and startups. It decreases the entrepreneur's financial burden and helps in the existing entrepreneur's development. It is concerned with providing loans of Rs 10 lakhs to small, micro enterprises, consisting of non-farm business, and loans given for generating income are called Mudra loans. Non-farm includes activities such as poultry, dairy, and Beekeeping. The scheme focused on creating an inclusive, sustainable, and value-based entrepreneurial culture and achieving economic success and financial security. PMMY schemes help in job creation. It encouraged the female individuals by charging lower interest rates. It evaluates the scheme's impact on women's entrepreneurship, employability, and empowerment level. Access to credit generated socio-economic growth for underserved individuals. 50.31 crore accounts were sanctioned under the PMMY scheme where women's accounts have amounted to 34.01 crore.

Sukanya Samrddhi Yojana:(SSY)

This scheme was launched by Prime Minister Narendra Modi on 22nd January 2015 as a part of Beti Bachao, Beti Padhao campaign. The account is opened through the post office or commercial banks. This scheme is a small savings program where a girl aged 10 years or younger can open this account. This helps to get access to affordable credit and other financial services for poor and vulnerable groups. This scheme is a pre-condition to economic growth and development, reducing poverty and economic inequality. The Sukanya Samrddhi Yojana has contributed towards the goal of financial inclusion. The SSY has been tremendously successful since its launch on January 22, 2015. This scheme helped to generate girl's financial independence. 1.88 Lakhs accounts have been opened under the Sukanya Samriddhi yojana on 1st of February 2015.

Internet Banking:

Internet Banking has transformed access to financial services by eliminating economic and geographical barriers. People residing in rural areas faced difficulties in availing the banking services due to the absence of physical bank branches. Internet banking has enabled individuals to have online transactions and serve the

underserved population. Internet banking reduces transaction costs and increases efficiency due to the elimination of visiting physical banks. As Financial literacy improves through educational resources provided by Internet banking platforms, individuals have better knowledge of the financial system and its services. Mobile banking has a high penetration whereas there is limited use of the traditional banking infrastructure. But internet banking suffers several challenges such as in rural areas lack of access to the internet, cybersecurity risks, fraud, and phishing attacks.

UPI credit:

UPI credit has played a crucial role in financial inclusion. India's banking system permits it to serve a limited segment of the population. UPI credit changes this ideology by offering credit to a person having no formal credit history. It decreases the entry barrier for millions of consumers and offers the unbanked population into the formal financial system. But when UPI credit increases, the risk of debt also increases. 'Buy now, Pay later' system leads to the accumulation of long-term financial debt.

RATIONALE OF THE STUDY

Policy Implication and Financial Literacy:

Financial Inclusion is closely connected to financial literacy which impact the consumer behavior. Consumer having financial literacy can make informed decisions about the savings, investing and managing debt. Policymakers make certain policy to promote access to financial services and enhance financial literacy by analyzing the impact of financial inclusion.

Impact on economic growth:

Financial inclusion is related with increased economic growth at a macroeconomic level. By analyzing consumer behavior helps to know the impact on national savings, investment and consumption due to increase in financial inclusion.

Impact of digital financial services:

The financial inclusion has been increased due to rise of digital financial services such as mobile banking, E-

Wallets et al. and improved the consumer decision making. The traditional consumption methods are replaced with the accessibility, convenience, and affordability of digital financial services.

Understanding financial decision making:

It evaluates the implication on financial choices people make due to access to financial services such as savings account or credit. Financial inclusion helped to make more informed decision making regarding the savings, borrowing and investing.

LITERATURE REVIEW

Klapper et al., citation (2016): He defined financial inclusion as the availability and utilization of financial services, is a crucial objective for economic and financial development. Consequently, it has been suggested that it serves as a vital policy instrument to aid in the attainment of the sustainable development goals (SDGs).

Lusardi and Mitchell (2014): He stated that financial literacy denotes an individual's comprehension of different financial principles, including the time value of money, budgeting, consumer rights, compound interest, and various others, which helps to make informed choices regarding investment, savings, taxation, retirement, insurance, and other financial issues. It asserts that greater financial literacy results in improved financial decision-making skills.

Dr. C Rangarajan (2008): led a financial inclusion committee defined financial inclusion as "The process of providing financial services and make sure that timely and sufficient credit are provided to vulnerable groups when they are in need at an affordable cost". Prof Raghuram Rajan's committee on financial sector reforms defined financial inclusion as, "Broadening access to financial services, including payment solutions, savings options, insurance products, and pensions safeguarded against inflation."

Goyal and Kumar (2020): He highlighted out the various impact of the financial inclusion policy intervention in different countries due to environmental, cultural and other factors. The present state of the financial inclusion and the dynamic nature

of the financial inclusion emphasizes the need for financial literacy research.

RESEARCH GAP

One of the obvious research gaps pertains to the time gap under consideration. Existing research do not involve in depth analysis of the difference in consumer behavior for financial literacy and financial inclusion and the extent of availability and use of the financial product among the consumers and among the retailers

Research on consumer behavior has established a relationship between financial decision making and various factors such as financial product characteristics, and financial awareness. However, the absolute level of impact of these factors on household consumer's investment has not been proven.

To overcome the research gap, there is a requirement of knowledge of financial literacy or awareness on financial inclusion. The study intends to assess the impact of financial literacy and awareness and features of inclusive products on consumer decision making.

OBJECTIVES

- 1.To assess the necessity of Financial Literacy or Financial Awareness on financial inclusion and impact of financial products on consumer decision-making.
- 2.To assess the extent of financial services to underserved population and its impact on the inclusive growth.
- 3.To address the concern of the financial inclusion gap through government policy, schemes, and other measures.

RESEARCH METHODOLOGY

Data collection: The study used primary data by collecting through google forms distributed via various channels, including social media such as Instagram and LinkedIn, email and WhatsApp. The data were collected through structured questionnaire distributed among the respondents.

Population: The population for this study comprises Indians residing in India.

Sampling technique: This study will use convenience sampling. This technique involves selecting respondents who are readily available and easiest for the researcher to access. Convenience sampling is a non-probability sampling, where respondents are not having a fair and equal chance of being selected.

Sample size: The sample size considered for the behavior of consumers study is 246 and behavior of retailer is 42.

Statistical tools: Statistical Package for the Social Sciences (SPSS) and Microsoft excel will be used to perform correlation, descriptive statistics and frequency analysis.

1. **Frequency Analysis:** Crosstabs were used to analyze the frequency of the usage of the financial product across the various demographic factors such as age, gender, income levels, educational qualification through SPSS.
2. **Correlation Analysis:** Correlation of the usage and access of the financial product and the factors have implication on financial inclusion.
3. **Descriptive Statistics:** Bar graphs and pie charts are extracted from Google forms and excel to have a comparative study.

RELIABILITY TEST

Cronbach's Alpha Test is performed in SPSS to check the reliability of the questionnaires on consumers and retailers.

Reliability Statistics	
Cronbach's Alpha	N of Items
.744	9

Figure 1: Test Results
(Source: Primary Data)

The Cronbach's Alpha test of this research for consumer is 0.744 which is greater than 0.7. Hence, the questionnaire for this research is acceptable.

Reliability Statistics	
Cronbach's Alpha	N of Items
.702	8

Figure 2: Test Results
(Source: Primary Data)

The Cronbach's Alpha test of this research for retailers is 0.702 which is greater than 0.7. Hence, the questionnaire for this research is acceptable.

FINDINGS AND OBSERVATION

I. Consumers:



Figure 3: Age Distribution of Consumers
(Source: Primary Data)

use_of_financial_product * Age Crosstabulation						
Count		Age				Total
		18-24	25-34	35-44	45 and above	
use_of_financial_product	Debit and Credit	1	1	2	19	23
	Insurance	1	0	0	3	4
	Internet Banking	2	2	11	77	92
	Mobile Banking	19	2	11	64	96
	Savings Account	4	2	4	21	31
Total		27	7	26	164	246

Figure 4: Test Results
(Source: Primary Data)



*Figure 5: Gender Distribution of Consumers
(Source: Primary Data)*

use_of_financial_product * Gender Crosstabulation

Count

		Gender		Total
		Female	Male	
use_of_financial_product	Debit and Credit	4	19	23
	Insurance	2	2	4
	Internet Banking	15	77	92
	Mobile Banking	16	80	96
	Savings Account	11	20	31
Total		48	198	246

*Figure 6: Test Results
(Source: Primary Data)*

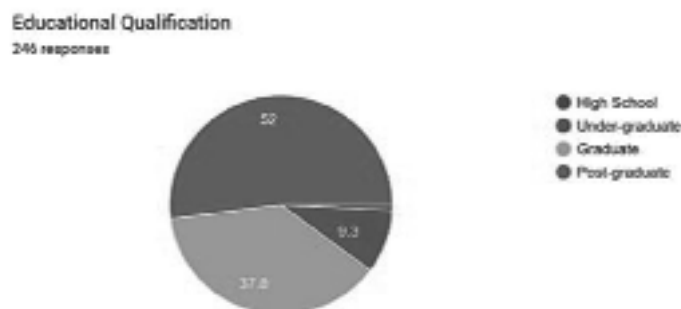


*Figure 7: Educational Qualifications of Consumers
(Source: Primary Data)*

use_of_financial_product * Educational_Qualification Crosstabulation

Count

		Educational_Qualification				Total
		Graduate	High School	Post-graduate	Under-graduate	
use_of_financial_product	Debit and Credit	12	0	10	1	23
	Insurance	1	0	2	1	4
	Internet Banking	36	0	54	2	92
	Mobile Banking	34	2	45	15	96
	Savings Account	10	0	17	4	31
Total		93	2	128	23	246

*Figure 8: Test Results
(Source: Primary Data)*

Occupation
246 responses

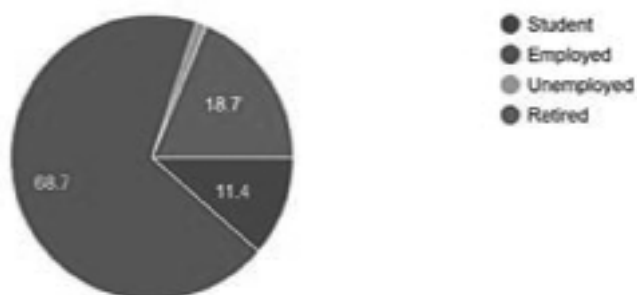


Figure 9: Occupation of Consumers
(Source: Primary Data)

use_of_financial_product * Occupation Crosstabulation

Count		Occupation				Total
		Employed	Retired	Student	Unemployed	
use_of_financial_product	Debit and Credit	18	3	2	0	23
	Insurance	3	0	1	0	4
	Internet Banking	73	17	2	0	92
	Mobile Banking	56	21	19	0	96
	Savings Account	19	5	4	3	31
Total		169	46	28	3	246

Figure 10: Test Results
(Source: Primary Data)

Occupation
246 responses

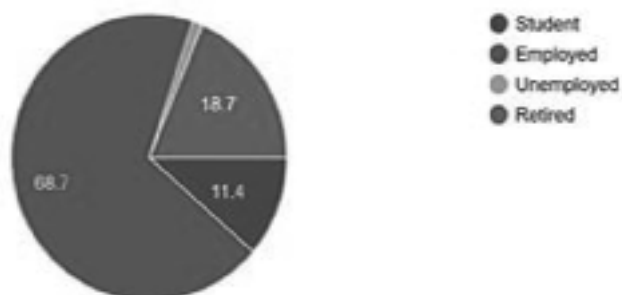


Figure 11: Monthly Income of Consumers
(Source: Primary Data)

use_of_financial_product * Monthly_Income Crosstabulation

Count

		Monthly_Income					
		25,001-50,000	50,001-75,000	75,001-1,25,000	Above 1,25,000	Less Than 25,000	Total
use_of_financial_product	Debit and Credit	0	1	5	16	2	23
	Insurance (Health)	0	0	0	3	1	4
	Internet Banking	0	4	20	66	2	92
	Mobile Banking (e.g. UPI, PhonePay, Gpay, etc.)	2	2	18	56	18	96
	Savings Account	0	1	4	16	10	31
Total		2	8	47	156	33	246

Figure 12: Test Results
(Source: Primary Data)

Q1.

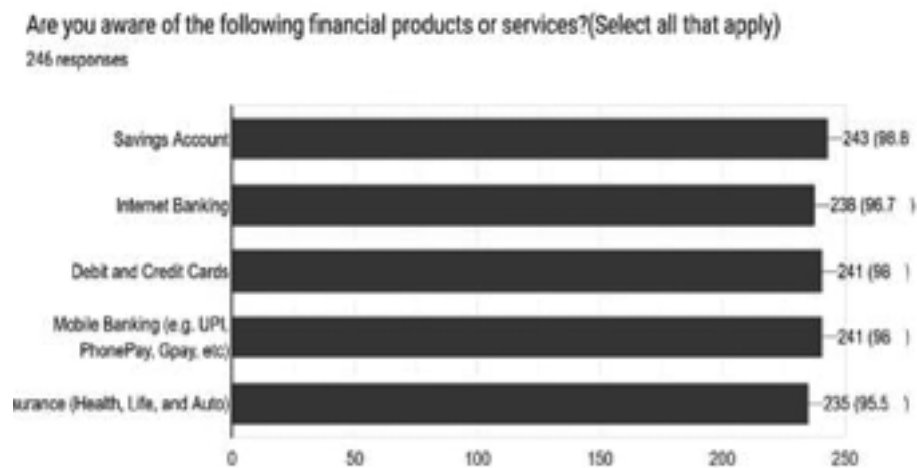


Figure 13: Question 1 Answer Composition
(Source: Primary Data)

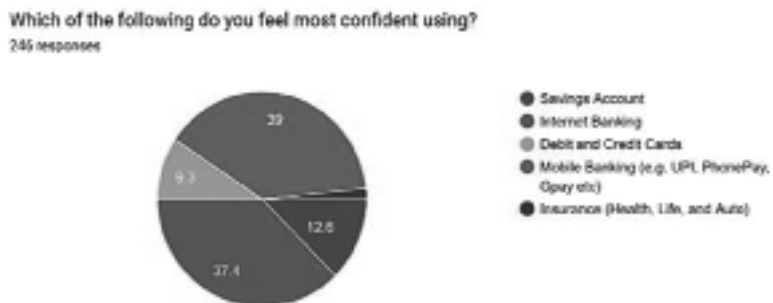


Figure 14: Distribution of Answers
(Source: Primary Data)

Interpretation:

In figure 13, 95 per cent and above of the total respondents are aware of the following financial products are savings account, internet banking, debit and credit cards, mobile banking and insurance with the rise in technology in fig.1. But there is still a little decrease in case of Insurance due to the better return they receive from other financial products. Hence, they are satisfied with the available financial products for

financing and do not seek insurance as their first priority as it is evident from figure 14.

In figure 14, it is observed that 39 per cent of the respondents are using Mobile Banking and 37.4 per cent of the respondents are using Internet Banking. It is also observed that many people are aware of the insurance but do not use insurance. Hence, there is lack of trust in financial institution, complexity of the financial product, perceived high risk and people prefer to manage their finance in simple way by avoiding the complexities of using various financial products.

Here, we conclude that there is a need to cater the above unserved respondent as mentioned in the second objective of my research.

Q2. Correlation between How Confident are you in your ability to manage your finances? and how often do you use the financial product?

The individuals are not aware about the utility, benefits and function of the financial product. Hence, the individuals are not using the financial products properly.

Q3. Correlation between the How Confident are you in understanding the terms and conditions of the financial products you use (e.g. interest rates, Fees)? And How easily you access financial services like loans, savings accounts and insurance?

Correlations		Understanding terms_condi on_of_financi _product	Access_to_fina ncial_services
Spearman's rho	Understanding_terms_condi on_of_financi _product	Correlation Coefficient	1.000
		Sig. (2-tailed)	.538**
		N	246
	Access_to_fina ncial_services	Correlation Coefficient	.538**
		Sig. (2-tailed)	<.001
		N	246

** . Correlation is significant at the 0.01 level (2-tailed).

Figure 16: Test Results
(Source: Primary Data)

Correlations		Confident_in_ managing_fina nce	Use_of_fina ncial_product
Spearman's rho	Confident_in_ managing_fina nce	Correlation Coefficient	1.000
		Sig. (2-tailed)	.048
		N	246
	Use_of_fina ncial_product	Correlation Coefficient	.048
		Sig. (2-tailed)	.453
		N	246

Figure 15: Test Results
(Source: Primary Data)

Interpretation:

The correlation coefficient $r = 0.048 > 0$. It shows a positive correlation.

Here, we can observe that there is a very weak positive correlation between the individuals confident in managing their finance and how often the individuals are using the financial product.

Interpretation:

The correlation coefficient $r = 0.538 > 0$, there is a positive correlation.

Here, we can observe that there is a moderate positive correlation between confident in understanding the terms and condition of the financial product and accessibility of the financial services such as savings account

and insurance.

The individuals are using the financial services by understanding the terms and the condition of the financial product at a moderate level. Hence, there is need to provide awareness and accessibility of the financial services to the unbanked or unserved population in order to achieve financial inclusion.

Q4. Correlation between How confident with the mobile banking app's security features? (example(e.g.). PIN, two factor authentication et al.), How well do you understand the risks associated with the use of mobile banking (e.g. fraud, hacking, phishing et al.)? and How often do you use mobile banking to track your spending and manage your expenditure?

Correlations					
Spearman's rho	Confident_with_mobile_banking_app_security_features	Correlation Coefficient	1.000	.610**	.276**
		Sig. (2-tailed)	.	<.001	<.001
		N	246	246	246
		Understanding_risk_associated_with_use_of_mobile_banking	.610**	1.000	.323**
	Understanding_risk_associated_with_use_of_mobile_banking	Correlation Coefficient	.610**	1.000	.323**
		Sig. (2-tailed)	<.001	.	<.001
		N	246	246	246
		Use_and_manage_mobile_banking	.276**	.323**	1.000
	Use_and_manage_mobile_banking	Correlation Coefficient	.276**	.323**	1.000
		Sig. (2-tailed)	<.001	<.001	.
		N	246	246	246

** Correlation is significant at the 0.01 level (2-tailed).

Figure 17: Test Results
(Source: Primary Data)

Interpretation:

The correlation between How confident with the mobile banking app's security features? (e.g. PIN, two factor authentication et al.) and How often do you use mobile banking to track your spending and manage your expenditure?

The correlation coefficient $r=0.275 > 0$. It shows positive correlation.

Here, we can observe that there is a weak positive correlation between the confident with knowledge of mobile banking app security features and the usage of the mobile banking app.

The people are still nowadays not aware of the security features of the mobile banking app due to which the

people are finding difficulty in using the mobile banking app. There is lack of awareness of the mobile banking app security features.

The correlation between How well do you understand the risks associated with the use of mobile Banking (e.g. fraud, hacking, phishing et al.)? and how often do you use mobile banking to track your spending and manage your expenditure?

The correlation coefficient $r=0.323 > 0$, there is a positive correlation.

Here, we can observe that there is a weak positive correlation between the understanding the risk associated with the use of mobile banking and the usage of the mobile banking.

The people fear the risk associated with the mobile banking. Hence, the people do not use the mobile banking at a

large scale. There is need for awareness of prevention of risk associated with the mobile banking.

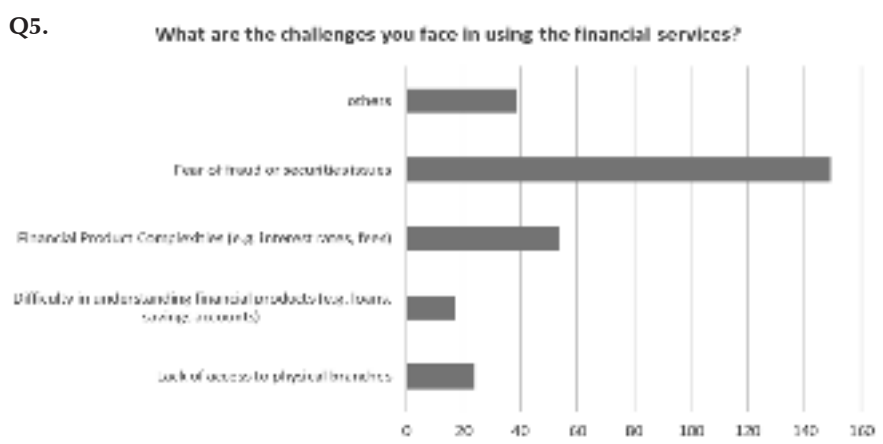


Figure 18: Bar Chart showing difficulties in using financial services.
(Source: Primary Data)

Interpretation:

People find challenges in utilizing the financial services due to the following reasons are 149 people have fear of

fraud or securities issues. Above 40 people are not aware about the financial product complexities. There is a need for financial awareness about the fraud, financial product complexities, features of financial product and launching the physical branches.

Q6. What would encourage you to use financial services more? (Select all that apply)
246 responses

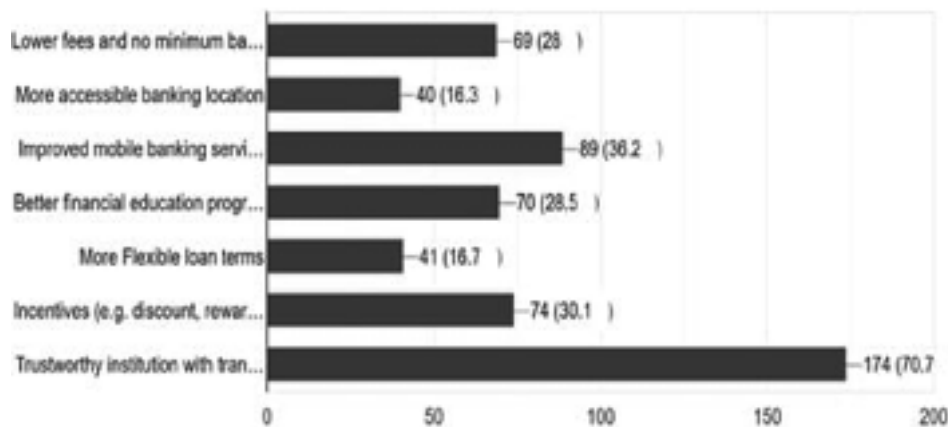


Figure 19: Bar Chart showing composition of answers
(Source: Primary Data)

Interpretation:

70.7per cent of the respondents seek to have trustworthy institution with transparent policies while availing the financial services from the formal financial system. There are several institutions who lack from providing transparent policies in order to gain advantage from customers through making frauds. 36.2per cent of the respondents want to improved mobile banking services and 28per cent of the respondents want to have lower fees and no minimum balance. The people want to have proper financial system in disposing and investing the money while utilizing the mobile banking services so that personal information of the individuals is protected. There are 28per cent of the population who want to have lower fees and no minimum balance while utilizing the financial services. This will help to promote the individual having low income to be financially included.

Q7 Do you believe access to financial services could improve your economic opportunities?
246 responses

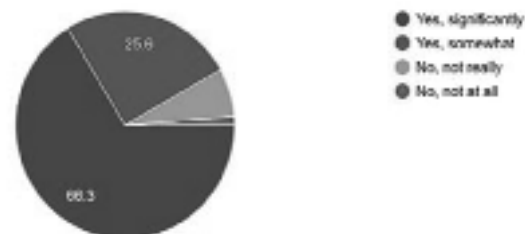


Figure 4: Test Results
(Source: Primary Data)

Interpretation:

66.3per cent of the respondents' state that access to financial services could significantly improve individual's economic opportunities. There are 25.6per cent of the respondents who are doubtful about their economic opportunities.

Q8.

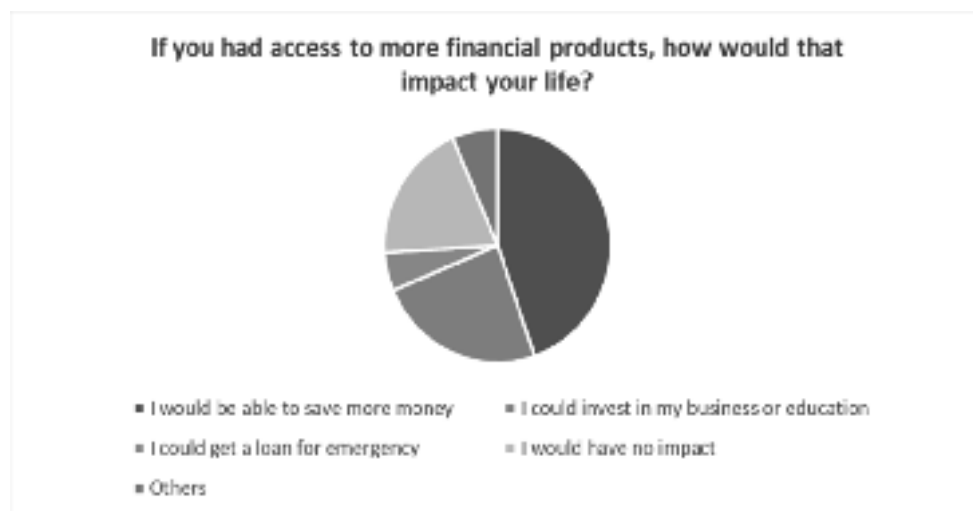


Figure 21: Composition of answers
(Source: Primary Data)

Interpretation:

45per cent of the respondent would be able to save more money, 24per cent respondents would be investing in their business or education, 5per cent could get loan for emergency. There is a positive impact on their life due to access to more financial products. Utilizing the financial products improves the standard of the living and achieving inclusive growth.

Q9. Correlation between the How would you rate your financial situation before and after gaining access to financial services? and In your opinion, how effective have government policies been in improving your access to financial services?

Correlations

			financial_situation_before_and_after_financial_services	effectiveness_of_govt_policies_in_accessing_financial_services
Spearman's rho	financial_situation_before_and_after_financial_services	Correlation Coefficient	1.000	.372**
		Sig. (2-tailed)	.	<.001
		N	246	246
	effectiveness_of_govt_policies_in_accessing_financial_services	Correlation Coefficient	.372**	1.000
		Sig. (2-tailed)	<.001	.
		N	246	246

** . Correlation is significant at the 0.01 level (2-tailed).

Figure 22: Test Results
(Source: Primary Data)

Interpretation:

The correlation coefficient(r)= $0.372 > 0$, it shows positive correlation.

Here, we observe that there is a weak correlation between effectiveness of the government policies in accessing the financial services and financial situation after gaining access to financial services. The government policies are not effective enough to improve their financial situation of the individuals.

Q10.

Are you aware of the Sukanya Samriddhi Yojana (SSY)?

246 responses



Figure 23: Composition of answers
(Source: Primary Data)

Have you or someone in your family open an SSY account?

246 responses



Figure 24: Composition of answers
(Source: Primary Data)

How satisfied are you with the SSY scheme in terms of its financial returns (interest rates, tax benefits)?

246 responses



Figure 25: Composition of answers
(Source: Primary Data)

Interpretation:

In figure 23 and figure 24, 95.9 per cent of the respondent are aware about Sukanya Samriddhi Yojana (SSY) Scheme but only 54.9 per cent of the respondent have availed the SSY scheme. There is lack of awareness of the benefits of SSY Scheme. 38.6 per cent are neutrally satisfied with SSY scheme in fig. 5.

Q11. Do you think the government should improve the SSY scheme (e.g. better return, wider accessibility)?
246 responses



Figure 26: Composition of answer
(Source: Primary Data)

Interpretation:

76.8per cent of the respondents want the government to improve SSY scheme such as better return and wider accessibility. It is evident from the figure 25 that only 45.1per cent of the respondents are utilizing the SSY scheme where as 95.9per cent of the respondents are aware about the SSY Scheme. Hence, there is a need for improvement in SSY Schemes so that the unserved population are financially included.

If yes, please specify the improvement you would like to see.

1. There is need for more promotional activities on financial literacy.
2. There is need for simple procedure for opening an SSY account.
3. The age limit of the girl child should be increased as it is a small savings and the cost is going up sharply.
4. More interest return should be provided as it is also a deposit for future of girl child.
4. From the day of birth of girl child, birth certificate to be issued only after receipt of proof of opening SSY with any scheduled Bank.
5. Withdrawal of full amount may be allowed after 18years at the time of educational need.

6. Increasing the maximum annual deposit limit and allowing for more flexible withdrawals for education expenses at different stages.

II. Retailers

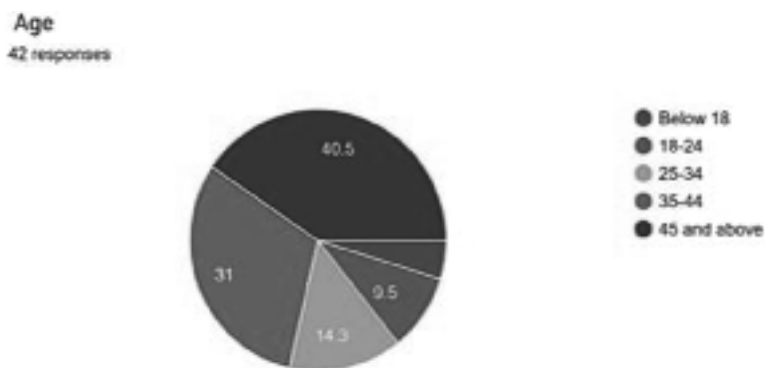


Figure 27: Age Distribution of Consumers
(Source: Primary Data)

		Age			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18-24	4	9.5	9.5	9.5
	25-34	6	14.3	14.3	23.8
	35-44	13	31.0	31.0	54.8
	45 and above	17	40.5	40.5	95.2
	Below 18	2	4.8	4.8	100.0
Total		42	100.0	100.0	

Figure 28: Test Results
(Source: Primary Data)

Gender
42 responses



Figure 29: Gender Distribution of Retailers
(Source: Primary Data)

Size of Business:
42 responses



Figure 30: Size of Business
(Source: Primary Data)

		Size_of_business			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Large (50+ employees)	3	7.1	7.1	7.1
	Medium (11-50 employees)	5	11.9	11.9	19.0
	Small (1-10 employees)	34	81.0	81.0	100.0
	Total	42	100.0	100.0	

Figure 31: Test Results
(Source: Primary Data)

How long has your business been in operation?
42 responses



Figure 32: Duration of business
(Source: Primary Data)

No_of_years_business_operated

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1-3 years	3	7.1	7.1	7.1
	4-10 years	8	19.0	19.0	26.2
	More than 10 years	31	73.8	73.8	100.0
	Total	42	100.0	100.0	

Figure 33: Test Results
(Source: Primary Data)

Q12.

Which of the following financial services does your business use? (Select all that apply)
42 responses

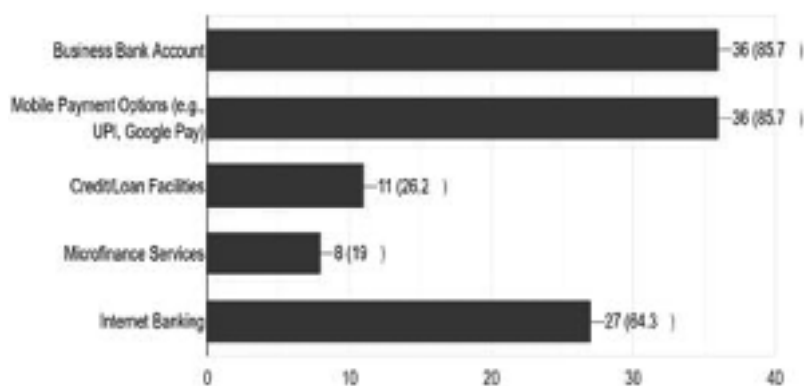


Figure 34: Composition of Answers
(Source: Primary Data)

Interpretation:

85.7per cent of the retail entities uses business bank account and mobile payment option for their business use. There is lack of awareness regarding the microfinance services. In the era of the digital payment, many retail shops are using digital system to run the business to avoid cash transaction. There are 81 per cent of small retail entities as stated

in the figure but only 19 per cent of the retail entities uses microfinance services. There is lack of awareness regarding the accessibility, benefits of microfinance services. The retail entities are slightly interested in availing credit/Loan facilities which requires collateral rather than the microfinance services which is collateral free.

Q13. **How important is access to financial services (e.g., banking, loans, mobile payments) for the operation of your retail business?**

42 responses



Figure 35: Composition of Answers
(Source: Primary Data)

Interpretation:

Almost all of the retail entities but majorly 81 per cent says that it is important to have access to financial services for the operation of the business. The Business are expected to cope with the challenges due to the dynamic environment in order to gain competitive advantage. Hence, there is need for financial services in formal financial system for the operation of the retail entities.

Q14. Correlation between Do you offer customers multiple payment options (e.g., card payments, mobile payments, cash)? And Has access to financial services (e.g., bank accounts, loans, mobile payments) positively impacted your ability to run your business?

Correlations			
		offering_multiple_payment_option	has_the_financial_services_positively_impact_the_business
offering_multiple_payment_option	Pearson Correlation	1	.372*
	Sig. (2-tailed)		.015
	N	42	42
has_the_financial_services_positively_impact_the_business	Pearson Correlation	.372*	1
	Sig. (2-tailed)	.015	
	N	42	42

*. Correlation is significant at the 0.05 level (2-tailed).

Figure 36: Test Results
(Source: Primary Data)

Interpretation:

The Pearson correlation(r)= $0.372 > 0$. It shows positive correlation.

Here, we can observe that there is a weak positive correlation between the retail business offering multiple payment option and the impact of positively impact of the financial services on the business.

The offering of the multiple payment option has positively impacted the business at low level. There are lots of individuals who are unserved from financial inclusion.

Q15.

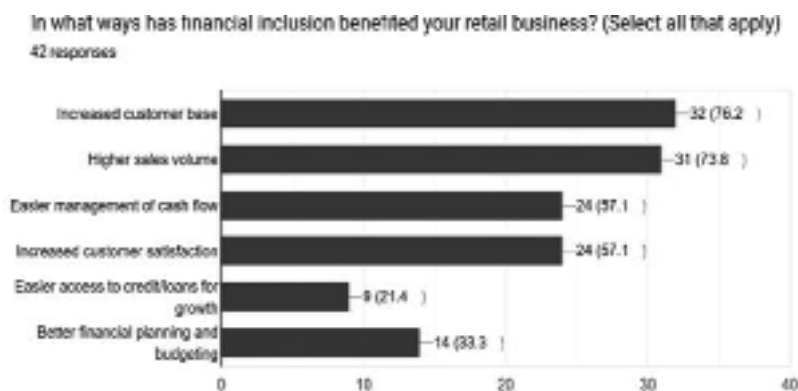


Figure 37: Composition of Answers
(Source: Primary Data)

Interpretation:

The financial services from the formal financial system (such as banks and other financial institution) have helped the retail business to achieve increased customer base (76.2per cent) and higher sales volume (73.8per cent). These financial services benefitted the retail business to gain financial inclusion and inclusive growth.

Q16.

Do you think providing digital payment options (e.g., mobile wallets, online payment platforms) has improved customer loyalty and retention?
42 responses



Figure 38: Composition of answers
(Source: Primary Data)

Interpretation:

92.9per cent of the retailers think that digital payment option has improved customer loyalty and retention and promotes financial inclusion which helps both the retailers as well as consumers.

Q17.

Have you noticed a difference in customer spending habits due to the availability of financial services (e.g., mobile wallets, credit facilities)?
42 responses



Figure 39: Composition of answers
(Source: Primary Data)

INTERPRETATION:

Yes, there is 76.2per cent of the retailers have noticed that increased availability of the financial services like mobile wallets and credit facilities has an effect on consumer spending habits due to more frequent impulsive purchases.

Q18. What challenges do you face in implementing or utilizing financial inclusion services in your retail business? (Select all that apply)

42 responses

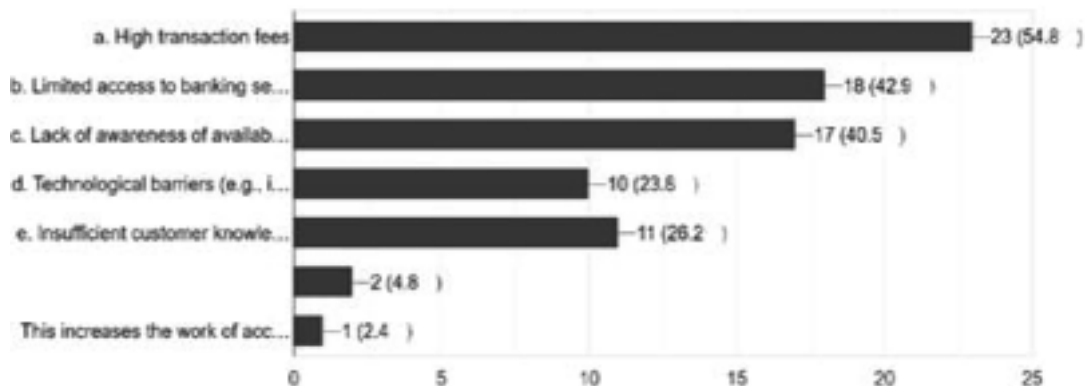


Figure 40: Composition of answers
(Source: Primary Data)

Interpretation:

The retail business faces challenges majorly from high transaction fee comprising 54.8per cent, limited access to banking services in my area (42.9per cent), lack of awareness of the availability of available financial tools (40.5per cent), technological barrier (23.8per cent) and insufficient customer knowledge (26.2per cent) in implementing or utilizing the financial inclusion. There is need for awareness about the financial services as the customer do not have sufficient information, face technological barriers.

There is also requirement for wide access to banking services and serve the unbanked individuals into formal financial system to achieve financial inclusion.

Q19. Do you think that increasing access to financial services (e.g., mobile wallets, loans, credit facilities) will lead to long-term growth for your retail business?

42 responses



Figure 41: Composition of answers
(Source: Primary Data)

Interpretation:

85.7per cent of the retail business think that increasing access to financial services will lead to long term growth for retail business and achieve inclusive growth in the economy.

Q20. How has access to financial services affected your ability to pay suppliers and vendors?
42 responses

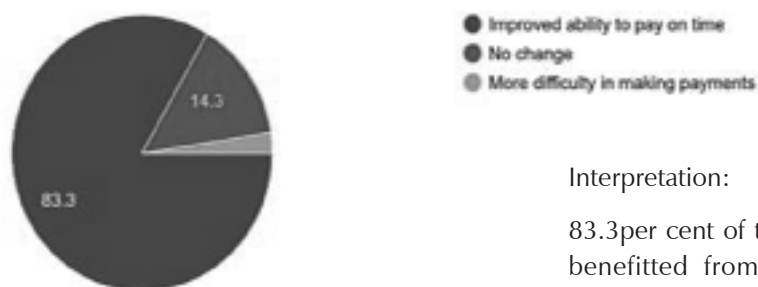


Figure 42: Composition of answers
(Source: Primary Data)

Interpretation:

83.3per cent of the retail business are benefitted from access to financial services to pay suppliers and vendors which generate inclusive growth in the economy.

Q21. What impact do you think financial inclusion will have on the future of retail businesses in your community?
42 responses

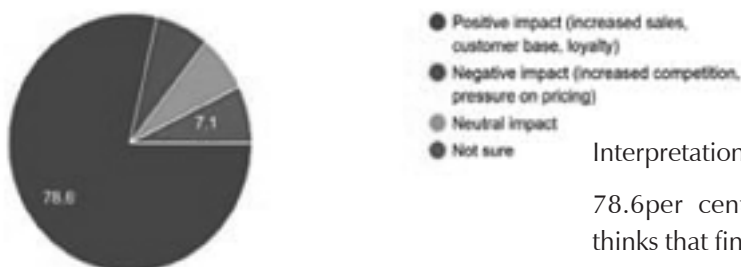


Figure 43: Composition of answers
(Source: Primary Data)

Interpretation:

78.6per cent of the retail business thinks that financial inclusion will have positive impact such as increased sales, customer base and loyalty.

Q22. If you have received a loan or credit, how has this affected your business?
42 responses



Figure 44: Composition of answer
(Source: Primary Data)

Interpretation:

All the retail business found beneficial from a loan or credit to run the operation of the business or purchasing a machinery. 50per cent of the retail business were able to expand their business such as new location and product lines. 26.2per cent of the retail business were able to have smooth cash flow and 23.8per cent of the retail business were able to improve operational efficiency.

Q23. How has access to financial services changed your decision-making process as a retailer?

42 responses



Figure 45: Composition of answers
(Source: Primary Data)

Interpretation:

The 54.8per cent of the retailers got benefited from financial services and helped to make proper decision making such as offering better deals and discount to customers, 35.7per cent of the retailer were able to take more risk and make larger investments and 7.1 per cent were able to plan inventory better.

Q24. How do you envision the role of financial inclusion in shaping the future of your retail business?

42 responses



Figure 46: Composition of answers
(Source: Primary Data)

Interpretation:

52.4per cent of the retail business states that financial inclusion has helped in their business strategy. 35.7per cent of the retail business states that financial inclusion will play a supporting role, 4.8per cent and 7.1per cent of the retail business states that it will have little impact or unsure about the future of the retail business.

Q25. Correlation between Do you believe offering more diverse payment methods (digital, credit, et al.) has increased customer satisfaction and loyalty? And has the availability of digital payments led to an increase in customer purchases at your store?

Correlations

			offering_payment_method_increased_customer_satisfaction	availability_of_digital_payment_increased_customer_purchase
Spearman's rho	offering_payment_method_increased_customer_satisfaction	Correlation Coefficient	1.000	.751**
		Sig. (2-tailed)	.	<.001
		N	42	42
	availability_of_digital_payment_increased_customer_purchase	Correlation Coefficient	.751**	1.000
		Sig. (2-tailed)	<.001	.
		N	42	42

** Correlation is significant at the 0.01 level (2-tailed).

Figure 47: Test Results
(Source: Primary Data)

Interpretation:

The correlation coefficient (r) = 0.751 > 0, there is positive correlation.

Here, we can observe that there is a strong positive correlation between the offering more diverse payment methods and increase in customer purchases.

The offer of more diverse payment methods have positive impact on customer purchase. People are encouraged to purchase as per their suitability of payment method. This increases customer satisfaction and loyalty.

Q26. Correlation between Has the availability of financial services facilitated your ability to expand your business (e.g., opening new branches, offering more products/services)? And Do you believe that financial inclusion has helped your business survive financial challenges (e.g., economic downturns, lack of capital)?

Correlations

		does_availability_of_financial_services_expanding_business	business_survive_financial_challenges
Spearman's rho	does_availability_of_financial_services_expanding_business	Correlation Coefficient	1.000
		Sig. (2-tailed)	.757**
		N	42
	business_survive_financial_challenges	Correlation Coefficient	.757**
		Sig. (2-tailed)	1.000
		N	42

** . Correlation is significant at the 0.01 level (2-tailed).

Figure 48: Test Results
(Source: Primary Data)

Interpretation:

The correlation coefficient (r) = 0.757 > 0, there is positive correlation.

Here, we can observe that there is a strong positive correlation between the expectation of the retailers that financial inclusion helped in surviving financial challenges and the actual availability of the financial services.

Retailer believe that financial inclusion helped the business to cope with financial challenges which helped the retailers in expansion of the business. Retail business got significant relief from the government schemes during the period of economic downturns such as COVID-19 relief measures. During the lockdown, the retail business who were used to go frequently to the physical stores, Banks and many other financial institutions to run the operation of their business started converting into digital stores, availed digital financial services provided by the bank to procure loans.

Q27. Correlation between Are you aware of any government schemes or yojanas aimed at promoting financial inclusion for small businesses and retailers? And have you ever benefited from any government schemes or financial inclusion policies?

Correlations

		aware_of_government_schemes	benefits_from_government_schemes
aware_of_government_schemes	Pearson Correlation	1	.154
	Sig. (2-tailed)		.331
	N	42	42
benefits_from_government_schemes	Pearson Correlation	.154	1
	Sig. (2-tailed)	.331	
	N	42	42

Figure 49: Test Results
(Source: Primary Data)

Interpretation:

The Pearson correlation(r)= $0.154 > 0$, there is a positive correlation.

Here, we observe that there is very weak positive correlation between the awareness of the government schemes and the benefits availed from the government schemes.

Very few retailers have utilized and got benefitted from the government schemes due to lack of awareness about the government schemes. There is a financial inclusion gap between the awareness and usage of the government schemes in their business.

Interpretation:

45per cent retailers are benefitted from Jan Dhan Yojana and 19per cent retailers from MUDRA yojana. Few retail business are financially included and other retail business can be encouraged to be financially included through providing the financial awareness about the utility and benefits of the various government schemes.

Interpretation:

31per cent of the retail business learn about the various government schemes from the local government offices, 26.2per cent from banks and financial institution, 28.6per cent from the government advertising and 14.3per cent from the community organization.

Interpretation:

Government policies such as MUDRA Yojana have helped 61.90per cent of the retail business significantly in the operation of the business activities. The government schemes have helped to achieve the financial inclusion gap where earlier the business found difficulties in across the MUDRA loan but gradually there is a rise in availing the MUDRA Loans from the FY 2016 to FY 2024.

Interpretation:

57.1per cent retailers received government schemes relief during the periods of economic downturn such as COVID-19 relief measures this help to promote inclusive growth by the government.

Interpretation:

Retailer strongly agree (40.5per cent) and agree (33.3per cent) with government schemes helping in improving the overall satisfaction of customers.

FINAL FINDINGS

OBJECTIVE	QUESTIONNAIRE (AS PER DATA AND ANALYSIS)	STATISTICAL TOOLS	FINAL FINDINGS
To assess the necessity of Financial Literacy or Financial Awareness on financial inclusion and impact of financial products on consumer decision-making.	Q1, Q12, Q13 Q2, Q3, Q4, Q14	Descriptive statistics Correlation	1.Many people are aware of insurance but don't use it as much due to lack of trust, complexity of financial product and high risk. 2.Using correlation, it is observed that individuals are moderate understanding financial services which indicates for a need for increased awareness and accessibility to unbanked population. 3. The people fear the risk associated with the mobile banking. Hence, the people do not use the mobile banking at a large-scale indicating need for financial awareness.
To assess the extent of financial services to underserved population and its impact on the inclusive growth.	Q5, Q6, Q7, Q8, Q15, Q16, Q17, Q18, Q19, Q20, Q21, Q22, Q23, Q24 Q25	Descriptive statistics Correlation	1.Respondents comprising 45% would be able to save more money, 24% respondents would be investing in their business or education, 5% could get loan for emergency. There is a positive impact on their life due to access to more financial products. 2. there is a strong positive correlation between the offering more diverse payment methods and increase in customer purchases.
To address the concern of the financial inclusion gap through government policy, schemes, and other measures.	Q10, Q11, Q27, Q28, Q29, Q30, Q31 Q9, Q26 Q11	Descriptive statistics Correlation Explanatory	1.There is a weak correlation between effectiveness of the government policies in accessing the financial services and financial situation after gaining access to financial services. 2. The data shows that only 45.1%of respondents are using the SSY scheme, while 95.9% are aware of it. 3. Government policies such as MUDRA Yojana have helped 61.90% of the retail business significantly in the operation of the business activities.

Figure 55: Conclusion
(Source: Primary Data)

CONCLUSION

In conclusion, financial inclusion not only improves the individual's growth but also improves the economic growth, ensuring all individuals are financially included and creating opportunity in the unserved communities. Financial inclusion helps the individuals to manage finances by availing the financial services such as savings account, credit, insurance. Financial inclusion helped the economy in achieving the 7 Sustainable Development Goals (SDGs). But, digital literacy, financial education, infrastructure limitation still remain barrier to financial inclusion. For financial inclusion to improve the individual's financial lives can be from government, financial institutions, technology providers are required to create inclusive, accessible and sustainable financial system.

From the above analysis and findings, there is lack of financial awareness and ineffective government policies and initiative. But there are some individuals are benefitted from the financial services. There is a need for the unbanked individuals to be banked and serve the unserved individuals.

The consumer behavior variable becomes prominent in company planning in achieving positive digital impact. After analyzing the data, it was found that financial institution having efficient digital financial system helps to make better service experience and the need of the users.

From the above analysis, we discovered that there is various dimension of financial exclusion. They are

1. Access Exclusion- it refers to the access restriction that the individual finds risk in accessing the financial product
2. Condition exclusion- it refers to the financial exclusion due to inappropriate condition connected with the financial product.
3. Technology exclusion- the individuals decide not to opt financial product due to fear of fraudulent activities in the period of rise in technology.

The individuals are still underserved due to the following reasons are

1. A small proportion has access credit only from micro credit institution.
2. There is proportion who has extremely limited access to banking services due to high transaction cost.
3. There is extremely limited access to insurance.
4. There is significant number depends on services from unsustainable institution due to clients has to pay high transaction cost.

RECOMMENDATION

1. There is need for encouragement of using mobile banking and digital payment methods in the underserved area.
2. Financial inclusion initiative should emphasize the importance of insurance and other risk management tools which are often left unseen by underserved populations.
3. Financial institution is required to gain customer trust by providing affordable, transparent and accessible financial products and services and access to trustworthy institution.
4. There is need for awareness of the fraudulent activities in the digital payment because there is rise in fear of frauds that can be observed from my research analysis.

LIMITATION OF THE STUDY

1. The survey is mainly comprising of male respondents as compared the female respondents in case of survey to the retailers of my research.
2. The findings may be limited in their applicability to regions beyond the specific geographic location where the research was conducted.
3. The way participants are chosen for the study can lead to sample that doesn't accurately represent the target population.

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ESG score does have an impact on the financial performance of a company but the investors and stakeholders must focus that there exists positive as well as negative impact.

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Impact of ESG Score on the Financial Performance of the Company: A Study of Sensex

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Abstract

The effect of Environmental, Social, and Governance (ESG) scores on the financial performance of Sensex-listed companies is examined in this study.

A company's environmental sustainability, social responsibility, and governance practices are all reflected in its ESG scores, which provide a thorough assessment of its non-financial performance. To investigate the relationship between ESG scores and important financial metrics, such as Price-to-Book Value, Debt-to-Equity Ratio, Return on Assets, Return on Equity, and Return on Capital Employed, the study uses regression analysis and correlation.

The results show that there is a mixed relationship between ESG scores and financial performance. ESG scores and return on assets have a weakly positive association, but price-to-book value, debt-to-equity, return on equity, and return on capital employed have negative correlations. This implies that while increased ESG involvement can support long-term stability and stakeholder trust, it does not always result in better financial returns. While pointing out the limitations of financial predictability based only on ESG scores, the study also emphasizes the growing importance of ESG considerations in corporate strategies and investment decisions. For investors, legislators, and business managers navigating the changing terrain of sustainable finance, the research offers insightful information.

KEY WORDS: Financial Performance, Sensex, ESG Score, Returns

INTRODUCTION

ESG score is a framework to create an estimate that can be quantified like a numeric score or a letter rating for the company in terms of the level of success in the environmental, social and corporate governance pursuits undertaken. ESG is built on three main considerations in which the most notable include Environmental (E), Social (S), and Governance (G). Each of them additionally consists of various sub-indicators which are taken into account so as to evaluate the organization's non-financial performance.

The arena of 'E' which broadens up this environmental factor draws upon all the activities of the entity with the corresponding reservations and opportunities that may arise from this activity. It is measured through use of

environmental data or disclosures made by the organization which show their effect on biodiversity, efficiency of using natural resources, lesser amount of pollution or other greenhouse gas emissions, recycling and efficient use of electricity and water. The 'S' factor that encompasses the social factors examines how the entity deals with its stakeholders like employees, customers, society at large, suppliers or other stakeholders. It does not only entail an equitable treatment to the employees but it also includes the gender parity, workplace safety, community relations, customer satisfaction and many others as well.

Moreover, 'G' factor or Governance factors are centred on emanating the policies so that they are compliant with the regulations and industry practices. It is the cornerstone on which any company is designed or assessed for. Among the three factors it is the most vital one. It endorses whether the organization is considered responsible, and treats all its stakeholders equally and fairly. Corporations are evaluated not only based on the amount and the quality of their disclosures but the degree of their compliance to both mandatory and voluntary directives.

OBJECTIVES

To determine the extent to which companies' adoption of ESG practices has affected financial performance or indicators.

To support and ease the decision-making process for all parties involved, particularly for investors eager to make wise investments in Indian businesses.

METHODOLOGY

The data has been analysed using Correlation and Regression analysis to understand the company's performance on each material issue. For the analysis, variables like ESG Score 2025, Price/Book Value, Debt-Equity Ratio, Return on Assets, Return on Equity and Return on Capital Employed has been used. This analysis helps to identify the strengths, weaknesses and what might be the areas for improvement.

DATA ANALYSIS AND FINDINGS

The Table 1 given above shows the descriptive statistics of research variables used in the analysis. The value of mean, median, mode, standard deviation, kurtosis, skewness, range, minimum and maximum are presented for selected variables.

	ESG Scores	ROE	ROCE	P/BV	D/E	ROA
Mean	58.06	23.73	22.72	7.69	2.07	9.39
Std Error	2.98	4.32	5.59	1.9	0.54	1.73
Median	58	17.7	13.32	5.05	0.96	6.01
Mode	68	18.4	10.47	N/A	N/A	20
SD	16.056	23.66	30.63	10.41	3.011	9.5
Sample Variance	266.68	560.26	938.25	108.46	9.06	87.29
Kurtosis	-0.997	17.58	18.95	15.18	4.15	3.09
Skewness	-0.090269	3.86	4.07	3.66	2.0066	1.75
Range	60	133.88	167.94	53.98	12.6	39.21
Minimum	28	1.12	1.14	0.82	0	0.99
Maximum	88	135	169.08	54.8	12.6	40.2

Table 1: Summary of Descriptive Statistics
(Source : Primary Data)

The mean ESG score is 58.06 which indicates towards an adequate performance is exercised by the businesses on ESG front. This also points towards the attitude of Indian companies towards the gain in importance and acknowledgement of non- financial factors. The maximum ESG score observed is 88 while the lowest being at 28.

The observed standard deviation is of 16.056 which indicates variability in the scores across companies. The negative kurtosis of -0.997 indicates that the distribution of scores is relatively flat as compared to a normal distribution. The skewness of ESG scores is -0.090, which indicates a slight leftward tail in the distribution. Most companies cluster around the middle scores. The range of ESG score is 28.

The mean of Price/ Book Value is observed to be 7.69 with a standard deviation of 10.41 indicating a considerable spread. The maximum observed value is 54.8 while the minimum being at 0.81. The positive

skewness of 3.66 indicates a right-skewed distribution. Most companies have lower Price/BV ratios, but there are outliers with very high ratios. The kurtosis value is 15.18, suggesting a heavy-tailed distribution. The range of the data is 53.98.

The companies have Debt to Equity ratio of around 2.07 on average with a standard deviation of 3.011. Also, some companies have no debt at all which is indicated by the minimum value of zero. The positive skewness implies that more companies have higher debt relative to their equity. The range of the data is 12.6.

The average Return on Assets is approximately 9.39 per cent. There is a significant variability which is indicated by the values ranging from 0.99 per cent to over 40.2 per cent. The range is given as 39.21 per cent. The positive skewness indicates that most companies have lower return rates, but there are outliers with exceptionally high returns.

The average Return on Equity is 23.73 per cent with a standard deviation of 23.66 per cent. The maximum and minimum values being 135 per cent and 1.12 per cent respectively which gives the range as 133.88 per cent. Similar to return on assets, positive skewness suggests outliers with exceptionally high return on equity values.

The average Return on Capital Employed is about 22.7 per cent with a standard deviation of

30.63 per cent. The maximum and minimum values being 169.08 per cent and 1.14 per cent respectively which gives the range as 167.94 per cent. The positive skewness indicates the variability in the values.

	ESG	P/BV	D/E	ROA	ROE	ROCE
ESG	1					
P/BV	-0.31053	1				
D/E	-0.27435	-0.2552	1			
ROA	0.000162	0.697215	-0.48717	1		
ROE	-0.2661	0.846861	-0.16117	0.800647	1	
ROCE	0.183008	0.870861	-0.30377	0.880697	0.953827	1

Table 2: Correlation Analysis
(Source : Primary Data)

The above data table, Table 2 represents a correlation matrix for various financial metrics and their relationship with the ESG score. Each cell in the matrix contains a numerical value that indicates the strength and direction of the correlation between two variables. Let's break down each metric:

1. Price/BV (Price-to-Book Value Ratio): This ratio compares a company's stock price to its book value (net asset value). The negative correlation with the ESG score which is indicated by correlation coefficient of -0.31053. It suggests that companies with higher ESG scores tend to have lower Price/BV ratios. The table also shows that there is a strong positive correlation with return on assets and return on capital employed.
2. Debt to Equity: Some companies have no debt and have the value of zero. The negative correlation with the ESG score which is indicated by the correlation coefficient of - 0.27435. It implies that companies with better ESG practices tend to have lower debt relative to equity. The table also shows that there is a negative correlation with price/ book value, return on assets, return on equity and return on capital employed.
3. Return on Assets: It measures a company's profitability relative to its total assets. There is not a strong correlation with the ESG score as the correlation coefficient is given as 0.000162. There is a weak but positive correlation between ESG score and Return on Assets. It implies that companies with high ESG score may also have high Return on Assets. The table also shows that there is a positive correlation with price/ book value, return on equity and return on capital employed.
4. Return on Equity: It assesses a company's profitability from shareholders' equity. There is a negative correlation with the ESG score which is indicated by the correlation coefficient of - 0.2661. Also, it suggests that companies with poor ESG practices tend to have high return on equity. The table also shows that there is a positive correlation with price/ book value, return on asset and return on capital employed.
5. Return on Capital Employed: It evaluates profitability from both equity and debt capital. There is no strong correlation with the ESG score which is indicated by the given correlation coefficient of 0.183008. The table also shows that there is a positive correlation with price/ book value, return on equity and return on assets.

Dependent Variable- Price/BV

SUMMARY OUTPUT								
Regression Statistics								
Multiple R	0.31053886							
R Square	0.096428185							
Adjusted R Square	0.054157763							
Standard Error	10.07487765							
Observations	30							
ANOVA								
	df	SS	MS	F	Significance F			
Regression	1	303.3041403	303.3041	2.588129	0.054890933			
Residual	28	2843.088476	101.5382					
Total	29	3146.392617						
	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	19.19087084	0.901870964	2.128283	0.009384	5.032031061	33.32871801	5.032031061	33.32871801
X Variable 1	-0.198034618	0.114562225	-1.72862	0.094891	-0.432704693	0.036635462	-0.4327047	0.036635462

Table 3: Results of Linear Regression
(Source : Primary Data)

Score coefficient is given as -0.19803. For every one unit increase in the ESG Score, the price by book value decreases by approximately 0.19803 units when holding other variables constant. The p-value for ESG Score is 0.094891 suggesting that this variable is not statistically significant at a 95 per cent confidence level.

SUMMARY OUTPUT								
Regression Statistics								
Multiple R	0.274350787							
R Square	0.075268354							
Adjusted R Square	0.042242224							
Standard Error	2.947000183							
Observations	30							
ANOVA								
	df	SS	MS	F	Significance F			
Regression	1	19.79195239	19.79195	2.279055	0.142334688			
Residual	28	243.1545843	8.685164					
Total	29	262.9785467						
	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	5.012281998	2.018905817	2.482673	0.019505	0.876740904	9.147823001	0.876740904	9.147823001
X Variable 1	-0.05058039	0.033511253	-1.50965	0.142335	-0.1192308	0.018054299	-0.1192308	0.018054299

Table 4: Dependent Variable- Dbt to Equity
(Source : Primary Data)

ESG Score coefficient for is -0.0505. Which means for every one-point increase in ESG Score, the debt-to-equity value decreases by approximately 0.0505 units, assuming all other variables remain constant. The p-value associated with ESG Score is 0.14, which is greater than the common significance level of 0.05. Therefore, ESG Score might not be a reliable predictor in this model.

SUMMARY OUTPUT							
Regression Statistics							
Multiple R	0.000162						
R Square	2.64E-08						
Adjusted R Square	-0.03571						
Standard Error	16.61955						
Observations	30						
ANOVA							
	df	SS	MS	F	Significance F		
Regression	1	0.000204	0.000204	7.38E-07	0.899320614		
Residual	28	7733.866	276.2055				
Total	29	7733.867					
	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	
Intercept	58.06307	4.365645	13.30021	1.27E-13	49.12135247	67.00658771	
X Variable 1	0.000279	0.324767	0.000859	0.999321	-0.664976855	0.665534886	

Table 5: Results of Linear Regression- Dependant Variable: Return on Assets
(Source : Primary Data)

ESG Score coefficient is 0.000279. Which means that for each one unit increase in ESG Score, the return on asset value increases by approximately 0.000279 units, assuming all other variables remain constant. The p-value is given as 0.99 which suggests that this variable is marginally significant at a five per cent significance level.

SUMMARY OUTPUT							
Regression Statistics							
Multiple R	0.266101666						
R Square	0.070810097						
Adjusted R Square	0.037624743						
Standard Error	23.22035725						
Observations	30						
ANOVA							
	df	SS	MS	F	Significance F		
Regression	1	1190.499758	1190.5	2.133776	0.155216948		
Residual	28	15097.17979	539.185				
Total	29	16287.67955					
	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	
Intercept	46.13107027	15.90728098	2.899997	0.007189	13.54648231	78.71565823	
X Variable 1	-0.385693814	0.264040507	-1.46074	0.155217	-0.926358274	0.155166646	

Table 6: Dependent Variable- Return on Equity
(Source : Primary Data)

ESG Score coefficient is -0.3856. Which means for every one-point increase in ESG Score, the return on equity value decreases by approximately 0.3856 units, assuming all other variables

remain constant. The p-value associated is 0.155, which is greater than the common significance level of 0.05. Therefore, ESG Score will not be a reliable predictor in this model.

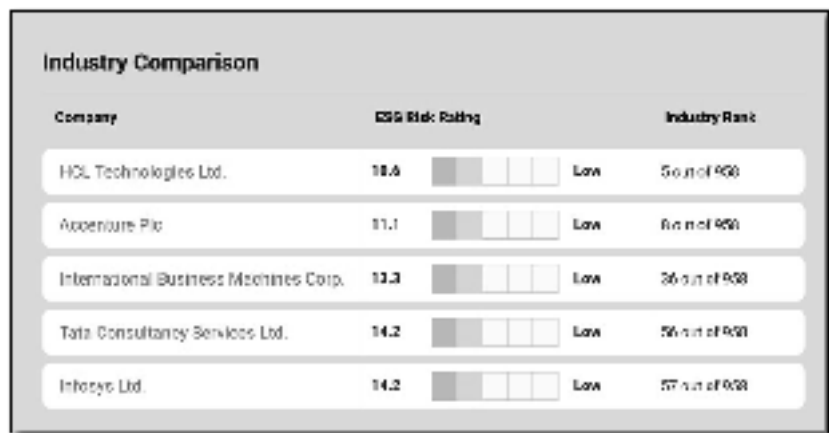
SUMMARY OUTPUT								
Regression Statistics								
Multiple R	0.18307986							
R Square	0.033518235							
Adjusted R Square	-0.00098971							
Standard Error	30.55459621							
Observations	30							
ANOVA								
	df	SS	MS	F	Significance F			
Regression	1	906.5642858	906.5643	0.971059	0.332855466			
Residual	28	26140.33379	933.5833					
Total	29	27046.89808						
	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	42.53852545	20.9316567	2.032258	0.051711	-0.33802962	85.41508051	-0.3380296	85.41508051
X Variable 1	-0.342374147	0.347438714	-0.98542	0.332855	-1.054070089	0.369321796	-1.0540701	0.369321796

Table 7: Dependent Variable- Return on Capital Employed
(Source : Primary Data)

The coefficient for ESG Score is - 0.3423. Which means for every one - increase in ESG Score, the return on capital employed value decreases by approximately 0.3423 units, assuming all other variables remain constant. The p-value associated is 0.332855, which is higher than the common significance level of 0.05. Therefore, ESG Score will not be a reliable predictor in this model.

Detailed Case study of Tata Consultancy Services with respect to the impact of ESG Score impact on the financial performance of the company:

Overview- Tata consultancy services is a prominent global IT services provider, boasting a workforce of over 600,000 individuals. Based in Mumbai, the India-based firm utilizes its offshore outsourcing model to generate half of its revenue from North America. The company provides a range of traditional IT services, including consulting, managed services, cloud infrastructure services, and business process outsourcing as a service, or bpaas.



(Source : Primary Data)

ESG Score Contribution

The S&P global ESG score measures a company's performance on and management of material ESG risks, opportunities, and impacts informed by a combination of company disclosures, media and stakeholder analysis, modeling approaches, and in-depth company engagement via the S&P global corporate sustainability assessment (CSA). The S&P global ESG score is a relative score measuring a company's performance on and management of ESG risks, opportunities, and impacts

compared to their peers within the same industry classification. The S&P global ESG score uses a double materiality approach whereby a sustainability issue is considered to be material if it presents a significant impact on society or the environment and a significant impact on a company's value drivers, competitive position, and long-term shareholder value creation. The S&P Global Corporate Sustainability Assessment (CSA) score is the S&P Global Environmental, Social, and Governance (ESG) score, excluding any modeling techniques. The S&P global media and stakeholder analysis (MSA) forms an integral part of the global corporate sustainability assessment (CSA) and enables S&P global to monitor companies' sustainability performance on an ongoing basis by assessing current controversies with potentially negative reputational or financial impacts.

DuPont Analysis for Tata Consultancy services & Infosys to depict impact on ESG

DuPont Analysis:

The primary benefit of the Dupont Analysis Formula is its ability to deconstruct ROE into smaller parts, which facilitates a more thorough examination of the financial performance by highlighting important strengths and shortcomings.

The following are the three financial factors that are generally discussed:

1. Profits as a gauge of how well a business is running. The net profit margin serves as a representation of this. Net Profit Margin is calculated by dividing net profit by operating revenue.
2. Levels of asset utilisation as a gauge of the money made from the asset base. To put it another way, it gauges how well and efficiently the resources are employed in company operations. This is a crucial element, particularly in industrial concerns where idle assets or low capacity utilisation are issues. The asset turnover ratio serves as a representation of this. Revenue divided by total assets is asset turnover.
3. The equity multiplier's calculation of financial leverage. Total Assets/Shareholder Equity = Equity Multiplier

When the three components are combined, the ROE is calculated as follows. ROE is calculated as $(\text{Net Profit/Revenue}) \times (\text{Total Assets/Total Revenue}) \times (\text{Total Assets/Equity})$.

ANALYSIS FOR TATA CONSULTANCY SERVICES

As of April 6, 2025, Tata Consultancy Services (TCS) has not yet released its full financial results for the fiscal year ending March 31, 2025 (FY 2024–25). The company is scheduled to announce these results on April 10, 2025.

However, TCS has published financial data for the first three quarters of FY 2024–25. Based on this information, we can perform a preliminary DuPont analysis to estimate the company's Return on Equity (ROE) up to December 31, 2024.

1. Net Profit Margin

Net Profit Margin = Net Income / Revenue

For the nine months ended December 31, 2024:

Revenue: 160,717 crore

Net Income: 37,671 crore

Net Profit Margin = $37,671 \text{ crore} / 160,717 \text{ crore} \approx 23.44\%$

2. Asset Turnover

Asset Turnover = Revenue / Total Assets As of December 31, 2024:

Total Assets: 139,410 crore

Asset Turnover = $160,717 \text{ crore} / 139,410 \text{ crore} \approx 1.15$

3. Equity Multiplier

Equity Multiplier = Total Assets / Shareholders' Equity As of December 31, 2024:

Shareholders' Equity: 74,172 crore

Equity Multiplier = $139,410 \text{ crore} / 74,172 \text{ crore} \approx 1.88$

4. Return on Equity (ROE)

ROE = Net Profit Margin $\times$ Asset Turnover $\times$ Equity Multiplier

ROE = $23.44\% \times 1.15 \times 1.88 \approx 50.7\%$

Interpretation:

The estimated ROE of approximately 50.7% for the nine months ended December 31, 2024, indicates

strong profitability and efficient use of equity. This performance is primarily driven by a robust net profit margin and a moderate level of financial leverage, as reflected in the equity multiplier.

Note: These figures are based on data available up to December 31, 2024. The full-year financial results, which will provide a more comprehensive view of TCS's performance, are expected to be released on April 10, 2025.

ANALYSING WITH RESPECT TO THE ESG SCORE

TCS ESG Score: 58 (Moderate Risk)

Environment: 11

Social: 27

Governance: 20

Overall Score: 58 (on Sustainalytics scale, where lower is better risk profile)

TCS's estimated ROE of ~50.7% is not in conflict with its ESG score of 58. In fact, its performance indicates that TCS has been able to balance shareholder returns with moderate ESG risks. Enhancing ESG (especially in social impact and disclosure) can reinforce its strong financial base and investors looking for high-ROE companies with improving ESG footprints may find TCS well-positioned.

ANALYSIS FOR INFOSYS LTD.

1. Net Profit Margin

Net Profit Margin = (Net Income / Revenue) × 100 For Q1 FY 2024–25:

Net Income: 6,368 crore

Revenue: 39,315 crore

Net Profit Margin = (6,368 crore / 39,315 crore) × 100 ≈ 16.2

2. Asset Turnover

Asset Turnover = Revenue / Total Assets As of June 30, 2024:

Total Assets: 108,143.5 crore

Asset Turnover = 39,315 crore / 108,143.5 crore ≈ 0.363

3. Equity Multiplier

Equity Multiplier = Total Assets / Shareholders' Equity As of June 30, 2024:

Shareholders' Equity: 74,172 crore

Equity Multiplier = 108,143.5 crore / 74,172 crore ≈ 1.458

4. Return on Equity (ROE)

ROE = Net Profit Margin × Asset Turnover × Equity Multiplier
ROE = 16.2% × 0.363 × 1.458 ≈ 8.6%

Interpretation:

Net Profit Margin (16.2%): Indicates that Infosys retains 16.2 as profit for every 100 of revenue, reflecting strong profitability. Asset Turnover (0.363): Suggests that Infosys generates approximately 0.363 in revenue for every 1 of assets, indicating moderate efficiency in asset utilization. Equity Multiplier (1.458): Reflects a conservative capital structure with low financial leverage, implying that the company relies more on equity than debt to finance its assets. ROE (8.6%): Represents the return generated on shareholders' equity.

While this figure is based on a single quarter's data, it provides an initial insight into the company's profitability relative to its equity base.

ANALYSING WITH RESPECT TO THE ESG SCORE

ESG Score: 69 – Low Risk (Better than TCS's 58)

Pillar Score

Environmental 12

Social 29

Governance 28

Total 69

A higher score = lower ESG risk (on Sustainalytics scale)

Low Leverage Supports High ESG Standards- Infosys's low equity multiplier (1.458) means: It finances most operations via equity, not debt, this reduces financial risk and exposure to interest rate volatility and fits well with Governance goals (risk-averse, transparent, long-term orientation). A conservative financial strategy reflects strong governance, which is mirrored in Infosys's high governance ESG sub-score (28).

Note: This analysis is based on the first quarter's financial data. For a comprehensive assessment, it's advisable to consider the full fiscal year's data once available, as quarterly figures can be influenced by seasonal variations and may not fully represent annual performance.

It also shows solid Profitability despite high ESG engagement and Infosys has 16.2% net margin, which is excellent considering ongoing investments in ESG, such as- Carbon neutrality initiatives, diversity & inclusion programs and ESG disclosures and audits. Infosys shows that prioritizing ESG does not hurt profitability. Its DuPont performance proves it can be profitable and responsible. Many global investors and sovereign funds screen companies using ESG risk ratings.

TCS VS INFOSYS

While TCS has an estimated ROE of ~50.7%, Infosys's 8.6% may seem low, but:

TCS's high ROE is heavily driven by higher asset turnover.

Infosys chooses strategic, sustainable growth with lower asset deployment and high ESG focus.

Infosys trades off aggressive ROE for sustainability and stakeholder trust, which pays off with a low-risk ESG score of 69.

Final Insight

Infosys's strong ESG score of 69 aligns with its prudent, transparent, and long-term oriented financial strategy, as seen in its DuPont breakdown.

It proves that: You can earn healthy profits (16.2% margin), use low leverage (1.458 multiplier), maintain investor trust, and still be a top ESG performer. TCS outperforms Infosys significantly in ROE due to a strong combination of margin and asset turnover. Infosys while more conservative in financial strategy (lower leverage and turnover), boasts a higher ESG score of 69 (vs TCS's 58). This reflects TCS as a high-efficiency, profit-oriented giant, while Infosys balances sustainable practices with stable returns.

CONCLUSION

In summary, the study examined the impact of ESG scores on the financial performance of Indian companies through a variety of analytical techniques, such as regression and correlation analysis between distinct financial indicators. The following conclusions can be made from it:

The average ESG scores achieved 58.06 which indicates that most of the companies have a good ESG score and there has been an increased focus on ESG disclosures.

ESG Scores are not very strongly correlated with the financial factors undertaken in this study. There is a weak positive correlation with Return on Assets. All the other factors are negatively correlated with the ESG scores.

Similarly result of regression analysis shows that increase in ESG scores will have a positive impact on the value of Return on asset but will have a negative impact on the value of price/book value, debt to equity, ratio return on equity and return on capital employed.

Therefore, ESG score does have an impact on the financial performance of a company but the investors and stakeholders must focus that there exists positive as well as negative impact. The study has its importance for different stakeholders, but is not comprehensive enough to throw light on all minute aspects of ESG related issues.

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Correlation analysis revealed a negative but statistically weak relationship between gold and equity market returns, indicating that gold tends to move in the opposite direction of stocks, though not consistently.

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Analyzing the Correlation between Stock Market Performance and Gold Returns: A Study Of The Past Decade (2014–2024)

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Department of Commerce (Morning)

ABSTRACT

This study explores the dynamic relationship between gold prices and stock market performance in India over the period 2014–2024, focusing on two major indices SandP BSE Sensex and Nifty 50. Using secondary data, the research applies descriptive statistics, correlation analysis, and linear regression to assess whether gold acts as a hedge or safe- haven asset during market volatility. The findings reveal a negative but statistically weak correlation between gold returns and equity indices, suggesting that gold tends to move inversely to the market, though inconsistently. Conversely, regression results indicate a statistically significant positive association between equity indices and gold price levels, highlighting long-term co-movement rather than short-term inverse behavior. These results reinforce the value of portfolio diversification, where gold serves as a stabilizing asset alongside equities. The study offers practical insights for investors, policymakers, and financial institutions regarding strategic asset allocation during periods of economic uncertainty.

INTRODUCTION

Background

Stock Market vs Gold: A Wealth Creation Perspective for Indian Investors

For Indian investors, both the stock market and gold are time-tested and significant tools for building and preserving wealth. Each serves a distinct role in an investment portfolio, shaped by differing risk profiles, economic conditions, and personal financial goals.

The stock market offers opportunities for capital appreciation through equity participation. It is inherently dynamic, with price fluctuations influenced by corporate earnings, economic indicators, investor sentiment, and global events. Platforms like the Bombay Stock Exchange (BSE) and the National Stock Exchange (NSE) provide access to equity trading, with benchmark indices such as the Sensex (top 30 companies) and Nifty 50 (top 50 companies) reflecting market performance. Broader indices like the BSE500 or NSE500 offer a more comprehensive picture of the

overall market, including mid and small-cap stocks.

Gold, in contrast, plays a defensive role in wealth management. Widely regarded as a safe haven, gold protects purchasing power and acts as a hedge against inflation and currency depreciation. It is especially valued during times of financial uncertainty or market downturns. Beyond its financial role, gold also holds deep cultural and economic importance in India, often passed down through generations as a symbol of security and wealth. With no counterparty risk and strong central bank backing, gold remains a resilient, non-correlated asset that helps balance risk in a diversified portfolio.

While the stock market targets long-term growth through business expansion and innovation, gold focuses on stability and wealth preservation. A balanced investment approach often includes both equities for higher returns and gold for protection against volatility.

Rationale/Justification

Investors choose between the stock market and gold based on their financial goals, risk appetite, and market conditions. The stock market is ideal for those seeking long- term capital growth, as it benefits from corporate earnings, economic expansion, and investor sentiment. However, its volatility requires a strategic approach. Gold, in contrast, is favoured for its stability, liquidity, and ability to safeguard wealth during inflation, geopolitical crises, or stock market downturns. Central banks and individuals alike hold gold as a reserve asset, reinforcing its credibility. Thus, while the stock market drives wealth creation through growth, gold ensures wealth preservation, making both essential yet distinct components of a diversified investment portfolio.

LITERATURE REVIEW

For the purpose of the study the following literatures and research paper were referred to:

Nader Trabelsi (2021)

The study analyzed the relationship between gold prices and seven BSE sectoral indices (2000–2018) using Generalized Auto Regressive Conditional

Heteroskedasticity (GARCH) models. The study found gold to be largely uncorrelated with these indices, acting as a hedge for the IT sector and aiding return predictions in FMCG, Consumer Durables, and Oil and Gas.

Dr. Nilam Panchal (2021)

The study examined the impact of gold prices on the Indian stock market using Nifty-50 index data from January 2018 to May 2021. It found that investors often shift from equities to gold during market volatility, indicating a dynamic inverse relationship.

Dr. Naliniprava Tripathy (2016)

Using monthly data from July 1990 to April 2016, this study explored the gold-stock market relationship through various econometric tests. It found no short-term causality between gold prices and Nifty movements, attributing fluctuations to broader macroeconomic factors.

Gadasandula, James, and Rao (2024)

Based on secondary data and a primary survey of 600 respondents, this study found that Indian households invest in gold for multiple reasons, especially to shield themselves from market instability, reaffirming gold's role as a safe-haven asset.

RESEARCH GAP

1. Limited focus on emerging markets: Most studies focus on developed economies like the US and Europe, with little research on stock-gold correlations in emerging markets such as India and China.
2. Lack of high-frequency data analysis: Studies often use monthly or weekly data, missing intraday fluctuations in stock and gold returns.
3. Inconsistent findings on long-term vs. short-term correlation: Some studies suggest gold is always a hedge, while others argue its role depends on market conditions.

OBJECTIVES OF THE STUDY

- To study the stock market fluctuations.
- Examine changes in the gold market within India.
- Evaluate how changes in gold prices affect the performance of the National Stock Exchange (NSE) and the Bombay Stock Exchange (BSE).
- To statistically analyze the causal relationship between gold prices and the key Indian stock market indices, namely the BSE SENSEX and NIFTY 50.

RESEARCH METHODOLOGY

This study employed a quantitative research approach to analyze the relationship between gold prices (over the past 10 years, from 2014 to 2024) and stock market performance (BSE SENSEX and Nifty 50). The research utilizes secondary data to assess correlation and conduct a descriptive analysis.

The following outlines the specific aspects of the methodology:

a. Data Sources:

Secondary Data: This study relied exclusively on secondary data.

- Stock Market Data: Yearly closing prices for the Bombay Stock Exchange (BSE) SENSEX, Nifty 50 were collected.
- Gold Price Data: Yearly average prices for gold (in INR per 10 grams) were collected.

b. Research Tools Used:

Microsoft Excel: This software was utilized as the primary tool for:

- Data organization and management.
- Data cleaning and preprocessing.
- Calculation of annual returns.
- Graphical analysis and visualization of price trends.

Statistical Package for the Social Sciences (SPSS)

- Descriptive statistical analysis (mean, standard deviation, minimum, maximum).

- More formal correlation analysis, potentially by different time segments.

c. Assumptions of Regression Analysis:

The regression analysis assumes standard conditions linearity, independence of errors, homoscedasticity, and normality of residuals. Visual inspection of residual plots suggested no major violations. Although formal diagnostic tests were not conducted, the data reasonably met the basic assumptions required for linear regression.

d. Sampling Method:

Given that the study utilized secondary data of the entire available annual average price data for the specified period from the data sources (BSE for Sensex and relevant sources for gold prices), the sampling method can be considered census or complete enumeration for the period under study. All available data points within the defined timeframe were intended to be included in the analysis, rather than a sample of the data.

e. Period of Study:

The period of study for this analysis, is from 2014 to 2024. Correlation analyses were conducted across this entire period and within the defined sub-segments to understand the evolving relationship between gold and the stock market.

Interpretation:

Gold experienced a decline in 2014 (-0.60 per cent) and a sharper drop in 2015 (-6.64 per cent), reflecting weak demand or a strong rupee. However, returns turned positive from 2016 onward, with notable spikes in 2019 (24.59 per cent), 2020 (28.23 per cent), and 2024 (23.80 per cent), driven by economic uncertainty, the COVID-19 pandemic, and inflationary pressures, which boosted gold's appeal as a safe-haven asset. The only negative return during this period occurred in 2021 (-4.09 per cent), likely due to post-pandemic market corrections. The consistent double-digit returns from 2022 to 2024 (14.38 per cent, 14.88 per cent, and 23.80 per cent) highlight gold's resilience amid global volatility, reinforcing its role as a reliable investment during turbulent times. Overall, the data underscores gold's cyclical nature, with periods of decline followed by strong recoveries, making it a strategic hedge against economic instability.

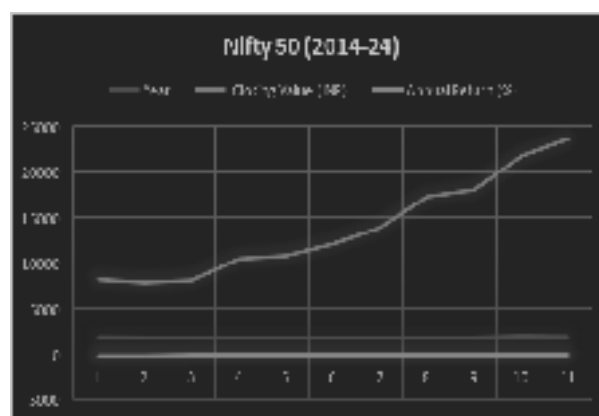


Figure 2: Past ten years (2014-24) Nifty 50 performance
(Source: NSE Website)

Interpretation:

The Nifty 50 index displayed an erratic but increasing trajectory from 2014 to 2024, reflecting changes in both the domestic and international economy. After a robust 31.40 per cent increase in 2014 due to policy optimism, it fell -4.10 per cent in 2015 as a result of market uncertainty. Prior to a dramatic surge in 2017 (29.00 per cent) propelled by strong business performance, there were

DATA ANALYSIS AND FINDINGS

A) Secondary Data Analysis:

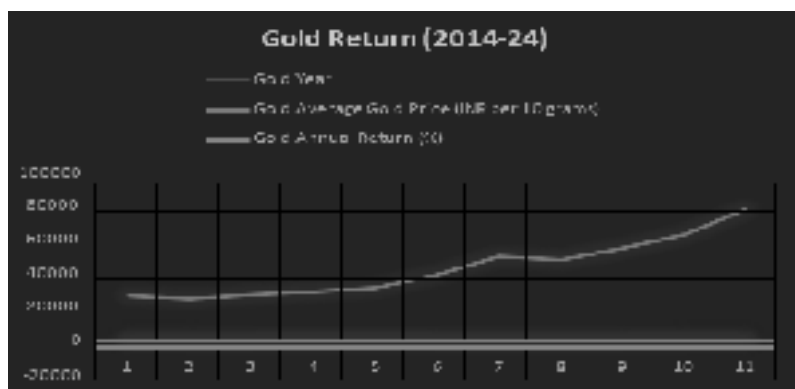


Figure 1: Past ten years (2014-24) Gold performance
(Source: Forbes India)

gains of 3.00 per cent in 2016. After slowing to 3.10 per cent in 2018, growth steadily increased to 12.00 per cent in 2019.

Due to robust markets and liquidity support, the pandemic year of 2020 unexpectedly saw a 14.90 per cent increase, which was followed by a 24.10 per cent increase in 2021 during the recovery.

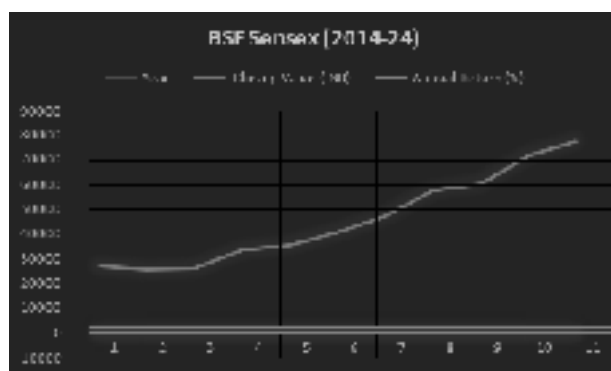


Figure 3: Past ten years (2014-24) BSE Sensex performance
(Source: BSE Website)

Gains slowed to 4.30 per cent in 2022 as rate hikes and inflation affected investor morale, but they recovered to 20.00 per cent in 2023 thanks to solid economic fundamentals. A weaker 8.80 per cent growth in 2024 may indicate a maturing bull phase or new macroeconomic challenges.

Despite short-term dips, the Nifty 50 outperformed safer assets like gold and produced notable long-term growth overall. The swings demonstrate how susceptible stocks are to shifts in global trends, policy, and investor opinion, reaffirming their reputation as a riskier but more lucrative investment class.

Interpretation:

The BSE Sensex exhibited a dynamic performance from 2014 to 2024, mirroring India's economic trajectory and global market influences. The index began the

decade with a robust 31.39 per cent surge in 2014, likely fueled by investor optimism following the election of a stable government and expectations of economic reforms. However, 2015 saw a correction of -4.06 per cent, attributed to global uncertainties such as the Chinese market crash and domestic challenges.

Recovery resumed in 2016 (3.01 per cent), followed by a strong rally in 2017 (28.65 per cent), driven by improving corporate earnings and liquidity inflows. The momentum continued in 2019 (12.02 per cent) and 2020 (14.90 per cent), the latter despite the pandemic, as stimulus measures and retail participation buoyed markets. The post-pandemic rebound peaked in 2021 (24.12 per cent), reflecting pent-up demand and economic reopening.

Subsequent years saw moderation, with 2022 (4.33 per cent) impacted by geopolitical tensions and rate hikes, while 2023 (20.03 per cent) rebounded on India's resilient growth story. By 2024 (8.80 per cent), returns tapered, signaling consolidation or cautious optimism amid global headwinds.

Descriptive analysis and Interpretation:

Statistic	Gold_Annual Return (per cent)	Nifty 50_Annual Return (per cent)	BSE Sensex_Annual Return (per cent)
Mean	0.107754545	0.132818182	0.133036364
Standard Error	0.035412518	0.034923506	0.034907947
Median	0.1008	0.12	0.1202
Standard Deviation	0.117450035	0.115828164	0.115776563
SampleVariance	0.013794511	0.013416164	0.013404213
Kurtosis	-1.116807506	-1.124459692	-1.127322062
Skewness	0.008773662	0.228466206	0.22963781
Range	0.3487	0.355	0.3545
Minimum	-0.0664	-0.041	-0.0406
Maximum	0.2823	0.314	0.3139
Sum	1.1853	1.461	1.4634
Count	11	11	11

Table 1: Descriptive Statistics of Gold Return and BSE Sensex, Nifty 50

Interpretation:

The annual return analysis of Gold, Nifty 50, and BSE Sensex from 2014–2024 reveals distinct return patterns and volatility profiles, providing insight into their correlation dynamics. Compared to stocks, gold had a relatively stable average annual return of 10.75 per cent with a standard deviation of 11.75 per cent. The stronger growth potential and more exposure to market cycles are reflected in the slightly lower volatility (11.58 per cent and 11.57 per cent) and higher mean returns (13.28 per cent and 13.30 per cent, respectively) of the Nifty 50 and Sensex.

According to skewness statistics, gold (0.008) was almost symmetrical, showing balanced swings on the upside and downside, whereas stocks (Nifty: 0.228, Sensex: 0.229) had a slight tendency toward larger positive returns. In contrast to a normal distribution. All three assets exhibit negative kurtosis (Gold: -1.11, Nifty: -1.12, Sensex: -1.12), suggesting lighter tails and fewer extreme fluctuations compared to a normal distribution. Gold's lesser drawdown (- 6.64 per cent) and narrower maximum return (28.23 per cent) contrast with the larger drops and bigger peaks of stocks (Nifty: 31.4 per cent, Sensex: 31.39 per cent).

The idea that gold and stocks have complimentary roles in a portfolio is supported by these patterns, which suggest that even when they occasionally move in the same direction, their different risk-return structures offer chances for diversification.

Key Takeaways:

1. Equities outperformed gold on average but with higher cyclical sensitivity.
2. Gold provided stability and downside protection.
3. Low alignment in volatility patterns suggests diversification benefits.

CORRELATION ANALYSIS

Variables	Gold_Annual Return (per cent)	Nifty 50_Annual Return (per cent)	BSE Sensex_Annual Return (per cent)
Gold_Annual Return (per cent)	1		
Nifty 50_Annual Return (per cent)	-0.108572972	1	
BSE Sensex_Annual Return (per cent)	-0.109181821	0.999998547	1

Table 2: Correlation between Gold Return and BSE Sensex Return, Nifty 50 Return

Interpretation:

The correlation matrix provides insights into the relationships between Gold, Nifty, and Sensex returns. Gold returns exhibit a negative correlation with both Nifty (-0.108) and Sensex (-0.109), indicating that when stock market returns rise, gold returns tend to decline, and vice versa. This reinforces the idea that Gold acts as a hedge against stock market fluctuations, as investors often shift to Gold during market downturns. Although the correlations between Gold and Nifty/Sensex are negative, they are not statistically significant ($p > 0.05$), indicating a weak and inconsistent inverse relationship.

On the other hand, Nifty and Sensex returns show an extremely strong positive correlation (0.999), meaning they move almost in tandem. This is expected, as both indices represent the broader Indian stock market and share common economic and market influences. The near- perfect correlation suggests that investing in Nifty or Sensex yields almost identical returns over time.

Overall, the data suggests that while Gold offers diversification benefits due to its negative correlation with equities, Nifty and Sensex behave similarly, making them interchangeable for equity market exposure. An investor seeking to balance risk should consider combining Gold with stock market investments to achieve a more stable portfolio.

REGRESSION ANALYSIS For BSE Sensex Index

Regression Statistics	
Multiple R	0.976938113
R Square	0.954408077
Adjusted R Square	0.949342308
Standard Error	3929.119575
Observations	11

ANOVA Table

Source	df	SS	MS	F	Significance F
Regression	1	2908567848	2908567848	188.4033875	2.43242E-07
Residual	9	138941825.7	15437980.63		
Total	10	3047509674			

Coefficients Table

Variable	Coefficients	Standard Error	t Stat	P-value
Intercept	694.8514978	3304.727969	0.210259817	0.838147892
BSE SENSEX (Closing Value)	0.915413069	0.066691849	13.72601135	2.43242E-07

Table 3: Regression Analysis of Gold Price and BSE Sensex Model Summary

Interpretation:

The ANOVA results confirm that the regression model is statistically significant ($p = 0.02 < 0.05$), meaning Sensex Closing strongly influences the dependent variable. The coefficient for Sensex Closing ($B = .915$, $p = 0.02$) indicates that for every 1-point change in Sensex Closing, the dependent variable changes by .915 units. However, the intercept (694.85 , $p = 0.838$) is not significant, implying that the base value has little impact.

In conclusion, the model confirms that Sensex Closing has a strong and reliable impact on the dependent variable, making it a key driver of change. While the intercept is not meaningful, the high significance of Sensex Closing suggests that it can be effectively used for predictive analysis.

For Nifty 50

Regression Statistics	
Multiple R	0.975725268
R Square	0.952039799
Adjusted R Square	0.946710888
Standard Error	4029.876976
Observations	11

ANOVA Table

Source	df	SS	MS	F	Significance F
Regression	1	2901350498	2901350498	178.6555945	3.05806E-07
Residual	9	146159176	16239908.44		
Total	10	3047509674			

Coefficients Table

Variable	Coefficients	Standard Error	t Stat	P-value
Intercept	487.7244541	3407.618897	0.143127641	0.889342621
NIFTY 50(Closing Value)	3.063508087	0.229197946	13.36621093	3.05806E-07

Table 4: Regression Analysis of Gold Price and Nifty 50 Model Summary**Interpretation:**

The Analysis of Variance (ANOVA) results shows that the regression model is statistically significant (p-value of 0.03, which is well below the 0.05 threshold. This confirms that the independent variable (Nifty Closing) has a strong influence on the dependent variable, making the model a reliable predictor. In the regression coefficients table, the Intercept (487.72) has a p-value of (0.889), meaning it is not statistically significant and does not contribute meaningfully when Nifty Closing is

zero. However, the Nifty Closing coefficient ($B = 3.063$, $p = 0.03$) is highly significant, indicating that for every 1-point change in Nifty Closing, the dependent variable changes by 3.063 units.

Overall, the analysis confirms that Nifty Closing has a strong and statistically significant impact on the dependent variable, making it a key factor in prediction. While the constant term is not meaningful, the high significance of Nifty Closing reinforces its role as a reliable indicator.

CONCLUSION AND RECOMMENDATIONS

The study stated the impact and effect of gold prices on the Indian stock market, utilizing the BSE Sensex and Nifty 50 indices as market proxies. Correlation analysis revealed a negative but statistically weak relationship between gold and equity market returns, indicating that gold tends to move in the opposite direction of stocks, though not consistently. This suggests that when the stock market performs well, gold return might decline, potentially acting as a hedge against losses. Interestingly, regression analysis identified a statistically positive impact of gold price changes on the stock market, although this influence was quantitatively small. This implies that while gold can influence the market, its effect is outweighed by other, more significant factors. During the study period, the movements of gold prices, BSE Sensex, and NSE500 were found to be unstable over time.

Recommendations:

- **Investors:** Offer insights into portfolio diversification strategies, considering the relationship between gold and stock market investments. For example, discuss the potential role of gold as a hedge against stock market volatility.
- **Policymakers:** Suggest potential implications of the findings for economic policy, financial market regulation, or investment promotion.
- **Financial Institutions:** Offer recommendations for how financial institutions can use the research findings to better advise clients or develop investment products.

Limitations of the Study:

- **Data Limitations:** The study may be constrained by the availability, granularity, or frequency of data, which could affect the depth of analysis.
- **Scope Limitations:** Specify if the study focused on specific indices or a particular time frame, limiting the generalizability of the findings.

- **Methodological Limitations:** The reliance on secondary data or specific statistical approaches may introduce biases or restrict the study's robustness.
- **External Factors:** Acknowledge that the study might not have captured all the complex external factors that can influence the relationship between gold and stock market (e.g., geopolitical events, sudden policy changes).

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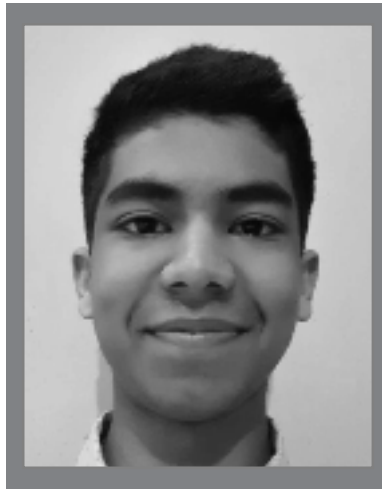
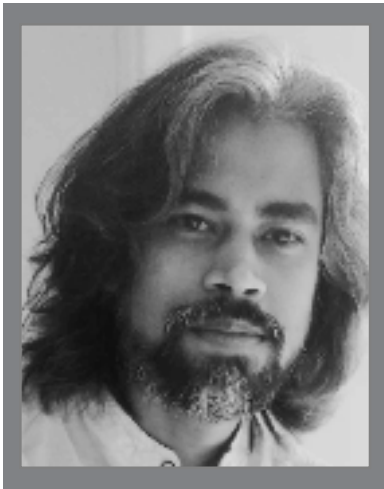
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This combined effect of enhancing the management of cash flows as well as inducing liquidity shortages poses a nuanced but vital facet of financial digitization.



UPI and the Cash Flow Tug of War: Decoding The Double Impact On Small Businesses

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ABSTRACT

With the growth of digital payment methods like UPI, mobile wallets, and card transactions, India's financial environment has seen a rapid transition. The adoption of digital payments by small business owners and service providers, including merchants, pan shops, street food vendors, rickshaw

pullers, and auto-rickshaw drivers, is increasing day by day providing ease, speed, and financial inclusion. With an emphasis on adoption rates, sales impact, cash flow management, and liquidation concerns (such as the inability to offer change due to lower cash usage), this study attempts to evaluate the penetration, advantages, and difficulties of digital payments in this industry faced by MSME's and small business owners and address both sides of this digital payment coin for MSME's and small business owners. To collect primary data, a structured questionnaire was distributed to service providers and owners of small businesses. The research examines factors influencing the adoption of digital payment methods, including years in operation, types of businesses, and income levels. It also explores whether digital transactions have led to increased cash flow, enhanced sales, or introduced new financial challenges such as liquidation issues and payment frauds. A variety of quantitative methods were employed to identify significant trends and relationships, including hypothesis testing, correlation analysis and descriptive statistics. The results indicate that, despite the benefits of improved accessibility, cashflow management and financial efficiency through digital payments, there are still challenges like liquidation issues and frauds.

This research emphasizes to address the vital role of UPI in not only in increasing cashflow management and sales but also the rising issue of cash crunch and liquidity issues caused by it.

KEYWORDS: UPI, UPI Adoption, Digital Payments, Small Businesses, Liquidity Issues, Cash Flow Management, Financial Inclusion, India.

INTRODUCTION

In India, financial inclusion stands as a vital driver of economic growth and equitable access to financial services.

- This research probes the intricate dynamics of Indian financial inclusion, examining key independent variables that shape access, utility, and management of cashflows amongst MSME, vendors and businesses.

- Like two sides of a coin this research addresses sales gains, liquidity pains, and the financial balancing act for small businesses.
- Simultaneously, "Consumer Perception and Acceptance Towards Digitization" reflects evolving financial landscapes.
- The pandemic accelerated digitization while revealing economic vulnerabilities, warranting thorough evaluation. "Government Initiatives and Digital Infrastructure" foster equitable access.
- In this research we will have an eagle eye view from business point of view addressing the benefits as well as challenges faced by them.
- Lastly, this research untangles the interplay of these variables, unveiling their combined impact on India's dynamic financial landscape among retailers.

RESEARCH FRAMEWORK AND METHODOLOGY

OBJECTIVES OF THE STUDY

- To evaluate the depth of UPI penetration among small businesses, vendors and service providers in India.
- To evaluate the depth of UPI penetration among autorickshaws.
- To study the emergence of cash crunch and liquidity issues faced by retailers and small businessmen due to rise of UPI.
- Influence of UPI in improving cashflow management and helping businesses in efficient revenue handling, less pilferage and easier transfer of funds.
- Influence of UPI in increasing sales volume for retailers thereby helping business grow and foster better financial development.

DATA SOURCES

Strategy of Drawing Sample/Collecting Data: The acquisition of data through a meticulously designed questionnaire and direct interviews involving 40

autorikshaws + 50 small businesses (respondents) facilitates an exhaustive assessment of financial literacy. This approach offers valuable insights into both proficient and deficient areas, thereby guiding strategic initiatives aimed at understanding pros and cons faced by small businesses.

The personal interviews conducted with randomly selected group of individuals served as a not only quantitative but also qualitative data source, providing insights into participants' awareness, attitudes, and opinions regarding UPI. This qualitative data source was instrumental in understanding the human perspective and the contextual nuances of the research topic.

Using the gathered dataset, a hypothesis analysis was carried out using the proportionality test. Using this statistical method, the proposed consumer acceptance and perception hypotheses were either supported or refuted.

RESEARCH DESIGN

The study design is "Explanatory" in nature. It can serve as a starting point for more in-depth studies. Understanding this kind of study can make it easier for you to identify the underlying causes of certain problems and complete information gaps.

A causal or diagnostic research design has been adopted in this study in order to determine the impact of status of UPI on MSME's and small business owners.

METHODOLOGY

Qualitative Approach: The research methodology employed qualitative techniques, specifically interviews, to delve deeply into participants' experiences and perceptions regarding the research topic.

Open-Ended Conversations: The interviews were conducted one-on-one, allowing participants to express themselves freely without constraints imposed by structured questions, fostering rich and detailed responses.

Thematic Analysis: The qualitative data collected from the interviews underwent thematic analysis, a method used to identify and interpret patterns or themes within the dataset, facilitating a comprehensive understanding of the subject matter.

Quantitative Analysis with Chi-Square Tests: Following the qualitative phase, the study employed Chi-square tests for hypothesis analysis. This statistical method examined associations between variables and tested formulated hypotheses related to financial literacy and UPI preference.

Mixed-Methods Approach: By combining qualitative and quantitative methodologies, the research provided a holistic understanding of the topic, blending nuanced qualitative insights with statistical assessments, thereby enhancing the depth and breadth of the study's findings.

ANALYSIS AND FINDINGS

ANALYSIS OF PROPORTIONALITY TESTS IN UPI PENETRATION AND FINANCIAL IMPACT

HYPOTHESIS TEST: PENETRATION OF UPI AMONG SMALL BUSINESS OWNERS AND MSMEs EXCEEDING 84PER CENT

HYPOTHESIS:

Null Hypothesis (H_0): The proportion of small business owners and MSMEs using UPI is at most 84per cent ($p \leq 0.84$).

Alternative Hypothesis (H_1): The proportion is greater than 84per cent ($p > 0.84$).

RESULTS:

Sample size (n) = 50

Successes (businesses using UPI) = 47

Sample proportion ($\hat{p}$) = 0.94

Test statistic = 3.0134

p-value = 0.04129

95per cent Confidence Interval: (0.8460, 1.0000)

Interpretation: With a p-value of 0.04129, which is below 0.05, we reject the null hypothesis. This confirms that the proportion of UPI adoption among small business owners and MSMEs is significantly greater than 84per cent. The sample proportion of 94per cent further strengthens this finding, indicating that digital payments have deeply penetrated the small business sector.

```

> # goodness test to study the the penetration of upi among small business owner
> # and 80% to see that 84% or not.
> n = 40
> x = 38
> p = 0.8
> prop.test(x = 38, n = 40, p = 0.8, alternative = "less", conf.level = 0.05)

One-sample proportion test with continuity correction

data:  success out of n, null probability p
sample estimates:
p-value = 0.04129, df = 1, p-value = 0.04129
alternative hypothesis: true p is smaller than 0.8
95 percent confidence interval:
 0.000000 0.960000
sample estimates:
 p
0.95
>

```

Figure 2: Proportionate test
(Source Primary Data)

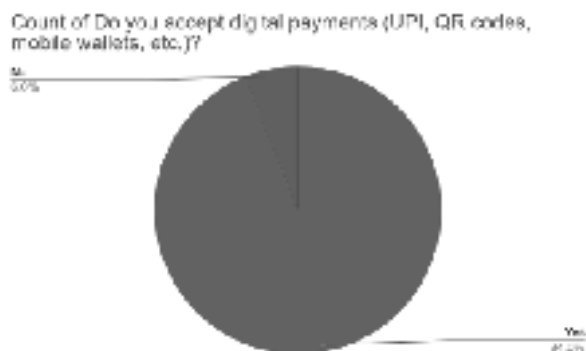


Figure 3 : digital payments
(Source Primary Data)

HYPOTHESIS TEST: UPI PENETRATION AMONG AUTO RICKSHAWS BEING LESS THAN 47PER CENT

HYPOTHESIS:

Null Hypothesis (H_0): The proportion of auto rickshaw drivers accepting UPI is at least 47per cent ($p \geq 0.47$).

Alternative Hypothesis (H_1): The proportion is less than 47per cent ($p < 0.47$).

RESULTS:

Sample size (n) = 40

Successes (auto rickshaws using UPI) = 13

Sample proportion (p_{hat}) = 0.325

Test statistic = 2.8191

p-value = 0.04657

95per cent Confidence Interval: (0.0000, 0.4673)

INTERPRETATION:

The p-value (0.04657) is below 0.05, leading us to reject the null hypothesis. This supports the claim that the proportion of UPI adoption among auto rickshaw drivers is significantly lower than 47per cent. The sample proportion of 32.5per cent suggests that UPI usage in this segment is still limited, possibly due to a lack of infrastructure, awareness, or customer demand.

```

> # goodness test to study the the penetration of upi among auto rickshaw driver
> # and 47% to see that 47% or not.
> n = 40
> x = 13
> p = 0.47
> prop.test(x = 13, n = 40, p = 0.47, alternative = "less", conf.level = 0.05)

One-sample proportion test with continuity correction

data:  success out of n, null probability p
sample estimates:
p-value = 0.04657, df = 1, p-value = 0.04657
alternative hypothesis: true p is less than 0.47
95 percent confidence interval:
 0.000000 0.467251
sample estimates:
 p
0.325
>

```

Figure 4: proportionate test

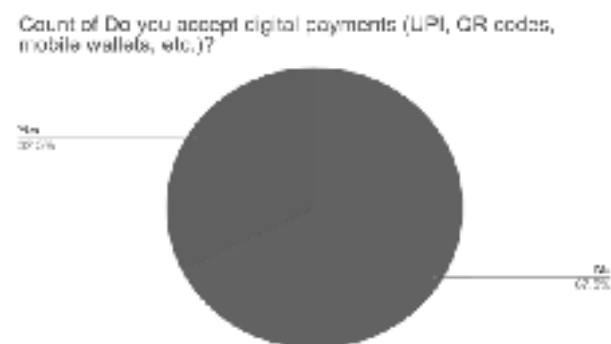


Figure 5: digital payments
(Source Primary Data)

Hypothesis Test: Cash Crunch and Liquidity Issues Faced by Retailers and Small Businessmen Due to UPI Adoption

HYPOTHESIS:

Null Hypothesis (H_0): The proportion of retailers and small business owners facing cash crunch and liquidity issues due to UPI adoption is at most 77per cent ($p \leq 0.77$).

Alternative Hypothesis (H_1): The proportion is greater than 77per cent ($p > 0.77$).

RESULTS:

Sample size (n) = 50

Successes (retailers facing liquidity issues) = 44

Sample proportion (p_{hat}) = 0.88

Test statistic = 2.8233

p-value = 0.04645

95per cent Confidence Interval: (0.7725, 1.0000)

Interpretation: Since the p-value (0.04645) is less than the standard significance level (0.05), we reject the null hypothesis. This indicates strong evidence that more than 77per cent of small business owners and retailers face liquidity issues due to UPI adoption. The confidence interval also supports this claim, as the lower bound is above 0.77. The findings suggest a significant disruption in cash flow cycles for these businesses.



Figure 6 : difficulty in payments
(Source Primary Data)

Hypothesis Test: Improvement in Cash Flow Management Due to UPI Among Small Business Owners

Hypothesis:

Null Hypothesis (H_0): The proportion of small business owners experiencing improved cash flow due to UPI is at most 84per cent ($p \leq 0.84$).

Alternative Hypothesis (H_1): The proportion is greater than 84per cent ($p > 0.84$).

Results:

Sample size (n) = 50

Successes (businesses with improved cash flow) = 47

Sample proportion (p_{hat}) = 0.94

Test statistic = 3.0134

p-value = 0.04129

95per cent Confidence Interval: (0.8460, 1.0000)

Interpretation: Since the p-value (0.04129) is below 0.05, we reject the null hypothesis. This confirms that more than 84per cent of small business owners report improved cash flow due to UPI adoption. The high adoption rate and convenience of instant transactions may have contributed to better financial management for these businesses.

Increase in Sales Volume Due to UPI (Proportion > 68per cent)

```
> # hypothesis test to study the cash flow management has improved due to UPI
> # among more than 84% of small business owner or not.
> n= 50
>
> successes = 47
> p.hat= success/n
> p = 0.84
>
> prop.test(successes,n,p, alternative = "greater")
# sample proportions test with continuity correction

data: successes out of n, null probability p
z-squared = 3.0134, df = 1, p-value = 0.04129
alternative hypothesis: true p is greater than 0.84
95 percent confidence interval:
 0.8460477 1.0000000
sample estimates:
p
0.94
```

Figure 7: proportionate test
(Source PRIMARY DATA)

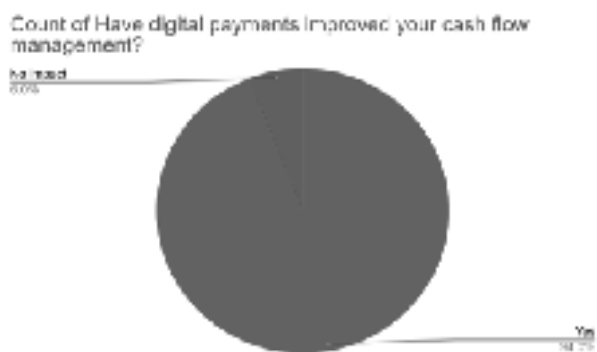


Figure 8: change in digital payments
(Source Primary Data)

HYPOTHESIS:

Null Hypothesis (H_0): The proportion of businesses experiencing increased sales due to UPI is less than or equal to 68per cent ($p \leq 0.68$).

Alternative Hypothesis (H_1): The proportion of businesses experiencing increased sales due to UPI is greater than 68per cent ($p > 0.68$).

RESULTS:

Sample Size (n): 50

Observed Proportion (p): $40/50 = 0.80$

Null Proportion (p): 0.68

p-value: 0.04771

95per cent Confidence Interval (CI): (0.681, 1.000)

INTERPRETATION:

Since p-value < 0.05 , we reject the null hypothesis at a 5per cent significance level, confirming that more than 68per cent of businesses experience an increase in sales due to UPI adoption. This suggests that digital payments attract more customers, reduce friction in transactions, and boost overall sales volume for businesses.

KEY FINDINGS AND COMPARITIVE ANALYSIS INSIGHTS:

Widespread UPI Adoption Across Small Businesses:

```

a 2 hypothesis test to check whether sales volume has increased due to UPI
> #found more than 68% of small business owner or not.
> n = 50
> success = 40
> p_value < 0.05
> p = 0.04771
> prop.test(success, n, p, alternative = "greater")

2-sample proportions test with continuity correction

data:  success out of n, null probability p
X-squared = 3.7822, df = 1, p-value = 0.04771
alternative hypothesis: true p is greater than 0.68
95 percent confidence interval:
 0.6816372 1.0000000
sample estimates:
      p 
0.8
>

```

Figure 9 : proportionate test
(Source Primary Data)

The statistical analysis verified that small business and MSMEs' adoption of UPI is considerably high, with over 94per cent of business owners actively utilizing digital payments. This result identifies a significant shift towards cashless payments, fueled by ease of use, speed of transaction, and customers' preference. Business owners interviewed recognized that UPI has emerged as an essential tool of their daily operations, enhancing limited reliance on cash while offering smooth payment solutions.

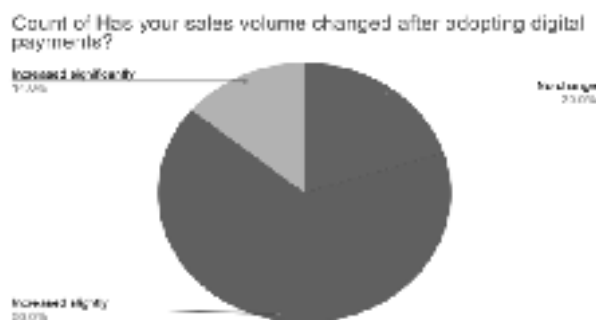


Figure 10 : change in sales volume
(Source Primary Data)

LOWER UPI PENETRATION AMONG AUTO-RICKSHAW DRIVERS AND SERVICE PROVIDERS:

Compared to small businesses, auto-rickshaw drivers and other service providers showed much lower rates of

adoption, with statistical data in favor of the fact that UPI penetration among this group is less than 47 per cent. Most drivers mentioned technical limitations, absence of smartphone availability, network problems, and fear of transaction failure as main reasons for their reluctance towards using digital payments. But among the ones who utilized UPI, the majority appreciated its advantages and even suggested other drivers adopt it to gain more customers.

IMPACT ON BUSINESS SALES AND CUSTOMER PREFERENCE:

The research found that most business owners reported a boost in sales after they adopted UPI payments, especially since customers now expect and prefer digital payment methods. Most businesses indicated that the presence of UPI boosted their customer base, as individuals who had limited cash tended to prefer buying from stores that supported digital payments. This is consistent with India's overall financial inclusion strategy, which promotes digital transactions as a way to increase economic engagement.

LIQUIDITY AND CASH FLOW ISSUES:

Although UPI has enhanced cash flow management in general, a large percentage of business owners (over 80 per cent) indicated that they were experiencing liquidity problems due to lower availability of cash at their counters. Most vendors were unable to offer change for small cash transactions because most of their money was kept in digital wallets instead of cash. This paradox points to an operational issue—where electronic payments facilitate transactions, they also introduce a new type of vulnerability where business owners may have to withdraw physical cash periodically to ensure liquidity.

Strong Endorsement for UPI Among Existing Users:

One of the key qualitative findings from the research was that existing users of UPI highly recommended it to others. Most of the participants were content with e-transactions, saying that UPI improved the efficiency of their businesses, lowered the risk of theft and

counterfeit currency, and allowed better financial tracking. More importantly, most UPI users reported that they would continue doing digital payments in the future, supporting the long-term sustainability of cashless payments in India's informal economy.

Enhancement of Cash Flow Management:

One of the most significant benefits of UPI adoption found in this research is its effect on cash flow management. Numerous entrepreneurs indicated that UPI transactions allowed them to keep better track of their revenues, minimized the possibility of theft and fraud, and gave them a clearer picture of daily revenue. Unlike their cash transactions, which involved physical processing and manual accounting, their UPI payments ensured instant crediting of funds into their bank accounts, making it simpler to budget, plan expenses, and reinvest in their business operations.

CONCLUSION

This research provides a comparative perspective on digital payment acceptance across various segments of businesses and shows high disparity between high adoption in MSMEs and less acceptance by auto-rickshaw drivers and other service providers. Quantitative tests of proportionality statistically confirmed the differences and established the rationale for focused awareness programs and infrastructural upgradation to fill the adoption gap.

Additionally, while UPI has elevated sales and financial productivity considerably, the liquidity management issue is still a significant concern for many businesses, particularly those that receive both cash and electronic payments. Conversely, having the option of tracking revenues electronically and getting paid instantly has enhanced many companies' ability to manage cash flow, enabling them to have tighter control over their revenue and expenditure streams. This combined effect of enhancing the management of cash flows as well as inducing liquidity shortages poses a nuanced but vital facet of financial digitization.

The overall implication of this research is that digital payments, and UPI specifically, are not only convenient

but also a financial imperative of the current dynamic market. As more companies embrace digital transactions, India gets closer to becoming a fully cashless economy where financial transactions become quicker, safer, and more inclusive. The positive attitude among existing UPI users, their intention to use it further, and their vigorous promotion of its use signal a cultural transition towards digital financial systems—one that will define the future of small enterprises and informal commerce in India.

This study highlights both what has been achieved and what still lies in the way. Even as digital payments have revolutionized business processes, policymakers, banks, and payment service providers need to keep streamlining the digital environment in order to solve problems of liquidity, enhance network stability, and bring financial services to the underserved.

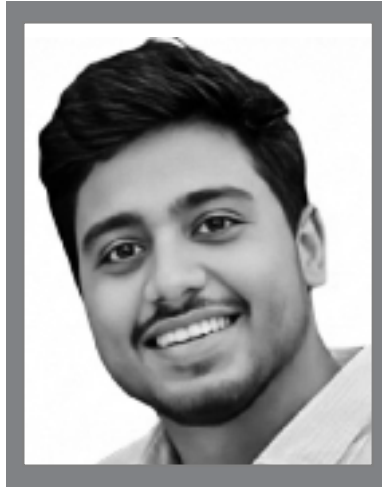
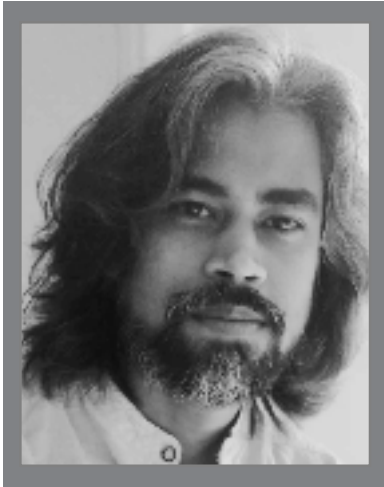


Figure 11: digital scanner in grocery shop
(Source Primary Data)

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“

Shareholders should re-evaluate investing in Adani at this price on the grounds of long-term fundamentals over short-term trends.

”

A Valuation Study of Adani Green Energy Ltd. (AGEL)

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Department: Commerce (Morning)

ABSTRACT

Adani Green Energy Ltd. (AGEL), one of India's leading renewable energy firms, has demonstrated exponential growth in its operational capacity and revenue streams, yet it remains at the centre of valuation debates due to its high leverage, volatile market sentiment, and complex regulatory landscape. This research estimates AGEL's intrinsic value through Discounted Cash Flow (DCF) and market multiples while integrating external risk factors and peer comparison. Using primary survey data and secondary financial reports from

2017 to 2024, the study evaluates how financial performance, government policy, and market perception affect AGEL's valuation. The findings suggest that while AGEL enjoys operational efficiency and future scalability, market overvaluation concerns persist. These insights are intended to aid investors and policymakers in understanding the nuanced valuation landscape of renewable energy firms in India.

KEYWORDS: Adani Green Energy, Valuation, Discounted Cash Flow (DCF), Renewable Energy, Financial Risk, Market Sentiment

INTRODUCTION

India's transition to clean energy has made the renewable sector a key area of investment, with Adani Green Energy Ltd. (AGEL) at its forefront. Established in 2015, AGEL has rapidly expanded its renewable energy portfolio, leveraging solar and wind capacity to contribute toward India's national target of 500 Giga Watt (GW) by 2030. Despite operational success, AGEL's stock remains controversial lauded for high Earnings Before Interest, Tax, Depreciation and Amortization (EBITDA) margins yet scrutinized for overvaluation and financial opacity.

This paper attempts a detailed valuation analysis, embedding risk assessments and peer comparisons to explore whether AGEL's soaring valuation is justified by its fundamentals.

LITERATURE REVIEW

Shinde-Pawar et al. (2023) – Examined AGEL's strategic recovery after the Hindenburg Research report, highlighting debt management, proactive stakeholder communication, and resilience in renewable operations as key drivers of stability.

Jindal et al. (2025) – Assessed climate transition risks, finding AGEL's solar and wind investments lowered its exposure to fossil fuel policy changes, creating a relatively low-risk profile during India's energy transition.

Rajput et al. (2024) – Analyzed the impact of sustainable electrification on stock performance,

showing AGEL outperformed peers due to investor confidence in its renewable projects, linking sustainability with market success.

Gupta & Jindal (2024) – Compared AGEL's Return on Investment (ROI), debt ratios, and project completion rates to industry benchmarks, concluding that its large capacity growth and cost-efficient project management drove exceptional financial results.

Meher et al. (2024) – Used Random Forest models to predict renewable stock prices, finding AGEL's performance was strongly influenced by policy measures and energy output, demonstrating sensitivity to operational and regulatory changes.

RESEARCH GAP & AIM

The research identifies gaps in renewable energy valuation, particularly for Adani Green Energy Ltd. (AGEL), including the need for advanced financial engineering models, a deeper understanding of market-based vs. intrinsic valuation differences, peer comparisons, risk factor analysis, stock market perception, and long-term business viability.

The study aims to:

- Determine AGEL's intrinsic value using DCF, market multiples, and other financial models.
- Assess financial performance metrics such as revenue growth, EBITDA margins, debt levels, and Return on Equity (ROE) to gauge sustainability.
- Evaluate the impact of government policies, regulations, investor sentiment, and macroeconomic trends on valuation.
- Compare AGEL's market position with peers like Tata Power, National Hydroelectric Power Corporation (NHPC), Jindal South West (JSW) Energy, and Suzlon.
- Conduct risk assessments focusing on capital structure, interest coverage, reinvestment rates, and volatility sensitivity.
- Analyze share price movements, market sentiment, and valuation multiples to assess overvaluation or undervaluation.

- Offer strategic recommendations for investors, policymakers, and corporate leaders based on valuation insights, risks, and growth potential.

METHODOLOGY

The study evaluates AGEL's valuation in India's renewable energy sector using both primary and secondary data. Primary insights were gathered from 165 respondents, including students, investors, and professionals. Secondary data comprises AGEL's financials (2017–2024), investor presentations, stock screeners, and macroeconomic sources. The analysis applies DCF, market multiples (Price Earnings (P/E), Enterprise Value (EV)/EBITDA, ROE), and peer comparison with Tata Power, JSW Energy, NHPC, and Suzlon, using Excel-based models, ratio analysis, and charts.

STRATEGIC & OPERATIONAL CONTEXT

Financial Overview

AGEL's financial performance from Financial Year (FY)20 to FY25 reflects robust top-line and EBITDA growth, driven by aggressive capacity expansion in the renewable energy sector. However, despite operational gains, the company continues to face profitability challenges, with low or negative net income across multiple years. This suggests that high growth is being financed through elevated debt levels and sustained capital expenditure, leading to pressure on margins and returns. While the growth story is compelling, especially in a sector with long-term tailwinds, the company's elevated valuation multiples must be weighed against its subdued bottom-line performance and high leverage. Overall, AGEL presents a high-growth, high-risk profile that demands a cautious and fundamentals-based valuation approach.

Key Financial Metrics				
	Mar-20	Mar-21	Mar-22	Mar-23
Total Sales	₹ 2,549	₹ 3,124	₹ 5,133	₹ 7,776
Sales Growth (y-o-y)	23.84	22.58	64.31	52.49
Gross Profit Margins	73.54	75.74	70.93	73.90
EBITDA Margin	70.76	72.79	68.79	71.75
EBIT Margin	55.29	57.23	52.25	55.03
Net Profit Margin	15.81	-5.63	0.02	11.77
Earning Per Share (In Rs)	7.58	-1.13	0.01	5.78
Dividend Per Share	0.00	0.00	0.00	0.00

Key Financial Metrics				
	Mar-20	Mar-21	Mar-22	Mar-23
Enterprise Value	38,139.49	1,95,990.12	3,50,700.81	1,91,816.02
EV/EBITDA	21.15x	66.19x	59.32x	34.38x
EV/Sales	14.96x	62.76x	68.32x	24.67x
Price To Earnings	1031.78x	812.83x	512.39x	143.30x
Price To Book Value	10.17x	78.54x	114.56x	19.11x
Return On Capital Employed	8.18	6.77	4.84	6.95
Return On Equity	17.10	-8.00	0.04	12.53

Figure 1: Financial Metrics of AGEL
(Source: Primary Data)

Industry Analysis

India's renewable energy sector is rapidly evolving, driven by strong government support, including a 11.1 lakh crore capex for FY 2024–25 and a target of 500 GW non-fossil fuel capacity by 2030. The sector saw 71 per cent of new power capacity additions from renewables in FY 2023–24. Adani Green, now India's first company to cross 10,000 MW renewable capacity, has grown its portfolio at a 41 per cent Compound Annual Growth Rate (CAGR)—far outpacing the national average. With rising energy sales, expanding operational capacity, and a locked-in pipeline of nearly 22 GW, AGEL is positioned as a key player in supporting

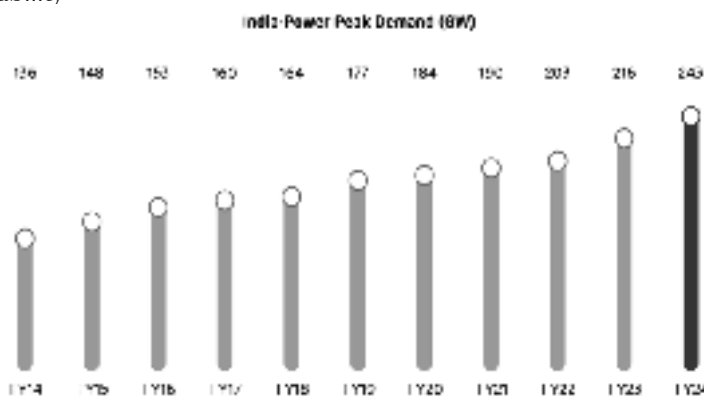


Figure 2: Peak Power Demand in India
(Source: Primary Data)

India's clean energy and net-zero goals amidst global efforts to curb emissions and fossil fuel dependence.

Operation Portfolio

AGEL's renewable capacity grew from 2.5 GW in FY20 to 15.2 GW in FY25 (including near-completion projects), achieving a 42 per cent CAGR. With an ambitious target of 50 GW by FY30, the company continues to demonstrate strong momentum, aggressive scaling, and a firm commitment to leading India's renewable energy transition.

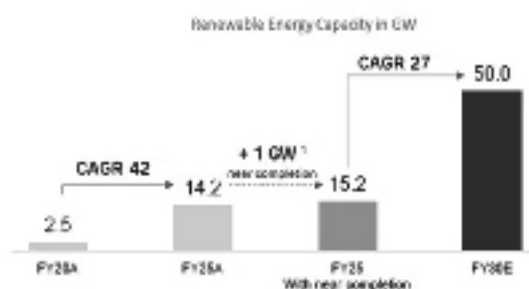


Figure 3: Increase in Renewable Energy Capacity of AGEL
(Source: AGEL Annual Report)

AGEL's sharp growth from 2.5 GW in FY2020 to 14.2 GW in FY2025, targeting 50 GW by FY2030. While solar remains dominant at 71 per cent, the energy mix is evolving—with hybrid projects reducing to 5 per cent and 11 per cent allocated to Pumped Storage Hydro—signaling a strategic shift toward greater grid stability and energy diversification.

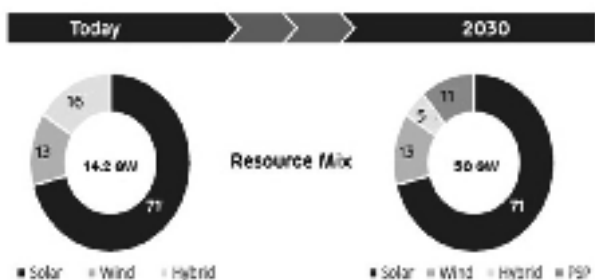


Figure 4: Energy split
(Source: AGEL Annual Report)

Business Model

Adani Green Energy's business model primarily involves developing, owning, and operating large-scale solar

and wind power plants across India, generating electricity which is then sold to government entities and corporations through long-term power purchase agreements (PPAs), focusing on largescale project development and leveraging their expertise in construction and operation to achieve low costs and high efficiency; essentially, they bid for renewable energy projects, build the plants, and sell the power



Figure 5: Revenue Mix of AGEL
(Source: AGEL Report)

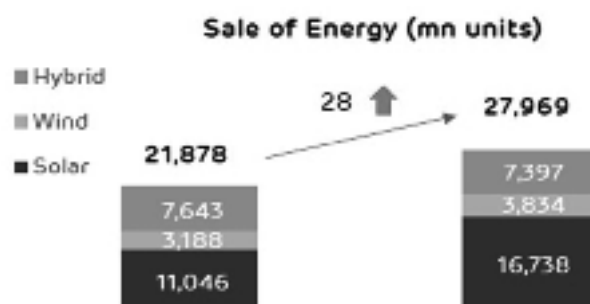


Figure 6: Energy Sales - Provisional Operational Update
(Source: AGEL Report)

generated at a fixed tariff for a long period.

Public Scrutiny and Valuation Sensitivity

Legal and regulatory challenges have significantly impacted AGEL's valuation and investor sentiment. U.S. prosecutors recently indicted Gautam Adani and key executives in a \$265 million bribery case linked to solar contracts, triggering a market loss of approximately \$9.7 billion for AGEL and \$26 billion across the group. Moody's responded by downgrading the outlook for several Adani entities to "negative," while global partners like TotalEnergies paused further investments, affecting capital inflows. Earlier, the 2023 Hindenburg Research report alleging stock manipulation and accounting irregularities further intensified scrutiny, though AGEL's management has denied all allegations.

The rise and fall of Adani Green Energy shares

The shares dropped 8% on Nov. 25 after TotalEnergies paused further investments, taking total losses since the U.S. indictment to 31



Figure 7: Effect On AGEL share price-
(Source: Reuters)

Ratio	March-23	March-24	Trendline
Sales Growth	51.49	18.57	
EBITDA Growth	58.00	32.25	
EBIT Growth	59.55	27.95	
Net Profit Growth	91400.00	(93.66)	
Dividend Growth	-	-	
Gross Margin	73.50	82.38	
EBITDA Margin	71.75	80.00	
EBIT Margin	55.03	59.38	
EBT Margin	17.59	5.09	
Net Profit Margin	11.77	0.63	
Sales/Expenses Sales	1.75	2.25	
Depreciation Sales	16.72	20.64	
Operating Income Sales	55.03	59.38	
Return on Capital Employed	6.95	7.33	
Retained Earnings	100.00	100.00	
Return on Equity	12.53	0.59	
Self Sustained Growth Rate	12.53	0.59	
Interest Coverage Ratio	1.47x	1.09x	

Figure 8: Financial Ratios of AGEL
(Source: Primary Data)

Invested Capital	₹ 14,796.00	₹ 20,862.00	₹ 38,180.00	₹ 53,149.00	₹ 66,600.00
EBIT	₹ 1,409.19	₹ 1,788.00	₹ 2,682.00	₹ 4,279.00	₹ 5,475.00
ROIC	9.52	8.78	8.08	8.05	8.35
Calculation Of Reinvestment Rate					
	Mar-20	Mar-21	Mar-22	Mar-23	Mar-24
Net Capex	₹ 3,394.00	₹ 6,130.00	₹ 14,855.00	₹ 3,338.00	₹ 15,700.00
Changes in Working Capital		₹ 1,690.00	₹ 995.00	₹ (115.00)	₹ (1,497.00)
EBIT	₹ 1,409.19	₹ 1,788.00	₹ 2,682.00	₹ 4,279.00	₹ 5,475.00
Marginal Tax Rate	25.00	25.00	25.00	25.00%	25.00
EBIT(1-Tax)	₹ 1,056.89	₹ 1,341.00	₹ 2,011.50	₹ 3,209.25	₹ 4,105.25
Reinvestment		₹ 7,820.00	₹ 15,850.00	₹ 3,223.00	₹ 14,203.00
Reinvestment Rate		585.15	787.97	180.43	345.89
				4 Year Average	454.36
				4 Year Median	464.52
Calculation Of Reinvestment Rate					
	Mar-20	Mar-21	Mar-22	Mar-23	Mar-24
Reinvestment Rate		585.15	787.97	180.43	345.89
ROIC		8.78	8.08	8.05	8.35
Intrinsic Growth		53.23	63.31	8.09	28.87
				4 Year Average	37.87
				4 Year Median	40.06

Figure 9: Financial Ratios of AGEL
(Source: Primary Data)

PERFORMANCE & VALUE DRIVERS

The Ratio Narrative

AGEL's financial ratios present a mixed valuation outlook. While strong gross (82.38per cent) and EBITDA margins (80.02per cent) reflect solid operational efficiency, the sharp decline in net profit margin to 0.63per cent and low ROE (0.59per cent) and Return on Capital Employed (ROCE) (7.33per cent) indicate weak profitability and poor capital efficiency—critical concerns for valuation. Leverage remains high with a debt-to-equity of 43.01per cent and low interest coverage (1.3x), raising solvency risks. Valuation multiples like P/E (264.26x) and EV/EBITDA (47.00x) appear significantly stretched. Despite excellent working capital efficiency—evident in a negative cash conversion cycle and improved debtor days—liquidity remains tight with a current ratio of just 0.5x. Overall, while operational strength is evident, weak returns and elevated leverage weigh negatively on AGEL's intrinsic valuation.

AGEL's intrinsic growth profile presents both potential and risk from a valuation perspective. With ROIC (~8–9per cent) closely matching its Weighted Average Cost of Capital (WACC) (9.07per cent), the company shows limited value creation, dampening investor appeal. While aggressive reinvestment rates (100–700per cent) fuel expansion, they constrain free cash flow, impacting near-term valuations.

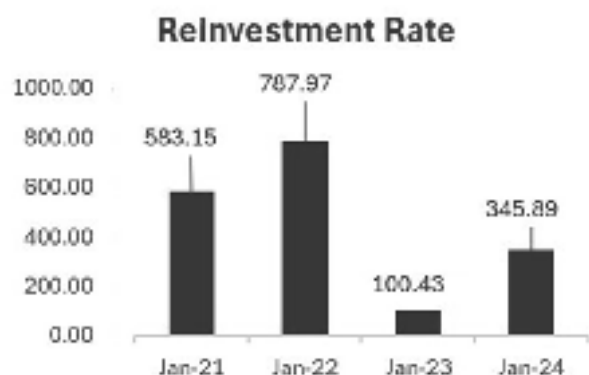


Figure 10: Reinvestment Rates of AGEL
(Source: Primary Data)

The intrinsic growth rate, though averaging 38per cent, is highly volatile—raising concerns over sustainability and future predictability. Critically, growth is primarily debt-funded rather than organic, increasing financial risk and weakening valuation resilience. Overall, while reinvestment supports growth narratives, low ROIC, high leverage, and dependence on capital-intensive expansion undermine long-term value creation and investor confidence.

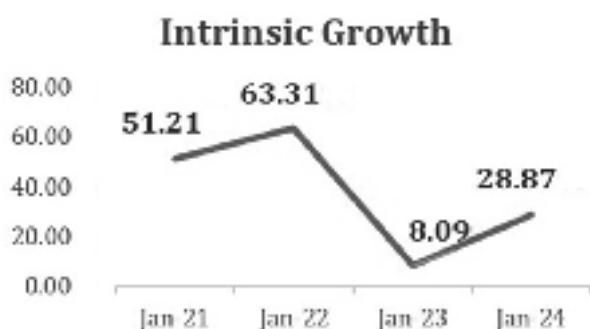


Figure 11: Intrinsic Growth of AGEL
(Source: Primary Data)

Limited Value Creation

As seen in the analysis, AGEL's Return on Invested Capital (ROIC) is nearly equal to its Weighted Average Cost of Capital (WACC), indicating that the company is just about covering its cost of funding without creating significant additional value.

This limits its ability to generate excess returns for shareholders, which can weigh down its market valuation.

Moreover, the company's growth has been largely debt-funded rather than driven by internal profits, increasing financial risk and raising concerns about long-term sustainability. High debt levels may support expansion in the short term but can reduce investor confidence and affect valuation negatively.

With this context in mind, we now move toward deriving the company's intrinsic value per share using a DCF & Comparable Company Analysis approach to assess what the stock should truly be worth based on its future cash-generating potential.

The Cash Flow Compass

The DCF analysis for Adani Green Energy Ltd. indicates that the company's current market valuation is significantly higher than what its fundamentals justify.

Calculation of PV of FCFF	Mar-27F	Feb-28F	Feb-29F
EBIT	₹ 7,606.16	₹ 8,624.25	₹ 9,561.75
Tax Rate	75.00	75.00	75.00
EBIT (1-Tax)	₹ 5,773.62	₹ 5,468.19	₹ 7,245.31
Reinvestment Rate	537.68	562.06	562.06
Free Cash Flow To Firm (FCFF)	₹ (25,269.82)	₹ (25,887.16)	₹ (133,482.58)
Mid Year Convention	2.5	3.5	4.5
Discounting Factor	0.804187561	0.73801178	0.676654683

Figure 12: DCF of AGEL
(Source: Primary Data)

Based on projected Free Cash Flows to Firm (FCFF), high reinvestment rates, and a WACC of 9.07per cent, the intrinsic value per share comes out to – 9,842, compared to the actual market price of 972. This reflects a valuation gap of over 1100per cent, suggesting the stock is heavily overvalued from a purely fundamental standpoint.

The negative equity value is largely due to deeply negative free cash flows over the forecast period, driven by high capital spending and debt-funded growth.

While such investments may support future capacity, they reduce immediate value creation and limit profitability. The terminal value, which typically contributes significantly to valuation, also turns out negative here due to weak cash flow outlooks.

AGEL's market price is driven more by sentiment and long-term expectations than current financial performance. This highlights a clear disconnect

Calculation of Terminal Value	
FCFF (n+1)	₹ (37,510.54)
WACC	9.07
Terminal Growth Rate	6.50
Terminal Value	-1460854.723
Calculation of Enterprise Value	
PV OF FCFF	₹ (1,00,883.66)
Present Terminal Value	₹ (14,60,854.72)
Value Of Operating Asset	₹ (15,61,738.39)
Add: Cash	₹ 7,218.00
Less: Debt	₹ 4,463.00
Value Of Equity	₹ (15,58,983.39)
No Of Shares	158.4
Equity Value Per Share	-9842.066839
Share Price	₹ 972.00
Discount/Premium	-1113

Figure 13: DCF of AGEL
(Source: Primary Data)

between the company's future potential and its present valuation, which poses a risk for value-focused investors.

The cash left in the business is fully used as a reinvestment moreover funds was borrowed to fund further investments. As a result, reinvestment rate is more than 100per cent as extra investment is funded by debt

Hence the growth is debt funded (as the company is investing in the business more than what it is earning as EBIT so over and above EBIT is funded by debt, that is 600per cent more than EBIT) which make the valuation lucrative and risky.

Benchmarking the Business

Company	Ticker	Valuation		
		EV/Revenue	EV/EBITDA	P/E
ADANI GREEN ENERGY LTD		19.7x	28.8x	79.9x
Tata Power Company Ltd		7.5x	11.1x	25.6x
NHPC Ltd		11.0x	15.0x	28.5x
JSW Energy Ltd		9.6x	18.7x	44.5x
Suzlon Energy Ltd		9.1x	17.4x	34.3x
IRDAI Ltd		17.2x	19.2x	34.4x

Figure 14: Comparison of companies
(Source: Primary Data)

The comparable company analysis highlights that Adani Green Energy Ltd. (AGEL) is significantly overvalued when benchmarked against its industry peers. Using valuation multiples such as EV/Revenue, EV/EBITDA, and P/E, AGEL's implied intrinsic value per share ranges between 339.2 and 495.8, while its actual market price stands at 972.

Adani Green Energy Comparable Valuation	EV/Revenue	EV/EBITDA	P/E
Implied Enterprise Value	₹ 1,17,354.74	₹ 1,35,997.38	₹ 1,24,853.04
Net Debt	₹ 32,256.00	₹ 35,000.00	₹ 32,256.00
Implied Market Value	₹ 85,098.74	₹ 1,00,997.38	₹ 92,597.04
Shares Outstanding	158.00	158.00	158.00
Implied Value per Share	339.2	495.8	419.0
Conclusion	Overvalued	Overvalued	Overvalued

Figure 15: Valuation of AGEL shares
(Source: Primary Data)

This represents a substantial premium of over 90per cent, suggesting that the stock trades far above its fair value based on sector norms. AGEL's valuation multiples—EV/Revenue (19.7x), EV/EBITDA (28.8x), and P/E (79.9x)—are consistently the highest among peers like Tata Power, JSW Energy, and NHPC, despite similar or even stronger operational metrics from some of them.

This implies that current market pricing may be driven more by aggressive growth expectations and sentiment rather than financial fundamentals.

From a valuation standpoint, this analysis clearly indicates that AGEL is overvalued relative to its peer group across all standard metrics, warranting caution for value-conscious investors.

Adani Green Energy appears significantly overvalued, with its implied fair value per share ranging from 339 to 496 against the market price of 972. This suggests a strong valuation disconnect driven more by sentiment than fundamentals.

The ROE Blueprint

	Mar-20	Mar-21	Mar-22	Mar-23	Mar-24
Net Profit	-23.23	210	489	974	1100
Average Shareholder Equity	2144.56	2276.28	2407	4050	8569
Return On Equity (ROE)	-1.06	9.22	20.32	19.64	12.84
Net Profit	-23.23	210	489	974	1100
ROE Multiplier	2144.56	2276.28	2407	4050	8569
Net Profit Margin (A)	-0.91	6.72	9.54	19.44	11.94
Revenue	2548.63	3114	5133	7775	9120
Average Total Asset	16540.61	23557.55	43823.00	62031.50	77497.50
Assets Turnover Ratio (B)	0.26	0.14	0.18	0.14	0.18
Average Total Asset	16540.61	23557.55	43823.00	62031.50	77497.50
Average Shareholder Equity	2144.56	2276.28	2407.00	4050.00	8569.00
Equity Multiplier (C)	7.74	10.34	18.24	15.29	9.04
Return On Equity (A*B*C)	-1.06	9.22	20.32	19.64	12.84
Net Profit	-23.23	210	489	974	1100
Average Total Asset	16540.61	23557.55	43823.00	62031.50	77497.50
ROE Multiplier	-1.06	9.22	1.12	1.55	1.42
Net Profit	-23.23	210	489	974	1100
ROE Multiplier	-1.06	9.22	1.12	1.55	1.42
Net Profit Margin (A)	-0.91	6.72	9.54	12.53	11.94
Revenue	2548.63	3114	5133	7775	9120
Average Total Asset	16540.61	23557.55	43823.00	62031.50	77497.50
Assets Turnover Ratio (B)	0.26	0.14	0.18	0.14	0.18
Return On Asset (A*B)	-0.14	0.89	1.12	1.55	1.42

Figure 16: ROE of AGEL
(Source: Primary Data)

The return-based analysis of Adani Green Energy Ltd. (AGEL) highlights a significant shift in financial performance over time. From FY17 to FY20, the company posted negative Return on Equity (ROE) and Return on Assets (ROA), driven by consistent net losses and weak asset turnover.

However, post-FY21, both metrics turned positive, with ROE peaking at 20.32 per cent in FY22 before slightly moderating to 12.86 per cent in FY24.

The DuPont breakdown shows that the improvement in ROE is largely supported by rising profit

margins and a high equity multiplier, rather than strong asset efficiency.

Despite these gains, the company's returns remain sensitive to changes in profit margins and leverage.

This trend indicates that while AGEL is progressing toward profitability, its valuation should still account for its heavy dependence on financial leverage and relatively low asset turnover—factors that may limit sustainable long-term return generation and add risk to its valuation outlook.

AGEL's margin is going up mainly because of high sales and more debt, not better use of assets. This makes the growth look strong but adds risk to its true value.

RISK & RESILIENCE ASSESSMENT

The Fragility Filter

The Altman's Z-Score analysis for Adani Green Energy Ltd. offers critical insight into its financial stability and risk of default. From FY17 to FY19,

Altman's Z Score Analysis Calculation								
Working Capital/Total Assets								
Working Capital	Mar 17	Mar 18	Mar 19	Mar 20	Mar 21	Mar 22	Mar 23	Mar 24
	91691	279.65	1967.45	2484.76	9026	6521	6251	1486
Total Asset	615942	15708.58	14057.53	39121.08	29892	58954	69008	88086
Working Capital/Total Assets (A)	14.85	1.74	12.74	35.20	17.52	11.06	30.09	5.07
Retained Earnings/Total Assets								
Retained Earning	0	0	0	40318	0	1	95.00	95.00
Total Asset	615942	15708.58	14057.53	39121.08	29892	58954	69008	88086
Retained Earning/Total Assets (B)	0.00	0.00	0.00	2.19	0.00	0.00	1.57	0.07%
EBIT/Total Assets								
EBIT	73.84	311.21	603.6	1409.15	1708	2582	4276	5475
Total Asset	615942	15708.58	14057.53	39423.65	28892	58954	69008	88086
EBIT/Total Assets (C)	1.35	1.98	4.55	7.85	6.23	4.55	6.40	6.32
Market Cap/Total Assets								
Market Cap	4,732.54	5,134.52	5,810.31	29,968.52	1,72,800.12	2,89,451.81	1,19,577.03	2,80,691.72
Long Term Liabilities	4346.57	9894.14	11142.40	34866.15	24000	52832	54225	64558
Market Cap/Long Term Liabilities (D)	108.68	51.89	52.15	181.25	715.76	586.62	237.41	445.39
Total Sales/Total Assets								
Total Sales	902.65	1,480.25	2,087.95	2,945.55	5,134.00	5,353.00	7,776.00	9,120.00
Total Assets	4,346.57	9,894.14	11,142.40	14,866.19	28,288.00	52,832.00	54,223.00	64,558.00
Return On Assets (E)	11.54	15.01	18.40	17.16	18.40	9.72	14.34	14.29
Altman's Z-Score								
Final Score	Mar 17	Mar 18	Mar 19	Mar 20	Mar 21	Mar 22	Mar 23	Mar 24
	0.59	0.55	0.80	1.54	4.88	2.78	2.06	2.10
Risk Rating	Distressed	Distressed	Distressed	Distressed	Strong	Strong	Grey Zone	Strong

Figure 17: Altman's Z-Score Analysis
(Source: Primary Data)

AGEL consistently scored below 1.8, placing it in the “distressed” zone, indicating high bankruptcy risk.

However, from FY20 onwards, the company’s score improved sharply, reaching a peak of 7.82 in FY21, driven largely by rising Earnings Before Interest and Tax (EBIT), increasing market capitalization, and improved asset turnover.

Despite some volatility, AGEL’s Z-score remained above the safe threshold of 3.0 in recent years, reflecting stronger financial health. However, the sharp decline in working capital and retained earnings in FY24, along with a lower Z-score of 3.10, suggests weakening fundamentals.

While the company currently avoids distress, its reliance on market value and fluctuating operating metrics implies that any downturn in investor sentiment or profitability could quickly affect its financial stability.

Hence, from a valuation perspective, AGEL’s improving score is encouraging, but caution is warranted due to underlying financial sensitivity.

VULNERABILITY MATRIX

The risk profile of Adani Green Energy Ltd. significantly influences its valuation and must be factored into any investment or pricing model.

The company’s high leverage and low interest coverage raise serious concerns about debt servicing, especially during volatile cash flow periods.

Its liquidity issues, such as a deteriorating current ratio, further suggest short-term financial strain.

Meanwhile, the lofty valuation multiples—far exceeding industry norms—indicate overreliance on aggressive growth expectations, making the stock vulnerable to sentiment shifts.

Legal and regulatory challenges, including allegations of fraud and

bribery, have already impacted foreign investor confidence and credit outlooks, thus increasing the required return (WACC).

Operational dependencies on long-term PPAs, combined with rising costs and episodic utilization gains, underline the fragility of its profitability.

Finally, macroeconomic pressures, such as global interest rates and currency risks, add further layers of uncertainty.

Together, these risks elevate the discount rate and necessitate scenario-based valuation models, signaling that AGEL’s market price may not fully reflect its underlying risk-adjusted fundamentals.

CONCLUSION

The conclusion reveals that while Adani Green Energy has shown consistent growth in sales and maintains a strong EBITDA margin, its underlying fundamentals raise several valuation concerns.

The net profit remains unstable, with no dividends declared to date, and over 50 per cent of revenue is absorbed by interest expenses—indicating low interest coverage and liquidity stress.

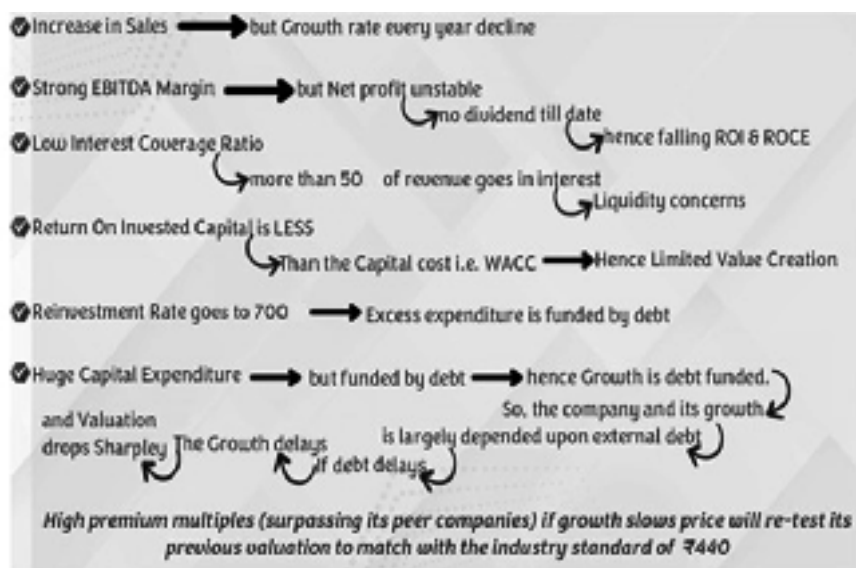


Figure 18: Overall Analysis
(Source: Primary Data)

Moreover, the company's Return on Invested Capital (ROIC) is consistently below its Weighted Average Cost of Capital (WACC), meaning it destroys value rather than creating it.

The extremely high reinvestment rate—touching up to 700 per cent—is being largely funded by debt, making growth heavily reliant on external borrowings.

This introduces significant risk: if growth delays or debt servicing issues arise, valuation could fall sharply.

shareholder participation through AGMs and governance reports can assist in ensuring transparency and financial prudence.

Final Recommendation: Caution advised-AGEL is overvalued. Future valuation depends on growth sustainability & debt control.



Figure 19: AGEL Share history reaching the calculated price 440
(Source: Primary Data)

Given AGEL's currently inflated multiples compared to peers, any slowdown in growth or shift in sentiment may cause its share price to correct toward the industry average, potentially around 440.

Shareholders should re-evaluate investing in Adani at this price on the grounds of long-term fundamentals over short-term trends. Keeping an eye on ROE and debt influence is necessary, as low returns and high debt could influence profitability in the future. Knowing the premium valuation in comparison to industry peers assists in making an informed choice. Active

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Overall, SME IPOs are found to influenced retails, that is, have a sentiment driven momentum, whereas in case of Mainboard IPOs, institutional participants are found to analyze the fundamentals and thereby not creating a buzz.



Main Board vs SME IPOs: What Makes Some IPOs Hot and Others Not?

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ABSTRACT

This study examines the recent hype about Initial Public Offerings (IPOs) in India and focuses on studying both Mainboard IPOs and IPOs of Small and Medium Enterprises (SMEs), listed until January 2025. A sample of 40 IPOs (20 from each segment) were used for the study to find the factors that lead to a large number of subscriptions and the short-term performance post-listing of these IPOs. Hype was measured using aggregate and segment category subscription data for Qualified Institutional Buyers (QIB), Non-Institutional Investors (NII), and Retail Investors (RII). IPO performance indicators included gains on listing date, 1-week return, and 1-month return.

KEYWORDS: IPOs, SMEs, QIB, NII, RII

INTRODUCTION

In this competitive environment where organizations continuously compete with each other to gain a competitive edge, increase market share or their visibility, raising capital has become a common practice. Initial Public Offering (IPO) has nowadays become a popular option for the companies to raise capital and expand their operations. The IPO market in India lists a number of companies every year, available to both institutional and retail investors for investment, to raise capital for them with an intention of expanding their operations and fulfil their monetary requirements. However not all IPO manage to generate a similar hype, subscription rates being used as a measurement of the hype. Subscription rates refers to the times the shares have been applied for. For example, if the company wants to issue 1,00,000 shares to the public, whereas the public has collectively demanded for 10,00,000 shares instead. In such a case the issue is said to be oversubscribed by 10 times. An important question which arises in our minds is: What could be the potential factors which would make some issues hype and heavily oversubscribed and would that hype guarantee long term success of the issue? Is it the fundamentals, the market sentiments, the brokers' recommendations or just the Grey Market Premium (GMP)? Are all the factors responsible for the hype even possible to quantify or some qualitative factors are also responsible behind the hype? Multiple factors are responsible for the hype and demand in the IPOs.

BACKGROUND

This study comes from the increasing interest in IPOs among the investors as a potential for easy and high return avenue for returns whereby there are still concerns by others about overvaluation, post listing corrections and speculations. The initial hype is often doubted if this would result in long term performance or just translates to short term listing gains. The hype around the IPOs is commonly measured by

subscription rates whereby research have found out that not all IPOs hyped in the shorter term deserve the premium valuation, resulting to post listing corrections. It is often assumed by investors that oversubscribed IPOs are a safe investment option for them but past research has found out that many of them fail to sustain the initial price surges and thereby results in disappointment to the investors. Given this discrepancy, we have to figure out what are the factors really responsible for the hype and whether this hype would translate into listing gains.

LITERATURE REVIEW

Pollack, Seth W., 2001

Findings: The research finds out that the retail subscription is majorly inflated because retailers tend to overbid in IPOs to maximize their chances of getting an allotment. It was further concluded that IPOs with heavy subscription from retail investors often experience high volatility and huge price corrections post listing whereas institutional driven IPOs are more stable and have sustainable long-term performance.

Verma, Anjali & Ranjan, Prateek, 2019

Findings: This study confirms that even if the IPO is fundamentally weak, it would attract huge over subscriptions and good listing gains if there is a positive sentiment however such IPOs tend to underperform after the initial hype fades.

Kulkarni, Suresh & Iyer, Rohini, 2009

Findings: The study reveals that retailers are mainly influenced by media hype and speculations which results to high volatility post listing, whereas QIB participants focus on fundamentals and thereby tend to have a stable post listing performance.

Chopra, Ananya & Khanna, Vikram, 2018

Findings: Although IPOs with high anchor investors would witness higher QIB participation, leading to a stable listing day and post listing performance, however it is not always true as market sentiments and valuations also play a critical role.

Desai, Sameer & Malhotra, Pooja, 2000

Findings: SME IPOs are found out to be more volatile because of lower liquidity post listing due to the higher retail participation. In contrast, Mainboard IPOs are mainly driven by institutional investors, resulting in a higher stability post listing. The study reveals that SMEs do carry a higher risk but also offer greater upside potential to investors who are less risk averse.

Iyer, Rajat & Bose, Sneha, 1999

Findings: It was found out that IPOs launched during the bull market often are overvalued but still have high demand and enjoy strong listing gains, whereas those launched in bearish conditions experience low demand and flat or negative listing returns, though some of them recover as market conditions improve.

RESEARCH GAP

Based on the above literature review, the following key research gaps have been identified:

Most research focuses on the IPO pricing and their listing gains, very few have analysed why certain IPOs get huge oversubscription while the others do not. Existing researches have mainly focused on Mainline IPOs, with negligible research on SME IPOs and how do they differ from Mainline IPOs in terms of hype, listing gains and post listing performance. While some of the studies have mentioned GMP and QIB participation, a

very few have tried to quantitatively analyse if they could be used to predict the subscription levels and long-term performance of the issue. Researches have incorporated factors like issue size, market sentiments and sector of the IPO, noteworthy factors like peer comparison, broker recommendations and IPO ratings remains unexplored. Also, prior researches relied on descriptive statistics or anecdotal evidence rather than rigorous data collection and analysis.

RESEARCH OBJECTIVES

To identify key factors influencing high subscription rates in recent IPOs.

To analyse the relationship between hyped IPOs and their post-listing performance.

To identify the key factors influencing the subscription of Mainboard IPOs vs. SME IPOs.

RESEARCH METHODOLOGY

The study focuses on Initial Public Offerings (IPOs) listed on the National Stock Exchange (NSE) and Bombay Stock Exchange (BSE) in India. The research takes into account both Mainboard and SME IPOs to figure out the factors influencing subscription levels and its post listing performance.

The study considers a sample of 40 IPOs, including:

20 Mainboard IPOs

20 SME IPOs

The research focuses on IPOs listed on the exchanges in January 2025 and earlier, ensuring that only most recent IPOs are analyzed and recent market trend is reflected, excluding those with insufficient data of factors needed for the analysis.

Objective 1: To identify key factors influencing high subscription rates in recent IPOs.

[illegible]

Figure 1: Correlation Analysis
(Source: Researcher's Calculations)

The data indicates that the Grey Market Premium (GMP %) has a strong positive correlation (0.519) with overall subscription tendencies which provides further evidence supporting the idea that grey market behaviour can often provide a strong leading indicator of overall enthusiasm, and therefore, demand for an IPO. On the contrary, the Project P/E Ratio and Size of Issue showed moderate negative correlations to overall subscription (-0.418 and -0.368 respectively). As noted in the discussion above, this suggests that IPOs with higher valuations, as demonstrated by the Project P/E Ratio, or larger issue sizes, tend to see lower subscription interest when compared to IPOs with lower valuations and smaller issue sizes, either due to overpricing or supply and demand issues as discussed above.

SUMMARY OUTPUT							
Regression Statistics							
Multiple R	0.999711914						
R Square	0.99942301						
Adjusted R Square	0.999175975						
Standard Error	1.416464604						
Observations	40						
ANOVA							
	df	SS	MS	F	Significance F		
Regression	23	1255101.297	54569.62	3460.681	1.19E-38		
Residual	16	745.1772991	46.57325				
Total	39	1255846.498					
		Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%
Intercept		-5.71015334	0.012055105	-4.73644	0.450100	-22.20910547	10.73880179
Log of Income (\$)		0.14976626	0.007668316	1.95446	0.064276	0.07664163	0.22289089
NI of Location (%)		0.024785845	0.171111841	0.144855	0.077721	0.089500082	0.089460769
RI of Location (%)		-0.05940784	0.105655152	-0.55862	0.578617	-0.273584188	0.154569582
Q/R Sub. (Times)		0.379426391	0.013648571	27.11514	2.19E-18	0.358541374	0.400307408
NI Sub. (Times)		0.225949521	0.006464095	40.81126	4.18E-25	0.211838712	0.23996033
Retail Sub. (Times)		0.475599076	0.013094349	36.40037	7.42E-24	0.449867003	0.501331149
Issue Size (%)		0.001570056	0.001361145	1.157196	0.007578	0.001744385	0.001395307
Projected P/E Ratio		0.10943028	0.004489519	2.43752	0.020477	0.21524502	0.003635002
GM1 (in %)		0.054891449	0.006640255	8.263128	0.146146	0.020423667	0.089359234
IFO Rating		7.105110734	1.646155713	4.287875	0.000148	3.821716907	10.68851549
Banks Recommendation		24.51729758	11.06745435	2.209271	0.036104	1.705141346	47.32945002
Index Returns (%)		0.285808885	0.048220894	5.92775	0.001264	1.402880685	0.368737521
Peer Comparison		-32.31553682	11.03523813	-2.925452	0.006066	-55.82804156	-10.25300415

**Figure 2 - Multiple Regression
(Source: Researcher's Calculations)**

INTERPRETATION

Among the predictors, Retail Subscription Times, NII Subscription Times, and QIB Subscription Times had the most statistical significance and effect on total subscription. Retail demand has the highest coefficient (0.476), followed by NII (0.223) and QIB (0.279), indicating retail investor enthusiasm is the most powerful individual effect in driving subscription levels.

Objective 2: To examine the relationship between hyped IPOs and their post-listing performance.

CORRELATION ANALYSIS

The findings support the notion that IPO hype is rooted in sentiment and speculation rather than the fundamentals, and the factors that drive short-term returns will be influenced by a broader set of market factors that extend beyond subscription levels. Investors should be cautioned to view oversubscription as a signal of future price performance.

SUMMARY OUTPUT								
Regression Statistics								
Multiple R	0.198320588							
R Square	0.039331065							
Adjusted R Square	0.014070325							
Standard Error	13.45889826							
Observations	40							
ANOVA								
	df	SS	MS	F	Significance F			
Regression	1	282.2344664	282.2344664	1.35571831	0.259418101			
Residual	38	6893.626371	181.412203					
Total	39	7175.860838						
	Coefficients	Standard Error	t Stat	P value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	3.883458941	3.114529288	0.283657612	0.778212576	-5.421574972	7.18848485	-5.42157497	7.188484855
Overall Subscription(Times)	0.01406342	0.011841056	1.247306239	0.219918101	0.036740393	0.00970155	0.03674039	0.009701549

*Figure 3 : Regression Analysis
(Source: Researcher's Calculations)*

INTERPRETATION:

The findings indicate that despite potentially showing any level of excitement on the part of investors, in this case, in the sense of oversubscribing on the IPO, there appears to be no significant link to 1-week returns. Therefore, it appears that short-term gains on the IPO will be influenced more by overall market sentiment, news flow, or general economic conditions rather than subscriber levels.

SUMMARY OUTPUT								
Regression Statistics								
Multiple R	0.072940737							
R Square	0.005318436							
Adjusted R Square	-0.026771239							
Standard Error	26.14674283							
Observations	40							
ANOVA								
	df	SS	MS	F	Significance F			
Regression	1	1.157347889	1.157347889	0.002218828	0.962698928			
Residual	38	207.0194906	5.447881331					
Total	39	208.1768385						
	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	-0.044211484	0.040200126	-1.101212215	0.274867547	-0.12490245	0.036479482	-0.12490245	0.036479482
Overall Subscription (Times)	-0.001100442	0.004774483	-0.047656719	0.963830003	-0.011224019	0.009023135	-0.011224019	0.009023135

Figure 4 – Regression Analysis
(Source: Researcher's Calculations)

INTERPRETATION:

The research illustrates those levels of IPO oversubscription have no meaningful or statistically significant effect on 1-month returns. While there may be a significant amount of hype around an IPO, that hype inevitably fades and does not translate into sustained returns after the stock is listed. The implication is that short-run performance often has more to do with company fundamentals or news events after listing and the behaviour of the overall market rather than just the oversubscription level.

OBJECTIVE 3: TO IDENTIFY THE KEY FACTORS INFLUENCING THE SUBSCRIPTION OF MAINBOARD IPOs VS. SME IPOs.

SUMMARY OUTPUT								
Regression Statistics								
Multiple R	0.008889625							
R Square	0.000078236							
Adjusted R Square	-0.046030981							
Standard Error	66.00110463							
Observations	70							
ANOVA								
	df	SS	MS	F	Significance F			
Regression	15	0.000115615	7.660770333E-06	0.000176773	0.999823217			
Residual	54	206.7731718	3.829132811					
Total	69	206.7847333						
	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	5.011869658	2.211870859	2.265801678	0.028212771	0.585979442	9.437759874	0.585979442	9.437759874
QIB Subscription (%)	0.111247917	0.124999817	0.890077117	0.376704336	-0.13799618	0.359494014	-0.13799618	0.359494014
RII Subscription (%)	0	0	0.0000	0.999999999	0	0	0	0
RII Subscription (%)	0.000000001	0.000000000	0.000000000	0.999999999	0	0	0	0
QIB Sub. (Times)	0.020311212	0.013600371	1.49344017	0.043707617	0.00314474	0.037477684	0.00314474	0.037477684
RII Sub. (Times)	0.029465806	0.020891104	1.410000000	0.162295000	-0.013331008	0.072252624	-0.013331008	0.072252624
Overall Sub. (Times)	0.037715751	0.017607074	2.142777171	0.036177007	0.002920718	0.072510785	0.002920718	0.072510785
Open Price (%)	0.000001175	0.000000001	0.000000000	0.999999999	0	0	0	0
Projected %k Ratio	-0.000000000	0.000000000	0.000000000	0.999999999	0	0	0	0
QIB (%)	0.000000000	0.000000000	0.000000000	0.999999999	0	0	0	0
RII (%)	0.000000000	0.000000000	0.000000000	0.999999999	0	0	0	0
Overall %k Ratio	0.000000000	0.000000000	0.000000000	0.999999999	0	0	0	0
RII Recommendation	0.000000000	0.000000000	0.000000000	0.999999999	0	0	0	0
Index Return (%)	0.000000000	0.000000000	0.000000000	0.999999999	0	0	0	0
Post-Subscription	-0.000000000	0.000000000	0.000000000	0.999999999	0	0	0	0

Figure 5 – Regression Analysis
(Source: Researcher's Calculations)

INTERPRETATION:

Overall, the regression findings highlight that subscription behavior by investor categories (QIB, NII, RII) is the most critical driver of hype in Mainboard IPOs. Other qualitative factors like ratings and recommendations may influence investor sentiment but do not hold strong predictive power statistically in this dataset.

Analysis

SUMMARY OUTPUT									
Regression Statistics									
Multiple R	0.899579038								
R Square	0.809238131								
Adjusted R Square	0.857032434								
Standard Error	2.242899483								
Observations	20								
ANOVA									
	df	SS	MS	F	Significance F				
Regression	13	857858.3684	65989.112	14838.25	2.80292E-11				
Residual	7	34.90085825	4.98584						
Total	20	857893.1693							
	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%	
Intercept	71.16286008	38.44184746	1.77338	0.09172	70.6863865	66.18029673	70.6863865	66.18029673	
QIB allocation (%)	1.73474012	2.193570126	0.78972	0.435389	0.928803107	3.459322872	0.928803107	3.459322872	
NII allocation (%)	-1.58079076	0.889793945	-1.77676	0.098752	-3.363877915	0.102294179	-3.363877915	0.102294179	
RII allocation (%)	3.097256738	1.758887647	1.760513	0.071821	0.719034014	6.070258264	0.719034014	6.070258264	
QIB Sub. (Times)	0.135285758	0.021213529	15.80064	9.83E-07	0.285021649	0.185347888	0.285021649	0.185347888	
NII Sub. (Times)	0.230302151	0.003770945	60.38485	8.97E-11	0.201381981	0.217759243	0.201381981	0.217759243	
Retail Sub. (Times)	0.491688431	0.008827885	55.81787	1.33E-10	0.4711967	0.511000112	0.4711967	0.511000112	
Issue Size (%)	-0.00112654	0.028972748	-1.07134	0.118132	-0.099635205	0.037383119	-0.099635205	0.037383119	
Projected P/E Ratio	0.038193371	0.000969773	0.628777	0.533472	-0.002088588	0.078380745	-0.002088588	0.078380745	
GMP (in %)	0.054370441	0.008201684	1.938222	0.095789	0.017457827	0.121198734	0.017457827	0.121198734	
PO Rating	1.725275087	1.90640035	1.474602	0.042345	0.16561345	7.28496383	0.16561345	7.28496383	
Broker Recommendation	-1.41800371	1.727585631	-1.41363	0.200353	-5.531832935	1.641821538	-5.531832935	1.641821538	
Index Returns (%)	0.431765732	0.170755426	1.164552	0.282149	-0.444803999	1.308405463	-0.444803999	1.308405463	
Peer Comparison	0	0	65533	#N/A!	0	0	0	0	

Figure 6 – Regression
(Source: Researcher's Calculations)

INTERPRETATION:

The major factors that are measurement of the hype factor in SME IPOs are again subscription levels by category of investor (QIB, NII, and Retail), along with directionally consistent evidence from retail allocation and IPO ratings. In combination, these factors account for most of the variation in subscription in SME IPOs with this sample by providing a compelling perspective on what the demand factors are for SME IPOs.

Analysis

	Overall Subscription	Retail Subscription	QIB Subscription	NII Subscription	Grey Market Subscription	IPO Size	Grey Market Activity	IPO Hype	Overall Subscription	Retail Subscription	QIB Subscription	NII Subscription	Grey Market Subscription	IPO Size	Grey Market Activity	IPO Hype
Overall Subscription	1															
Retail Subscription	0.754	1														
QIB Subscription	0.848	0.754	1													
NII Subscription	0.938	0.754	0.848	1												
Grey Market Subscription	0.938	0.754	0.848	0.938	1											
IPO Size	0.938	0.754	0.848	0.938	0.938	1										
Grey Market Activity	0.938	0.754	0.848	0.938	0.938	0.938	1									
IPO Hype	0.938	0.754	0.848	0.938	0.938	0.938	0.938	1								
Overall Subscription	0.938	0.754	0.848	0.938	0.938	0.938	0.938	0.938	1							
Retail Subscription	0.754	1	0.848	0.938	0.938	0.938	0.938	0.938	0.754	1						
QIB Subscription	0.848	0.754	1	0.938	0.938	0.938	0.938	0.938	0.848	0.754	1					
NII Subscription	0.938	0.754	0.848	1	0.938	0.938	0.938	0.938	0.938	0.754	0.848	1				
Grey Market Subscription	0.938	0.754	0.848	0.938	1	0.938	0.938	0.938	0.938	0.754	0.848	0.938	1			
IPO Size	0.938	0.754	0.848	0.938	0.938	1	0.938	0.938	0.938	0.754	0.848	0.938	0.938	1		
Grey Market Activity	0.938	0.754	0.848	0.938	0.938	0.938	1	0.938	0.938	0.754	0.848	0.938	0.938	0.938	1	
IPO Hype	0.938	0.754	0.848	0.938	0.938	0.938	0.938	1	0.938	0.754	0.848	0.938	0.938	0.938	0.938	1

Figure 7 – Correlation
(Source: Researcher's Calculations)

INTERPRETATION:

The strongest correlation overall was with Overall Subscription and NII Subscription at 0.938, followed by QIB Subscription (0.848), and then Retail Subscription (0.754). These three factors indicate strong positive correlation, and likely indicate that interest in the IPO market from each category of investors drive overall IPO hype. This implies that the participation of investors in the IPO, particularly Non-Institutional and Qualified Institutional Buyers, is a core driver of subscription momentum. The correlation analysis indicates that subscription levels by different investor types, particularly NII and QIBs, as well as IPO size and grey market activity are the most important in explaining IPO hype amongst Mainboard issues.

Analysis

	Overall Subscription	Retail Subscription	QIB Subscription	NII Subscription	Grey Market Subscription	IPO Size	Grey Market Activity	IPO Hype	Overall Subscription	Retail Subscription	QIB Subscription	NII Subscription	Grey Market Subscription	IPO Size	Grey Market Activity	IPO Hype
Overall Subscription	1															
Retail Subscription	0.754	1														
QIB Subscription	0.848	0.754	1													
NII Subscription	0.938	0.754	0.848	1												
Grey Market Subscription	0.938	0.754	0.848	0.938	1											
IPO Size	0.938	0.754	0.848	0.938	0.938	1										
Grey Market Activity	0.938	0.754	0.848	0.938	0.938	0.938	1									
IPO Hype	0.938	0.754	0.848	0.938	0.938	0.938	0.938	1								
Overall Subscription	0.938	0.754	0.848	0.938	0.938	0.938	0.938	0.938	1							
Retail Subscription	0.754	1	0.848	0.938	0.938	0.938	0.938	0.938	0.754	1						
QIB Subscription	0.848	0.754	1	0.938	0.938	0.938	0.938	0.938	0.848	0.754	1					
NII Subscription	0.938	0.754	0.848	1	0.938	0.938	0.938	0.938	0.938	0.754	0.848	1				
Grey Market Subscription	0.938	0.754	0.848	0.938	1	0.938	0.938	0.938	0.938	0.754	0.848	0.938	1			
IPO Size	0.938	0.754	0.848	0.938	0.938	1	0.938	0.938	0.938	0.754	0.848	0.938	0.938	1		
Grey Market Activity	0.938	0.754	0.848	0.938	0.938	0.938	1	0.938	0.938	0.754	0.848	0.938	0.938	0.938	1	
IPO Hype	0.938	0.754	0.848	0.938	0.938	0.938	0.938	1	0.938	0.754	0.848	0.938	0.938	0.938	0.938	1

Figure 8 – Correlation
(Source: Researcher's Calculations)

INTERPRETATION:

The correlation analysis of this Study into SME IPOs shows that participation from each category of investor, especially retail and NII consumers, and grey market competition is a major influence on driving an IPO they may or may not have knowledge on prior to the event. However, IPO Ratings seem to carry a slightly more weight in considerations among SME investors than the traditional Mainboard IPOs, which by the guidance of

the presenters can be perceived as secondary type of valuation metric.

LIMITATIONS

Lesser time frame

Only reliant on secondary data

Lesser Sample Size

Changing Market Conditions

Primarily focused on short term returns

Volatility of GMP before listing

CONCLUSION

The tests conducted in this research on the factors influencing SME IPOs and Mainboard IPOs shows that they are significantly different.

In SME IPOs, the retail enthusiasm, measured by retail subscription and thereby the Grey Market Premium (GMP) have a strong positive correlation which is indicative of the fact that the hype is highly influenced by the retail interest in the IPOs. We have also observed that the correlation with returns does weaken over a period of time, conclusive of the fact that SME IPOs are predominantly driven by sentiments.

In contrast, Mainboard IPOs reveal that higher levels of QIB and NII (Institutional Investors), indicate more research oriented approach. The longer term performance, measured by indicators like P/E Ratio, Issue Size and overall market conditions aligns with their fundamentals.

Overall, SME IPOs are found to be influenced by retail sentiment, that is, have a sentiment driven momentum, whereas in case of Mainboard IPOs, institutional participants are found to analyze the fundamentals and thereby not creating a buzz.

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“

Consumer sentiment is highly based on the fame of the singer, ticket prices, ease of venue accessibility, and overall event experience.

”

Understanding Concert Ticket Pricing, Revenue Growth, and Consumer Behavior: Insights From India's Livemusic Industry

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ABSTRACT

The purpose of this study is to examine the dynamics of concert ticket pricing, revenue growth, and consumer behavior within India's live music industry, with a focus on recent large-scale tours such as Coldplay's Music of the Spheres Tour. The study aims to contribute to the growing discourse on the commercialization of live music experiences in India, where data-driven insights into ticket pricing and audience behavior remain limited. Through a combination of primary data collected via consumer surveys and secondary research from industry reports, media coverage, and case studies, the study seeks to uncover key patterns and decision-making processes in ticket pricing, the impact of artist popularity on sales, and the evolving expectations of Indian audiences. The findings suggest that while tiered pricing, early bird discounts, and dynamic pricing models are increasingly common, factors such as artist's popularity and demand, venue location, and perceived value strongly influence consumer decisions. Revenue growth is being driven not just by ticket sales but also by strategic partnerships, premium experiences, and merchandise sales. This study highlights the need for more consumer-centric strategies to sustain the momentum of India's expanding live music scene.

KEYWORDS: Ticket Pricing, Concert, Coldplay, Consumer Behavior, Music Industry, Ticket Sales, Revenue Growth.

INTRODUCTION

1. Background of the Study: The entertainment industry has become one of the most vibrant sectors ever since India's live music has taken a lead role. Rise of music festivals like Sunburn, Lollapalooza India, and Dil Luminati Tour along with the increasing number of international artists performing in the country like Dua Lipa, and Ed Sheeran, live music events have captured the hearts of millions, especially young adults. What makes this remarkable transformation even more fascinating and intriguing is the fact that many performers are earning two-fold more from live concerts and events than from conventional mediums like filmmaking

and album sales. This transformation spotlights the emerging demand for experiencing real-time live music events among youths. Social media influence and the ease of accessing events act as fuel to the industry's boom. Platforms like Book My Show and Paytm Insider have made the reach of such live events easier in smaller cities and towns. Despite the surge in the popularity of live music, its success highly depends on the dynamics that drive consumers to purchase tickets and ticket pricing strategies.

2. History of Live Music Industry: From traditional performances at cultural and religious events to nationwide commercial concerts and music festivals, the history of the live music industry in India has evolved significantly. Predominantly associated with classical, folk, and Bollywood performances, the industry has dilated notably over the last two decades driven by the rise of digital platforms. The post-pandemic era has also seen a surge in the industry as people seek opportunities to reconnect. With the induction of international music festivals and the increasing presence of legendary artists like Arijit Singh, Honey Singh and Diljit Dosanjh, the live music landscape has experienced a revolutionary change impacting the current revenue growth of the industry.
3. Conceptual Framework: Live music refers to a "performance where a musician or singer plays or sings in front of an audience in real-time. It can include vocals, instruments, or a combination of both. Unlike recorded music, live music is characterized by its immediacy, spontaneity, and ability to foster emotional connections." Artists, event organizers, venues, and audiences including the various revenue streams like ticket sales, sponsorships, and merchandise are the interrelated elements of the live music ecosystem.

Types of live music in India vary widely, from traditional concerts and prolonged music festivals to cultural and classic events, and small gigs at cafes or restaurants, the types of live music in India differ extensively. Here, the primary source of revenue is ticket sales driven by factors like effective pricing

strategies, performer popularity, sponsorships, and the scale of the event. Live music not only holds a noteworthy place in Indian culture, but also serves as a medium for cultural sentiments, entertainment, and social interaction leading to strong community building. Social media influence centered around social networking and Fear of Missing out (FOMO), high-quality performance attracts the audience to attend such events. The variables like performance quality, stage presence, and emotional impression create influential impact on the audience that determines their future purchase decision and sustainability. The economic forces such as income levels, digital monetization, and technological advancements, as well as consumer desire for unique experiences, influence ticket pricing and audience participation. Live music events even promote cultural exchange, inducing personal growth and a sense of belonging. However, spending priorities and disposable income levels might act as a barrier to accessing such events based on different demographic groups. This highlights the need for an affordable and effective ticket pricing mechanism and digital streaming options to make live music more inclusive and extensive.

4. Live Music Vs Concert: A person might wonder if live music implies concerts. To answer this, the distinction between the two is highlighted below:
 - Concert is a type of live music event. So, live music is a set and concert is a subset of it.
 - All concerts are music events but all music events may not necessarily refer to a concert.
5. International Scenario: The live music industry has become a considerable benefactor to both national and international economies, steered by the post-pandemic upturn of in-person events with major music festivals and concerts generating billions in revenue. Contributing significantly to GDPs worldwide, international tours of 2023 by performers like Taylor Swift and Beyonce have broken records. The "Eras Tour" by Taylor Swift, alone is projected to infuse approximately \$5 billion into the global economy, especially Japan and Singapore. It generated huge employment

opportunities lime-lighting the industry's economic impact.

6. National Scenario: Despite the global impact, India has also witnessed a surge in large-scale events such as Lollapalooza India, Zomaland, and Dil Luminati Tour. These events have uplifted local tourism, hospitality, and retail sectors which has resulted in the volatility of the Indian Share market. The 2023 version of Lollapalooza India attracted over 60,000 participants, resulting in substantial revenue, and creating thousands of jobs for lower middle class and poor people. Additionally, the demand for live entertainment among the youth has fueled the market of both national and international artists. Further, as the live music industry continues to evolve in terms of Virtual Reality and live streaming with the integration of technology, the industry's reach resulting in prolonged success remains undeniable, both in India and worldwide.

LITERATURE REVIEW

"The dynamics of success in the live music industry are often shaped by a complex interplay of recognition, representation, and external factors, as highlighted by recent research." Everts (2023), in his study, observed that preliminary-career music acts in the Dutch live music industry witnessed a winner-takes-all market, with a few acts attaining high attendees and revenue, while most strive to secure shows and generating moderate incomes. Using a dataset tracking 214 events over eight years, the research explored factors regulating live music success, including popular recognition, and industry representation. Findings concluded that significant and popular recognition remarkably correlated with higher performance numbers, while professional recognition revealed mixed results. Cultural and economic logic overlay in the live music industry, underlying the importance of recognition and networks for career advancement.

The live music industry is a dynamic sector that bridges the gap between cultural expression, and audience engagement. In India, this industry has observed a significant reconstruction, yet obstacles prevail, particularly in regions like North-East India, as

highlighted by Vedabala & Barailly (2023). Their study underlines critical issues such as restricted sponsorship, insufficient infrastructure, and the inclination towards inland artists over local talent, which curtail the growth of live music concerts. Additionally, the shortage of well-equipped auditoriums increases costs for organizers. The study also unfolds the constrained culture of purchasing concert tickets among locals, focusing on the requirement for customized ticket distribution strategies. These findings serve as a basis for understanding revenue growth, ticket pricing mechanisms, and consumer behavior in India's live music industry.

Apruzzese et. al. (2023) in their study observed that the COVID-19 pandemic brutally distorted the live music industry, affecting revenue streams, artists, and venues. Findings concluded that while live streaming furnished a temporary resolution, it lacked the joint experience of live events. The study highlights the economic difficulties faced by promoters and artists, with Live Nation and AEG ruling the industry. Consumer surveys suggest a preference for in-person concerts, though older generations showed more eagerness to pay for live streams.

Further, the global outlook brings out the role of pricing strategies in value creation as pointed out by Magni (2022) in his study, where he observed that the live music industry is inclined towards live events as a chief revenue source, yet value appropriation remains a question due to secondary ticket markets. Exploring 631 live events in Italy, the study intended to analyse how generalist and specialist event producers vary in their expertise to create and capture value. Findings conclude that generalists, accelerating high fixed costs, and divergent revenue streams, set higher minimum ticket prices and impose more pricing categories. While specialists struggle to seize value, strategic collaborations and clearly defined pricing models could strengthen their competitiveness in the continuously evolving live music landscape.

Besides in-person concerts, streaming services play a key role in driving demand for live events as observed by Christensen (2022). His study revealed that the removal of Warner Music content from Youtube in 2009 negatively impacted Warner artists' live concert

revenues, prices, and audience. This interrelated relationship suggests that, even if the industry struggles with the repercussions of the pandemic, the amalgamation of digital and live music experiences could be key to strengthening the sector. For example, the learning effect of streaming platforms not only introduces audiences to new artists but also prioritizes them for live performances, creating a mutual mechanism that benefits both artists and consumers.

"The COVID-19 pandemic significantly affected the UK live music industry, not just economically but as a crisis of spatial materiality" - Taylor et. al. (2020) in their study observed how lockdowns and social distancing delivered traditional music spaces unusable, affecting the spatial practices of musicians and audiences. Using Lefebvre's synergetic spatiality, the authors describe the inclination towards online performances and domestic spaces for music-making. Factual data from Scotland and the Midlands highlight the need for new representational spaces and flexible industry practices. The findings conclude that long-term structural refinements are necessary to uphold the industry beyond the immediate economic crisis, integrating new spatial and technological adaptations.

Hoeven & Hitters (2020), in their study, observed that despite its growing economic and cultural importance, the live music industry faces huge challenges. They ascertained four key concern domains namely: planning and policy context, economic challenges, audience trends, and the position of musicians. Regulations, gentrification, rising operational costs, and diminishing audiences for local talent were a few of the main issues highlighted by the authors. They also considered the diminishing income position of musicians and the turn down of small venues, which are significant for talent development. The study suggested solutions like regulatory reforms, financial support for small venues, and innovative audience engagement strategies. Findings concluded that to make the live music industry sustainable, a balance of economic, social, and cultural values, with the need for inclusive policies and continued innovation is necessary to support the sector's future.

Focusing on the challenges and solutions established in the live music industry, Naveed et. al. (2017) in their

study observed that the co-existence of streaming and live music has driven the sustainable growth of the music industry. Despite the initial decline in recorded music revenues, the study intended to analyse how the rise of streaming services contributed to the recovery of live music. Empirical data from the U.S. music industry over three decades disclosed that live music adapted digital innovations and developed a self-propagating function, contributing to the development of a "live-concert-streaming music industry" (LCSMI). The findings conclude that trust-based ICT-driven business models and digital advancements, such as AI and fintech, are essential for sustaining this evolution and ensuring long-term industry growth.

Strengthening the discourse around the economic and cultural significance of live music, Frith (2013) in his study explored how the industry has revolutionized to defeat financial and structural challenges. Through his study, he observed that the value of live music can be defined economically, i.e., in terms of income and profit, as well as culturally by focusing on the intrinsic, non-monetizable experience of live performance. The primary purpose of the study aimed to explore the historical and contemporary dynamics of the live music industry. Findings disclosed that despite the turn-down of the recorded industry, live music has boomed, motivated by innovative strategies such as festivals, and technological advancements in ticketing.

Finally, Holt(2010) in his study observed that the digital age has notably transformed the economy of live music, with concerts becoming a central economic driver in the music industry. The research aimed to theorize the concept of live music in the context of digital media proliferation and outline the key elements of the new live music economy. Findings revealed a sharp increase in concert ticket prices, the rise of new event genres like festivals and theatre-style shows, and the growing cultural value of live experiences in a digital society. Holt concluded that live music retains unique experiential qualities despite technological advancements, and its economic shift from recordings to concerts reflects broader social and cultural changes, emphasizing the need for further interdisciplinary research on live performance and media.

RESEARCH GAP

A rigorous review of the past literature has led to the identification of the following gaps in the existing literature:

- **Restricted focus on India's live music industry:** Existing literature has overlooked the rapid evolution of India's live music industry, particularly the post-pandemic surge. There has been extensive research on the global music industry, while on the other hand limited focus has been made on India's unique market dynamics, cultural context, and revenue growth trends.
- **Limited Analysis of Ticket Pricing and Sales Strategies:** Despite being the critical components of determining success, there is limited research on the ticket pricing mechanism and an effective sales strategy and how these strategies are tailored to the Indian market. The role of digital ticketing platforms like Book My Show and Paytm Insider has not been addressed.
- **Understudied Factors Influencing Ticket Purchases:** There is insufficient research on the specific factors that drive consumers to purchase tickets making it a global trend in India. Additionally, the impact of digital payment systems on online ticket sales remains underexplored.

OBJECTIVES OF THE STUDY

The objectives originating from the research gap in the existing literature are presented as follows:

- i. To determine the growth and impact in revenue from India's Live Music Industry, aiding it with the case study of Coldplay's recent high-profile concert "Music of the Spheres World Tour."
- ii. To understand how concert tickets are priced and sold in India.
- iii. To discover the factors that influence consumers to purchase tickets.
- iv. To examine whether income is associated with the maximum amount a person is willing to spend on a concert in India.

- v. To assess whether Age is associated with the frequency of attending live music concerts.

variables. The tests have been conducted using the software Jamovi (version: 2.6.26 solid).

RESEARCH METHODOLOGY

1. **Research Design:** The research design is exploratory, as it aims to identify key factors influencing concert ticket pricing and consumer purchasing behavior, given the limited structured research available in this domain. To achieve the first objective of the study, statistics from several secondary sources of data have been studied and analysed. A quantitative approach has been applied to achieve the next two objectives, as it has employed quantitative data collection instruments (questionnaire-based survey) to gather information from the respondents.
2. **Sample Design:** The study is conducted on respondents residing in the state of West Bengal, India. The non-probabilistic convenience sampling method was applied to determine the sample of the study, as it enables efficient data collection from readily available participants within a limited timeframe. The participants were surveyed through a close-ended questionnaire consisting of 20 questions. A total of 201 responses have been considered for the study. The survey took place in March 2025.
3. **Sources of Data:** A combination of primary and secondary sources has been used to collect data. Respondents have filled out a self-administered close-ended questionnaire based on a five-point Likert scale to gather the primary data. Secondary data is collected from books, journals, and research reports.
4. **Tools Used:** The acquired data has been filtered and categorised before entering into Microsoft Excel for further assessment. The analysed data has been presented through bar graphs, pie charts, line charts, and various other descriptive statistical analytical methods.

The chi-square test and Fisher's exact test, non-parametric measures, have also been performed to examine the association between different

ANALYSIS OF DATA

OBJECTIVE 1

To determine the growth and impact in revenue from India's Live Music Industry, aiding it with the case study of Coldplay's recent high-profile concert "Music of the Spheres World Tour"

GROWTH AND IMPACT IN REVENUE

The Live Music Industry in India has witnessed remarkable growth in recent years, influenced by the increasing disposable income of individuals. According to Business Today, the ticketed live music sector is alone expected to reach Rs. 1864 crores in 2025, whereas the entire Indian Live Music Event Industry was valued at Rs. 88 billion in 2023 and is projected to reach Rs. 143 billion by the year 2026, growing at a Compound Annual Growth Rate (CAGR) of 17.6 per cent. The number of concerts and live music events is projected to double from 8,000 in 2018 to over 16,700 by 2025.

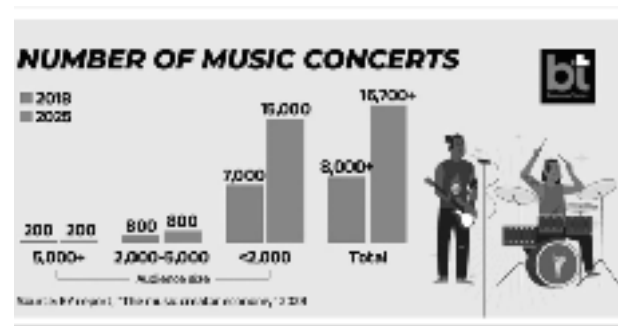


Figure. 1: Number of music concerts in 2018 and 2025
 (Source: <https://www.businesstoday.in/latest/economy/story/india-go-live-the-172-billion-cue-for-economy-from-coldplays-record-breaking-concert-in-ahmedabad-462265-2025-01-28>)

KEY FACTORS OF GROWTH

1. **Change in Disposable Income:** The growth of live music is significantly influenced by the changing disposable income. Indian audiences, particularly

the millennials and the GenZs are willing to spend on live experiences. As economic conditions improve, young adults have shown a strong inclination towards spending on experiences rather than material goods.

2. **Globalization of Music:** Indian audiences have become more familiarised with international music with the advent of streaming services like Spotify and Apple Music, thereby raising demand for live performances. Hence, collaborations between Indian and International artists like Ed Sheeran and Diljit Dosanjh have expanded the audience base and reach of live concerts.
3. **Evolution in Ticketing and Marketing:** Digital platforms like BookMyShow, and Paytm Insider have witnessed a significant reach. The ticketing segment has grown rapidly, with platforms like BookMyShow, and Zomato's ticketing arm acting as key enablers for the market. Notably, during FY23, BookMyShow partnered with most live events, seeing its income from this segment spike 9.5x to 237 crore.
4. **Brand Sponsorships:** The post-pandemic era has seen a surge in sponsorships. Upstox reported that brands like Puma, Coca-Cola, et al.. are heavily investing in music events by entering strategic partnerships with event organizers and leveraging concerts for advertising. This has led to a higher production budget and improved concert experiences.
5. **Government Support:** international tours are executed successfully due to improvements in stadiums and large-scale venues to enhance the capacity. State tourism boards have also started supporting music events to attract visitors, recognizing concerts as a potential boost to local economies.

ECONOMIC IMPACT OF THE LIVE MUSIC EVENTS

1. **Revenue Streams:** the various revenue streams are decoded as follows-
 - **Ticket Sales:** It is the primary source of revenue generation. Tickets for popular artists go out of stock

within minutes, showcasing the high demand.

- **Sponsorship Deals:** high-profile companies like BMW and DHL are willing to pay premium sponsorship fees for branding and promotional opportunities. This is done to gain visibility among a captive and engaged audience.
 - **Merchandising:** It is another major source of revenue generated through T-shirts, posters, and digital collectibles. Fans are strongly inclined towards Limited-edition merchandise; hence they often sell out quickly. This increases the profitability of live music events two-fold.
 - **Streaming & Media Rights:** Live streaming platforms like Disney+ Hotstar are generating revenue through paid viewership. The rise of hybrid concert models (as in the case of Coldplay's concert) is helping artists and organizers to monetize both in-person and virtual audiences.
 - **Premium Packages:** Fans are willing to pay higher prices for premium experiences like lounge access, Backstage passes, meet-and-greet sessions, et al.. Organizers are taking advantage of unique and personalized concert experiences and adding significantly to the revenue.
2. **Employment Opportunities and Local Business Growth:** Live music events create thousands of jobs, both temporary and permanent. According to Upstox, the overall employment impact due to such events is expected to grow by 15-20 per cent annually. Further, a single large-scale concert employs somewhere around 2,000 to 5,000 workers from all around India for logistics planning, stage setup, ground management, security staff, et al.. Small and Local businesses also experience growth in their revenue during such events.
 3. **Tourism and Hospitality:** Live music events significantly result in a boom in tourism and hospitality. High-profile events witness a spike of 350 per cent in flight bookings. Hotels near the venue location record full occupancy even with hiked room tariffs. Upstox reported that the tourism and hospitality sector experienced a revenue boost of 30-40 per cent during large-scale events.

4. Stock market: Live events have even positively impacted the Indian stock market. Companies like Saregama India, Tips Industries, Zomato (via Insider), BookMyShow have benefitted from such a boost. In the financial year 2024-25, live events contributed 2 per cent to Saregama's total revenue. A dominant player in the event ticketing space, BookMyShow has established itself as a major beneficiary of India's concert boom.

CASE STUDY OF COLDPLAY'S "MUSIC OF THE SPHERES WORLD TOUR"



Figure. 2: Coldplay's Chris Martin
(Source: <https://images.app.goo.gl/KXhFxnbcTXnArwrC9>)

Coldplay's concerts in India have set new benchmarks in the country's Live Music Industry. Their "Music of Spheres World Tour" of 2024 and 2025 attracted over 400,000 fans at 5 shows conducted in Mumbai and Ahmedabad, generating substantial economic impact.

The revenue breakdown is as follows:

- **Ticket Revenue:** Around 4,00,000 tickets were sold at 5 shows in Mumbai and Ahmedabad. Total ticket revenue was estimated at over Rs. 322 crores with approximately 1,80,00 tickets and 2,23,000 tickets sold in Mumbai and Ahmedabad respectively with an average ticket price of Rs. 8,000.
- **GST Revenue:** The total GST revenue collected was estimated at Rs. 58 crores, at an 18 per cent rate.
- **Book My Show Revenue:** A major revenue generator, BMS recorded Rs. 32.2 crores from a 10 per cent convenience fee on the ticket.
- **Metro Revenue:** During the concert days, Mumbai

and Ahmedabad recorded metro revenue of approximately Rs. 66 lacs each.

- **Disney+ Hotstar viewership:** 8.3 million viewers watched Coldplay's concerts via the streaming platform.

Coldplay's concerts even catered to some of the sustainability goals which are as follows:

- **Battery System:** Coldplay has introduced the first-ever mobile rechargeable show battery in collaboration with BMW. These batteries power 100 per cent of the show.
- **Kinetic Energy:** Kinetic floors and power bikes that generate electricity through audience movement.
- **LED Wristbands:** Made from 100 per cent compostable, plant-based materials and reused, sterilized, and recharged after each show.

Key stakeholders of Coldplay's concert:

STAKEHOLDER	KEY ROLE
1. Tour Promoters	Event planning, financing, ticketing, and marketing. The key players are Live Nation (Coldplay's official tour promoter) and Book My Show.
2. Ticketing Platforms	Facilitate online sales, handle marketing, and arrange venue and logistics. Again, Book My Show is the key player here.
3. Venue Owners & Operators	Provide the stadiums, negotiate deals on rental fees, and food & beverage sales. The key players are DY Patil Stadium in Mumbai and Narendra Modi Stadium in Ahmedabad.
4. Tour Managers and Technicians	Tour managers oversee daily operations during the tour, ensuring schedules are met and coordinating between various parties, whereas, technicians handle sound, lighting, and stage setups to ensure optimal performance quality.

1. Coldplay's Management	Coldplay's manager Phil Harvey handles band logistics, sponsorship deals, & media partnerships.
2. Media & Streaming	Expand revenue by broadcasting live shows on platforms like Disney+Hotstar, and general media promote tours through various channels, manage public perception, and PR.
3. Sponsorship & Branding	Provide financial backing, co-branding, and advertising. Collaborations with BMW and DHL are major sponsorship deals.
4. Marketing & Fan Engagement	Drive ticket sales via social media, influencer marketing, and loyalty programs. Coldplay's official site, Instagram, and X (Twitter) are key players.
5. Production & Logistics	Manages stage setup, sound, lighting, and travel logistics
6. Government and Regulatory Bodies	Issue necessary permits and ensure safety regulations are met.

Thus, India's live music industry is experiencing a rapid transformation, with international acts like Coldplay setting new benchmarks in revenue generation, audience engagement, and sustainability. The Live Music Industry has become a central driver of economic activity, benefiting multiple industries, including tourism, retail, hospitality, and infrastructure. India is set to appear as a global powerhouse in the live music space, driven by increased investment in venues, digital platforms, and sustainable event practices. The economic contributions of the industry are expected to expand further in the coming years, as long as it continues to innovate and adapt to evolving audience expectations.

DEMOGRAPHIC ANALYSIS

AGE	Below 18	18-25	26-35	36-45	Above 45
RESPONSES	9	164	15	8	5
PERCENTAGE	4.5	81.6	7.5	4	2.5

Table 1: Distribution of respondents based on age.

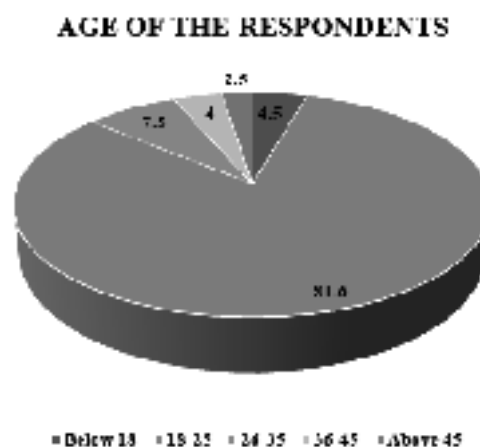


Figure. 3: Age of the respondents
(Source: Author's Compilation)

Interpretation: The age distribution among respondents indicates a predominant presence of individuals aged 18-25, comprising 81.6 per cent of the sample. Those aged 26-35 and 36-45 account for 7.5 per cent and 4 per cent respectively, while respondents below 18 and above 45 constitute 4.5 per cent and 2.5 per cent respectively. This suggests a significant representation of young adults, potentially influencing the survey's findings with their perspectives and preferences. This large proportion is likely due to the sample being primarily composed of college students. However, the contributions of older groups still add to the dataset's diversity.

GENDER	Male	Female
RESPONSES	52	149
PERCENTAGE (per cent)	25.9	74.1

Table 2: Distribution of respondents based on gender

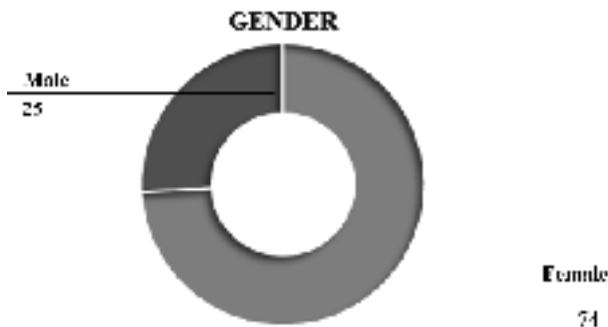


Figure. 4: Gender of the respondents
(Source: Author's Compilation)

Interpretation: Out of 201 respondents, we can see that the active participants have been female, comprising 74.1per cent, while only 25.9per cent of the participants are male. This higher female participation is likely because the evening department of the college, where the survey was primarily conducted, consists mostly of female students. Hence, the ideals and thought processes of females may outweigh the cogitation of males in this survey.

INCOME (MONTHLY)	Below 50,000	50,000-1.5 lacs	1.5-3 lacs	Above 3 lacs
RESPONSES	28	62	46	65
PERCENTAGE (per cent)	13.9	30.8	22.9	32.3

Table 3: Distribution of respondents based on family income.

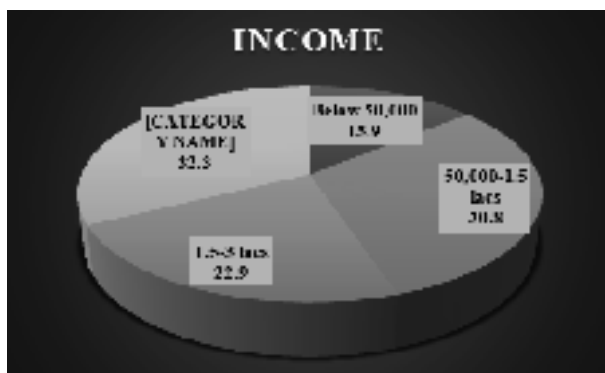


Figure. 5: Monthly family income of the respondents
(Source: Author's Compilation)

Interpretation: The income distribution among respondents illustrates varied financial backgrounds, with the majority (32.3per cent) reporting earnings above 3 lacs. Additionally, significant portions fall into the 50,000-1.5 lacs (30.8per cent) and 1.5-3 lacs (22.9per cent) brackets. Conversely, fewer individuals

reported earnings below 50,000 (13.9per cent). This diverse income distribution highlights the heterogeneous nature of the surveyed population, reflecting a blend of socio-economic backgrounds and potentially influencing their perspectives and behaviors about live music.

OBJECTIVE 2

To understand how concert tickets are priced and sold in India.

As per the secondary sources of information, the concert tickets are priced based on the following factors:

1. **Artist Popularity and Demand:** The higher the popularity and demand of the performing artist is, the higher the base price of the ticket, thus significantly impacting the ticket prices. For instance, Coldplay's concerts in Mumbai experienced extra-ordinary demand for tickets. As a result, the tickets were priced ranging from Rs.2500 to Rs. 35,000.
2. **Venue Capacity and Location:** Venue location and capacity is another major factor that affects pricing. Concerts that are conducted in Tier-2 and Tier-3 cities attract lower prices as compared to Tier-1 cities. Venue location also plays a key role in determining prices, prime locations in metropolitan cities often lead to higher ticket costs.
3. **Operational and infrastructure costs:** Costs pertaining to logistics, stage setup, sound, lighting, and security contribute to ticket pricing. As India faces certain infrastructural challenges, organizing large concerts can be expensive which can influence ticket costs.
4. **Ticket Categories and Pricing Phases:** Event organizers often impose tiered pricing strategies, including categories like General Admission, VIP, and Fan Pit. Prices differ based on categories. Likewise, there are different pricing phases, wherein the same category tickets are priced differently to influence consumers to purchase the tickets.

Alongside secondary sources, the survey conducted also led to the analysis of the following:

PRICE	Below Rs.500	500-2000	2000-5000	5000-10000	Above 10,000
RESPONSES	28	97	50	22	4
PERCENTAGE (per cent)	13.9	48.3	24.9	10.9	2

Table 4: Pricing based on the maximum price consumers are willing to spend on tickets.

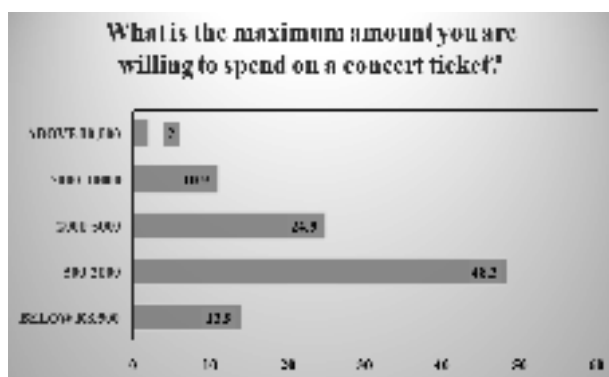


Figure 6: Maximum amount one is willing to spend on a concert ticket
(Source: Author's Compilation)

Interpretation: The graph illustrates the preferences of Indian consumers while spending on concert tickets. The majority (48.3per cent) prefer to spend Rs. 500-2000 for a concert ticket, underlining affordability as a key factor. The Rs. 2000-5000 range attracts 24.9per cent of buyers, reflecting a willingness to pay more for premium experiences. Only 10.9per cent and 13.9per cent opt for Rs. 5000-10,000 and below Rs. 500 tickets respectively, while an even smaller percentage chooses tickets above Rs. 10,000, indicating restricted demand for high-priced tickets. This pricing structure suggests that the Rs. 500-2000 segment of pricing is most suitable for Indian consumers and organizers, thus they should price the ticket accordingly.

EARLY-BIRD DISCOUNT	Very important	Somewhat important	Neutral	Not very important
RESPONSES	95	77	26	3
PERCENTAGE (per cent)	47.3	38.3	12.9	1.5

Table 5: Pricing based on early-bird discounts.



Figure 7: Importance of Early-bird discounts
(Source: Author's Compilation)

Interpretation: As 47.3per cent of the respondents consider early-bird discounts as an important factor for purchasing tickets, event organizers typically offer early-bird tickets at a discounted rate to incentivize early purchases. Consequently, as these sell out, the same category tickets are sold at a higher price in the subsequent phases.

SOURCE	Online Platforms	Event Website	Re-Sellers
RESPONSES	174	18	9
PERCENTAGE(per cent)	86.6	9	4.5

Table 6: Primary intermediary of ticket sales in India.



Figure 8: Author's Compilation of ticket sales in India
(Source: Author's Compilation)

Interpretation: The above chart illustrates the distribution of concert ticket sales across different channels in India. Online platforms rule the market, producing 87per cent of sales, indicating digital

ticketing services' convenience and wide reach. Conversely, event websites contribute 9per cent, anticipated from direct promotions by event organizers and resellers make up only 4per cent, implying limited reliance on secondary markets. The profound preference for online platforms suggests strong consumer trust in established ticketing websites and mobile apps like Book My Show, Paytm Insider, et al.. Additionally, this trend underlines the growing digital adoption in India's live music industry, strengthening the role of technology in ticket distribution and audience engagement.

TIMING OF PURCHASE	As soon as they are released	A few weeks before the event	A few days before the event	On the day of the event
RESPONSES	62	92	43	4
PERCENTAGE (per cent)	30.8	45.8	21.4	2

Table 7: Distribution of respondents based on the timing of typically purchasing concert tickets.

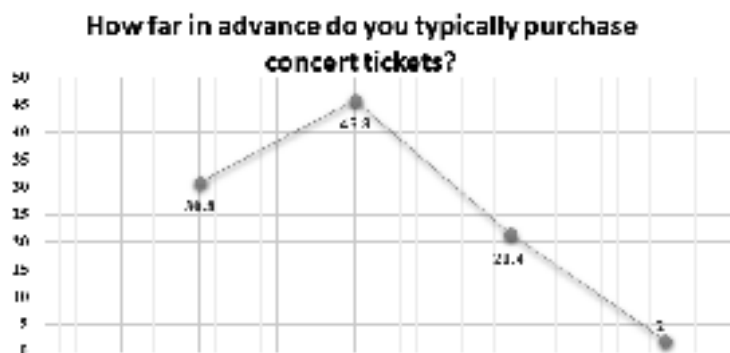


Figure 9: Respondents' time preference for purchasing tickets.
(Source: Author's Compilation)

Interpretation: The above graph illustrates when respondents typically purchase concert tickets in India. While the majority (45.8per cent) buy tickets a few weeks before the event, indicating a preference for reserving seats early while assessing schedules, 30.8per cent purchase as soon as tickets are released, likely due to high demand for popular concerts. Around 21.4per cent buy just a few days before, possibly influenced by last-

minute plans or availability, and only 2per cent purchase tickets on the event day, suggesting limited dependency on last-minute sales. This purchasing pattern reflects audience planning behavior, focusing on the importance of early promotions and tiered pricing strategies to maximize ticket sales.

MEDIUM	Social Media	Word of Mouth	Advertisements	Ticketing Platforms	Others
RESPONSES	145	30	18	6	2
PERCENTAGE (per cent)	72.1	14.9	9	3	1

Table 8: Distribution of respondents based on their medium of awareness for concerts.



Figure 10: Medium of awareness for concerts.
(Source: Author's Compilation)

Interpretation: Over 72per cent of respondents discover upcoming concerts and live events through social media, highlighting it as the most influential platform for driving ticket sales and promotional reach in India's live music industry.

OBJECTIVE 3

To discover the factors that influence consumers to purchase tickets.

HOW OFTEN	Frequently (more than 3 times a year)	Occasionally (2-3 times a year)	Rarely (once a year)	Never
RESPONSES	17	59	106	19
PERCENTAGE (per cent)	8.5	29.4	52.7	9.5

Table 9: Distribution of Respondents based on how often they attend live music concerts



Figure. 11: Frequency of attending live music concerts.
(Source: Author's Compilation)

Interpretation: The above graph illustrates that most people (52.7per cent) only attend one concert per year, whereas 29.4per cent attend 2-3 concerts annually. A small but passionate group (8.5per cent) attends frequently (more than 3 times yearly), showing these are dedicated music fans who might respond well to loyalty programs. Respondents aged above 35 (9.5per cent) never attend live concerts, suggesting that the live events attract young adults rather than older age groups. The data reveals interesting patterns about how often people attend concerts, which helps understand what motivates ticket purchases. So, let us now analyse the factors that influence consumers to purchase tickets.

TYPE OF MUSIC EVENT	RESPONSES	PERCENTAGE (per cent)
Rock	56	27.9
Pop	72	35.8
Hip-Hop/Rap	49	24.4
Classical	34	16.9
Bollywood	162	80.6
Regional/Folk	27	13.4
Others	3	1.5

Table 10: Distribution of respondents based on the kind of live music events they usually attend.



Figure. 12: Type of live music events that respondents usually attend
(Source: Author's Compilation)

Interpretation: The above graph illustrates Bollywood's dominance in concert ticket purchases, with 80.6per cent of respondents preferring Bollywood music events. Initially, genres like Rock (27.9per cent), Pop (35.8per cent), and Classical (16.9per cent) were more popular, but Bollywood's influence has escalated post-pandemic. The rise of Bollywood playback singers like Arijit Singh, Diljit Dosanjh, and Anuv Jain, whose live concert tickets sell out within hours, has fueled this trend. Conversely, Regional/Folk (13.4per cent) and Others (1.5per cent) have limited reach. This shift indicates how Bollywood's integration with mainstream media and films has made it the primary driver of concert sales in India.

FACTORS	RESPONSES				
	1	2	3	4	5
Ticket Price	24	18	36	55	68
Artist Popularity	12	20	32	51	86
Venue Location	9	26	69	48	49
Seating Arrangement	22	41	65	50	23
Review of Past concerts	16	34	53	54	44

Table 11: Distribution of respondents based on key factors influencing the purchase of tickets.
(NOTE: 1-Least Important to 5-Most Important)

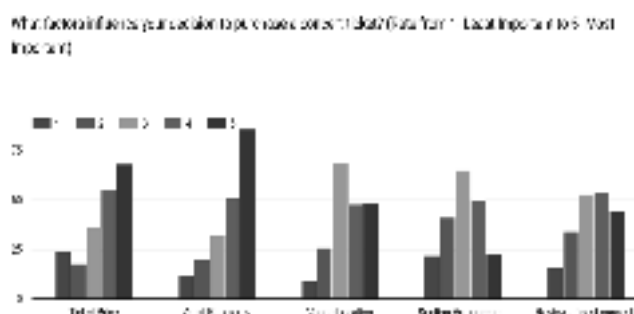


Figure. 13: Ranking of factors that influence respondents to purchase tickets.
(Source: Author's Compilation)

Interpretation: The above graph indicates the key factors that influence consumers to purchase tickets, ranked on a scale of importance. (1 being least important to 5 being most important). The factors are analysed as follows:

1. Ticket Price: Most respondents have ranked the ticket price as 4-5. This underlines that affordability and consumer willingness to spend on tickets are major factors that influence purchases. Thus, consumers are highly sensitive to pricing.
2. Artist Popularity: This is also ranked mostly around 4-5, suggesting that artists' fame and popularity significantly drive consumer behavior. Consumers are willing to pay for artists who are famous worldwide. For instance, people have gone beyond their budget for high-profile artists like Diljit Dosanjh and Honey Singh.
3. Venue Location: Likely rated 3-5, the mid-range bar suggests that accessibility to live events is a secondary factor in comparison to price and popularity. However, convenient locations may encourage participation.
4. Seating Arrangement: likely rated 3-4, seating arrangement does not majorly constitute a decisive factor in purchase although premium experiences including VIP seats and fanpit attract respondents.
5. Review of Past Concerts: Being least rated, the smallest bar indicates that review of past concerts constitutes minimal influence on consumers, thus dominating tangible factors like price, popularity, et al..

FACTOR	Availability of group discounts	Accessibility	Weather conditions	Presence of food and beverage stalls	Others
RESPONSES	113	123	99	63	5
PERCENTAGE (per cent)	56.2	61.2	49.3	31.3	2.5

Table12: Additional factors influencing consumers to purchase tickets.

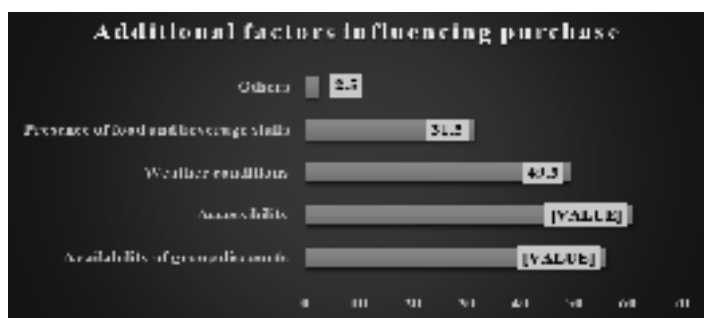


Figure 14: Additional factors influencing purchase
(Source: Author's Complilation)

Interpretation: The above graph indicates the presence of additional factors influencing consumers to purchase tickets. The factors are:

1. Availability of group discounts: 113 respondents (56.2per cent) consider group discounts as a factor influencing purchase. Discounts like buy 4 get 1 ticket free often act as impulse purchases inducing consumers to opt for concerts that they do not plan to attend.
2. Accessibility: factors like parking conditions and transport facilities strongly influence consumer purchases with 61.2per cent.
3. Weather conditions: for outdoor events, weather conditions play a decisive role in purchase. 99 respondents (49.3per cent) consider it as an influential factor.
4. Presence of food and beverage stalls: with 31.3per cent responses, availability of food and beverage is a secondary factor in contrast to group discounts and accessibility.
5. Other factors: factors like timing and date of the event (2.5per cent) have the least influence on Indian consumers.

FACTORS	RESPONSES	PERCENTAGE (per cent)
Expensive Tickets	148	73.6
Event inaccessible	108	53.7
Lack of interest in the event/artist	104	51.7
Poor reviews	54	26.9
Lack of Time/scheduling conflicts	71	35.3

Table 13: Factors that restrict the participation of consumers in concerts.

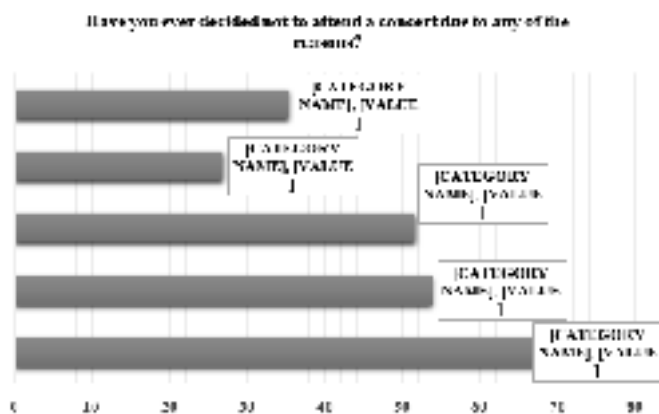


Figure. 15: Factors that restrict participation in live music events
(Source: Author's Compilation)

Interpretation: The data reveals the barriers to attendance in concerts with the majority (73.5per cent) being expensive tickets followed by inaccessibility of the event and lack of interest in the artist with 53.7per cent and 51.7per cent respectively. Conversely, other barriers like scheduling conflicts (35.3per cent) and poor reviews of the event (26.9per cent) are secondary factors. Addressing these factors could significantly boost ticket sales and audience engagement in India's growing live music market.

SOLUTION	Early bird discounts	Instalment payment options	Group discounts	Merchandise offer	Others
RESPONDENTS	146	31	122	27	3
PERCENTAGE (per cent)	72.6	15.4	60.7	13.4	1.5

Table 14: Solution to the Above Barriers.



Figure. 16: Factors that would make respondents more likely to purchase tickets.
(Source: Author's Compilation)

Interpretation: The above graph illustrates how organizers can overcome purchase barriers by imposing early bird discounts (72.6per cent) and group discounts (60.7per cent) like BUY 4 and GET 1 free. Conversely, Instalment Payment Options (15.4per cent) and merchandise offers (13.4per cent) can also be considered solutions. Other solutions (1.5per cent), including international and national talent collaboration, can combat the lack of interest.

OBJECTIVE 4

To examine whether income is associated with the maximum amount a person is willing to spend on a concert in India.

Hypothesis For Chi-Square Test:

Null Hypothesis (H0): There is no significant association between monthly family income and the maximum amount one is willing to spend on concert tickets in India; the two variables are independent.

Alternative Hypothesis (H1): There is a significant association between monthly family income and the maximum amount one is willing to spend on concert tickets in India; the two variables are dependent.

Contingency Tables							
Contingency Tables							
		What is the maximum amount you are willing to spend on a concert ticket in India?					
monthly family income		Above Rs. 10000	Below Rs. 500	Rs. 2001 - Rs. 5000	Rs. 500 - Rs. 2000	Rs. 5001 - Rs. 10000	Total
Above Rs. 3,00,000	Observed	3	6	17	30	9	65
	Expected	1.294	9.05	16.17	31.4	7.11	65.0
Below Rs. 50,000	Observed	0	8	5	13	2	28
	Expected	0.557	3.90	6.97	13.5	3.06	28.0
Rs. 1,50,001 - Rs. 3,00,00	Observed	1	3	14	19	9	46
	Expected	0.915	6.41	11.44	22.2	5.03	46.0
Rs. 50,000 - Rs. 1,50,000	Observed	0	11	14	35	7	62
	Expected	1.294	8.64	15.42	29.9	6.79	62.0
Total	Observed	4	28	50	97	27	201
	Expected	4	28	50	97	22	201

χ^2 tests			
	Value	df	p
χ^2	21.9	12	0.038
χ^2 continuity correction	21.9	12	0.038
Fisher's exact test			0.040*
N	201		

* Monte Carlo simulation

Figure. 17: Chi-square test of association (independence) between monthly family income and the maximum amount one is willing to spend on a concert ticket.
(Source: Jamovi software (version 2.6.26 solid))

Interpretation: Chi-square test of association (independence) was conducted between two categorical variables – Monthly family income (Below Rs. 50,000/ 50,000-1,50,000/ 1,50,001-3,00,000/ Above 3 lacs) and the maximum amount a person is willing to spend on concert tickets in India (Below Rs.500/ 500-2,000/ 2,001-5,000/ 5,001-10,000/Above 10,000). The expected cell frequencies were at least 5 for the majority (80per cent) of cells.

Statistical Results: χ^2 value = 21.9, df = 12, p-value = 0.038

$\chi^2_{(12)}$ (calculated) i.e., 21.9 > $\chi^2_{(12)}$ (tabular) i.e., 21.026 and p-value i.e., 0.037 < 0.05

So, we reject Null-Hypothesis (H_0) and accept Alternative-Hypothesis (H_1). Hence, we can conclude that a statistically significant association exists between monthly family income and the maximum amount one is willing to spend on a concert ticket.

OBJECTIVE 5

To assess whether Age is associated with the frequency of attending live music concerts.

Hypothesis For Fisher's Exact Test:

Null Hypothesis (H_0): There is no significant association between age and the frequency of attending live music concerts; the two variables are independent

Alternative Hypothesis (H_1): There is a significant association between age and the frequency of attending live music concerts; the two variables are dependent.

Contingency Tables						
Contingency tables						
What is your age?		How often do you attend Live Music Concerts?				Total
		Frequently (more than 3 times a year)	Never	Occasionally (2 - 3 times a year)	Rarely (once a year)	
18 - 25	Observed	13	16	51	84	164
	Expected	13.671	15.502	48.14	86.49	164.00
26 - 35	Observed	2	1	2	10	15
	Expected	1.269	1.418	4.40	7.91	15.00
36 - 45	Observed	1	0	0	7	8
	Expected	0.677	0.756	2.35	4.22	8.00
Above 45	Observed	0	0	3	2	5
	Expected	0.423	0.473	1.47	2.64	5.00
Below 18	Observed	1	2	3	3	9
	Expected	0.761	0.851	2.64	4.75	9.00
Total	Observed	17	19	59	106	201
	Expected	17	19	59	106	201

χ^2 Tests			
	Value	df	p
χ^2	12.8	12	0.385
χ^2 continuity correction	12.8	12	0.385
Fisher's exact test			0.279
N	201		

Figure. 18: Fisher's exact test of association (independence) between age and the frequency of attending live music concerts.
(Source: Jamovi software (version 2.6.26 solid))

Interpretation: Fisher's exact test of association (independence) was conducted between two categorical variables – Age (Below 18/ 18-25/ 26-35/ 36-45/ Above 45) and the frequency of attending live music concerts (Frequently/occasionally/ rarely/ never). Since most (80per cent) Expected cells are less than 5, Fisher's exact test has been applied instead of chi-square to showcase more accurate results.

Statistical Results: p-value = 0.279, i.e., p-value > 0.05

So, we accept Null-Hypothesis (H0) and reject Alternative-Hypothesis (H1). Hence, we can conclude that no significant association exists between age and the frequency of attending live music concerts.

FINDINGS OF THE STUDY

The major findings of the study have been summarised as given below:

- The live music industry of India has witnessed a remarkable growth in revenue as the ticketed live music sector is alone expected to reach Rs. 1864 crores in 2025, whereas the entire Indian Live Music Event Industry was valued at Rs. 88 billion in 2023 and is projected to reach Rs. 143 billion by the year 2026, growing at a Compound Annual Growth Rate (CAGR) of 17.6per cent. High-profile concerts like Diljit's Dil Lumanti Tour and Coldplay's "Music of the Spheres" have generated substantial income through tiered ticket pricing, brand sponsorships, and merchandising.
- Ticket pricing in India follows a tiered model-from general admission to VIP and price differentiation is made based on proximity to the stage, amenities, and exclusivity. Dynamic pricing strategies are used, where ticket prices increase based on demand and the artist's popularity. Ticket sales are majorly handled by online platforms like Book My Show and

Insider Paytm, offering early bird discounts and exclusive access to certain customer segments.

- Artist popularity and emotional connection are primary motivators for concert ticket purchases. Ticket pricing and affordability significantly affect consumer decisions—youth and students often look for discounted options. Location and venue accessibility also impact purchasing behavior, with metro cities being more favourable due to better infrastructure. Social media marketing, influencer endorsements, and viral campaigns play a vital role in creating hype and driving purchases. Consumers are drawn to value-added experiences like exclusive merchandise, VIP access, and behind-the-scenes content.
- The results from the chi-square test of association (independence) conducted between monthly family income and the maximum amount one is willing to spend on concert tickets in India highlight that there is a significant association between the two variables as the p-value is less than 0.05, i.e., $0.037 < 0.05$ and the calculated value is greater than the tabular value, i.e., $21.9 > 21.026$.
- The results from the Fisher's exact test of association (independence) conducted between age and the frequency of attending live music concerts highlight that there is no significant association between the two variables as the p-value is greater than 0.05, i.e., $0.279 > 0.05$.

CONCLUSION

In the decade past, live music concerts have gained huge popularity among Indian consumers and developed from niche events into mainstream entertainment activities. Such heightened interest has led to the growth in revenues in India's live music sector by a handsome amount, which has heavily invested in the country's economy. With global artists touring India on a regular basis and domestic talent thriving, the concert business has created job opportunities, fostered tourism, and stimulated supporting industries such as hospitality and merchandising.

One of the key aspects of this study has been learning about consumer sentiment towards live concert music. Indian listeners perceive concerts as something bigger than musical shows; they view them as experience shows, social gatherings, and cultural happenings. Consumer sentiment is highly based on the fame of the singer, ticket prices, ease of venue accessibility, and overall event experience. While the premium ticketing segments are growing on the back of higher disposable incomes, a larger part of the population is worried about affordability. Secondly, digital technologies and social media have increased consumer interaction, making it easier for promoters to promote events and consumers to make informed choices.

In the years to come, the Indian live music industry can expand its audience base and revenue streams significantly. To benefit from this, the organizers must balance competitive prices and premium experiences to cater to different consumer segments. Investment in technology-driven innovations, such as dynamic pricing models and virtual concerting experiences, can further enhance participation. Additionally, investing in developing infrastructure—quality of venues, accessibility, and logistics—will lead to more consumer satisfaction.

Lastly, collaborations with brands, streaming services, and tourism boards can create new opportunities for revenue generation and audience building. As the market develops, staying consumer-focused by keeping affordability, accessibility, and rich experiences at the forefront will be critical to driving long-term growth. By capitalizing on these opportunities, India's live music market can continue to thrive, establishing itself as a destination for world music.

RECOMMENDATIONS FOR IMPROVEMENT

To fuel the experience of India's Live Music Industry, some recommendations to the authorities and organizers are suggested as follows:

- Authorities and organizers must enhance the concert infrastructure and venue facilities to meet international standards. Venue facilities including seating arrangements, crowd management, entry and

exit systems, and security measures must be significantly improved to enhance the concert experience.

- The organizers must align the ticket prices with the diverse income levels of Indian consumers. A wider range of ticket categories must be introduced, catering to students and middle-income groups.
- Authorities must regulate the secondary ticket market by imposing strict regulations to control the resale of tickets at inflated prices. Blockchain technology must be used for ticket verification, ensuring fair access to tickets and preventing the exploitation of fans.
- Authorities must improve public transportation facilities and parking facilities near concert venues. Shuttle services can be implemented and there must be designated parking zones near significant concert venues, reducing congestion and making such events more convenient.
- Organizers must ensure transparency in ticket pricing by reducing the hidden charges. This might be achieved by displaying a clear breakdown of costs upfront, including taxes, service fees, and processing charges.
- Organizers must consider diversifying venue locations beyond major metropolitan cities including Mumbai, Delhi, and Bangalore as this would expand the audience base and increase overall industry revenue.

LIMITATIONS OF THE STUDY

1. The sample size is limited to 201 responses and respondents residing in West Bengal, which might not give a broader perspective of the entire population influenced by the Live Music Industry of India. So, there is a scope for future research on a much larger scale.
2. The project was completed within a very short period, i.e., 3 months from January 2025 to March 2025. Thus, due to the time constraint, the preparation and presentation of the project has been limited.

3. The topic chosen has recently gained relevance in India, resulting in a lack of relevant previous research on the same.

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Some form of gig economy welfare and regulation should change in order to meet not only fair compensation and job security for working people.

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The Rise of Subscription-based Businesses: Role of Consumer Behaviour and the Gig Economy

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ABSTRACT

In 2007, Netflix moved from DVD rental to streaming, and unknowingly initiated a business revolution. Today, subscription-based models are no

longer industry novelties, they're dominant forces, shaping how we eat, watch, learn, and work. However, what we often overlook, in the convenience of repetition-based services, is the complex eco-system of changing demand and an invisible labour force of gig workers it sits upon. As consumers chase after affordability and flexibility, businesses search for loyalty and predictable consumption patterns, are we seeing the next industrial shift? This paper will explore the rapid growth and evolution to subscription-based models through the lens of changing consumer behaviour, and the rise of the gig economy. It will unpack the effects of automation, AI, and digital personalisation on customer relationships, and if these types of markets deliver long-term value. For companies to remain viable in a new competitive context they must consider: is convenience proving to be at too high a cost?

KEYWORDS: Subscription Economy, Consumer Behaviour, Gig Economy, Digitalisation, Subscription Fatigue, Business Model Innovation

FROM ONE-TIME PURCHASES TO LIFETIME ACCESS: WHY SUBSCRIPTIONS ARE RESHAPING THE WORLD

In the last 10 years, a quiet revolution has transformed global commerce – one monthly payment at a time. Subscription-based business models, which once were mainly connected to magazine subscriptions and cable TV, have permeated every nook and cranny of our lives. Streaming services (Netflix, Spotify), e-commerce (Amazon Prime), and SaaS (Adobe Creative Cloud) have changed our expectations about how we consume, interact, and create. Even groceries (Blinkit) and meal delivery (Swiggy) have also moved to a subscription-based model.

What's driving this shift? It is not simply technology, it is psychology. Today's consumers prefer convenient and flexible access and lower ownership cost over rigid ownership. We live in a time enabled by cloud computing, mobile apps, and frictionless payment systems, where subscriptions allow us to not invest heavily up front, but rather we can access things, on demand. As our lifestyles undergo changes, so too, our

behaviours and preferences; we desire smooth and personalized experiences in all facets of our lives.

There is another force fuelling our service-first transformation—the gig economy. Subscription platforms utilize flexible labour. Delivery riders and home service providers are the hustle of the gig economy and are the operational engine behind customers' expectations for real-time satisfaction. Companies such as Ola, Urban Company, Zomato, etc., are heavily reliant on task-based labour, that is best utilized in high demand service-first situations.

Yet with growth stories comes cracks. Consumers are feeling burdened—overseeing subscriptions, price increases and “subscription fatigue,” as academics have termed it. On the supply side, businesses are facing rising churn, constant innovation pressure, and increased scrutiny into gig worker welfare.

Gig work appears in its own fight for labour rights due to precarious conditions, non-income, no benefits, and little employment protection.

As governments begin to implement regulatory frameworks around gig labour, and consumers become more demanding for ethical and integrated services, the subscription model finds itself at a crossroads. This study examines the interplay between consumer behaviour and gig-based operations, whether this model is designed for long-term sustainable consumption, and what this means for the future of business, employment and digital lifestyles.

LITERATURE REVIEW

- **Sharma & Lulandala (2023):** Exploring consumer behaviour and habit formation with OTT subscriptions during and after COVID-19, focusing on strategies used by platforms to maintain engagement.
- **Iyengar, Park & Yu (2022):** Analysing the economic impact of subscriptions, highlighting how upfront payments affect customer retention and outlining profitability models for subscription programmes.
- **Vallas & Schor (2020):** Tracking the rise of platform economies and the critical role of gig and crowd

workers, discussing employment insecurity and challenges faced in such models.

- **Schuh et al. (2019):** Demonstrates how subscription models enhance competitiveness for manufacturers in Industry 4.0 by stabilising revenue and improving customer focus.
- **Chen et al. (2018):** Studies consumer adoption of subscription models, noting women are more active subscribers and highlighting churn rate as a major business challenge.
- **Tran & Sokas (2017):** Warns of reduced worker protections in the gig economy, urging policy reform to secure health and safety benefits for gig workers.

CONCEPTUAL FRAMEWORK

1. Emergence of the Subscription Economy

The subscription model has matured and grown into an enormous transformational force that has turned access into a service. On the spectrum of blurred lines between service and product, subscriptions have invited new ways in which customers interact with businesses. Whether it be Netflix, Spotify, Amazon Prime, or Adobe Creative Cloud, companies are starting to move away from one-time purchase transactions in favour of the recurring revenue model to deliver consistent value through mutually beneficial transactions.

Some of the catalysts for this evolution include – convenience of auto-renewal, affordability of smaller payment obligations, personalisation derived from data analytics and the tools to interpret that data, easy access on digital platforms. Additionally, as consumers start to value experience over ownership, subscriptions create opportunity in being flexible, easy-to-use, and free from long-term commitment.

2. Understanding Consumer behaviour and evolution

Consumer behaviour is central to the success of subscription models. It involves how individuals or groups make decisions about purchasing and using services. This behaviour is influenced by various

personal, psychological, social, cultural, and economic factors.

Consumer Evolution began with traditional word of mouth and small local buying inspections, then came the industrial & advertising boom where mass production of goods and branding and advertising shaped preferences. Today, digital age consumers are hyper-informed, comparison-focused, experience-driven, and heavily influenced by social media and they demand speed, personalisation and seamless digital experiences.

3. The Gig Economy Backbone

The gig economy is a system of labour characterised by short-term contracts or flexible work, usually commissioned through online platforms. These workers are the back-end of many subscription-based services - driving food, customer inquiries and on-demand services. Gig work is attractive due to flexibility, task-based income and the ability to be a global workforce. However, gig work provides no job security or stability, as most gigs managed by an app on a mobile device or online platform. The types of gig workers, are Freelancers, seasonal workers, content creators and skilled professionals. The key inputs driving gig economy are tech platforms, high speed internet and smartphones, increasing consumer demand, and a flexible and adaptive labour market.

Objectives of the Study

- This study aims to explore the key drivers behind the rapid growth of subscription-based businesses across sectors like technology, entertainment, and retail.
- It examines the role of the gig economy in supporting these models through flexible labour and real-time service delivery.
- The research also analyses evolving consumer preferences, the impact of digitalisation and technological progress, and challenges such as subscription fatigue, retention issues, and regulatory risks.
- Finally, it assesses the long-term sustainability of these models from economic, social, and ethical perspectives, highlighting their potential to reshape business and employment landscapes.

RESEARCH METHODOLOGY

This study is based on primary data collected via a 25-question Google Forms survey, circulated between 12th February and 20th March 2025. The sample comprised 156 respondents across various age groups and locations. Data analysis involved bar graphs, pie charts, and correlation analysis using Microsoft Excel to interpret consumer behaviour and gig economy trends in subscription-based businesses.

Limitations of the Study – The study is limited by its small, urban-centric sample size and reliance on internet-based data collection. Results may not generalise across industries or global markets due to differing regulations. Rapid changes in consumer behaviour and gig work also restrict the ability to assess long-term sustainability and trends accurately.

RESPONSE ANALYSIS

Q1. What factors influence your decision to subscribe?

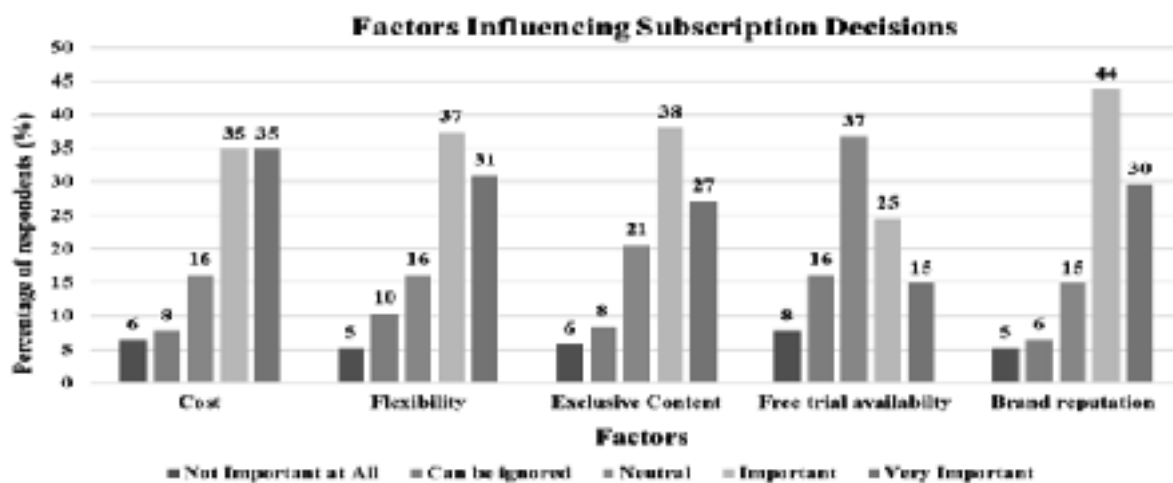


Figure 1: factors influencing subscription
Source: Researchers' Calculation

Among the factors that influence subscription decisions brand reputation (74%) and cost (70%) emerge as the most important ones. Next in rank are Flexibility (68%) and the availability of exclusive content (65%). Respondents majorly remained neutral when considering free trial availability to be a factor of consideration. The following correlation matrix also highlights that combinations of Brand Reputation with Cost, Flexibility and Exclusivity show a positive (>0.5) correlation, showing how these factors are related to each other.

		Cost	Flexibility	Exclusivity	Free trial	Reputation
Cost		1.00				
Flexibility		0.45	1.00			
Exclusivity		0.44	0.51	1.00		
Free trial		0.34	0.34	0.38	1.00	
Reputation		0.54	0.49	0.54	0.44	1.00

Q2. What type of Subscription-based services are popular among users?

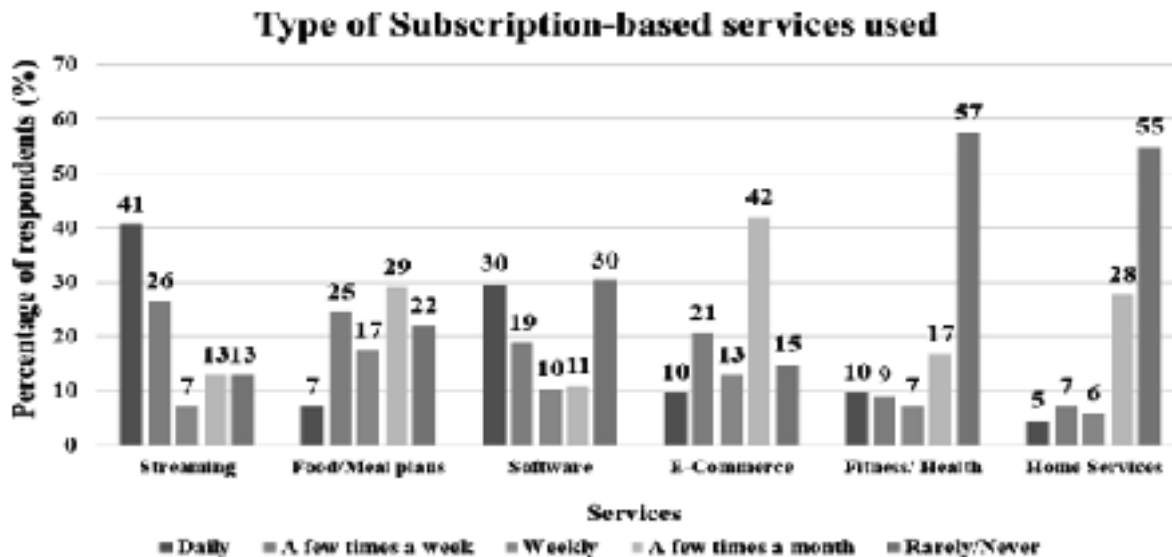


Figure 2: type of subscription
Source: Researchers' Calculation

When asked about the choice and frequency of usage of various subscription services, respondents have chosen Streaming services as the most used followed by Software services. Food and E-commerce services are moderately used. Fitness and home services are the least popular among the respondents of this survey.

Q3. What pricing strategy do you believe works best for subscription-based services?



Figure 3: pricing strategy
Source: Researchers' Calculation

Most respondents agree that basic services should be free and the premium services should be paid, and that one should only pay for only the part of service that they use. Only a few respondents liked the idea of having one price for the whole subscription or having different levels of access at different price points.

Though respondents have had an opinion about pricing strategies their subscription behaviour as per income, occupation as well as spending pattern, so we can say that the price is more important than the pattern of pricing.

Q4. How much do you spend on subscription-based services monthly (in INR)?

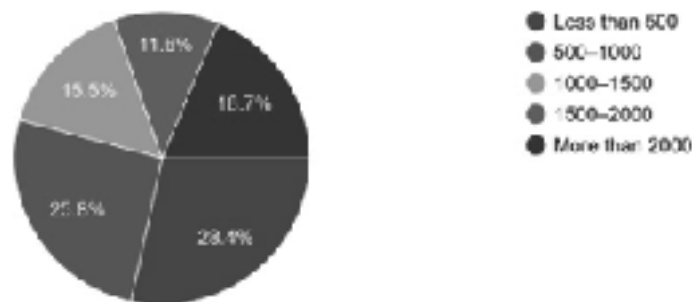


Figure 4: Monthly expenses
Source: Researchers' Calculation

Looking at the spending habits we have a diverse response, but we can compare it with their occupation and income levels. As about 58% of the respondents were students, we also see that most of the respondents spend less than 1000 INR on subscription-based services. The section of respondents spending higher than 2000 INR can be related to the ones having monthly income above 80000 INR.

Respondents had quite a mixed response about sharing their subscription accounts. In the correlation matrix of Spendings, Sharing and no. of subscriptions above, we can see that people who spend more have more subscription accounts but not exactly share them.

	Spendings	Sharing	No. of subscriptions
Spendings	1.000		
Sharing	0.404	1.000	
No. of subscriptions	0.600	0.329	1.000

Q5. What do you dislike the most about Subscription-based businesses?



Figure 5: subscription based business
Source: Researchers' Calculation

Most (39%) of the respondents dislike paying for services that they rarely use. 27% of them do not like the hidden fees and sudden price increases. A fair number of respondents are upset about them getting into too many subscription options(14%) and then facing difficulty in cancelling these subscription services(18%). Only 3 respondents out of 155 felt the lack of ownership over the products and services.

Key concerns among consumers include high costs, auto-renewal issues, and lack of flexibility. Addressing these factors can enhance customer retention and satisfaction in subscription-based businesses

Q6. How do the subscription-based businesses affect the Gig economy?

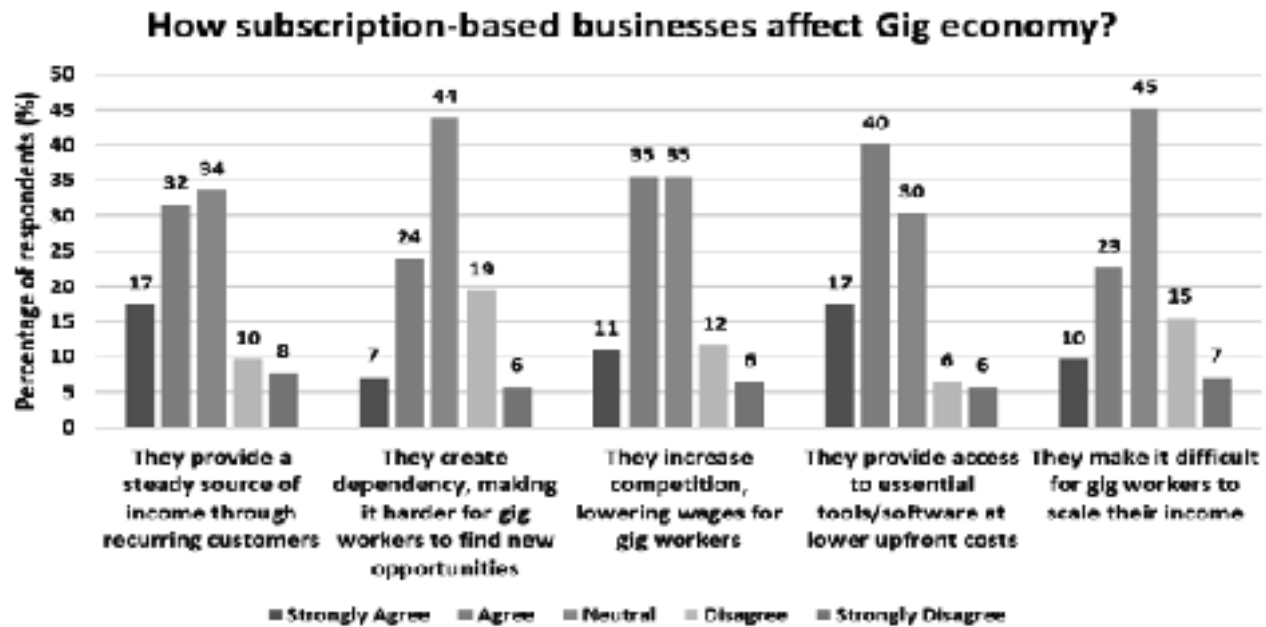


Figure 6: Gig economy affecting subscription based business
Source: Researchers' Calculation

When asked an opinion on a few statements about the effect on the gig economy the respondents agreed (57%) mostly that subscription-based businesses provide access to essential tools at lower upfront costs to the gig economy. Respondents had similar agreement on the fact that this business sector provided a steady source of income through recurring customers and they increase competition, lowering wages for gig workers (49% and 46% agreement respectively). They remained fairly neutral and showed disagreement with the statements that the subscription-based businesses create dependency, making it harder for gig workers to find new opportunities and scale their income.

Q7. How has the consumer usage evolved?

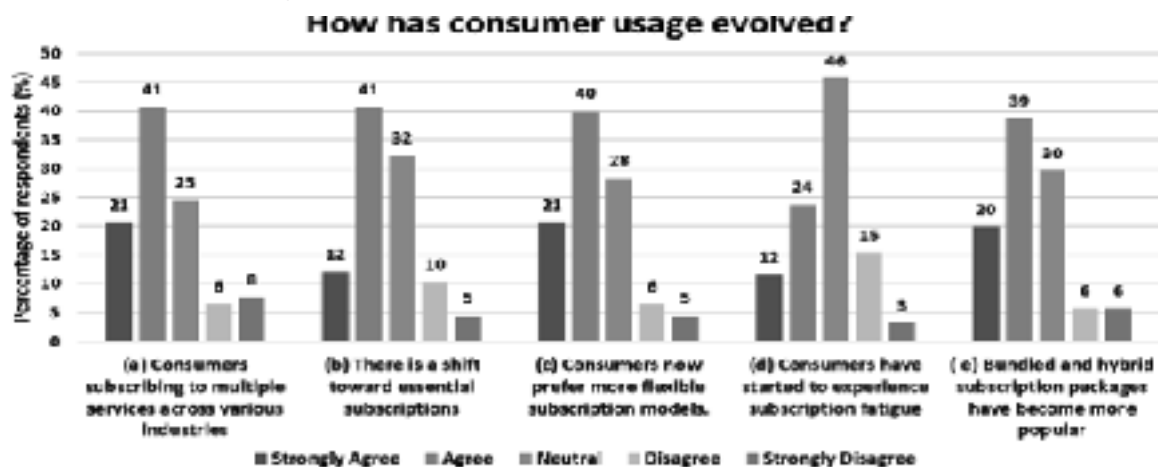


Figure 7: consumer usage
Source: Researchers' Calculation

With the evolution in the subscription-based business the usage pattern of consumers has also evolved. Most of the respondents agreed that consumers have been subscribing to multiple types of services which have been growing across various sectors(st.(a)) and that this had led to consumers now preferring more flexible models(st.(c)). They also showed agreement that bundled and hybrid packages have become more popular(st.(e)) and that there is a shift towards essential subscriptions (st.(b)). Respondents remained neutral to the fact that consumers have started to experience subscription fatigue(st.(d)).

Statement	a	b	c	D	e
a	1.0000				
b	0.4539	1.0000			
c	0.6001	0.5417	1.0000		
d	0.2621	0.2462	0.4107	1.0000	
e	0.4459	0.3960	0.6243	0.3907	1.0000

The above correlation matrix confirms that those who subscribe to multiple services want more flexible models (a&c). Consumers now prefer more flexible models which has led to bundled and hybrid packages to become more popular (c&e). Consumers subscribing to multiple services have somewhat agreed to hybrid packages to become more popular (a&e).

Q8. CERTAIN STATEMENTS RESPONDENTS GAVE THEIR OPINION ON:

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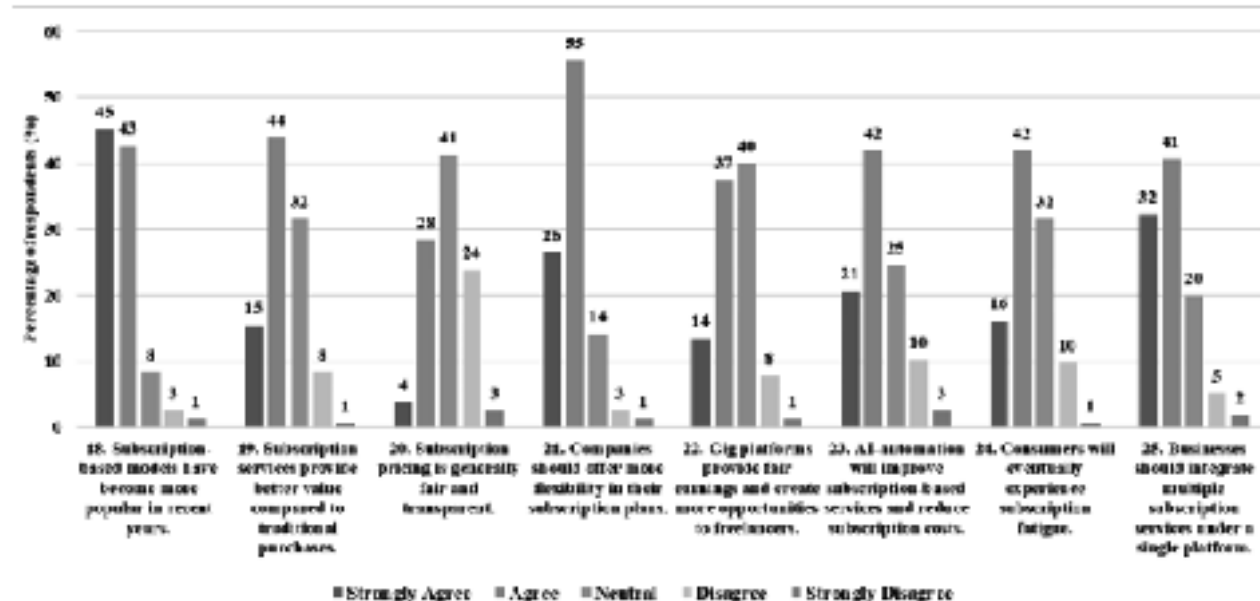


Figure 8: opinion by respondents
Source: Researchers' Calculation

OBSERVATIONS FOR EACH STATEMENT

Subscription-based models have become more popular in recent years: 88% agree making up the majority, showing widespread recognition of the growing

popularity of subscription models. Only 8% are Neutral, and the rest indicate minimal opposition to this trend.

Subscription services provide better value compared to traditional purchases: 76% of respondents agree that

subscription services offer better value. With a small percentage disagreeing, it suggests that while most see the value, some remain unconvinced.

Subscription pricing is generally fair and transparent: A very varied response, indicated that pricing fairness is largely debated, with a significant number of respondents uncertain.

Companies should offer more flexibility in their subscription plans: 55% Disagree, a very high disagreement level, suggesting that companies may already provide sufficient flexibility or that respondents are sceptical about the need for further changes.

Gig platforms provide fair earnings and create more opportunities for freelancers: 40% disagree, 37% neutral, showing a high level of scepticism regarding the fairness of gig economy earnings. 14% Agree, with only 8% Strongly Agree, indicate mixed opinions but lean towards dissatisfaction.

AI automation will improve subscription-based services and reduce subscription costs: 42% Agree and 25% Neutral, showing optimism about AI's impact. While 10% Disagree and 3% Strongly Disagree indicate some doubts.

Consumers will eventually experience subscription fatigue: 42% Agree and 32% remain neutral, meaning many respondents anticipate potential fatigue from managing multiple subscriptions. 16% Disagree, and only 10% Strongly Agree, indicating that while concern exists, not everyone sees it as a major issue.

Businesses should integrate multiple subscription services under a single platform: 41% Agree and 32% remain neutral, showing strong support for an all-in-one subscription platform. 20% disagree, indicating that some may prefer keeping subscriptions separate.

Statement	18	19	20	21
18	1.0000			
19	0.2362	1.0000		
20	0.1419	0.4235	1.0000	
21	0.5117	0.1017	0.0616	1.0000

The correlation matrix above shows that consumers feel that subscription services provide better value compared to traditional purchases and that the pricing

is generally fair and transparent (i.e., 19&20 show a slight positive correlation). Also, as subscription-based models have become more popular in recent years companies should offer more flexibility in their subscription plans (i.e., 18&21 showing positive correlation)

Key Inferences and Insights from the Study

Young, digitally active users are most common: Most respondents were students aged 18-24 and urban-based, signifying a tech-savvy group highly engaged with digital services. This demographic is more likely to be into streaming, SaaS, and e-commerce subscriptions.

Diverse representation: A mixture of occupations and income means the majority were able to provide differing viewpoints. Students and lower-income users have more pressing affordability issues, whereas professionals were likely to pay more for premium features and experiences.

Subscription usage: The majority of users belong to 1 to 5 services, indicating increased enrolment. Services are often shared with peers or family in order to maximize cost savings. Streaming and software services were the most reported and fitness and home services were less reported.

Decision drivers: Respondents felt that brand reputation, pricing, exclusive content, and flexibility were top influential drivers. Tiered and pay-as-you-go pricing models are strongly preferred over fixed or rigid pricing.

Noted pain points: Users were dissatisfied with being charged for services they did not use. They were frustrated with hidden costs, automatic-renewal, and cancellation options. Subscription fatigue is likely becoming a broader issue, especially with users managing multiple services.

Changing consumer behaviours: Consumers increasingly prefer hybrid, flexible, and bundled offers, paying a single payment reduces complication and increased access and cost. The preference has shifted towards those that prioritize utility and value over luxury/novelty services.

Gig Economy views: Subscription platforms provide gig-style jobs for gig workers (delivery, service roles), however, research participants were critical of gig work (inconsistency of income, competition, and lack of benefits). Views of fairness and future sustainability of gig work were mixed and uncertain for many participants.

Mixed views about Technology & Automation: AI received a positive impression, as part of an effective strategy for efficiency and cost controls, while remaining uncertain about job displacement or quality of service.

From Trend to Transformation: The Journey Ahead

In the future, the subscription economy will likely change again. There are emerging models that will be catalyzed by, for example, AI personalisation, blockchain, and Web3 technology that may change consumer access and ownership. Future scholarship can include the interplay between sustainability, ethics and environmental impact and subscription consumption. Cross cultural studies could explore how people are consuming subscription services in other parts of the world. Some form of gig economy welfare and regulation should change in order to meet not only fair compensation and job security for working people. As industries advance, the challenge for sustainable growth will be in balancing technology with human welfare and consumer value.

The subscription economy has altered the way we consume, work, and interact with service businesses. Consumers are attracted to subscriptions because they provide immediate availability, low cost, and customisation. Despite ongoing growth, the

subscription economy faces challenges related to systemic consumer fatigue, fair price assessments, and the problems faced by gig workers. The research shows that adaptability, innovation, and ethical accountability will shape the future of the subscription economy. Success in this sustainable economy will favour organisations that have a good understanding of the changing face of consumer priorities—combining digital efficiencies with innovative human-based approaches.

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The acceleration of e-transformation, driven by lockdowns and remote work, moved tech stocks to new heights, creating a stark contrast with traditional industries.

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Impact of the Covid-19 Pandemic on Stock Market Returns and Volatility

Dr. Ruby Mary Notts

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Post Graduate and Research Department of
Commerce (Evening)

Diya Gupta

Department of Commerce (Evening)

ABSTRACT

Impact of Covid-19 pandemic on stock market returns and volatility," provides a comprehensive analysis of the effects of the COVID-19 pandemic on global stock markets. It notes that the pandemic, declared in March 2020, caused a state of chaos in previously stable financial markets. The study highlights that the pandemic's impact was not uniform across all sectors, with the healthcare industry demonstrating greater resilience compared to non-essential sectors like consumer discretionary goods, raw materials, and real estate. The research also identifies key gaps in existing literature, such as the long-term changes in market sentiment, the effectiveness of policy responses across different economies, and the influence of behavioural economics on retail investors. The dissertation's objective is to fill these gaps by informing policymakers, investors, and financial institutions on how to better manage future economic turmoil and strengthen financial stability.

KEYWORDS: COVID-19, stock market, volatility, stock returns, financial crisis, economic recovery

INTRODUCTION

Over the past few decades' Eastern crises began with the 1997 Asian Financial Crisis, followed by the Dot-Com bubble of 2000, then the Subprime Mortgage Crisis of 2007, and finally the European Sovereign Debt Crisis from 2011 to 2013. In March of 2020, the COVID-19 outbreak was declared a pandemic which caused the previously stable financial markets to go into a state of chaos globally.

There was generalized panic surrounding the idea of severe economic consequences that could accompany the great depression, which was echoed broadly. The IMF and the World Bank were equally concerned about the outcomes. During periods of crises market efficiency plays a crucial role. The first wave of the pandemic in the early 2020 followed by the second wave in 2021, caused many businesses to close down for an extended period, which disrupted the financial market. Numerous researches have proven the great contagion impact that COVID-19 had on the stock

exchange and how profoundly it impacted different sectors of the economy.

The impact of the pandemic was not uniform across all industries. Some sectors experienced more severe disruptions and declines in returns than others. The healthcare industry, for instance, demonstrated greater resilience compared to non-essential sectors such as consumer discretionary goods, raw materials, and real estate. Additionally, government interventions—including stimulus packages and vaccination programs—played a crucial role in stabilizing markets and aiding economic recovery. Thus, in the light of the foregoing this study aims to evaluate the long-term effect of the Covid-19 pandemic on share market valuations and returns and compare its effect on stock markets of different countries or regions. Further, this study seeks to analyse the role of government interventions (e.g., fiscal stimulus, monetary policy) in mitigating the effect of the pandemic on secondary markets in different countries and understand the cerebral and behavioural impact of the pandemic on investor decision making

LITERATURE REVIEW

Engle and Ng (1994) found that negative return shocks do not exert as significant an impact on irregularity as positive yield shocks a finding later nuanced by more recent research. For instance, a 2025 study employing a quantile-based nonlinear model (QESTAR) reveals stronger persistence of negative shocks in lower quantiles, whereas positive shocks in upper quantiles revert more quickly to the mean. This underscores a growing recognition that asymmetries in shock persistence play a critical role in financial market dynamics.

Building on earlier insights by Baker et al. (2016) and Gulen and Ion (2016), which documented how stock market volatility depresses investment, production, and employment and amplifies policy uncertainty more recent studies have reaffirmed and elaborated on these relationships. For example, a study undertaken by IMF (2023) shows that dollar exchange rate volatility temporarily reduces investment and, with a one-year

lag, hampers productivity, particularly in financially constrained firms or economies with pronounced wage rigidities. Similarly, in the context of global value chain (GVC) integration, unfavourable movements in real exchange rates were found to hinder operating performance and corporate investment, with effects especially pronounced among leveraged or financially constrained firms.

Alfaro, Chari, and Panizza (2019) examined how firms in developing markets are vulnerable to exchange rate fluctuations, showing that larger firms face heightened risks to sales growth and broader economic resilience. Subsequent research reinforces this view. A study conducted in the year 2023–24 highlights the sector- and firm-level heterogeneity in exchange rate volatility's impact on international trade, emphasizing that robust risk management strategies and tailored policy interventions are critical to mitigate these vulnerabilities. Moreover, an IMF (2024) research highlights that low institutional capacity in public debt management, particularly across many emerging and low-income countries, exacerbates macroeconomic instability under foreign currency debt and volatility shocks. It recommends expanding hedging capacity and developing local-currency bond markets to enhance resilience. Additional evidence suggests that countries with lower competition in domestic product markets, such as many in sub-Saharan Africa, exhibit stronger exchange rate pass-through into inflation, further amplifying adverse effects on firms and consumers.

RESEARCH METHODOLOGY

This study adopts a mixed-methods approach, integrating both quantitative and qualitative analyses to provide a comprehensive understanding of the impact of the COVID-19 pandemic on financial markets.

Data Sources: Epidemiological data, including statistics on COVID-19 cases, mortality rates, and related indicators, will be obtained from the World Health Organization (WHO) as well as official databases of national health departments. Financial and economic data, such as stock market indices, exchange rates, and macroeconomic indicators, will be sourced from

established financial databases and government publications.

Quantitative Analysis: To assess market volatility during the pandemic, statistical measures such as standard deviation, variance, and GARCH models will be employed. Regression analysis will further be conducted to examine the relationship between market returns and explanatory factors, including pandemic-related news, economic indicators, and government policy responses. In addition, an event study methodology will be utilized to analyze market reactions to key pandemic-related developments, such as lockdown announcements, fiscal stimulus packages, and vaccine approvals.

Qualitative Analysis: A systematic review of the extant literature—including academic studies, working papers, and industry reports—will be undertaken to establish a theoretical framework and contextualize the quantitative findings. This qualitative component will provide insights into the broader socio-economic implications of the pandemic and identify potential channels through which COVID-19 affected financial markets.

By combining rigorous statistical analysis with contextual insights from prior research, this mixed-methods design ensures both empirical robustness and theoretical depth in addressing the research questions.

ANALYSIS AND FINDINGS

To further the analysis, we categorised the findings into three observations:

COMPARING THE PANDEMIC'S EFFECT ON STOCK MARKETS ACROSS DIFFERENT COUNTRIES OR REGIONS

The study highlights that the pandemic's impact was not uniform across all sectors. The healthcare industry demonstrated greater resilience, while non-essential sectors such as consumer discretionary goods, raw materials, and real estate experienced more severe disruptions. A comparison of data from January–December 2019 and January–June 2020 revealed an increase in positive correlations across all stock

exchanges during the crisis period. This suggests a growing interdependence and continuity among these global markets. The research also noted high irregularity and volatility clustering in all ten countries' market indicators during the pandemic. The study's findings indicate that the UK, France, and Italy's market indicators performed the worst in terms of yields from January to June 2020, while China and the US were the only ones that had optimistic yields during that period. The market indicators for Brazil, India, and the US showed the strongest rebound, while the British and French indicators had the lowest response.

Index	Brazil IBXS50	France CAC40	Germany DAX	UK FTSE100	Italy FTSE Italia	Japan NIKKEI225	USA S&P500	Canada SPTSX	India Sensex	China SSE Composite
Brazil IBXS50	1.00	0.73	0.65	0.72	0.59	0.22	0.32	0.22	0.55	0.34
France CAC40	0.73	1.00	0.87	0.95	0.31	0.51	0.74	0.81	0.63	0.59
Germany DAX	0.65	0.87	1.00	0.94	0.31	0.52	0.73	0.80	0.57	0.57
UK FTSE100	0.72	0.95	0.94	1.00	0.39	0.46	0.75	0.84	0.62	0.59
Italy FTSE Italia	0.59	0.31	0.31	0.39	1.00	0.42	0.72	0.75	0.56	0.59
Japan NIKKEI225	0.22	0.51	0.52	0.46	0.42	1.00	0.73	0.40	0.35	0.49
USA S&P500	0.32	0.74	0.73	0.75	0.72	0.73	1.00	0.85	0.85	0.50
Canada SPTSX	0.22	0.81	0.80	0.84	0.79	0.40	0.85	1.00	0.56	0.38
India Sensex	0.55	0.63	0.57	0.62	0.56	0.35	0.85	0.56	1.00	0.53
China SSE Composite	0.34	0.59	0.57	0.59	0.59	0.49	0.50	0.38	0.53	1.00

Table 1: Correlation Matrix of Major International Stock Indices

The graph above displays the diurnal oscillations of all the indicators from January 2019 to June 2020. The figure below offers a regard in the significant irregularity endured during the corona virus period, considering the request indicator of India also in the next page its shows all the request indicators of all the ten different countries and displays clustering of volatility, indicating that volatility in the current period will impact unborn ages of irregularity, and all return series appear to be returning to the mean, stating immobility.



Figure 1: Nifty Performance during the calendar year 2020

It is also observed that the alternate sector during the covid-19 crisis period exhibits lower negative skewness and reduced kurtosis in return distribution compared to the initial quarter of the covid-19 crisis period. The goodness-of-fit test verifies that the yields were not normal or irregular in both the pre COVID- 19 period and in the COVID- 19 period. Also, certain pointers within the alternate sector of the COVID- 19 extremity indicate a yield to normality, yet all the similar pointers parade an advanced degree of variability compared to typical ages.

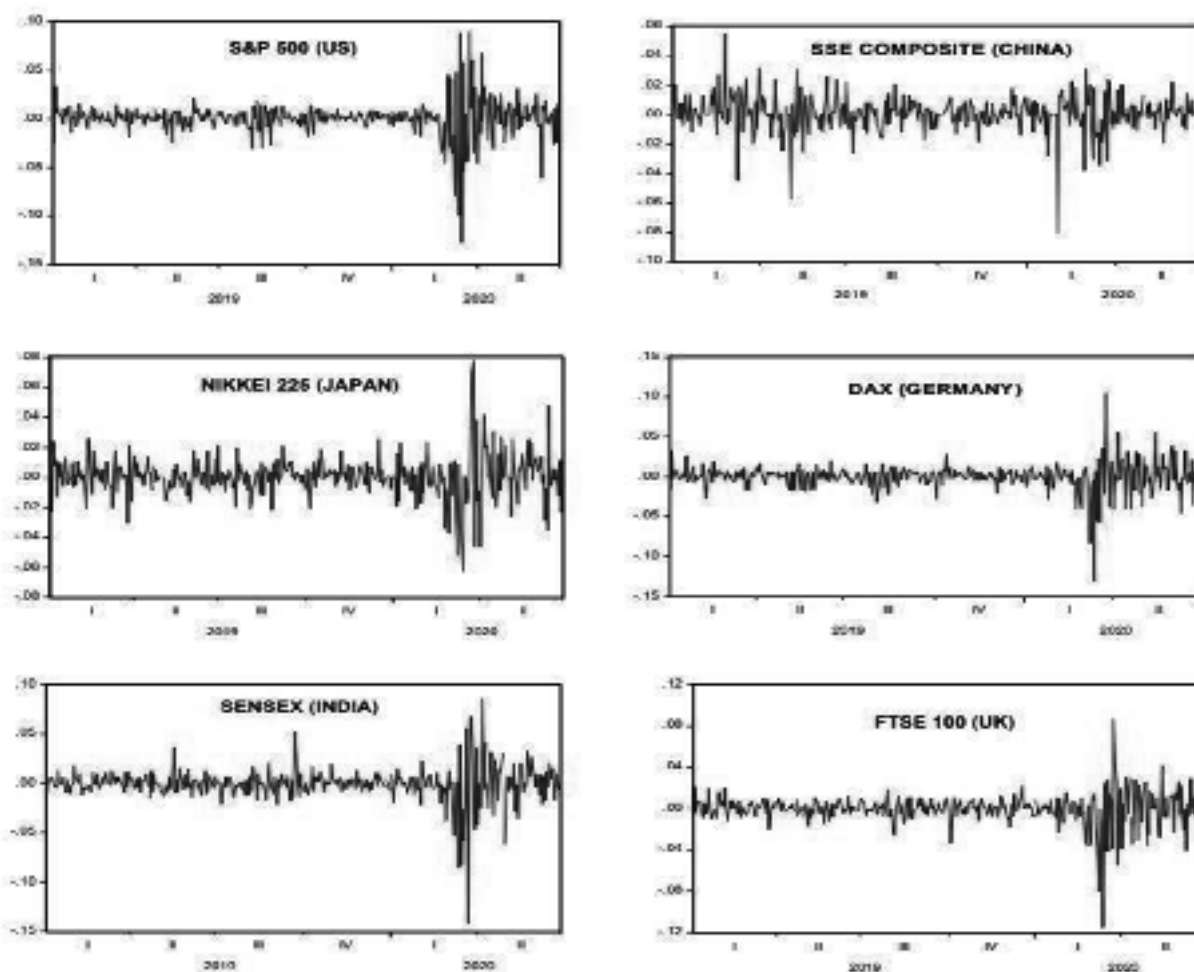


Figure 2: Indicators of United States, China, Japan, Germany, India and United Kingdom.
(Source: Primary Source)

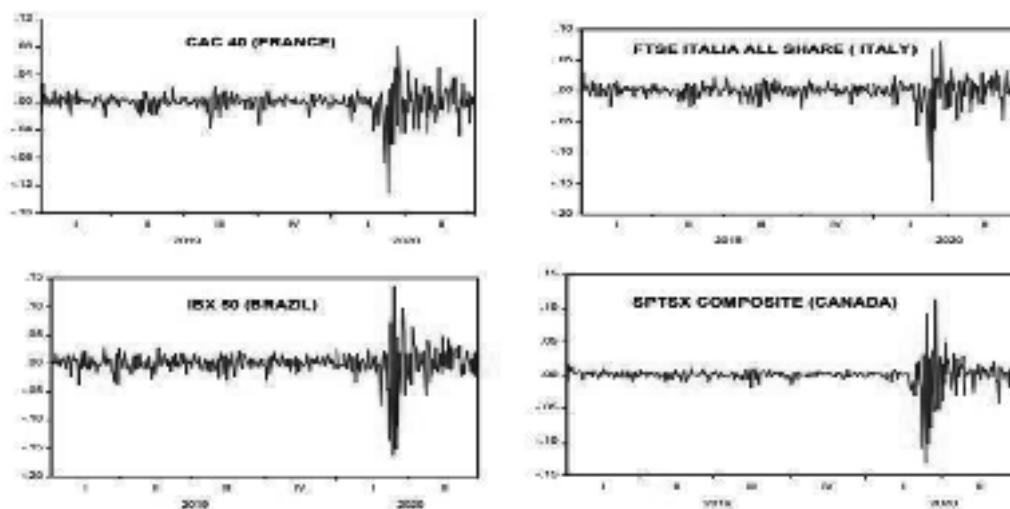


Figure 3: Indicators of France, Italy, Brazil and Canada
(Source: Primary Source)

The chart shows the indicators of UK, France, and Italy performed worst in terms of yields from January - June 2020. The Chinese and US requests were the one and only bones that endured optimistic yields from January to June 2020. When contrasting the profitable indicators of alternate sector with those of the beginning quarter of 2020, it's clear that most infact every indicator has rebounded, albeit with the varying degrees of strength. Generally, the British and the French indicators had the lowest answer fairly, while the Brazil, the India and the US request indicators displayed the well-built strength in their recoil. The graphs above provide a sapience into the high irregularity in the present nimbus contagion time with all countries request indicators take into account. likewise, all the graphs feel to parade irregularity congregate, so it will affect unborn ages of irregularity in the current period, and all yield series feel to be mean returning, which states immobility.

ANALYSING THE ROLE OF GOVERNMENT INTERVENTIONS IN MITIGATING THE EFFECT OF THE PANDEMIC ON SECONDARY MARKETS IN DIFFERENT COUNTRIES.

Governments worldwide responded to the pandemic with immediate, vigorous actions, including lockdowns, fiscal support, and vaccination programs, which were crucial in stabilizing markets. The study proposes a machine learning framework to evaluate the impact of these interventions on different stock market sectors. The analysis uses five intervention metrics from the Oxford COVID-19 Government Response Tracker: the government response indicator, economic support indicator, rigidity indicator, constraint and health indicator, and openness threat indicator. The descriptive statistics for these indicators suggest that the intensity of most government interventions was similar, with the exception of the economic support indicator. A comprehensible framework for predicting the impacts of COVID-19 governmental Monetary policy

influences all three aspects of equity returns: commercial profits, risk-free interest rates, and risk premiums. The Oxford COVID-19 Government Response Tracker offers five intervention metrics: government response indicator, economic support indicator, rigidity indicator, constraint and health indicator, and openness threat indicator. In China, when 2020 began, the government adopted standardized measures in response to the covid-19 outbreak.

Variable	Mean	SD	Median	Trimmed	MAD	Min	Max	Range	Skew	Kurtosis	SE
Stringency Index	155.25	997.20	76.33	73.00	42.00	-59	11,999.09	11,999.58	0.00	11.55	133.96
Risk of Openness Index	65.64	12.06	74.92	72.44	22.08	2.72	78.12	75.39	-3.64	14.12	0.64
Government Response Index	66.52	12.55	68.49	63.71	35.50	3.67	77.35	65.19	-2.71	8.39	0.61
Containment & Health Index	65.77	12.40	72.32	72.06	33.79	3.91	80.15	76.15	-3.18	10.90	0.61
Economic Support Index	43.71	22.30	62.93	45.75	0.00	0.00	62.22	62.00	-1.56	-0.72	1.13

Table 1: Descriptive Statistics of Policy and Response Indices

Indices related to stringency, government response, and containment/health are relatively consistent across countries, showing strong policy interventions and clustering at high values, especially during peak pandemic periods. In contrast, economic support policies varied widely across countries, highlighting differences in fiscal capacity and political choices. The negative skew across most indices indicates that strong interventions were more prevalent than weak ones, while the high kurtosis in several indices points to outliers—countries with extreme policy responses.

The descriptive statistics in Table 1 suggest that while most countries adopted stringent containment and health policies, there was considerable heterogeneity in economic support measures. This divergence has direct implications for financial market volatility. The clustering of high stringency and government response indices aligns with the observed volatility clustering in stock returns, as stringent lockdowns created uncertainty regarding production, consumption, and trade. Conversely, the wide variation in economic support reflects differences in fiscal resilience across nations, which likely influenced investor confidence unevenly across markets. Countries with stronger fiscal stimulus packages (higher economic support index values) may have experienced quicker stabilization of market expectations, while those with weaker support faced prolonged irregularities. Thus, the interplay

between strict containment policies (which were broadly similar) and economic support policies (which varied significantly) helps explain the persistence of volatility shocks and the gradual mean reversion in return series observed during the pandemic.

EVALUATING THE LONG-TERM EFFECT OF THE PANDEMIC ON SHARE MARKET VALUATIONS AND RETURNS

The pandemic led to a rise in retail trading, with millions of individuals becoming “epidemic day dealers” who used platforms like Robinhood and eToro. The study found that the COVID-19 pandemic significantly increased the likelihood of negative returns in global equity markets, with investors viewing the crisis as a major economic hazard. While countries like the UK, Germany, Brazil, and India saw a considerable increase in the probability of a “bad state,” markets in the US, Russia, China, Italy, and Spain experienced a decline in this probability during the pandemic compared to the pre-pandemic period.

The expected return on shares is also linked with the price to earnings ratio, as shareholders utilize the reduction rate to calculate the worth of unborn cash overflows. Valuations are out of tune with low expected returns, and (vice-versa) high valuations indicate that prices don't have significant room left for further growth (meaning expected returns have to be low). It has been well understood that asset prices can be good indicators, since they are reflective of investors' expectations about future earnings. In order to make an

estimate of growth expectations in terms of maturity, this study uses data from a related market—, like dividend futures.

The pandemic of COVID-19 significantly influenced global equity markets, resulting in a significant boost in the chances of negative returns. So this implies that investors considered the crisis a global economic hazard expecting detrimental market conduct. In comparison with the pre pandemic time, the odds of negative results increased considerably in nations like the UK, Germany, Brazil, and India. On the other hand, the markets in The United States, Russia, China, Italy, and Spain experienced a decline in the probability of entering a poor condition.

	United Kingdom	United States	Italy	Germany	China	Brazil	Russia	India	Spain
Mean	0.5362	0.5677	0.5525	0.5322	0.4850	0.4985	0.5299	0.5174	0.5487
Median	0.5350	0.5671	0.5529	0.5314	0.4842	0.4981	0.5295	0.5170	0.5486
Maximum	0.6035	0.6019	0.5643	0.5758	0.5268	0.5211	0.5541	0.5418	0.5576
Minimum	0.4890	0.5441	0.5346	0.5024	0.4572	0.4834	0.5136	0.5011	0.5428
SD	0.0141	0.0070	0.0036	0.0089	0.0084	0.0045	0.0049	0.0049	0.0018
Skewness	0.7147	0.7318	-0.7860	0.7431	0.7746	0.7714	0.7596	0.7641	0.7663
Kurtosis	4.6610	4.7326	4.8657	4.7506	4.8248	4.8296	4.8014	4.8118	4.8220

Table 2: Bad state probability (Before COVID-19)

(Source: Primary Source)

	United Kingdom	United States	Italy	Germany	China	Brazil	Russia	India	Spain
Mean	0.5798	0.5472	0.5180	0.5805	0.5050	0.4863	0.4958	0.5416	0.4919
Median	0.5619	0.5625	0.5345	0.5693	0.5235	0.4814	0.5090	0.5049	0.4833
Maximum	0.7908	0.6298	0.6023	0.7390	0.6000	0.5595	0.7093	0.7798	0.5709
Minimum	0.4903	0.3683	0.2404	0.4403	0.3712	0.4361	0.0586	0.4676	0.4265
SD	0.0604	0.0495	0.0558	0.0514	0.0494	0.0208	0.1110	0.0759	0.0468
Skewness	1.8032	1.7234	3.1002	0.6441	1.208	1.0957	2.361	1.8215	0.2462
Kurtosis	5.6327	5.6377	12.8640	3.2700	3.8491	4.8427	9.7593	5.0637	1.5943

Table 3: Panel B: Bad state probability (During COVID-19)

(Source: Primary Source)

Table above presents descriptive statistics for the probability of a poor condition. Panel A shows the results for the initial three months of a year during the COVID-19 era, encompassing January 1, 2020, through March 31, 2020. Panel B presents the results for the second quarter. During the COVID timeframe, extending from April 1, 2020, to June 30, 2020

ANALYSING THE CEREBRAL AND BEHAVIOURAL IMPACT OF THE EPIDEMIC ON INVESTOR

The COVID-19 outbreak caused heightened psychological stress among investors, leading to sharp declines in global stock markets. The study found a negative correlation between investor sentiment and investment decisions during the crisis. The volatility in investor sentiment, coupled with the rising number of COVID cases, significantly affected investor confidence and mental well-being. The research notes that being homebound due to lockdown measures adversely affected the psychology of investors and business professionals who were accustomed to spending 10–15 hours daily on outbound work-related activities. To cope with the uncertainty and anxiety, some investors adopted behavioural therapy techniques and recreated their market setups at home, which helped them maintain stability. The study emphasizes the importance of preventive strategies to manage financial stress during economic crises

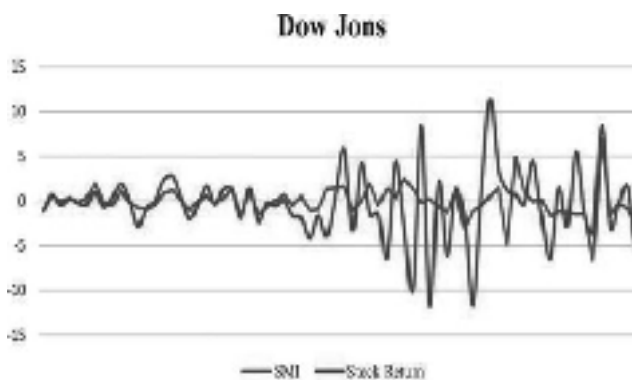


Figure 4: Dow John Stock Return.
(Source: Primary Source)

The COVID-19 outbreak had disrupted multiple aspects of life, significantly affecting public health and financial markets. The long-term stability of the global stock market and broader financial systems carries important implications for economic resilience. As key participants in the financial ecosystem, investors experienced a shift in sentiment, with their positive

attitude or fatalism about future stock prices undergoing considerable swap. This heightened volatility in investor sentiment contributed to a sharp decline in stock prices, reflecting the uncertainty and market instability brought about by the pandemic. The stock market movement in the above figures has shown the beneficial relationship between investor psychology and stock market returns. The investors or business people were generally outbound for 10–15 hours per day. During pandemic, however, they were homebound, which affected their psychology adversely.

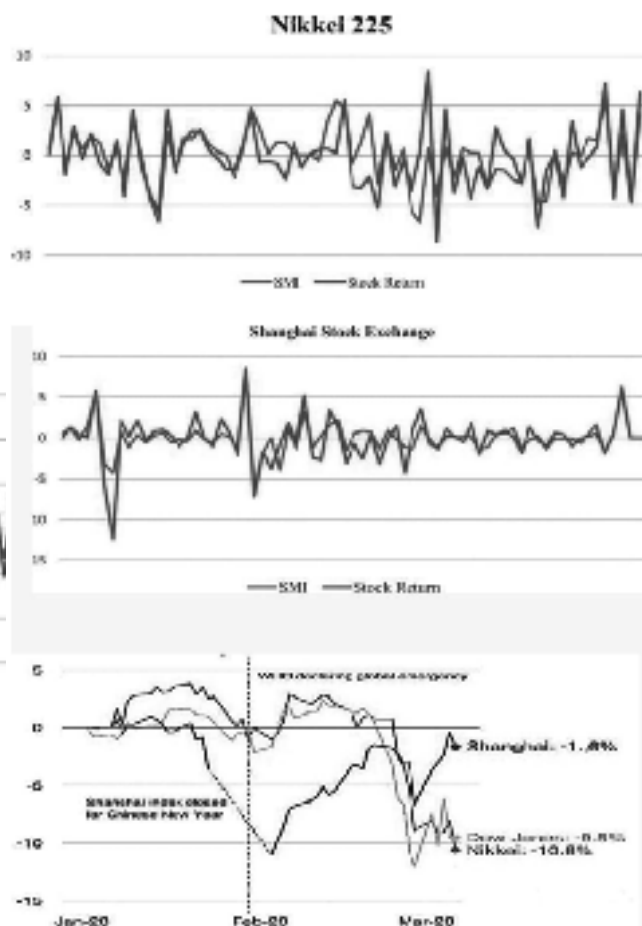


Figure 5: Shanghai Stock Exchange Stock Returns.
(Source: Primary Source)

The volatility in stock prices, coupled with the rising number of confirmed COVID cases, significantly affected investor confidence and mental well-being. Research findings indicate a secured negative

correlation between investor opinion and investment decisions during pandemic-induced crises across all analyzed markets. Additionally, the movement of stock markets alongside the sentiment index highlights a positive interrelationship between investor psychology and stock yields.

Before pandemic, work professionals and investors typically spent 10–15 hours daily on outbound travel for work-related activities. However, lockdown measures confined them to their homes, negatively affecting their mental health. This study emphasizes the importance of preventive strategies to manage financial stress during economic crises. To cope with uncertainty, investors adopted behavioural therapy techniques, such as relaxation exercises, to alleviate anxiety and maintain a balanced mind-set. Furthermore, in an effort to adapt to new circumstances, some investors recreated a scaled-down version of their stock market setups at home as they were unable to visit the offices as frequently. The absence of psychological control or pressure allowed the investors to allocate funds and maintain stability in stock markets and economies.

CONCLUSION

Before the covid-19 virus struck India, the stock market was thriving in January 2020. It began to fall in March 2020, and it crashed in April 2020 when the country implemented a nationwide lockdown. As the country gradually eased the lockdown and resumed economic activities in the final month of May, stock indexes began to accelerate in their recovery, as evident from the June 2020 data. To revive the economy and stimulate business growth, a well-thought-out recovery plan is crucial. The nation should prioritize attracting foreign investments and should aim to decrease the importation of goods. It is crucial to promote and purchase goods manufactured in India, as well as support local producers. The RBI and GOI have implemented several reforms, including reducing the repo rate and relaxing regulations. Companies that have developed unique products, expanded their distribution channels, implemented advanced technology, and maintained a strong financial position

would be able to regain their growth momentum after the lockdown. The sole means to revitalize the economy is to enhance the capabilities of its citizens and attain self-sufficiency as a nation.

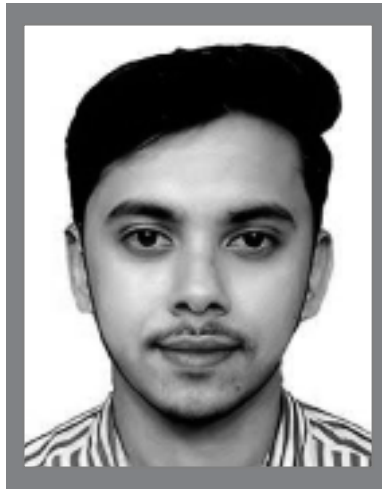
The pandemic's influence widened beyond immediate market reactions, altering the very landscape of investment. The acceleration of e-transformation, driven by lockdowns and remote work, moved tech stocks to new heights, creating a stark contrast with traditional industries. This divergence focused on the market's responsiveness to shifts in consumer behaviour and technological adoption. Additionally, the unprecedented fiscal and monetary policies, while directed at stabilizing economies, introduced new complexities, involving concerns about inflation and potential asset bubbles. The lingering impacts of supply chain disruptions and the ongoing evolution of the virus itself carried on to inject uncertainty, making market predictions particularly challenging.

The question that arises is how could all world indices rally despite the catastrophic dip in March? Despite a rise in COVID-19 cases, the decline in the GDP growth rate and in the gross fixed capital formation as a percentage of GDP, worldwide markets have seen a sharp recovery. Given the inherent uncertainty in the current environment, however, it is difficult to predict the long-term economic impact of COVID-19, especially since there is no comparable historical benchmark on which to base such predictions.

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By enhancing movie-going experiences of the people through high-end formats films, it has provided luxurious and most advanced technology and facilities.

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A Study on PVR and Inox Merger: Two of India's Biggest Cinema Chains Combined

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ABSTRACT

In 2023, PVR (Priya Village Roadshow) Cinemas and INOX Leisure Limited - India's two largest multiplex chains, merged to form PVR-INOX Limited, marking a significant consolidation in the Indian entertainment industry. This study tries to explore the strategic motivations behind the merger and evaluates its impact on various aspects of the cinema ecosystem, including market competition, pricing strategies, consumer experience, and financial

performance. The present study is based on primary data collected from 130 respondents. All respondents were consumers, chosen to represent the target group under investigation. This study analyses how the merger has influenced consumer behaviour and reshaped competitive dynamics in the post- pandemic era. The findings aim to provide insights into whether the merger promotes long- term industry growth or raises concerns about monopolistic practices and reduced consumer choice. This study contributes to understanding the dynamics of consolidation in the entertainment industry and offers insights for policymakers, business strategists, and cinema enthusiasts navigating the evolving landscape of Indian cinema.

KEYWORDS: Monopolistic Competition, Customer Behaviour, Sustainable Initiatives, Synergies, Exchange Ratio.

INTRODUCTION

The India cinema by reaching movie-goers globally and overriding Hollywood in volume, the industry is one of the biggest and most advanced influential film industries in the world. Among the most diversified entertainment industries, Indian cinema includes not only Hindi language movies but also include regional industries. Accompanied within an atomistic competition, Indian cinema industry has seen a shift of single-screen theatres to multiplex chains including movie palace and cinema complex with Bollywood. Due to progress of technologies, changing consumer tastes and preferences, and corporate merger, this industry has also conceived notable structural changes. The merger of PVR Limited and INOX Leisure Limited in 2023 created a significant event in Indian cinema exhibition forming a bigger chain of the country. The overall financial performance of the film sector, market competition, pricing strategies and feedbacks from customer were affected by this recent merger. The merger has highlighted concerns about market penetration and accessibility of various content of film by initiating a dominant and influential multiplex. It is the most remarkable events in Indian cinema industry marking it as a historical event in the books of cinema industry. How the market perception and competition, ticket pricing, movie-lovers or audience behaviour and

the future of film distribution over the country were influenced by the merger is analysed in this study.

PVR Ltd. was one of the India's ruling multiplex cinema chains before the merger. Priya Exhibitors and village Roadshow Limited as a joint venture established in 1997, ruled the multiplex in India by incorporating modern and high-quality movie-watching experiences. By becoming equivalent with premium cinema and innovation in India PVR cinemas expanded over the time. PVR operated an extensive network of multiplexes across the country, with its headquarter in Gurugram. By enhancing movie-going experiences of the people through high-end formats films, it has provided luxurious and most advanced technology and facilities. Known for its premium movie-watching experience, advanced projection technologies, and customer-centric approach, established in 1999 as a part of the INOX Group, the company quickly became a key player in the Indian cinema industry. Competing directly with PVR and other cinema chains INOX had expanded its mark across the country, to exercise control over the multiplex market. INOX Leisure headquartered in Mumbai, operated hundreds of multiplex screens across various places offering various formats of film.

CONCEPTUAL FRAMEWORK

- **Exchange Ratio:** The exchange ratio shows how many shares of the acquirer are given for each share of the target. It indicates the relative value of the deal:
- **Exchange Ratio = Offer Price per Target Share ÷ Acquirer's Share Price.**
- **Regional Exhibition:** A regional exhibition, held within a specific geographical area, showcases themes like art, culture, and science. Post the 2023 merger, strategies for regional exhibitions play a key role in shaping market competition and pricing.
- **Standardization:** Standardization is the application of uniform rules or specifications to ensure consistency and efficiency across products, services, or operations. In cinema, it appears in pricing strategies, screening formats like IMAX/4DX, and concession practices of chains like PVR-INOX.

LITERATURE REVIEW

Gaughan (2017) emphasised that mergers are often pursued to achieve economies of scale, reduce competition, and create synergies that can enhance operational efficiency. Consolidation, in particular, allows firms to strengthen their market presence by integrating complementary assets, customer bases, and capabilities. Capron and Mitchell (1998) stated that service-sector mergers frequently involve knowledge transfer and cultural integration, which are critical to realizing post-merger synergies. However, the literature also acknowledges that service-based consolidations face greater challenges in harmonizing intangible aspects such as brand identity, customer relationships, and employee engagement compared to product-based sectors.

Haspeslagh and Jemison (1991) emphasized that the success of a merger is not solely determined by the strategic rationale behind it, but by how effectively the merging entities integrate their structures, cultures, and systems. Kübler and Wieringa (2020) noted that consolidation can enable traditional players to pool resources for technological upgrades, enhance customer data analytics, and develop competitive digital strategies. Caves (2000) emphasised that creative industries argues that mergers in such sectors are often complex due to the coexistence of commercial and cultural objectives. While the financial motive is dominant, the merger of cinema chains also affects film diversity, screen availability, and content curation. Penrose (1959) stated that firms grow not only by expanding their existing operations but also by acquiring external assets and capabilities through mergers.

OBJECTIVES OF THE STUDY

1. To analyse the market competition and pricing strategies in the Indian cinema industry due to impact of the PVR-INOX merger.
2. To evaluate the effects of the merger on consumer experience, including service quality, movie selection, and approachability.
3. To explore shifts in consumer tastes and movie-

going behaviour following the merger, including audience crowd trends in the cinema.

4. To assess whether audiences view the merger as beneficial to their interests and feedbacks and to evaluate consumer conception and brand loyalty after the merger.

RESEARCH METHODOLOGY

The present study is based on primary data collected from 130 respondents. All respondents were consumers, chosen to represent the target group under investigation. Data collection was carried out through canvassing a pre-ordained questionnaire, which was carefully structured to ensure consistency, reliability, and relevance of responses. The questionnaire is designed to capture consumers' perceptions and behaviours in a systematic manner.

The responses obtained from the questionnaire were extensively analyzed using Microsoft Excel, wherein statistical tools such as pie charts, bar graphs, and other graphical representations were employed to interpret the collected data. These graphical representations not only enabled a clear depiction of consumer responses but also supported extensive analysis, allowing patterns and trends to be identified effectively. To facilitate meaningful interpretation, various statistical tables were employed.

DATA ANALYSIS AND DISCUSSION

Particulars	No. of respondents	Percentage of Respondents
Below 18	11	9 per cent
18 – 24	98	75 per cent
25 – 34	20	15 per cent
35 – 44	1	1 per cent
Total	130	100 per cent

*Table 1: Percentage distribution showing age groups of respondents
(Source: Primary Survey, 2025)*

The above table shows that young adults dominate at 75 per cent, followed by 25–34 at 15 per cent and teenagers (below 18) at 9 per cent. Middle-aged participants (35–44) are almost absent at 1 per cent. This indicates the study mainly targets younger audiences, such as students (see table-1).

Particulars	No. of respondents	Percentage of Respondents
Male	78	60 per cent
Female	51	39 per cent
Prefer not to say	1	1 per cent
Total	130	100 per cent

Table 2: Percentage distribution showing gender distribution of respondents
(Source: Primary Survey, 2025)

The table shows a male majority at 60 per cent, females at 39 per cent, and 1 per cent preferring not to disclose. This indicates the survey sample is male-dominated, though a significant share of female respondents also participated (see table-2).

Particulars	No. of respondents	Percentage of Respondents
Weekly	1	1 per cent
Monthly	33	25 per cent
Occasionally	71	55 per cent
Rarely	25	19 per cent
Total	130	100 per cent

Table 3: Percentage distribution showing frequency of visiting the cinema among respondents.
(Source: Primary Survey, 2025)

The above table shows 55 per cent of respondents visit cinemas occasionally, while 25 per cent engage moderately. Rare visits account for 19 per cent, and only 1 per cent are frequent moviegoers. This suggests that despite ticket pricing and streaming alternatives,

cinema remains popular but is not a frequent activity for most (see table-3).

Particulars	No. of respondents	Percentage of Respondents
PVR	44	35 per cent
INOX	78	61 per cent
Other	8	4 per cent
Total	130	100 per cent

Table 4: Percentage distribution showing preference of cinemas before the merger
(Source: Primary Survey, 2025)

The above table shows 61 per cent of respondents preferred INOX, while 35 per cent chose PVR, and 4 per cent opted for regional players. This indicates INOX held a stronger consumer position before the merger, though PVR also maintained a notable presence (see table-4).

Particulars	No. of respondents	Percentage of Respondents
Ticket pricing	29	22 per cent
Quality of screens and sound	29	22 per cent
Food and Beverages options	17	12 per cent
Location	25	20 per cent
Comfort of seating	25	20 per cent
Loyalty programs	5	4 per cent
Total	130	100 per cent

Table 5: Percentage distribution showing key factors influencing cinema choice
(Source: Primary Survey, 2025)

Screen and sound quality and ticket pricing (22 per cent) are the top factors influencing cinema choice, followed by seating comfort and location (20 per cent).

Beverage options matter moderately (12 per cent), while loyalty programs have minimal impact (4 per cent). Overall, customers prioritize core cinema experiences over peripheral benefits (see table - 5).

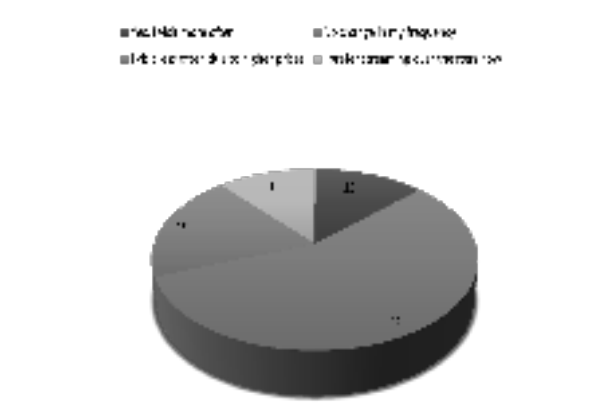


Figure 1: Effects of the merger on willingness to visit cinema more frequently.
(Source: Primary Survey, 2025)

The pie chart shows that 56 per cent of respondents report no change in cinema visits post-merger, while 19 per cent visit less due to higher prices and 12 per cent prefer streaming. Only 13 per cent visit more often, suggesting the merger has limited impact on footfall, with pricing and streaming posing key challenges ahead (see Figure -1).

The pie chart shows 53 per cent find tickets slightly overpriced but manageable, while 14 per cent see them as expensive. About 22 per cent find prices reasonable and 11 per cent consider them affordable. This suggests affordability is a concern, with high pricing potentially affecting long-term cinema interest (see Figure- 2).

Vertically we are measuring number of respondents and horizontally we are measuring respondents' perception

of technology after merger. The bar chart shows that 55 per cent of respondents perceive technology as somewhat better post-merger, while 22 per cent notice significant improvement. Another 22 per cent see no change, and only 1 per cent feels it has worsened. Overall, the merger appears to have driven modest technological upgrades, though many remain indifferent (see chart 3).

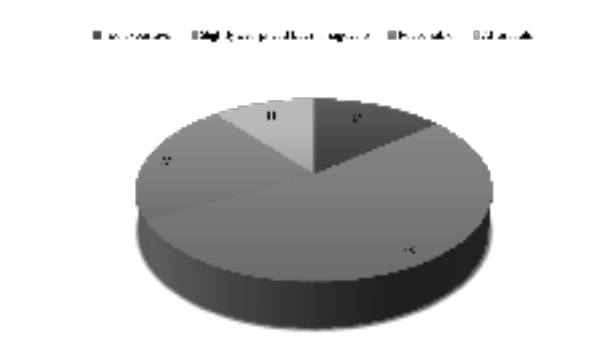


Figure 2: Current ticket pricing in PVR-INOX cinemas
Source: Primary Survey, 2025

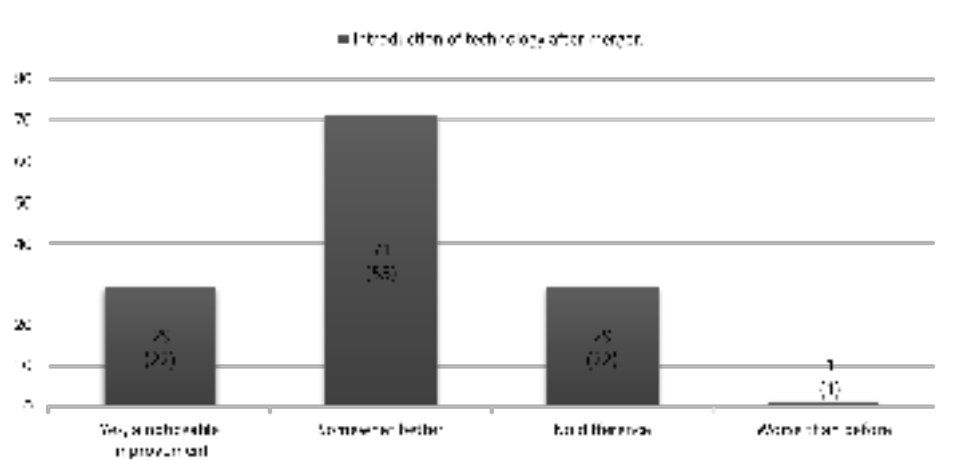


Figure 3: Introduction of technology after merger.
Source: Primary Survey, 2025

Vertically we are measuring number of respondents and horizontally we are measuring respondent's perception of changes in service quality. The chart shows 49 per cent of respondents observed slight improvement in service quality post-merger, while 17 per cent saw significant improvement. About 33 per cent noticed no change, and only 1 per cent reported worse service.

Overall, the merger reflects moderate service enhancement, though many customers see little difference (see Figure-4).

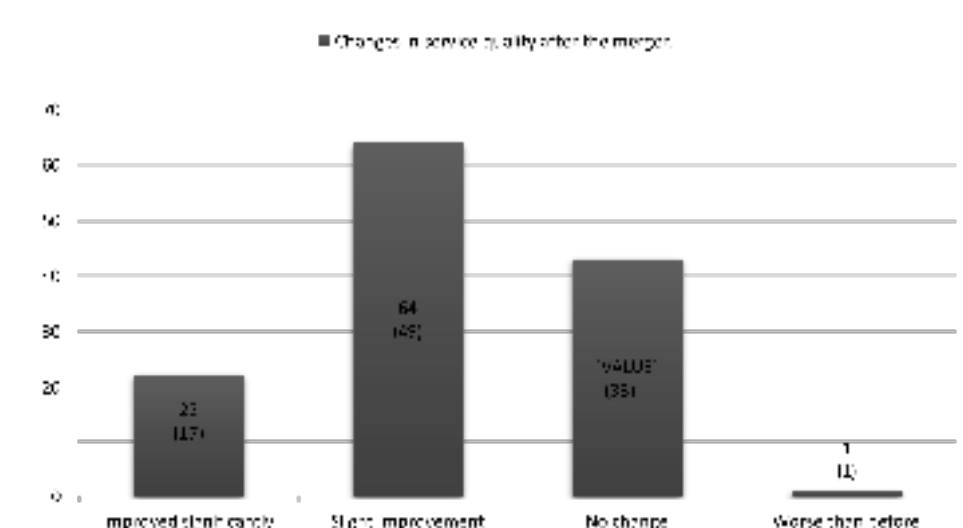


Figure 4: Changes in service quality after the merger
Source: Primary Survey, 2025

Particulars	No. of respondents	Percentage of Respondents
Business expansion & market dominance.	59	47 per cent
Financial challenges post-pandemic.	31	24 per cent
Competition with OTT platforms.	36	28 per cent
So far from my home.	1	1 per cent
Total	130	100 per cent

Table 6: Percentage distribution showing the perceived reasons behind the merger
Source: Primary Survey, 2025

The above table shows that 47 per cent attribute the PVR-INOX merger to business expansion and market dominance, 28 per cent to rising competition from

streaming, and 24 per cent to post-pandemic financial struggles. Only 1 per cent cites distance from home. Overall, the merger was driven mainly by market positioning and competitive pressures (see table-6).

Particulars	No. of respondents	Percentage of Respondents
Yes, it made them more stable.	74	58 per cent
No, financial issues still exist.	26	21 per cent
Not sure	27	21 per cent
Total	130	100 per cent

Table 7: Percentage distribution showing public perception on strength of financial position.
Source: Primary Survey, 2025

The table above shows 58 per cent of respondents believe the PVR-INOX merger strengthened the company's financial position, while 21 per cent feel issues persist and another 21 per cent remain uncertain. Overall, the merger is largely seen as financially beneficial, though doubts about long-term impact remain (see Table- 7).

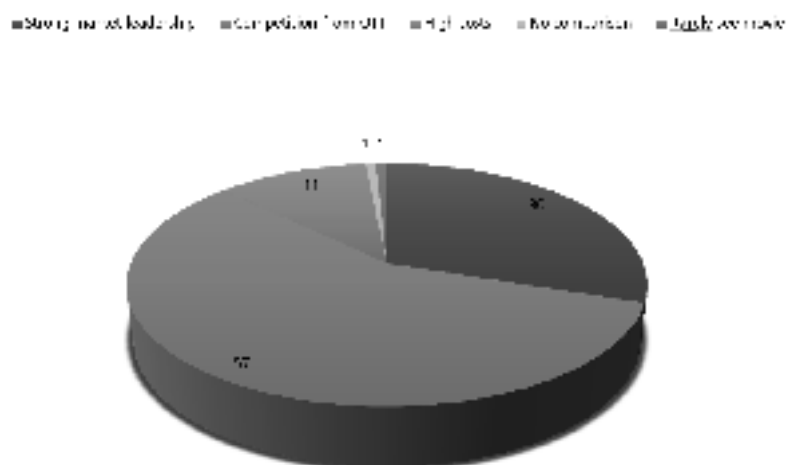


Figure 5: Percentage distribution showing future perception of PVR-INOX in Indian cinema industry.
Source: Primary Survey, 2025

The above pie-chart shows 57 per cent of respondents view OTT competition as the biggest challenge for PVR-INOX, while 30 per cent express confidence in its long-term success. High costs concern 11 per cent, and 2 per cent cite minimal relevance. Overall, streaming competition remains the dominant future concern (see Figure -5).

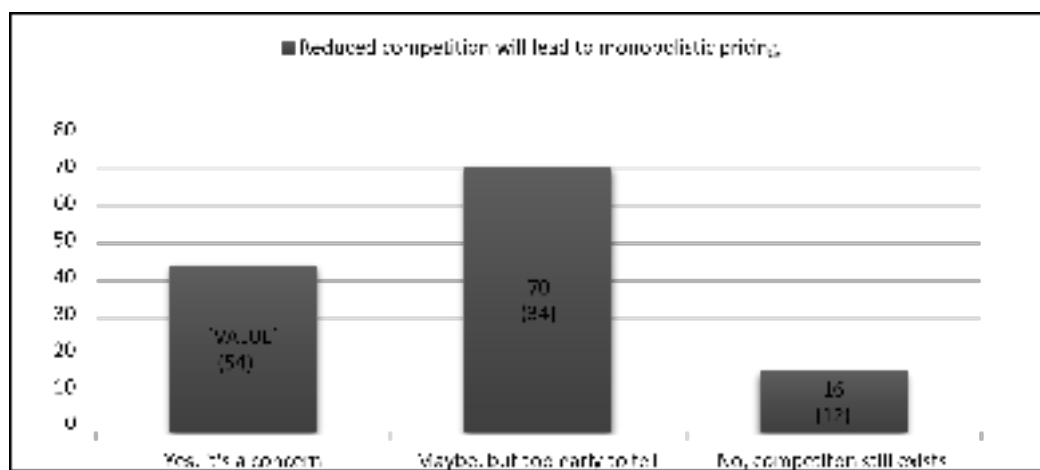


Figure 6: Reduced competition will lead to monopolistic pricing.
Source: Primary Survey, 2025

The chart shows 54 per cent of respondents are uncertain if reduced competition will lead to monopolistic pricing, while 34 per cent believe ticket prices could rise. Only 12 per cent feel alternative options will prevent it. Overall, concerns exist, but many remain unsure of the merger's pricing impact (see Figure-6). Vertically we are measuring number of respondents and horizontally we are measuring respondent's opinion on monopolistic pricing on reduced competition.

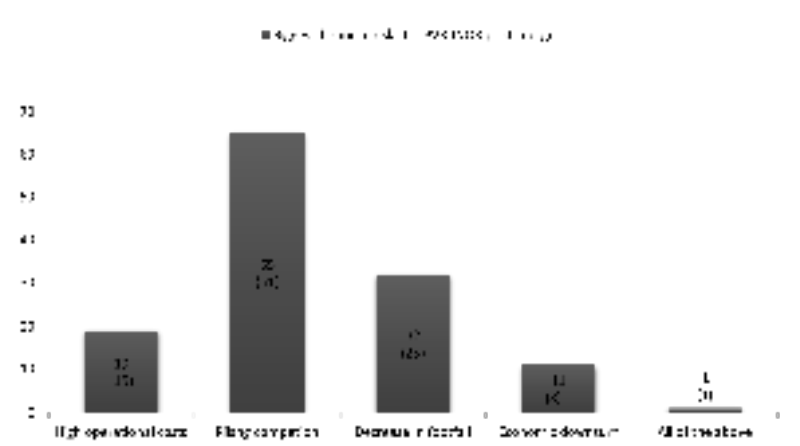


Figure 7: Biggest financial risks for PVR-INOX post-merger.

Source: Primary Survey, 2025

Vertically we are measuring number of respondents and horizontally we are measuring major financial risks faced by PVR-INOX on merger. The above bar chart shows 51 per cent see rising competition, mainly from OTT platforms, as the biggest financial risk for PVR-INOX. About 25 per cent cite declining footfall, 15 per cent high operational costs, and 8 per cent economic downturn. A small share chose 'all of the above,' indicating multiple threats. Overall, external challenges remain significant (see Figure -7).

Particulars	No. of respondents	Percentage of Respondents
Expanding to smaller cities	21	16 per cent
Offering dynamic	38	29 per cent
Introducing premium experiences.	27	21 per cent
Enhancing loyalty	45	17 per cent
Partnering with streaming platforms.	44	17 per cent
Total	130	100 per cent

Table 8: Percentage distribution showing key strategies for long-term financial growth in PVR-INOX post-merger.

Source: Primary Survey, 2025

The above table highlighted that the key strategies for PVR-INOX's long-term financial growth post-merger. Respondents favour flexible pricing, diversified content, and innovative in-theatre services to match evolving audience tastes. Premium formats like IMAX and 4DX (21 per cent) and enhanced experiences are

seen as vital for justifying higher prices. Hybrid content models with OTT platforms (17 per cent), loyalty and subscription programs (17 per cent), and expansion into Tier 2/3 cities (16 per cent) are also recognized as growth drivers. Overall, a blend of premium offerings, innovation, partnerships, and market expansion is viewed as crucial for sustaining profitability and balancing traditional cinema with modern consumer expectations (see table- 8).

Particulars	No. of respondents	Percentage of Respondents
Yes	34	26 per cent
No	50	39 per cent
Depends on pricing and experience	46	35 per cent
Total	130	100 per cent

Table 9: Percentage distribution showing respondents preference for smaller cinemas chain over PVR-INOX.

Source: Primary Survey, 2025

The above table shows 39 per cent of respondents remain loyal to PVR-INOX, while 35 per cent may shift to smaller chains if pricing or experience is better. Another 26 per cent prefer smaller chains outright due to pricing or service concerns. This indicates PVR-INOX must sustain competitive pricing and quality to retain its audience (see table-9).

The table shows mixed but largely positive satisfaction levels post-merger, with most respondents rating 3 or 4 ranging from 33 per cent to 42 per cent. A notable share rated 5 i.e., 15 per cent, reflecting high satisfaction, while smaller segments gave 1 or 2 ranging from 3 per cent to 7 per cent, indicating some dissatisfaction. Overall, the merger is well-received, though further improvements could enhance consumer experience (see table -10).

Scale	No. of respondents	Percentage of Respondents
1	2	3 per cent
2	9	7 per cent
3	44	33 per cent
4	55	42 per cent
5	20	15 per cent
Total	130	100 per cent

Table 10: Percentage distribution showing respondents satisfaction levels regarding the merger.
Source: Primary Survey, 2025

Particulars	No. of respondents	Percentage of Respondents
Yes, strongly support	45	35 per cent
Somewhat	42	33 per cent
Neutral	40	30 per cent
No, don't support	3	2 per cent
Total	130	100 per cent

Table 11: Percentage distribution showing respondents recommendations on government support to prevent cinema monopoly.
Source: Primary Survey, 2025

The above table shows 35 per cent of respondents strongly support government regulation to prevent a cinema monopoly, while 33 per cent somewhat support it. About 30 per cent remain neutral, and only 2 per cent oppose intervention. Overall, most customers acknowledge risks of reduced competition and favour regulatory oversight (see table -11).

MAJOR FINDINGS

- OTT platforms, a significant challenge – Streaming services like Netflix, Prime are major threat to PVR-INOX as per responses by more than half of the respondents. The cost to subscribe to OTT platforms may pull audiences away from theatres. PVR-INOX needs to improve out-stand in order to counter this challenge.
- Concern about Monopolistic pricing – Fewer competitors around, PVR-INOX could have greater control over the pricing. Responses with 34 per cent of the respondents raise the concern governing higher ticket and concession prices. This could negatively impact accessibility and causing concern with affordability.
- One of the top risks. Rising competition remains – Audience now has many choices for entertainment making retention of customer difficult. Increasing competition from OTT services and regional chains of cinema is a major challenge as perceived by 51 per cent of the respondents.
- A challenge of high operational costs – Rent, maintenance and staff salaries are certain burden of operational costs which could force PVR-INOX to raise prices impacting affordability. 15 per cent of the respondents perceive it. Strategies which are crucial for profit making shall be cost effective.
- Premium experiences do matter – Growth will be driven by luxury cinema experiences such as recliner seating, food and IMAX screens as believed by 21 per cent of the respondents. For enhanced experiences consumer are willing to pay more. Competitors can be differentiated from PVR-INOX by investing in high-end offerings.
- Loyalty program if enhanced could help – Long term engagement and repeat visits can be encouraged by

loyalty programs. Customer footfall and retention can be improved by better rewards and discounts as believed by 17 per cent of the respondents. Discounts on tickets and concessions can build loyalty towards brand, these are some special benefits.

- g. Viable alternatives of smaller cinema chains – Switching to smaller chains based on pricing and experience is considered by 35 per cent of the respondents. The local cinema still has competitive potential which can be conveyed by the study. In order to retain its customer, the entity shall continuously enhance its offerings.

LIMITATIONS OF THE STUDY

Preferences of Indian audience may not be fully represented as the dataset is limited. The study has a shortfall of direct insights from industry stakeholders, example., analysts, cinema executives et al. Long-term impacts on pricing strategies and market consolidations remained uncertain as the opinions may still be evolving as the merger happened in 2023. The psychological factors influencing consumer choices are not explored and hence the study lack customer behaviour insights.

RECOMMENDATIONS

In order to tap into new markets and increase revenue PVR-INOX should focus on expanding to smaller cities. To make tickets more affordable and attract a wider audience, implementation on flexible pricing models, discounts, and offers can be made. Customer satisfaction and justification to premium pricing, premium seating, better food options, and immersive technology can be improved. Streaming platforms shall be collaborated with in order to offer exclusive content and hybrid viewing experiences enhancing customer engagement. Increase in brand loyalty and retention of customer can be seen if rewards, discounts, and exclusive benefits for frequent moviegoers are made.

CONCLUSION

Financial performance, consumer preferences, market impact and concerns regarding regulations are key

insights for the study of PVR-INOX. Certain challenges like declining net profit margins, consumer levels off satisfaction, rising cost remain areas of concern while the findings above suggest that the merger has led to vital revenue and profit growth. In order to sustain long-term growth this study highlights the need for strategic expansion, competitive pricing and improved experience of customer. With the PVR-INOX experience post-merger this study reveals mixed levels of satisfaction from a consumer perspective. Improvement in service, pricing strategies and offering of content is required even though a vital portion of the audience is satisfied. The importance of maintaining affordability and accessibility to retain customer loyalty gets lower as the preference for smaller cinema chains are available. To prevent monopolistic practices in the industry this study also shows emphasis on the necessity of government regulations. To safeguard consumer interests and to ensure fair competition a considerable number of respondents support regulatory interventions. This states the need for PVR-INOX to engage in rightful practices of business and actively address concerns of monopoly.

Overall, PVR-INOX long term success will depend on strategic initiatives which are aimed at financial optimization, engagement of consumer and compliance of regulatory and it has created a dominant player in the industry of cinema. It can ensure sustainable growth, strengthen its market position and carry-on providing quality entertainment experiences to its customer.

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According to research, Boomers prioritize Gen Z, which emphasizes innovation whereas other generations like Millennials and Boomers on performance and personal growth.

”

The Shifting Sands of Labour: Decoding Generational Disparities At Work

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ABSTRACT

Viewed through generational variances, this research investigates the changing dynamics of the contemporary workplace with particular emphasis on Gen Z, Millennials, Gen X, and Boomers. Entitled "Decoding Generational Disparities at Work," the study examines how work values, technical adaptability, and beliefs about work life balance vary among

generations. Given fast shifts in corporate culture, hybrid work models, and digital transformation, knowledge of intergenerational views has become essential for supporting inclusive and effective work environments. The results clearly show different priorities; Gen Z and Millennials value flexibility, wellbeing, and personal time more than older people, who have a more conventional point of view. This thesis not only underlines these differences but also provides advice for companies and human resources specialists trying to close generational divides via customized regulations and procedures.

KEYWORDS: Generational Differences, Intergenerational Workplace Dynamics, Organisational Expectations, Technological Adaptability, Work-Life Balance

INTRODUCTION

The generational clock has been ticking, moving towards the most advanced, independent, and self-aware era of working human capital mankind has ever experienced. Recently, the internet has proved itself to be a boon in disguise by aptly highlighting the tug-of-war of generational reciprocations. What is the horizon of generations currently classifying as human capital? How do these generations react and comprehend differently in the face of certain similar circumstances? How does this critical difference affect working patterns? Are there any significant factors marking the ebb and flow of productivity of the groups concerned? This study aims to navigate through the alleys of corporate workspace and decode the code to efficiency and effectiveness by answering these questions.

BACKGROUND

Diversity is the canopy of ideation. The current workplace is more diverse than ever, including top-to-bottom generations at various positions and designations. "Creating and managing a diverse workforce is a process, not a destination." - R. Roosevelt

Thomas, Jr. strikes the right chord in stressing the importance of management of the workforce. Currently, the employees are from Multiple generations contributing together, which include Boomers (Gen X), Millennials (Gen Y), and the emerging Gen Z.

The Boomers, rather post-boomers, are the demographic cohort born between 1965 and 1980. This generation belongs to the dedicated, industrious, and workaholic individuals who prioritize work life more than their private lives. Next comes the Millennials, born between the 1980 and 2000s the Gen Y, adept in inculcating technology in the workplace. They are considered the "first global generation" and are often referred to as digital natives due to their elevated familiarity with the internet. The disruptors, Gen Z refers to the generation born between 2000 to 2010s emphasizing the actual meaning of work-life balance rather than just a mere word, by prioritizing striving for individuality, voicing their opinions, and seeking stress-free work agendas.

RATIONALE OF THE STUDY

"Each generation imagines itself to be more intelligent than the one that went before it, and wiser than the one that comes after it. A quote by George Orwell aptly defines and agrees with the mindset of the generations at the workplace. There has been a paradigm shift in working in the digital age. The working patterns, aspects, and factors have taken a leap in the dark hoping for a positive impact. The generational cohorts are often caught eyeing the priorities which vary extensively across Boomers to Gen Z.

According to research, Boomers prioritize Gen Z, which emphasizes innovation whereas other generations like Millennials and Boomers on performance and personal growth. Moving on to technology, Gen Z prefers the advent of Digital communication which highly tangents that of older generations tapping on to more traditional ways. Flexibility is a non-negotiable pact for Gen Z and on the other hand, older generations agree to sign in for rather rigid schedules.

The inferences drawn from the mentioned notings agree with the need of the hour for generational understanding and addressing knowledge gaps. The study offers insights for HR managers to decipher the implications and needs to appropriately tailor the selection, recruitment, training, and development programs in the coming age. A comparative study that revolves around understanding the perspective of Gen Z and other generations concerning various parameters.

LITERATURE REVIEW

Ravid et al. (2025) highlights how generational stereotypes continue despite clear lack of evidence which supports generational differences. A review of academic publications through meta-analysis shows authors tend to stretch the differences between modern generations. The study indicates importance for my current research about workplace generational differences by highlighting the necessity for specific data-based insights about workforce interaction patterns.

The research by King, N., & Kumar, S. (2023) shows that Baby Boomers, Gen X and Gen Y exhibit substantial distinctions in their work values concerning organizational status and workplace freedom in India. Such generational differences produce harmful effects on office team dynamics and operational effectiveness. Our comprehension of generational differences requires attention because the research investigates value disparities as well as technological literacy and work-life choices between Generation Z members and their predecessors.

The study by Kasana A. (2024) examines Gen Z workplace behaviour after adopting a growth mindset which leads to better engagement with tasks yet does not affect their preferences regarding skill acquisition. Gen Z faces specific barriers such as mental health problems together with unrealistic expectations according to research. The study findings validate the research's examination of Gen Z's occupational values

as well as their approach to obstacles as well as mindset effects on professional expectations.

Rudolph et al. (2021) use the social constructionist and lifespan perspectives to fight generational stereotypes regarding work and aging at work. The study establishes generational labels provide an overly basic explanation of workplace complexities. This study draws meaning from the critical analysis of generational typing because it provides tools to understand Gen Z workplace development over time.

Gabrielova, K., & Buchko, A. A. (2021) studies the office conflicts that arise when Millennial managers lead Gen Z staff members by discussing variances in their leadership preferences and their encouragement mechanisms along with their team dynamics and social intercourse patterns. The research incorporates generational cohort theory as its base to provide management solutions. Research findings consolidate the study's examination of generational work value variations which impact leadership approaches and professional connections at work.

The study by Chillakuri B. (2020) shows how HR professionals view Gen Z workforce management because these professionals note both ambitious character and innovative talent alongside technological dependency and demanding flexibility and career growth. The research results support this investigation which examines unique Gen Z work values and expectations and technological impact on employee recruitment and retention practices.

Sakdiyakorn et al. (2021) investigates the impact of Generation Z collective consciousness that emerges from globalization and technological innovations and personal narratives on their professional values and performance. The work values of Gen Z are shaped by self-direction together with universalism principles that motivate their professional expectations. The investigation of Gen Z work values and attitudes serves academic researchers who want to create better workplace strategies for engagement.

Benítez-Márquez et al. (2022) explains how workforce integration of Gen Z faces difficulties which require adaptive human resource strategies and company cultural evolution. Research about Gen Z's workplace influence has been growing yet remains underdeveloped as an academic field of study. The research focuses on generational differences regarding work values, tech adaptability and developing work-life expectations because of these insights.

Assessment of Gen Z career aspirations through environment, family, and work exposure by Barhate, B., & Dirani, K. M. (2021) leads to the requirement of additional research involving Gen Z employees. Experience leads to changes in personal objectives as people mature. The research connects three components including generational values and work environment knowledge to examine how Gen Z members approach work and long-term planning.

The article by Waworuntu et al. (2022) emphasizes how supportive settings and satisfying work conditions with work-life balance improve performance for Gen Z and millennial employees. The results indicate that members of Gen Z prefer work with both meaningful value and flexible arrangement. The research findings directly support this study because they analyze generational values together with work-life balance expectations and workplace generational differences despite current performance literature gaps.

RESEARCH GAP AND OBJECTIVES OF THE STUDY

Research Gap

The generational disparity has been spreading like wildfire and the news, articles, and publications about the toxic work culture an eye opener for the alarming situation catering to the viral post on Aadit Palicha (Co-Founder Zepto) on late-night meetings, unusual work hours, and inhumane working hours expectations floated on LinkedIn amidst discussions. A reel video by Palki Sharma (Vantage – First Post) on “Why is Gen Z

considered as Employer’s Nightmare” reveals that 1 in 6 companies are hesitant to hire Gen Z. There is a scarcity of the reason behind such phenomenon that searches through the relevant solutions.

OBJECTIVES OF THE STUDY

1. To determine the difference in work values, attitudes, and expectations between Gen Z and other generations.
2. To compare the familiarity with technology/role of technology between Gen Z and other generations.
3. To understand the difference in work-life balance expectations between Gen Z and other generations.
4. To examine whether there is a statistically significant difference in the perceived importance of work-life balance among different generation groups.
5. To examine the association between generation and preferred work schedule among different generation groups.

RESEARCH METHODOLOGY

Research Design

The research study uses a descriptive and comparative design to study workplace expectation changes between different generations. The study simultaneously examines the work-value discrepancies and technological adjustment capabilities and work-life equilibrium differences that exist between Generation Z and its predecessor cohorts. The authors use a quantitative method which integrates structured questionnaires to acquire comparable and measurable responses. The research method allows an organized assessment of how different generational groups behave while expressing their preferences and expectations in modern dynamic workplace settings.

Sample Design

The investigation uses convenience as non-probability sampling method to select its study participants. An appropriate sampling approach was adopted to guarantee membership representation from different generations and varieties of employment types. A broad group of participants from various demographics who are at least 18 years old includes students together with interns as well as working professionals and self-employed people and unemployed individuals. The choice of research participants followed age-related criteria and accounted for their presence or future participation in the workforce which made them appropriate representatives of their specific generational group.

Sources of Data

The research obtains its main data by using a structured Google Forms survey distributed. The research questions measure work values and technological application and work-life harmony through multiple-choice formats combined with checkboxes and both ranking scale and Likert scale rating approaches. The study incorporates primary survey findings from Google Forms but also uses secondary information from academic journals and books on organizational behaviour and online articles to build theoretical settings and match survey data with external trends. The research becomes strengthened by the integration of both primary and secondary sources.

Tools Used

The main data collection resource consists of a Google Form that enables efficient structured responses from a wide range of participants. Microsoft Excel and Google Sheets will serve as analytical tools for this study through which responses will be organized while basic statistics like mean and mode will be calculated to create bar graphs and pie charts for showing generational comparisons. The chi-square test and Kruskal Wallis H Test, non-parametric measures, have also been performed to examine the association between different variables. The tests have been conducted using the software Jamovi (version: 2.6.26 solid). The chosen tools will help create meaningful interpretations of survey results and validate our findings regarding the work-based differences between generations.

LIMITATIONS OF THE STUDY

The research faces limitations because its sample outcome is based on 200 responses but these responses might not demonstrate all generational viewpoints accessible throughout various production fields nationwide. Information obtained via self-reported data through online surveys could contain response biases which prevent researchers from studying complex work behaviour or work attitudinal complexities in detail. The research's broadness is reduced by selecting only geographical areas and participant interpretation of questions thereby affecting findings' overall applicability.

DATA ANALYSIS AND FINDINGS

Demographic Analysis

GENDER

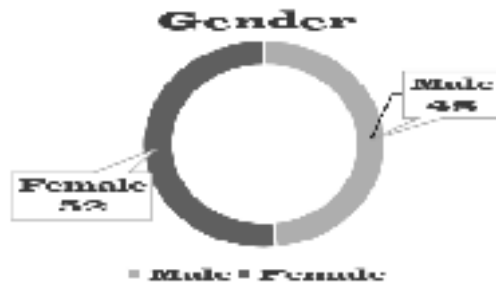


Figure 1: Gender Distribution
(Source: Primary Data)

The respondents are almost in an equal ratio with 52 per cent Female where 48 per cent Male in the gender aspect.

AGE

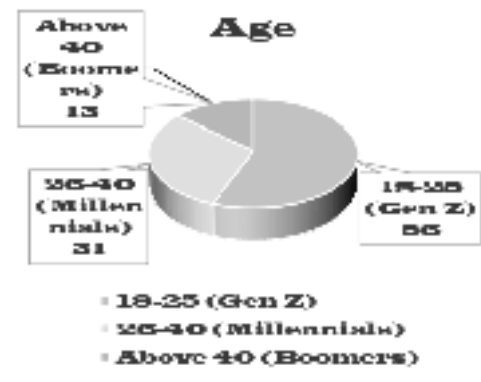


Figure 2: Age Distribution
(Source: Primary Data)

This showcases that the majority (56 per cent) of respondents are within the 18-25 age range suggesting that the pivotal focus was on Generation Z in comparison to other generations at 30 per cent and 14 per cent.

EMPLOYMENT

Employment Status



Figure 3: Employment Status Distribution
(Source: Primary Data)

The above data reveals that the majority of the respondents 36.5 per cent are students who are about to step into the corporate arena alongside interns/articles at 27.5 per cent, Working Professionals at 18.5 per cent and Self Employed at 15 per cent.

OBJECTIVE: DIFFERENCE IN WORK VALUES, ATTITUDES, AND EXPECTATIONS

Generational Priorities at Work: What do they value the most?

Age Group	Collaborative and Supportive Team	Competitive Compensation- Packages	Flexible Work Arrangements	Professional Development and Growth
18-25	34	5	13	47
26-40	24	19	24	33
Above 40	19	31	23	27

Table 1. Work Motivators
(Source: Primary Data)

As observed in the Table 1.1, GEN Z and Millennial show a strong inclination towards Personal Development and Growth 47per cent and 33per cent respectively while Boomers prioritizes Competitive Compensation Packages 31per cent. This supports the hypothesis that younger employees value personal enhancement, whereas older generations lean toward financial stability. The information shows clear generational affinity for work expectations. Those 18–25 years old value a collaborative, supporting team (34per cent) and give professional development top priority, showing a need for mentorship and educational programs. Said 47per cent Reflecting midcareer goals, the 26–40 age group shows a more balanced preference with significant focus on development (33per cent) and flexibility (24per cent). On the other hand, people over forty esteem competitive pay most (31per cent), so indicating an emphasis on financial security. Generally speaking, the data shows that older professionals are more motivated by concrete incentives and worklife balance than younger workers, who seek growth and support.

1. Generational Motivators at Work: What motivates them the most?

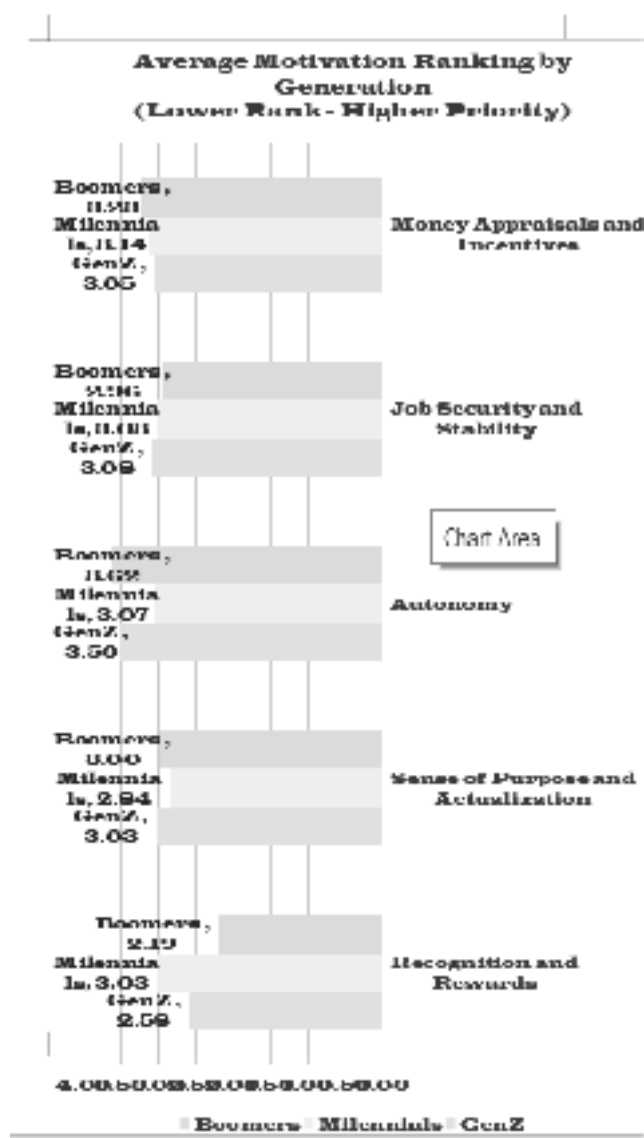


Figure 4: Ranking by Generation
(Source: Primary Data)

RECOGNITION AND REWARDS:

Gen Z (2.58) values this most (lowest rank). Boomers along with Millennials choose this factor as the least significant with an average score of 3.03. Interpretation: Gen Z members show higher preference for appreciation and acknowledgment when compared to other generational groups because their upbringing involved digital culture as well as constant feedback systems.

SENSE OF PURPOSE AND ACTUALIZATION

Boomers assign this priority level of 3.00 to their lives which is more than what Millennials and Gen Z rate it. Interpretation: Gen Z puts this factor at the third position on their priority list. Boomers pursue meaning and lasting fulfilment in light of their adult stage possibly because they have reached maturity and developed their careers.

AUTONOMY

Boomers express the least importance for autonomy since their responses contain the highest numbers (3.62). Gen Z (3.50) values autonomy more than Boomers but still less than Millennials (3.07). Interpretation: The working style of Millennials emphasizes their need for responsibilities they can supervise autonomously. They prefer ordered workspaces compared to other generations.

JOB SECURITY AND STABILITY

All generations are quite similar: Boomers: 2.96, Millennials: 3.03, Gen Z: 3.08. Interpretation: Employees from all generations recognize the importance of job stability but assign it positions below the main factors motivating their work. Job-hopper stereotypes do not apply to Gen Z because they view stability as important even though it is less important than other factors at work.

MONEY, APPRAISALS AND INCENTIVES

Younger generations value money as a motivator at a rate of 3.05 despite Boomer employees setting their priority at 3.23. Millennials (3.14) are in between. Interpretation: The financial needs of young employees motivate them to seek financial rewards as their primary work incentive because of growing expenses together with student debt burdens and economic challenges.

The depicted chart reveals how motivation levels vary among different generations using five significant work

motivators. The study shows Gen Z workers strongly want appreciation together with financial benefits because they seek regular assurance and actual incentives. Millennials choose autonomy above other aspects because they desire flexible independent working arrangements.

The purposeful aspects of life alongside self-realization matter most to members of the Boomer generation who maintain strong ties to meaningful labour. Job security and stability maintain a relatively stable position of importance throughout all generations because employees from every generation wish to maintain their employment continuity despite their different positions at various career stages. The researched findings emphasize the essential need to develop specific motivational approaches to activate diverse age groups currently working together in the same organization.

OBJECTIVE 2: FAMILIARITY WITH TECHNOLOGY

Feedback and Friction: The Connection between Communication and Conflict.



Figure 5: Communication vs. Conflict
(Source: Primary Data)

The data in Figure 3 illustrates that employee feedback expectations create a direct link to their strategies for addressing work-related disputes. People who want feedback either daily or weekly choose direct style methods by 61per cent because they find it important to solve conflicts straightforwardly—presumably because they seek regular open communication and quick responses. People who get feedback only once a year or when needed adopt three different strategies which include collaborative methods at 32per cent and direct strategies at 24per cent and escalation approaches at 32per cent. The combination of irregular feedback appears linked to diverse conflict styles since it generates unclear communication pathways or follows strict organizational rankings.

People who get feedback either monthly or quarterly tend to use direct conflict resolution methods with 49per cent adoption rates and collaborative practices at 29per cent according to survey data. This pattern suggests they seek a mix of independent and group-oriented approaches in conflict management. Over 50per cent of those who infrequently obtain feedback use escalation as their conflict resolution method along with 50per cent who select direct conflict handling. What could indicate either continued interpersonal conflicts or insecure psychological workplaces are environments with minimal feedback. Receiving feedback frequently creates open direct communication patterns while receiving feedback infrequently leads people to adopt escalating or inconsistent communication styles.

In a nutshell, the examination assesses the link between supervisor feedback frequency expectations among workers with their preferred conflict management methods. Individuals who get feedback on a daily to weekly basis tend to handle workplace disputes directly which indicates their comfort level with transparent immediate interaction. People who do not get feedback often use confrontational and escalated methods when resolving workplace conflicts due perhaps to unclear communication systems or their sense of frustration. People who get feedback monthly or quarterly show equal interest in employing both collaborative strategies and direct engagement during conflict resolution.

Regular feedback provisions encourage employees to develop proactive solutions for workplace conflicts but infrequent feedback leads them to respond passionately and often negatively to workplace issues.

TECH PROFICIENCY ACROSS GENERATIONS: CURRENT SCENARIO

The pie chart depicts how different generations distributed according to their reported high levels of technological proficiency through visual assessment. The chart demonstrates generational differences through its summary of frequency counts between Gen Z and the age groups of Millennials and Boomers. Gen Z showcases the highest technology proficiency levels and stands behind Millennials while Boomer participants exhibit the lowest tech ability within the group. The graphical depiction shows data distribution by generation to provide convenient analysis and neat understanding of technological expertise across different age groups.

Distribution of High Tech Proficiency Across Generations

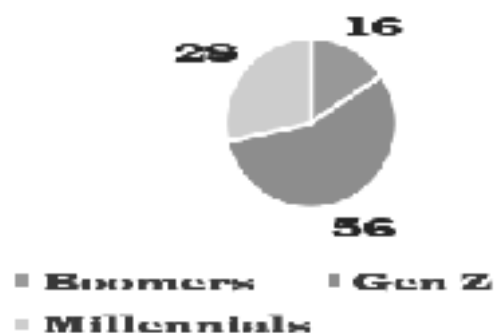


Figure 6: High Tech Proficiency
(Source: Primary Data)

The workplace demonstrates technological proficiency gaps according to the data presented in the “Distribution of High-Tech Proficiency Across Generations” pie chart. A majority of people in Gen Z demonstrate high tech skills at 56per cent while Millennials follow at 28per cent and Boomers trail behind at 16per cent. Data from the chart shows a direct relationship between young generations and their comfortable use of technology. Gen Z members represent a high percentage in the survey participant group because they spent their early years fully engaged with electronic devices which built their flexibility and self-confidence when working with technological systems. People from the Millennial generation show impressive digital competence while maintaining somewhat lower levels than Gen Z. The lower numbers of Boomer professionals indicate their possible lack of digital literacy skills and implies the requirement for specialized educational programs. Workplace training along with support systems must be customized to address the unique needs of different generations because this technique promotes the closing of technological skill gaps and increases productivity levels at work.

Distribution of Medium Tech Proficiency...

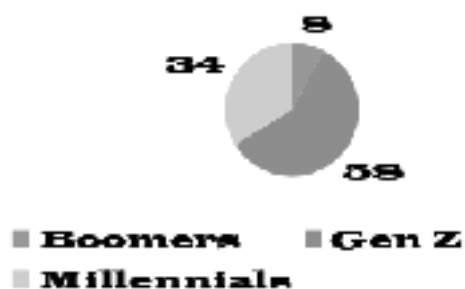


Figure 7: Medium Tech Proficiency
(Source: Primary Data)

The pie chart “Distribution of Medium tech Proficiency Across Generations” displays distribution patterns regarding technological proficiency at a medium level for various age groups. According to the data Gen Z maintains the lead with 58per cent followed by Millennials at 34per cent yet Boomer representatives make up only 8per cent of this medium proficiency group. Even among less experienced users this generation leads because it shows strong dominance in the medium proficiency category. The rise of digital tools occurred when Millennials matured so they hold most of the moderate proficiency category but Gen Z leads them. Boomer tech proficiency remains extremely low. Shared technology experience increases steadily from older to younger age groups according to research data. Organizations should deploy tech support approaches tailored toward different generations because this knowledge highlights their requirement for increased inclusivity and operational efficiency.

Distribution of Low Tech Proficiency Across...

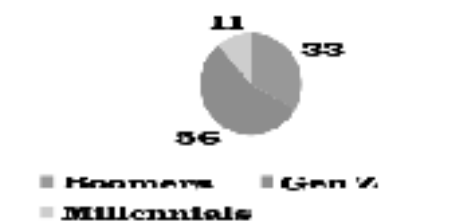


Figure 8 Low Tech Proficiency
(Source: Primary Data)

A study of low-tech proficiency among different generations displays an unexpected outcome based on the “Distribution of Low-Tech Proficiency Across Generations” pie chart. A majority of 56per cent of Gen Z individuals along with 33per cent from the Boomer generation display low tech proficiency according to the survey findings while Millennials represent only 11per cent. A high number of Gen Z participants identified their technical skills as inadequate based on this survey data. The research findings contradict the

mainstream belief about Gen Z being entirely technologically proficient because personal tech comfort levels differ significantly within this generation. Boomers demonstrate lower numbers in the low-tech proficiency category despite their traditional image of technological unawareness because either their population representation is lower or because they dedicated efforts to improve their technological competence. Technical proficiency remains consistently higher among members of the millennial generation throughout all qualitative proficiency levels of technology mastery. The data shows that personal experiences relating to technological education and support matter more than assigning people to specific age groups for determining tech expertise levels.

technical comfort tend to observe its positive impacts. At comfort level 4 people show the most engagement towards all areas where their highest responses come from Career Prospects with 57 and Industry Trends following closely with 51 indicating that digital comfort significantly affects career advancement and awareness.

The respondents from levels 1 and 2 expressed almost no interest in any motivational factors while Curiosity and Interest dropped to complete zero as their comfort levels decreased. A significant digital divide exists because technology unconfident users fail to see how these tools help their careers as well as organizational output. The majority of respondents showed weak perceived impact by indicating their responses in the red section.

ANALYSIS: RELATIONSHIP BETWEEN COMFORT WITH TECHNOLOGY WITH TECHNOLOGY MOTIVATORS

Comfort Level	Job Performance and Productivity	Industry Trends and advancements	Career prospects	Curiosity and Interest
5 (Very Comfortable)	40	41	36	31
4 (Somewhat Comfortable)	44	51	57	33
3 (Neutral)	31	28	25	7
2 (Somewhat Comfortable)	8	6	3	0
1 (Very Uncomfortable)	4	0	1	0

Table .2 Heat Map
(Source: Primary Data)

Table 2 – Heat Map visual representation shows that technology comfort levels determine employee responses regarding how technology supports key work-driven motivators including Job Performance and Productivity and Industry Trends and Advancements and Career Prospects and Curiosity and Interest. The analysis reveals a direct positive relationship because people who demonstrate high or medium levels of

- Legend (Heat Map Colours):
- Green: High number of responses – Strong recognition of technology's positive role
- Yellow: Moderate number of responses – Some recognition or neutral stance
- Red: Low number of responses – Weak or minimal perceived impact

OBJECTIVE 3: DIFFERENCE IN WORK-LIFE BALANCE EXPECTATIONS BETWEEN GEN Z AND OTHER GENERATIONS

Generational Differences in Perceived Importance of Work-Life Balance

major change in employer and employee values towards well-being and flexibility. The overwhelming majority of Millennials place extreme value on work-life balance since 10per cent indicated it was not very important combined with the absence of anyone saying it was not important at all.

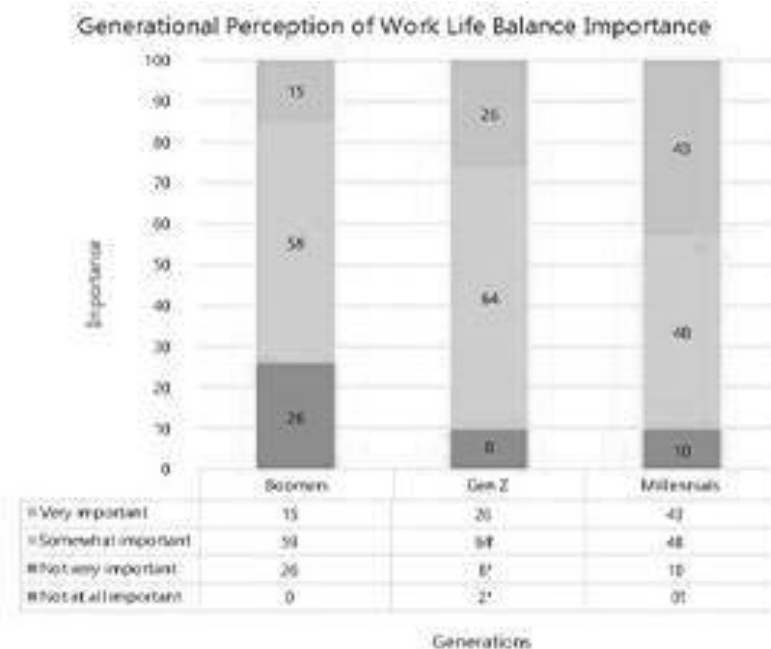


Figure 9: Perception of Work-Life Balance
(Source: Primary Data)

The “Generational Differences in Perceived Importance of Work-Life Balance” stacked column chart shows that Boomer, Millennial and Gen Z workers have different perspectives on this professional issue. This aspect of professional life ranks differently among each generation according to the results displayed in the analysis. A bulk of Boomer workers (59per cent) value work-life balance at a moderate level with 15per cent of them placing high importance on it. The results indicate that 26per cent of Boomers maintain a traditional approach to work ethics by disregarding significant importance of personal relaxation time. Work-life balance holds the most significance to Millennials since 43per cent rate it highly important and another 48per cent rate it important. A powerful cultural transformation towards promoting health and satisfaction in work environments seems to drive this

Gen Z represents the newest workforce generation whose combined answers create an unusual trend. Work-life balance stands as somewhat important to 64per cent of the workforce according to their responses while 26per cent consider it to be very important. The survey revealed minimal support for the unimportance of work-life balance with 8 percent registering this answer while only 2 percent confirmed the complete unimportance of this issue. Many members from Generation Z prioritize work-life balance yet they manage it differently perhaps because they joined the labour force after the pandemic era embraced remote work. The reduced numbers who strongly prioritize work-life balance in this category compared to millennials may suggest Gen Z members would allow temporary balance compromises to advance their careers or

secure financial security. The findings indicate a clear generational progression: Boomers remain moderately traditional, Millennials strongly advocate for balance, and Gen Z balances idealism with adaptability. The trend reflects broader societal shifts in values, work environments, and mental health awareness. Organizations aiming to foster intergenerational harmony must recognize these differing expectations and provide flexible, inclusive policies. This analysis offers vital insight for HR practitioners, managers, and policymakers designing future workplace structures.

WORK HOUR EXPECTATIONS ACROSS DIFFERENT SCHEDULE PREFERENCES

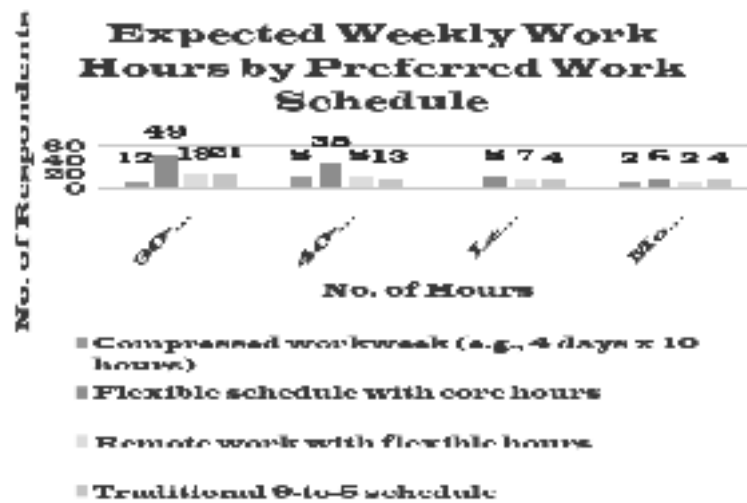


*Figure 10: Expected Weekly Work Hours by Preferred Work Schedule
(Source: Primary Data)*

The “Expected Weekly work hours by Preferred Work” schedule chart displays essential information regarding how individual work schedule choices affect expected numbers of hours worked per week. The analysis demonstrates how employees with different work schedules such as Compressed Workweek, Flexible Schedule with Core Hours, Remote Work with Flexibility and Traditional 9–5 arrange their work hours within less than 30, 30–40, 40–50 and more than 50 hour weekly thresholds. The survey data consistently demonstrates that workers choose 30–40 hour schedules as their most popular choice regardless of their work schedule type. Among the flexible schedule with core hours participants, 49 individuals predict working 30–40 hours which stands as the highest number compared to other groups. Flexible workplace conditions which combine structure seem to allow employees to strike a work-life balance while avoiding excessive work.

The distribution patterns for Compressed Workweek and Remote Work categories differ from each other. Among compressed group workers there is an even distribution of employees choosing between 30–40 hour work weeks (12 responses) and 40–50-hour work weeks (8 responses) and employees expecting over 50

hours of work per week (3 responses). Workers perceive the workday under a compressed schedule as heavier because it provides less time off during the week. Data shows remote work flexibility results in varied work hour expectations because eighteen employees project 30 to 40 hours yet another eight anticipate 40 to 50 hours work each week, and three workers spend more than fifty hours in their assignments. The Traditional 9–5 schedule generates employee expectations that lie between 30–50 working hours with few staff members perceiving the workweek as either excessively long or short. The widespread usage of 9 to 5 work schedule supports public belief that this pattern represents normal working hours at an average effort level.

Overall, these data points demonstrate that team members view work schedules differently which affects their estimated work time yet not in a simple pattern. Flexible work systems are commonly linked to even distributions of work but compressed schedules like remote work or compressed weeks sometimes create expectations for employees to extend their work periods. The discovered insights help employers match employee-friendly work systems with organizational schemes to prevent both burnout and excessive work duration.

WORK LIFE BALANCE ASPECTS ACROSS GENERATIONS

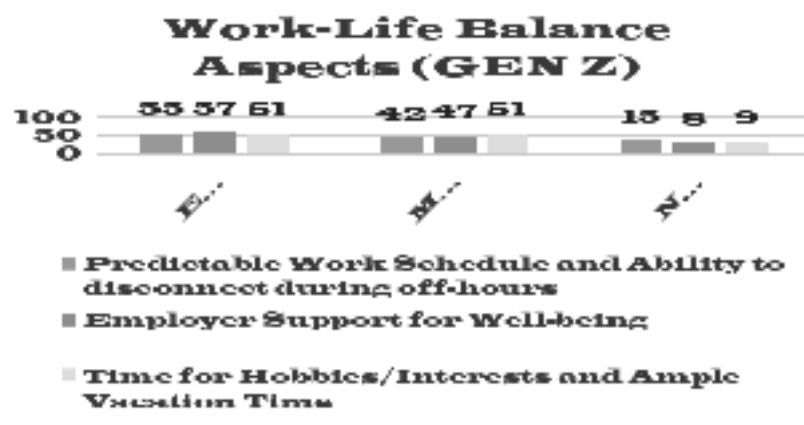


Figure 11: Gen Z
 (Source: Primary Data)

The information shows Gen Z's particular views on work life balance: they value not just career advancement but also mental health and limits. 57 Gen Z respondents found "Employer Support for Wellbeing" to be Extremely Important; 47 others chose Moderately Important and only eight picked Not Important. This shows a clear inclination for emotionally supportive companies first valuing mental health, flexibility, and a pleasant atmosphere.

"Moderately Important" by 42, "Predictable Work Schedule and Ability to Disconnect" was rated Extremely Important by 55 people. This emphasizes Gen Z's need for order and their wish to distinguish

personal time from work assignments—thereby challenging the overwork and steady contact culture.

In personal enhancement, "Time for Hobbies and Vacation Time" was also much esteemed, with an even split between Extremely and Moderately Important (51 each), but only 9 were unimportant. This balance shows that Gen Z values off work time to recharge and follow hobbies.

In general, Generation Z wants a working environment that honours boundaries, supports wellbeing, and gives personal space—signalling a move toward a more comprehensive and human-centred perspective of career life.

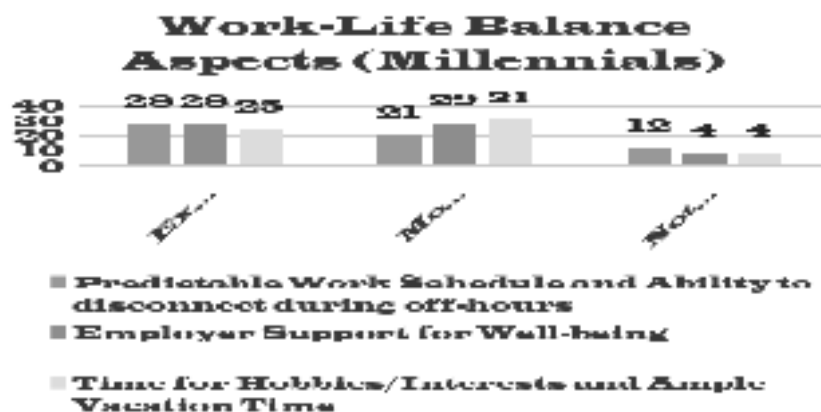


Figure 12: Millennials
 (Source: Primary Data)

Although their opinions differ more moderately from those of Gen Z, the data shows that Millennials consistently value many aspects of worklife balance. For "Predictable Work Schedule and Ability to Disconnect," 28 participants rated it as Extremely Important. This indicates divided opinion: although most still prize organization and limits, a significant minority seem more adaptable or maybe resigned to worklife lines that are blurred.

Employer Support for Wellbeing" was rated Extremely Important by 28 people, Moderately Important by 29, and only 4 saw it as Not Important. This shows that most of the Millennials, in close conformity with Gen Z's expectations, believe companies should first support their mental health and emotional wellbeing.

Regarding "Time for Hobbies and Abundant Vacation", 25 selected Very Important and 31 chose Moderately Important, therefore once more demonstrating great value for personal time. The low "Not Important" responses (just 4) give further evidence of this trend.

Generally speaking, worklife balance elements are highly but somewhat more evenly valued among Millennials. Although they share many aspirations with Gen Z, they seem more flexible with compromises within the workplace.

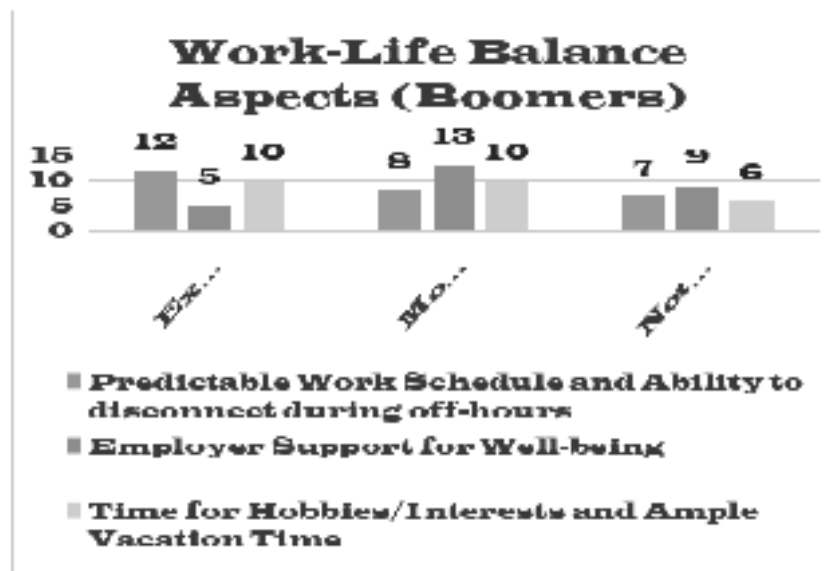


Figure 13: Boomer
(Source: Primary Data)

Possibly Boomers or older Generation X executives, the data offers a more diverse and less uniformly strong attitude on worklife balance among this age group. Only 12 respondents thought it Highly Significant when questioned about the value of a regular work schedule and the possibility to get off; 8 chose Moderately Important and 7 Not Important. This shows a rather divided attitude; many seem more used to traditional work setups or less dependent on strict boundaries between work and personal life.

Support for employee wellbeing from the employer shows even more variance: only five respondents chose Very Important, thirteen voted Moderately Important, and eight said it was somewhat important. This might

reflect either less ambitious from businesses in this line or a generational inclination to internalize stress and give job security over mental wellbeing top priority.

Responses concerning time for hobbies and vacation are rather even: 10 notes it is Very Significant, 10 Moderately Important, and 6 Not Important. This indicates that though personal time is valued, it might not be seen as absolutely necessary.

Altogether, the information suggests a somewhat more restrained ranking of worklife balance, with participants perhaps valuing resiliency and consistency above flexibility and wellness programs.

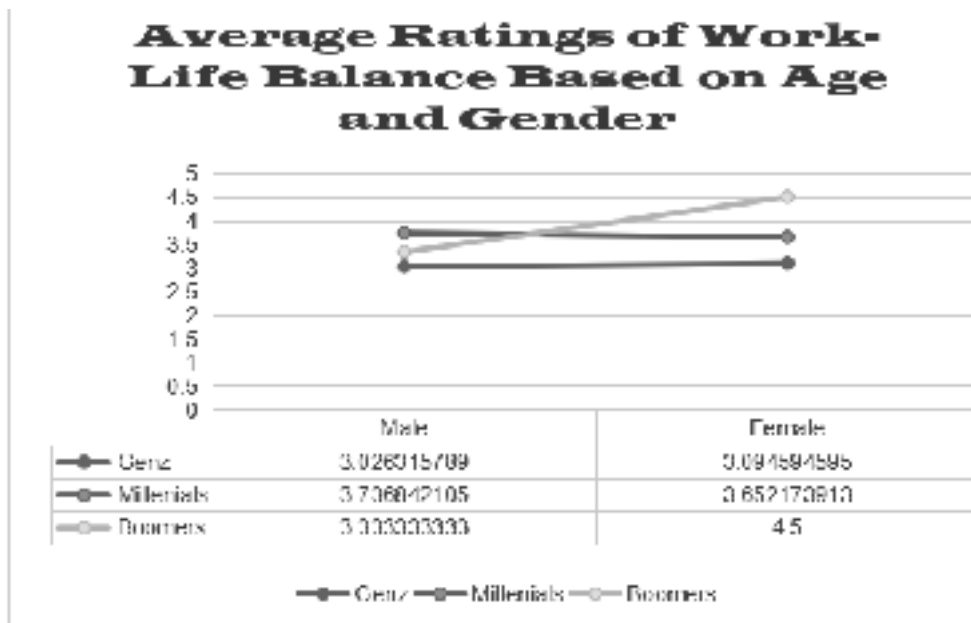


Figure 14: Ranking of Work Life Balance
(Source: Primary Data)

Among this age group—probably Boomers or older Gen X professionals—the data shows a more diverse and less consistently strong view on worklife balance. Only 12 participants consider a predictable work schedule and the capacity to disconnect Extremely Important; 8 regard it Moderately Important and 7 Not Important when asked about their significance. This shows a rather divided opinion, with many people more familiar with conventional employment formats or less dependent on strict separation of home and job.

The information shows genders specific and generational variations in how people view their present work life balance. Females in Gen Z give a bit higher average grade (3.09) than males (3.03), indicating fairly even experience between sexes in this age group. Still, the general lower average for both sexes suggests Gen Z believes their worklife balance is only somewhat kept, likely as they are starting on their career or dealing with employment uncertainty.

By comparison, males average 3.73 and women very follow at 3.65. This points toward better worklife balance among Millennials as a group—likely due to their more settled career path and capability to take advantage of changing workplace rules including flexibility and hybrid models.

The Boomers data has a special gender gap. Male Boomers had an average of 3.33, female Boomers a markedly higher 4.5. This notable variance could suggest older women, who could be approaching retirement or working parttime, experience more equilibrium or that their work demands have changed over time.

OBJECTIVE 4: DIFFERENCE IN THE PERCEIVED IMPORTANCE OF WORK-LIFE BALANCE AMONG DIFFERENT GENERATION GROUPS

Perceived Work/Academic-Life Balance

Hypothesis for Kruskal Wallis H Test:

Null Hypothesis (H_0): There is no significant difference in the perceived importance of work-life balance among Boomers, Millennials, and Gen Z.

Alternative Hypothesis (H_1): There is a significant difference in the perceived importance of work-life balance among at least one pair of the generation groups.

One-Way ANOVA (Non-parametric)

Kruskal-Wallis				
	χ^2	df	p	η^2
Work Life Balance	23.1	2	< .001	0.116

Dwass-Steel-Critchlow-Fligner pairwise comparisons

Pairwise comparisons - Work Life Balance			
		W	p
Gen Z	Millennials	6.58	< .001
Gen Z	Boomers	3.39	0.044
Millennials	Boomers	-1.46	0.557

Fig 15 Kruskal Wallis H Test: Generations and Work-Life Balance
(Source: Jamovi software)

Interpretation: Kruskal Wallis H Test was conducted between Generations (Gen Z, Millennials, Boomers) and Perceived Work-Life Balance (self-reported rankings from 1 to 5). The test revealed a significant difference in importance of work life balance. Gen Z places a significantly greater importance on work life balance compared to both Millennials and Boomers,

Contingency Tables

B	C				Total
	Flexible schedule with core hours	Compressed workweek (e.g., 4 days x 10 hours)	Remote work with flexible hours	Traditional 9-to-5 schedule	
Gen Z	68	12	20	12	112
Millennials	23	10	13	15	61
Boomers	7	1	4	15	27
Total	98	23	37	42	200

χ^2 Tests			
	Value	df	p
χ^2	32.3	6	< .001
N	200		

Nominal	
	Value
Phi-coefficient	NaN
Cramer's V	0.284

Fig 16 Chi-Square Test: Generations and Preferred Work Schedule
(Source: Jamovi software)

while Millennials & Boomers have somewhat similar ratings.

Statistical Results: χ^2 value = 23.1, df = 2, p-value < .001

So, we reject Null Hypothesis (H_0) and accept Alternative Hypothesis (H_1). Hence, we can conclude that there is a significant difference in the perceived importance of work-life balance among at least one pair of the generation groups.

OBJECTIVE 5: THE ASSOCIATION BETWEEN GENERATION AND PREFERRED WORK SCHEDULE

10. Preferred Work Schedule

Hypothesis for Chi-Square Test:

Null Hypothesis (H_0): There is no significant association between generation and preferred work schedule.

Alternative Hypothesis (H_1): There is a significant association between generation and preferred work schedule.

Interpretation: Chi-Square Test of association was conducted between Generations (Gen Z, Millennials & Boomers) and Preferred Work Schedule (Flexible with core hours, Compressed Workweek, Remote work with flexible hours, Traditional 9-to-5). The test revealed a significant difference in preferred work schedule amongst different generations. This pattern suggests younger generations lean toward flexibility and remote work, while older generations are more inclined towards traditional fixed schedules.

Statistical Results: X^2 value = 32.3, df = 6, p-value < .001

So, we reject Null Hypothesis (H_0) and accept Alternative Hypothesis (H_1). Hence, we can conclude that there is a significant difference in the preferred work schedule among the generation groups.

INSIGHTS AND RECOMMENDATIONS

The research "Decoding Generational Disparities at Work" sheds important knowledge on the changing dynamics of the workplace influenced by age differences. Organizations should consider a multigenerational strategy of workforce management that actively meets the varied values, expectations, and technical skills of staff members.

Since Generation Z values personal growth, recognition, and technological integration so much, companies should give first preference to clear communication, neverending learning choices, and digitalfirst processes. Meanwhile, older people prize financial stability and job stability, thereby emphasizing the importance of organized pay plans and career development systems.

Particularly among Millennials and Gen Z, the evident change in expectations for worklife balance also demands mental health support systems, flexible scheduling choices, and policies that foster overall well being. To close gaps and promote inclusion, businesses have to apply flexible solutions including custom technology training and feedback systems flown to personal preferences. An in-depth knowledge of generational requirements ultimately not only improves

worker happiness and efficiency but also creates a strong, futureproof corporate culture. Sustainable success in a progressively more varied workplace depends much on fostering compassion and teamwork among age groups.

The information clearly shows interesting generational differences that define the changing corporate environment of now. Professional growth, respect, and emotional wellbeing appeal much to Generation Z. Their digital first attitude is evident in their tendency toward flexible work schedules and technology integration; 56per cent exhibit elevated technology proficiency. Notwithstanding this, a significant number of Gen Z nonetheless claimed low competence, therefore contradicting the stereotype of entire tech fluency among the generation.

Millennials seem like a bridging generation since they rate work life balance, which was judged "very important," somewhat above everything; autonomy, career advancement, and especially worklife balance. They also show uniform, moderate technology comfort, matching their transitional upbringing between analogue and digital ages.

On the other side, Boomers give top focus on job security and compensation. Although this might be due to ingrained conventional work ethics rather than lack of interest, they show lower digital confidence and less focus on worklife balance.

Job stability is a respected constant up all generations. But expectations for feedback and styles of conflict resolution vary greatly close communication goes with direct conflict resolution, especially among younger people.

CONCLUSION

This research project, "Decoding Generational Disparities at Work," aimed to explore and understand how different generations—primarily Gen Z, Millennials, and Boomers—vary in their work values, attitudes, technological adaptability, and expectations of work-life balance. Through comprehensive survey data and subsequent analysis, the study revealed that

generational identity plays a significant role in shaping workplace priorities and behaviours.

Gen Z, the newest entrants into the workforce, prioritize professional development, emotional well-being, and frequent feedback. They thrive in tech-integrated environments and expect flexible schedules, transparent communication, and recognition-driven motivation. Interestingly, while most Gen Z respondents reported high technological proficiency, a significant portion indicated low comfort levels with technology—highlighting intra-generational diversity.

Millennials display a balanced set of expectations. They value autonomy, flexibility, and career progression, while strongly advocating for work-life balance. Their comfort with technology and preference for hybrid work models make them adaptable leaders in transitional workspaces.

Boomers, on the other hand, continue to prioritize financial compensation and job stability, with a relatively moderate emphasis on emotional well-being and flexibility. They exhibit a more traditional work ethic, often shaped by long-term organizational loyalty and structured routines.

Work-life balance emerged as a generational divider—while Millennials and Gen Z expect support for well-being, hobbies, and mental health, Boomers appear more accustomed to blurred boundaries and conventional work formats.

In conclusion, the project underscores the importance of acknowledging and embracing generational diversity in the workplace. Understanding these disparities enables organizations to implement tailored policies and foster inclusive environments. By bridging generational gaps with empathy, open communication, and adaptable practices, businesses can enhance employee satisfaction, productivity, and collaboration—ensuring that each generation thrives without compromising the collective growth of the organization.

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“

China's GDP has risen significantly after 2000, whereas India's growth has been steadier.

”

Impact of Spice Exports on Economic Growth of India and China: An Empirical Study

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ABSTRACT

This study intends to investigate how the exports of spices and the economic growth of India and China prospered from 1992 to 2022. Further, this study aims to investigate how the exports of spices impact economic growth over time for India and China. For this, researchers employ the Ordinary Least Squares (OLS) regression model. Results of this study indicate that both India and China have experienced strong export growth over the past three decades. China initially had higher export values than India, but India's export growth has been more in recent years. Regression analysis indicates that exports of spices significantly impact Gross Domestic Product (GDP) growth in both countries.

KEYWORDS: Spices, Export, Economic Growth, India, China, Ordinary Least Squares

INTRODUCTION

BACKGROUND

India has the leading position in the export of spices. It is also the largest producer of spices globally. The consumption of spices is significant. India has consistently maintained its position as the global export leader in spices over a considerable period of time. India's spice exports reached an all-time high in Financial year (FY) 2023-24, 15,39,692 tonnes and valued at 36,958.80 crore (4.46 billion USD). In the period 2022-23, the export of spices from India was valued at US\$3.73 billion, whereas it was US\$3.46 billion in 2021-22. In 2021-22, chilli was the main spice exported from India. Other spices in the export basket were spice oils, mint products, cumin and turmeric, etc. The country accounts for nearly 40% of the global spice trade by volume, exporting to markets in the US, Europe and the Middle East. Its spice industry has been upgraded in production techniques, processing and quality standards on a regular basis. Production of spices has increased from 11.12 million tonnes in 2021-22 to 11.14 million tonnes in 2022-23. India earns a significant amount of foreign exchange, which in turn creates jobs in the agricultural sector and also in the processing sector. These have a constructive effect on

the country's economic growth. Additionally, the rising global demand for Indian spices enhances agricultural productivity and increases investments in infrastructure, quality control, and value-added spice products.

China is another major player in the global spice trade, is the major competitor of India in the global market. It primarily focuses on processed and value-added spices rather than raw spices for production and exports. The country exports a variety of spices, including star anise, Sichuan pepper, ginger, garlic, cinnamon, and cassia, which are widely used in global cuisine and herbal medicine. China's spice exports are driven by its strong processing industry, advanced supply chains, and government support. Its major export destinations are the USA, the EU, Southeast Asia, Japan, and the Middle East, where demand for Chinese spices and spice-based extracts is high. In this context, this study aims to investigate how the exports of spices and the economic growth of India and China.

RATIONALE BEHIND THE STUDY

The existing literature on spices exports covers trends, world market shares, analysis of individual spice exports, supply side bottlenecks, export challenges, government policies and schemes to enhance exports, etc. But these studies do not throw much light on major competitors of India in the international spice market and a comparative analysis between their export performances. This is where the present study steps in. This study examines India vis-à-vis China's (India's major competitor) performance in the world market. It also depicts the role of exports of spices in economic growth. In the course of study, it is also addressed how the respective trade policies impact both countries' export performance and potential. These issues are expected to add value to the existing literature.

LITERATURE REVIEW

In the context of domestic production and international market dynamics, the literature reviewed here highlights the growth, stability and fluctuations, challenges, and opportunities in India's spice export

sector.

INDIA'S GROWTH AND PERFORMANCE OF EXPORTS IN SPICES

The export dimension is extensively analysed by Muthu (2021), whose study noticed an 8 per cent increase in volume and a 10 per cent rise in the value of spice exports between 2018-19 and 2019-20. This growth is attributed to positive trends in exports of major spices like chilli, cumin, and ginger. These findings align with Bansal et al. (2022), who noted an annual growth rate of 6.5 per cent in spice exports from 2010-11 to 2019-20. Similarly, Raju and Nagarajan (2024) reported that Indian spice exports crossed even the US benchmark in terms of export earnings, with exports contributing significantly to India's agricultural exports.

TREND IN SPICE PRODUCTION

Varadharaj and Prakash (2018) observed a positive trend in the production of spices in India. Their study emphasised India's growing domestic market and increasing international demand. Complementing this, Rajanbabu and Ganesan (2021) highlighted India's dominance in global spice production, cultivating 63 out of the 109 ISO-listed spices.

CHALLENGES IN SPICE EXPORTS

Spice exports in India face some hindrances in the foreign market. Export rejections due to pesticide residues and microbial contamination remain significant, though rejection rates have declined over time. Competition from other spice-producing countries and global trade fluctuations also pose challenges. Fluctuations in spice production further challenge exports. Joshi and Singh (2015) analysed trends from 1974-75 to 2012-13 and found out weather variations and price fluctuations as primary causes of growth instability. They emphasised the need for research-based planning and efficient marketing strategies to stabilise production. This is suggested by Babu (2017). His study identified competition from developing countries and fluctuations in the global

spice trade as critical challenges. The incidence of rejection of Indian spice exports by foreign countries has reduced over the years. This is supported by Vinothini and Suthacini (2024). They have supplemented their discussion by using CAGR analysis for 2010-2020.

VALUE ADDITION AND EMPLOYMENT GENERATION

The role of the spice sector in the Indian economy is important as it creates value in the supply chain and generates enough employment situations. The spice sector supports millions of farmers, with significant potential for employment generation through production and exports of value-added products and labour-intensive farming techniques. Babu (2017) noted that over three million farmers are engaged in various activities related to spices, highlighting the sector's socio-economic importance. Rajanbabu and Ganesan (2021) opined that an increase in spice production can raise employment levels, as the technique of spice cultivation is generally labour-intensive.

OBJECTIVES OF THE STUDY

The primary objectives of the study are:

- To examine the trend related to exports of spices and GDP during the chosen time period for India as well as for China.
- To find how the exports of spices impact economic growth over time, for India and China.

METHODOLOGY

DATA

This study uses time series data for 31 years, the time period being 1992-2022. The countries for which data have been collected are India and China. Data is collected for exports of spices, GDP and the rate of inflation.

Data related export values for spices for a couple of

years are collected from the database of the Spices Board of India (DGCI&S). Export quantities in tonnes for spices are collected from the FAOSTAT division of the FAO database. GDP data (in current US\$) for both countries is collected from the data source of World Bank. The data for the rate of inflation [consumer prices (annual %)] is also collected from the World Bank database.

This analysis has taken the natural logarithm of all the variables, namely GDP, exports and Rate of Inflation in order to normalise and stabilise the variance of the data.

TRENDS

Trends are presented for exports of spices for both India and China. Understanding trends in time series data helps in determining long-term patterns, allowing for better forecasting, irregularity or outliers detection, and informed decision-making. Trends represent the general direction of the data over an extended period, indicating whether it's increasing, decreasing, or remaining relatively stable. By identifying and modelling trends, time series analysis can predict future values. Trends can help identify unusual deviations from expected behaviour, which can be crucial for further analysis. Trends help to know about the dynamics of the phenomenon being studied.

DESCRIPTIVE STATISTICS

Descriptive statistical measures are calculated for exports of spices for both China and India. It summarises a data set. It includes central tendency and measures of variability. This study calculates the mean, median, mode and includes standard deviation, variance, lowermost and uppermost values, kurtosis, and skewness.

CORRELATION

Correlation is calculated between the variables included in the regression analysis. That is how GDP, exports and rate of inflation are correlated to each

other, is depicted by the correlation matrix. A correlation matrix helps in regression analysis by revealing the relationships between variables. A correlation matrix shows the level of correlation between the chosen variables. The values in the matrix (ranging from -1 to +1) indicate the strength and direction of linear relationships.

REGRESSION ANALYSIS

In order to find the impact of exports of spices on economic growth, a regression analysis is done, with exports as an explanatory variable and GDP as a dependent variable, where the rate of inflation is taken as a control variable. A regression equation with GDP as the dependent variable, export as the independent variable, and a control variable "C" could be written as:

$$GDP_t^I = \beta_0^I + \beta_1^I \text{Exports}_t^I + \beta_2^I \text{Inflation}_t^I + \epsilon_t^I \dots\dots\dots(1)$$

Where,

GDP_t^I = Gross Domestic Product of India

$Exports_t^I$ = Total exports of spices of India

$Inflation_t^I$ = rate of inflation of the country India

β_0^I = Intercept

β_1^I, β_2^I = Coefficients measuring the impact of exports and inflation on GDP, respectively for India

ϵ_t^I = Error term

Model 2: (for China)

$$GDP_t^C = \beta_0^C + \beta_1^C \text{Exports}_t^C + \beta_2^C \text{Inflation}_t^C + \epsilon_t^C \dots\dots\dots(2)$$

Where,

GDP_t^C = Gross Domestic Product of China

$Exports_t^C$ = Total exports of spices of China

β_0^C = Intercept

β_1^C, β_2^C = Coefficients measuring the impact of exports and inflation on GDP, respectively for China

ϵ_t^C = Error term

The regression equations (1) and (2) are run by OLS for India and China, respectively, and then a comparative analysis is performed.

Data Analysis and Findings

Results and Interpretation

Trends

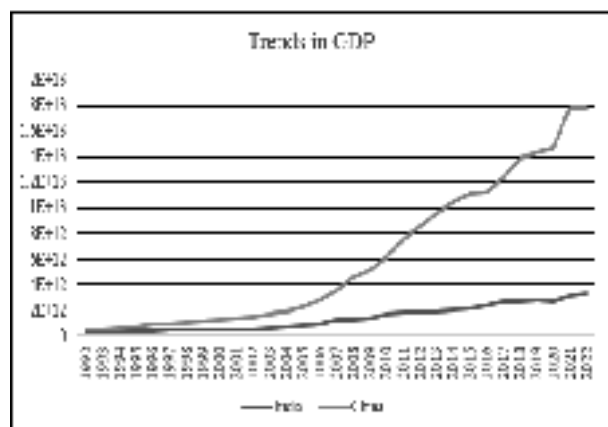


Figure 1. Trends in GDP (current US\$): India and China (1992-2022)
(Source Primary Data)

The above diagram represents the trends in GDP for India and China over time from 1992 to 2022. It shows that China's GDP has increased faster than India's over the years. India's GDP follows a more steady but slower increase.



Figure 2. Trends in Exports ('000 tonnes)
(Source Primary Data)

India and China (1992-2022)

SOURCE: FAO

The diagram represents Trends in Exports for India and China from 1992 to 2022. Both countries show a steady increase in exports over the years, with fluctuations.

China's spice export growth rate is slightly higher than India's, but both countries show similar upward trends. Both India and China have experienced strong export growth over the past three decades. China initially had higher export values than India, but India's export growth has been more in recent years. There are fluctuations in both export trends, indicating potential external factors such as global economic conditions, trade policies, or disruptions like financial crises and pandemics.

	GDP		Exports		Inflation Rate	
	India	China	India	China	India	China
Mean	1.36E + 12	6.05E + 12	297.90	336.54	6.91	3.90
Median	1.20E + 12	3.55E + 12	233.00	320.00	6.37	2.07
Standard Deviation	9.83E + 11	5.70E + 12	213.22	179.20	2.92	5.49
Minimum Value	2.79E + 11	4.27E + 11	67.00	71.00	3.33	0.40
Maximum Value	3.35E + 12	1.79E + 13	799.00	640.00	13.23	24.25
Skewness	0.52	0.71	0.84	0.10	0.56	2.31
Kurtosis	1.91	2.12	2.70	1.78	2.07	8.18

Table 1. Descriptive Statistics of the selected variables: India and China
Source: Researchers' Calculation

GDP

China's GDP is significantly higher than that of India's, with a higher median indicating a more consistently high economic output across different years. The median GDP being lower than the mean in both countries suggests some level of inequality. However, China's higher median implies that a larger share of its population benefits from economic growth. India's higher standard deviation of income indicates greater variability, meaning income levels are more spread out, leading to higher inequality. China's GDP distribution is more asymmetrical (higher skewness), with a few extremely high-GDP years dragging the average upward, while India's GDP is more balanced. China's higher kurtosis suggests more extreme GDP deviations, while India's lower kurtosis implies a more evenly spread GDP distribution. Overall, China has experienced larger economic booms and downturns, while India's GDP growth has been more consistent, without as many extreme variations.

EXPORTS

China's mean and median values are closer together, suggesting a more balanced and symmetric export distribution. India's mean is higher than its median, indicating a positively skewed distribution, that is, there were some years with very high exports that pulled the mean significantly. India's higher standard deviation means greater fluctuations in its export values over time. China's lower standard deviation suggests more stable and consistent export growth compared to India. India's exports varied significantly across different years, while China's exports were more predictable. India had both a lower minimum and a higher maximum, showing greater export fluctuations. China's range is smaller, meaning its exports were more stable and less extreme compared to India. India's exports had both very low and very high values, possibly due to policy changes, external shocks, or unstable global demand. India's positive skewness (0.836) suggests that a few very high export values are pulling the average up, meaning most export values are lower, but some extreme years had very high exports. China's near-zero skewness (0.098) means its export distribution is almost

symmetric, meaning high and low export years were more evenly spread without extreme outliers. India's higher kurtosis (2.705) means it has more extreme export values (either very high or very low). China's lower kurtosis (1.780) suggests fewer extreme export years, making its exports more stable over time.

INFLATION RATE (1992-2022) FOR INDIA AND CHINA

India's mean and median indicate relatively stable inflation over time. China's mean and median suggest lower average inflation, but the gap between them indicates periods of very high inflation. China's inflation has much higher variability than India (S.D = 2.919). This means China experienced more extreme fluctuations in inflation compared to India's more stable trend. China's inflation ranged from 0.401% to a high of 24.25%, indicating extreme volatility. India's inflation range (3.328% to 13.23%) was more controlled and moderate compared to China. China's inflation rate is highly right-skewed, meaning there were a few very high inflation spikes. India's lower skewness indicates a more balanced distribution with fewer extreme inflation spikes. China's very high kurtosis suggests extreme outliers, meaning there were significant inflation shocks. India's kurtosis is closer to normal, indicating a steady and expected inflation pattern.

CORRELATION MATRIX

A correlation matrix helps to identify relationships between variables before doing a regression analysis. It can predict the presence of multicollinearity, helping the regression model to include independent and meaningful explanatory variables. By showing which variables are most strongly correlated with the dependent variable, it helps in the selection of the right explanatory variables for the model. Additionally, it helps in interpreting the direction of relationships in regression, differentiating between positive and negative effects.

The following table provides the correlation values between GDP, Exports, and Inflation Rate in India and China.

	GDP	Exports	Inflation Rate
GDP	1	0.96	-0.23
Exports	0.96	1	-0.19
Inflation Rate	-0.23	-0.19	1

Table 2. Correlation matrix between the selected variables: India
Source: Researchers' Calculation

The correlation matrix for India shows the inter-relationships between GDP, Exports, and Inflation Rate. A correlation of 0.96 between GDP and Exports means that as exports increase, GDP also increases significantly. This indicates that India's economic growth is highly dependent on export performance (here, spice exports). This is expected as higher exports contribute to national income, industrial growth and the creation of job opportunities.

A correlation of -0.23 means that when the inflation rate rises, GDP tends to decrease slightly. There is a weak negative correlation, indicating that inflation does not impact GDP growth too strongly.

A correlation of -0.19 suggests that higher exports slightly reduce inflation, but the effect is weak. This might be because higher exports lead to economic growth and foreign currency inflow, which might help reduce inflation.

	GDP	Exports	Inflation Rate
GDP	1	0.90	-0.30
Exports	0.90	1	-0.38
Inflation Rate	-0.30	-0.38	1

Table 3. Correlation matrix between the selected variables: China
Source: Researchers' Calculation

A correlation of 0.895 means that China's GDP and Exports are highly positively correlated. This suggests that China's economic growth is strongly dependent on exports, but slightly less than India's correlation (0.96).

A correlation of -0.30 suggests that when inflation increases, GDP tends to decrease, but the relationship is not significantly strong. This is a stronger negative correlation than India's

(-0.23), meaning inflation has a more noticeable impact on China's economy than on India's. This indicates that China's rapid economic growth has helped control inflation.

A correlation of -0.38 means that higher exports are associated with lower inflation. This negative correlation is stronger than India's (-0.19), meaning China's exports had more impact on reducing inflation compared to India.

Regression Results and Interpretation

Interpretation of the Model (1) for India

		Coefficient Value	p - value	t - value	R ²	Adj R ²	S.E
India (Model 1)	Export	1.07	0.00	27.29	0.97	0.96	0.16
	Inflation	-0.05	0.44	-0.78			

Table 4. Regression Results: India
Source: Researchers' Calculation

The value of the coefficient of Exports, 1.07, suggests that a 1 unit increase in exports leads to a 1.07 unit increase in GDP, holding inflation constant. The p-value (0.00) indicates strong statistical significance, meaning exports have a substantial impact on GDP. The high t-value (27.29) further confirms the robustness of this result.

The coefficient Inflation Rate is -0.05. It suggests that an increase in the inflation rate slightly reduces GDP, but this effect is not statistically significant (p-value = 0.44). The t-value (-0.78) is quite low, reinforcing that inflation does not have a strong impact on GDP in this model.

MODEL FIT AND DIAGNOSTICS

R² = 0.97 suggests that the model explains 97% of the variation in GDP, which indicates an excellent fit. Adjusted R² = 0.96 confirms that even after accounting for the number of explanatory variables, the model

remains a good fit. Standard Error (SE) = 0.1597 means that the average deviation of predicted GDP from actual values is relatively small.

Interpretation of the Model (2) for China

China (Model 2)		Coefficient Value	p-value	t-value	R ²	Adj R ²	S.E
	Export	1.79	0.00	11.23	0.87	0.86	0.47
	Inflation	-0.003	0.97	0.03			

Table 5. Regression Results: China
Source: Researchers' Calculation

EXPORTS

The coefficient for exports is 1.79, indicating that a 1 unit increase in exports leads to a 1.79 unit increase in GDP, holding inflation constant. This relationship is highly significant, as evidenced by a p-value of 0.00. The t-value of 11.23 confirms that exports have a robust and substantial impact on GDP.

INFLATION RATE

In contrast, the coefficient for inflation is -0.003, suggesting that changes in inflation have a slight negative effect on GDP. The p-value of 0.97 indicates that this variable is not statistically significant, meaning inflation does not contribute substantially to explaining variations in GDP in this model. The low t-value of 0.03 further confirms that inflation's influence is weak.

MODEL FIT AND DIAGNOSTICS

The overall model fit is strong, with an R² value of 0.87, meaning 87% of the variation in GDP can be explained by the independent variables in the model. The adjusted R² of 0.86 confirms that even after adjusting for the number of independent variables, the model remains highly explanatory. The standard error of 0.47 suggests some variability in the model's predictions, though it remains within an acceptable range given the scale of GDP.

CONCLUSIONS AND POLICY RECOMMENDATIONS

This study has attempted to investigate how spice exports of India affect the economic growth of the country. The analysis of trends and descriptive statistics states that both India and China have experienced an increase in GDP. China's GDP has risen significantly after 2000, whereas India's growth has been steadier. Other statistical measures show that India's exports are more volatile with sharp fluctuations, whereas China's exports show stable growth, which may be due to industrialization and export-oriented policies. Inflation in India has been relatively stable compared to China, as the latter has shown sharper fluctuations. Correlation analysis indicates a strong positive relationship between GDP and exports in both countries. Inflation has a weak negative correlation with GDP and exports for both countries. Regression analysis indicates that exports of spices significantly impact GDP growth in both countries, while inflation negatively affects GDP, though it does not come out to be a statistically significant determinant. Based on the findings of this study, it is recommended that for both countries, policies should aim at improving supply chain efficiency, following trade facilitation agreements and implementing appropriate government schemes for sustainable growth in the spice export sector. By adopting these approaches, India and China can face global trade challenges as well as enhance their competitiveness in the growing spice industry worldwide.

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Uncertain pricing or hidden costs, like automatic subscriptions after trials, can lower consumer confidence and grind down brand loyalty.

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The Razor Blade Business Model: A Strategic Pricing Approach For Long Term Customer Retention

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CHAPTER I: INTRODUCTION

OVERVIEW

The Razor Blade Business Model has more often been regarded as a revolutionary pricing strategy, but it was not a creativity of some “Business Expert” but a strategy “by chance”. With this strategy, a company delivers a

main, also called the dependent product at a relatively cheaper price, or even at a loss, and makes the majority of its earnings from the sale of accessories or related consumables, or the independent product. The model, originating from the razor and blade analogy, is based on locking-in customers and generating consistent revenue in the long run, which tends to create brand loyalty. In addition to encouraging brand loyalty, this model guarantees consistent and certain revenue over time.

Although Gillette made it popular, there are early equivalents in the strategy such as selling printers and ink, or cameras and film. Over the years, the model has changed and found new uses in different industries, such as gaming consoles, coffee machines, and tech subscriptions like Kindle, Audible, and Apple. In the digital era, it has further advanced by combining with freemium and subscription models, showing its versatility and strength in today's business world.

BACKGROUND

The very name of the model comes from the actual practice of Gillette selling inexpensive razors and then making most of their profit from the replacement blades, which customers needed to continuously purchase. Although King C. Gillette didn't invent this model, he made the model popular in the early 1900s when he introduced the safety razor and detachable blades. This pricing strategy involved selling the durable product (or the main product) at or below cost while generating income from sale of consumables. It changed consumer preferences and became a model for other industries like printers, coffee machines, gaming consoles, and smartphones with subscription services.

RATIONALE BEHIND CHOOSING THIS BUSINESS MODEL

The reason for working on this business model for inclusion in my Dissertation Research Project stems from the model's generalized relevance, feasibility, and strategic applicability within industries in both the old

and new marketplaces. It sets a good example of how businesses utilize pricing and product strategies to build long-term value since it successfully combines low-cost customer acquisition with recurring revenue.

The model has been widely used in industries ranging from digital services to consumer goods, and it has been particularly effective in developing nations like India, as demonstrated by Jio's telecom strategy. It also provides a wealth of opportunities to examine pricing psychology, brand loyalty, and consumer behavior, which makes it both practically and academically important for modern business studies.

LITERATURE REVIEW

The Razors-and-Blades Myth(s) by Randal C. Picker (2011)

Randal C. Picker argued that the Razor-Blade Business Model emerged due to market forces rather than deliberate strategy. He found that Gillette adopted this model after contract expirations forced price reductions, and noted that competitors could always undercut by selling only the profitable consumables.

Pricing the Razor: A Note on Two-Part Tariffs by Richard Schmalensee (2015)

Richard Schmalensee's study found that selling the base product below cost is rarely optimal and typically only makes sense under specific market conditions with more low-demand consumers. He emphasized that the razor-and-blades strategy isn't usually driven by price discrimination and argued that below-cost pricing shouldn't be presumed predatory without considering market dynamics.

The U.S. Men's Razor-Blade Market: A Competitive Profile by Yogita Datta (2019)

The research questions the belief that competition mainly happens in the mid-price range. It emphasizes Gillette's strong presence in the premium market. The study demonstrates that innovation and brand reputation allow Gillette to impact pricing and market trends. These elements are essential competitive factors.

Capturing Value from Razor and Blade Business Models by Florian Homann, Stephan Winterhalter, and Oliver Gassmann (2016)

The paper by Homann, Winterhalter, and Gassmann looks at the razor-and-blade model from a market viewpoint. It accents practical strategies for capturing value instead of just discussing theory. The writers concentrate on optimizing pricing, ensuring client loyalty, and structuring the value chain for profit maximization.

Razor-and-Blades Pricing Revisited by Anirudh Dhebar (2016)

Anirudh Dhebar's "Razor-and-Blades Pricing Revisited" re-examines the traditional "razor and blades" model in the context of modern markets and hence offers a contemporary look at the classic business model. It looks into its significance beyond typical products, applying it to smartphones and subscriptions. It also examines the effects of changing preferences and price sensitivity.

RESEARCH GAP

This research aims to narrow the gaps in the understanding of the Razor Blade Business Model by conducting a comprehensive evaluation across various industries of its financial sustainability, impact on customer loyalty, and adaptability in the digital age. Moreover, the study examines unconventional areas which are of great importance today, like SaaS, IoT subscriptions, and digital platforms, particularly in emerging markets, whereas earlier research confined to a few specific industries only. It also looks at how businesses face the risks associated with relying on consumable pricing and how industry-specific elements like cost structures, competition, and consumer trends affect the model's performance which have not been adequately addressed by the existing literatures.

OBJECTIVES OF THE RESEARCH

- To understand the concept and operating mechanism of the Razor Blade Business Model.

- To analyse the implementation of this model, examine the financial implications and long-term sustainability of the same.
- To evaluate consumer behaviour and brand loyalty under this pricing strategy.

RESEARCH METHODOLOGY

The study employs an analysis of Primary Data approach.

The primary research focuses on consumer behaviour within this business model, analysing attributes such as brand loyalty, response to subscription-based pricing, purchasing decisions regarding the core product and its consumables, and perceptions of discounts and concessions. Data was collected through surveys and questionnaires administered via Google Forms. A sample of 125 respondents was analysed, covering the period from February 2025 to March 2025.

For easier interpretation, the results were displayed using graphs, charts, and trend lines. Statistical tools like chi-square analysis and hypothesis testing were used.

LIMITATIONS OF THE STUDY

1. Only a small sample of 125 respondents majorly from KOLKATA has been taken which makes it difficult to draw an appropriate conclusion from this sample size.
2. This study is based on the prevailing tastes and preferences of the respondents, which may change over time, depending on factors such as trends, current purchasing power or personal needs.

CHAPTER II: CONCEPTUAL FRAMEWORK

CONCEPT AND UNDERSTANDING OF THE RAZOR BLADE BUSINESS MODEL

The Razor-Blade business model entails making money from necessary consumables while selling a core product for little or no profit. Similar to the freemium

model in digital services, this tactic locks users into a product ecosystem, generating recurring revenue and customer loyalty. Competition is a major risk, which businesses mitigate by limiting compatibility and enforcing intellectual property laws to safeguard consumable sales.

Therefore, businesses must strike a balance between profitable consumable sales and reasonable core product pricing if they want to succeed.

CHAPTER III: PRESENTATION OF DATA, ANALYSIS AND FINDINGS

PRIMARY DATA ANALYSIS

ANALYSIS OF THE CONSUMER BEHAVIOUR OF "THE RAZOR-BLADE BUSINESS MODEL"

Now, having studied the working of the model, we shall now study the consumer perspective of the model for which we have conducted a survey through the Google Forms. We have put forth our analysis in the form of charts, diagrams and tables followed by testing hypothesis to study relationships between certain variables.

Q1. Are you familiar with The Razor – Blade Business Model?

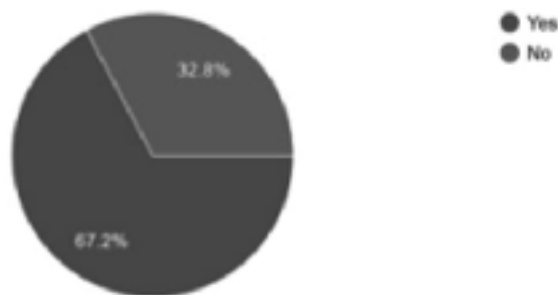


Figure 1 : Familiarity with model
(Source : Primary Data)

Interpretation- According to the survey, among a sample size of 125 people, it appears that the model has got a great awareness among the people with 67.2% people being aware of the model and 32.8% being unaware of the model.

Q2. How often do you purchase products that are associated with the Razor Blade Business Model (e.g., razors & blades, printers & ink, gaming consoles & games, coffee machines & pods, etc.)?

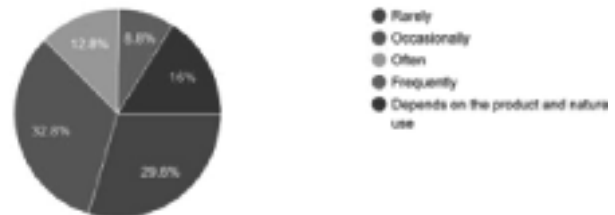


Figure 2 : Frequency of purchasing
(Source : Primary Data)

Interpretation- According to the survey, almost 60% of participants buy Razor-Blade Model related items infrequently or irregularly, indicating that they are not necessities and are not purchased according to a set pattern. About 24% of the remaining 40% regularly buy such items, demonstrating that they consider them necessities (e.g., razors and blades). The remaining 16% think that the frequency of purchases is determined by the product's intended use; for example, gaming gear may be necessary for regular gamers but infrequent for others.

Q3. Where do you typically purchase your razors and blades and other associated products



Figure 3 : Place of purchase
(Source : Primary Data)

Interpretation – According to survey results from 125 participants, 45.6% of respondents said that supermarkets are the best place to buy Razor-Blade

Model products. 6.4% prefer to purchase from brand websites, while 44.8% prefer to shop online. Just 3.2% use other strategies, such as physical showrooms or neighborhood stores.

Q4. What influences your decision to purchase such products?

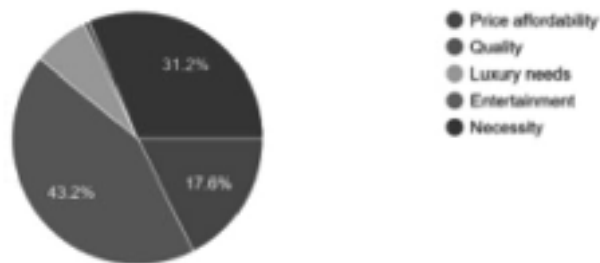


Figure 4 : Influence
(Source : Primary Data)

Interpretation – The survey reveals that approximately 74% of participants base their Razor Blade Business Model purchases on necessity and quality, demonstrating pragmatic, need based decision-making that prioritizes dependability and functionality over aesthetics or brand image. Customers prioritize affordable options, and brand loyalty is low. Luxury, price sensitivity, and entertainment have little bearing, indicating that gamers are more likely than non-gamers to buy products like gaming consoles.

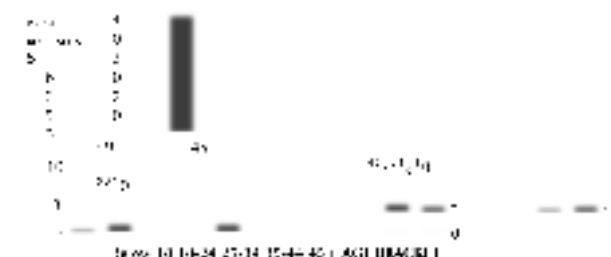
Q5. Where do you typically purchase your razors and blades and other associated products? (No. of Respondents)

Age/Mode of Purchase	Brand Website	Online	Supermarket	Total
Below 18	1	3	4	8
18-24	1	45	45	91
25-34	1	2	4	10
35-44	1	1	1	3
45+	1	1	1	3
Total	5	52	55	112

(Source : Primary Data)

Age/Mode of Purchase	Brand Website	Online	Supermarket	Total
Below 18	1.6%	3.6%	4.4%	9.5%
18-24	0.9%	40.5%	40.5%	81.9%
25-34	0.9%	1.8%	4.4%	7.1%
35-44	1.6%	0.9%	1.6%	4.1%
45+	1.6%	0.9%	1.6%	4.1%
Average	1.9%	27%	29%	68%

(Source : Primary Data)



(Source : Primary Data)

Interpretation: The most active consumer group, according to the 125 respondents to the survey, is between the ages of 18 and 24, and they prefer supermarkets and internet merchants. While older adults (35–44 and 45+) exhibit minimal engagement, indicating infrequent or alternative purchasing habits, younger groups (under 18 and 25–35) also favor supermarkets. Most likely as a result of low brand attachment, brand websites and other channels are least preferred. Supermarkets are more well-liked because they are easily accessible, have a solid reputation, and provide extra conveniences like home delivery and local vendor discounts.

Q6. How likely are you to switch to a competitor offering a cheaper alternative for refills?

Interpretation: According to the survey, the majority of participants have a neutral opinion about moving to less expensive refill options, indicating that it is neither a popular nor disregarded choice. Price may encourage some people to think about switching, but many people are discouraged from doing so even when prices are lower due to factors like product compatibility, switching costs, suitability, and terms that differ from those of competitors.

Q7. Do you feel that companies using this model overcharge for the refills/consumables?

Interpretation – According to the survey, 66.4% of participants believe that businesses overcharge for consumables or refills. This reflects a consumer perception that, as a result of product dependency and high switching costs, they are forced into ongoing purchases with no other options. However, since the company assumes production risks and frequently sells core products at or below cost, the pricing is justified from their point of view. Businesses should concentrate on establishing trust and providing customer incentives in order to balance both points of view and guarantee sustainability without making customers feel taken advantage of.

Q8. Would you prefer paying a higher upfront cost for the main product in exchange for lower refill costs?

Interpretation – According to the survey, 44% of participants are unsure if they would be willing to pay more up front for cheaper refills, while 31.2% are in favor of the idea and 24.8% are against it. Because refill purchases are recurring, this trade-off may ultimately benefit the consumer. Businesses, however, prefer high refill costs to guarantee long-term profits and low upfront costs to draw customers. Although many consumers claim to understand the model, the high number of "Maybe" responses indicates that consumers are not well-informed about the model's operation and long-term cost implications.

Q9. What factors make you continue purchasing refills from the same brand instead of switching to alternatives?

Interpretation: According to the survey, it appears that most people prefer quality as the factor to make them continue purchasing refills from the same brand, the second preference being given to Brand Value and Perception. Although many factors determine this decision but "Quality" remains the evergreen factor in the long term for any business. Brand reputation and Perception help in initial acquisition of customer and retaining them but without quality, no brand reputation will stay intact and no strategy would work out to preserve our market share. Moreover, no

customer would like to stick to the same brand if it degrades the quality of its products.

Hence, it is advisable for businesses to focus on quality before brand building and any other factor.

Q10. How important are loyalty programs, discounts, or rewards in influencing your continued purchase of refill products?

Interpretation: According to the survey, maximum people have a neutral opinion about the importance of loyalty programs, discounts, or rewards in influencing continued purchase of refill products. This response coincides with the analysis of Q6, where people had a neutral opinion about likelihood of switching to a competitor. As likelihood of switching to a competitor cannot be determined, the importance of incentive programs is also quite uncertain due to existence of a various other factor.

Q11. Would you be more likely to stay with a brand if they offered a lifetime discount on refills after a certain number of purchases?

Interpretation: According to the survey, majority of the people answer to a "Yes" with the proportion of the same being 89.6% out of the total population and only 10.4% of the people answering a "No". A rational consumer would ceteris paribus be attracted to discounts and rewards and hence the likelihood of a customer staying with the brand will be more if he or she gets entitled to a "lifetime discount".

Test for Significant Dependencies

Now, to examine and analyse relationship between difference aspects of Consumer Behaviour, we will test the aspects considering them separate variables using Chi-Square Test of Independence.

The hypotheses to be tested are as follows:

- Consumers are more likely to switch to a competitor if the refill prices are perceived as too high.
- Consumers who subscribe to auto-refill services are less likely to switch brands. ➤ Consumers who view the model as exploitative are less likely to believe it ensures long term business sustainability.

1. Hypothesis 1: Consumers are more likely to switch to a competitor if the refill prices are perceived as too high.

- H0 (Null Hypothesis): There is no significant relationship between perceived high refill prices and switching behaviour.

- H1 (Alternative Hypothesis): Consumers who perceive refill prices as too high are significantly more likely to switch to a competitor.

Hypothesis 1	How likely are you to switch to a competitor offering a cheaper alternative for refills? ("1" being most likely, "5" being least likely)					
Strongly Agree	1	2	3	4	5	Total
Agree	4	4	3	6	8	25
Neutral	12	14	20	10	2	58
Disagree	4	9	16	5	2	36
Strongly Disagree	-	2	1	2	-	5
Total	21	29	40	23	12	125

*Table 1: Observed Frequencies
(Source: Primary Data)*

Hypothesis 1	How likely are you to switch to a competitor offering a cheaper alternative for refills? ("1" being most likely, "5" being least likely)					
Do you feel that companies using this model overcharge for the refills?	1	2	3	4	5	Total
Strongly Agree	4.20	5.80	8.00	4.60	2.40	25
Agree	9.74	13.46	18.56	10.67	5.57	58
Neutral	6.05	8.35	11.52	6.62	3.46	36
Disagree	0.84	1.16	1.60	0.92	0.48	5
Strongly Disagree	0.17	0.23	0.32	0.18	0.10	1
Total	21	29	40	23	12	125

*Table 2: Expected Frequencies
(Source: Primary Data)*

Hypothesis 1	How likely are you to switch to a competitor offering a cheaper alternative for refills? ("1" being most likely, "5" being least likely)					
Do you feel that companies using this model overcharge for the refills?	1	2	3	4	5	Total
Strongly Agree	0.01	0.56	3.13	0.43	13.07	17.19
Agree	0.52	0.02	0.11	0.04	2.29	2.98
Neutral	0.69	0.05	1.74	0.40	0.61	3.50
Disagree	0.84	0.61	0.23	1.27	0.48	3.42
Strongly Disagree	4.12	0.23	0.32	0.18	0.10	4.95
Total	6.19	1.47	5.52	2.32	16.54	32.04

Table 3: Chi-square values
(Source: Primary Data)

Interpretation: Using a chi-square table, we find the critical value for $df = 16$ at $\alpha = 0.05$ (95 per cent confidence level) as 26.296.

Since our computed chi-square value (32.04) is greater than our critical value (26.296), we reject the null hypothesis. This implies that there exists a significant relationship between perceived high refill prices and their likelihood of switching due to refill cost.

2. Hypothesis 2: Consumers who subscribe to auto-refill services are less likely to switch brands.

- H0 (Null Hypothesis): Subscription services do not impact brand switching behaviour.
- H1 (Alternative Hypothesis): Consumers with subscription services are less likely to switch brands.

Hypothesis 2	How likely are you to switch to a competitor offering a cheaper alternative for refills? ("1" being most likely, "5" being least likely)					
Have you ever subscribed to an auto-refill or subscription service for such products?	1	2	3	4	5	Total
Yes	6.00	9.00	8.00	5.00	8.00	36.00
No	15.00	20.00	32.00	18.00	4.00	89.00
Total	21.00	29.00	40.00	23.00	12.00	125.00

Table 1: Observed Frequencies
(Source: Primary Data)

Hypothesis 2	How likely are you to switch to a competitor offering a cheaper alternative for refills? ("1" being most likely, "5" being least likely)					
Have you ever subscribed to an auto-refill or subscription service for such products?	1	2	3	4	5	Total
Yes	6.05	8.35	11.52	6.62	3.46	36.00
No	14.95	20.65	28.48	16.38	8.54	89.00
Total	21.00	29.00	40.00	23.00	12.00	125.00

Table 2: Expected Frequencies
(Source: Primary Data)

Hypothesis 2	How likely are you to switch to a competitor offering a cheaper alternative for refills? ("1" being most likely, "5" being least likely)					
Have you ever subscribed to an auto-refill or subscription service for such products?	1	2	3	4	5	Total
Yes	0.00	0.05	1.08	0.40	5.97	7.50
No	0.00	0.02	0.44	0.16	2.42	3.03
Total	0.00	0.07	1.51	0.56	8.39	10.53

Table 3: Chi-square values
(Source: Primary Data)

Interpretation: Using a chi-square table, we find the critical value for $df = 4$ at $\alpha = 0.05$ (95 per cent confidence level) as 9.488. Since our computed chi-square value (10.53) is more than our critical value (9.488), we reject the null hypothesis. This implies that there exists a significant relationship between consumers who subscribe to auto-refill services and their switching behaviour.

3. Hypothesis 3: Consumers who view the model as exploitative are less likely to believe it ensures long-term business sustainability.

- H0 (Null Hypothesis): Consumer opinion of the business model does not affect perceived sustainability.
- H1 (Alternative Hypothesis): Consumers who view the model as exploitative are more likely to believe it is unsuitable.

Hypothesis 3	What do you think about the model from the point of view of ensuring sustainability of the Business?			
As a consumer, what is your overall opinion about the model?	Quite Sustainable	Not at all Sustainable	Can't say	Total
Fair	17	5	14	36
Effective	40	10	23	73
Exploitative	9	1	6	16
Total	66	16	43	125

Table 1: Observed Frequencies
(Source: Primary Data)

Hypothesis 3	What do you think about the model from the point of view of ensuring sustainability of the Business?			
As a consumer, what is your overall opinion about the model?	Quite Sustainable	Not at all Sustainable	Can't say	Total
Fair	19.008	4.608	12.384	36
Effective	38.544	9.344	25.112	73
Exploitative	8.448	2.048	5.504	16
Total	66	16	43	125

Table 2: Expected Frequencies
(Source: Primary Data)

Hypothesis 3	What do you think about the model from the point of view of ensuring sustainability of the Business?			
As a consumer, what is your overall opinion about the model?	Quite Sustainable	Not at all Sustainable	Can't say	Total
Fair	0.21	0.03	0.21	0.46
Effective	0.06	0.05	0.18	0.28
Exploitative	0.04	0.54	0.04	0.62
Total	0.30	0.62	0.43	1.35

Table 3: Chi-square values
(Source: Primary Data)

Interpretation: Using a chi-square table, we find the critical value for $df = 4$ at $\alpha = 0.05$ (95 per cent confidence level) as 9.488.

Since our computed chi-square value (1.35) is less than our critical value (9.488), we fail to reject the null hypothesis. This implies consumer opinion of the business model does not affect perceived sustainability

CHAPTER IV: CONCLUSION AND RECOMMENDATION

THE RAZOR-BLADE BUSINESS MODEL SUMMARISED

Gillette's transformation from a frustrated salesman to a ground-breaking business plan is a prime example of

how innovation can completely transform an industry. Its flexibility demonstrates strategic foresight, particularly in reaction to patent disputes and market shifts. The legacy of King Gillette is not limited to a single product; it also includes the way that one concept revolutionized business practices.

The Razor - Blade business model depends on recurring demand by offering a low-cost base product to attract customers and earning revenue from ongoing sales of compatible consumables. Customer loyalty, which is driven by brand preference, compatibility, or convenience, is the backbone of this model. The model enables companies to enhance customer lifetime value while growing their market, offering differentiated products, and upselling, despite the paradox of low entry and high psychological switching costs. The

model's risks include the fact that if enough baits (consumables) aren't sold, the initial loss on the main product affects profitability adversely, particularly when competitors offer relatively cheaper alternatives. Uncertain pricing or hidden costs, like automatic subscriptions after trials, can lower consumer confidence and grind down brand loyalty.

Transparency is crucial to maintaining trust and encouraging repeat business thus ensuring brand loyalty. Consumer annoyances such as expensive replacements, lack of compatibility with third parties, and purposeful product designs that compel customers to keep buying from the same brand are also revealed by survey data, underscoring the model's ethical issues.

RECOMMENDATION

Hence, businesses should thrive to work on novel ideas and enhancing customer satisfaction so that a consumer does not feel cheated or deceived and thus The Razor – Blade Business Model would act as a “boon” for all businesses applying it.

Some useful suggestions to improve customer engagement with this Business Model could be:

- To maintain a competitive edge and encourage faithfulness, concentrate on developing strong customer relationships.
- Use a flexible pricing strategy that gives customers a choice in how much to purchase and offers customizable product features.

Therefore, to sum up, the Razor and Blade business model has completely changed how businesses handle profitability and pricing. High profits and market dominance are possible, but overcoming obstacles like upfront costs and reliance on refills is necessary for success; continuous innovation is required to maintain competitive strength.

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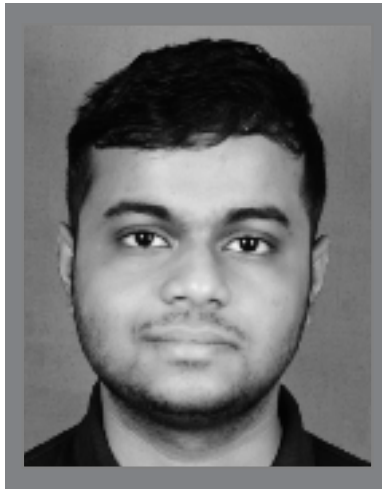
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“

The technology, in its current form, is far from being a substitute for human agents and often acts as a frustrating barrier between the customer and a solution.

”

Evaluating the Efficacy of AI Chatbots in After-sales Service: An Empirical Study in the Indian E-commerce Context

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The integration of Artificial Intelligence (AI) chatbots in customer service, particularly in after-sales support, represents a significant shift in business strategy aimed at efficiency and cost-reduction. While global studies highlight the potential of AI, its effectiveness in specific cultural and economic contexts like India remains underexplored. This study investigates the effectiveness, limitations, and consumer perceptions of AI chatbots in the after-sales service domain within the Indian e-commerce sector. Utilizing a quantitative approach, data was collected via a structured questionnaire from 83 respondents in Kolkata, India. The findings indicate a significant preference for human agents over AI chatbots, primarily due to the latter's inability to handle complex queries, lack of contextual understanding, and absence of human empathy. Despite high adoption rates for initiating service requests (70%), a vast majority (80%) of issues ultimately required human intervention for resolution. Consumer satisfaction with chatbots was markedly low (87% dissatisfied), underscoring a critical gap between technological implementation and user acceptance. The study concludes that while AI chatbots are a formidable tool for initial query filtering, their current capabilities are insufficient for complex after-sales scenarios in India. Recommendations include enhancing AI's contextual processing, ensuring seamless escalation to human agents, and incorporating empathetic communication designs to bridge the satisfaction gap.

Keywords: AI Chatbots, After-Sales Service, Customer Satisfaction, E-commerce, Human-AI Interaction, India.

INTRODUCTION

The contemporary digital marketplace is characterized by the pervasive integration of Artificial Intelligence (AI), with chatbots emerging as a frontline interface for customer interaction. Defined as “a program or application that users can converse with using voice or text”, chatbots are designed to simulate human conversation, automating responses and streamlining customer service operations. The evolution of chatbots, from Joseph Weizenbaum's rule-based ELIZA (1966) to

contemporary generative AI models like ChatGPT, signifies a paradigm shift towards automated customer service solutions (Adamopoulou & Moussiades, 2020).

The increasing digitization of commerce has made customer service a crucial differentiator in a highly competitive environment. After-sales service, in particular, plays a pivotal role in shaping customer loyalty and brand perception. It encompasses all interactions following a product purchase, including troubleshooting, returns, replacements, warranties, and technical assistance. Companies have long recognized that effective after-sales service drives repeat purchases, builds trust, and generates positive word-of-mouth (Khoros, 2024).

In recent years, businesses have turned to AI chatbots to address the growing demand for instant, round-the-clock customer support. These bots promise operational efficiency by offering instant responses, reducing labor costs, and handling a large volume of routine queries simultaneously. Global consulting firms forecast that AI adoption in customer service could reduce operational costs by up to 30% while significantly improving response times. Moreover, AI advancements now enable proactive engagement, predicting customer issues before they escalate, thereby shifting customer service from a reactive to a predictive model.

However, the adoption of AI chatbots in India introduces unique challenges. India represents a diverse market characterized by linguistic multiplicity, variable digital literacy, and heterogeneous consumer expectations. What works in technologically mature markets may not necessarily translate well to this context. Despite aggressive adoption by leading e-commerce companies like Amazon, Flipkart, and Myntra, anecdotal evidence and user feedback often highlight frustration with chatbot interfaces, especially in complex after-sales scenarios involving refunds, technical issues, or escalations.

This paper seeks to address these concerns by empirically investigating the efficacy of AI chatbots in after-sales services in the Indian e-commerce context. Specifically, it aims to analyze consumer satisfaction levels, identify technological and perceptual barriers,

and propose recommendations for bridging the gap between automation efficiency and customer experience quality.

LITERATURE REVIEW

The academic discourse on AI in customer service is extensive, reflecting the technology's rapid evolution and growing adoption across industries. Early chatbot applications relied on rule-based systems, where pre-defined scripts governed responses. These systems were limited in scope and failed when queries deviated from expected patterns. However, advancements in Natural Language Processing (NLP) and Machine Learning (ML) have transformed chatbots into more dynamic, conversational agents capable of learning from interactions and generating context-aware responses.

Pradana et al. (2017) demonstrated the potential of domain-specific chatbots through the development of SamBot for Samsung, which excelled in addressing brand-specific customer queries. Similarly, Brinks used AI to personalize customer interactions, successfully doubling its client base by tailoring responses to individual needs (Abraham, 2022). These examples highlight AI's potential to enhance customer engagement when effectively implemented.

Yet, consumer perceptions remain ambivalent. Luo et al. (2019) revealed a fascinating behavioral bias: when customers were unaware that they were interacting with AI, chatbot performance was rated on par with top-performing human agents. However, disclosing the chatbot's identity led to a staggering 79.7% reduction in purchase rates, suggesting deep-rooted skepticism about AI's competence and empathy.

Technological limitations further exacerbate these perceptions. Studies by Adam et al. (2020) and Ranieri & Dello Russo (2024) found that chatbots frequently fail to handle complex, non-standard queries, leading to repetitive or irrelevant responses. Users often describe these interactions as frustrating, particularly when chatbots lack mechanisms for quick escalation to human support.

The human element remains indispensable in customer service. Steinhoff et al. (2021) emphasize that human agents act as relational bridges, embodying empathy, judgment, and contextual understanding—qualities difficult to replicate in AI. Comparative studies reinforce this notion: Joshi (2023) reported that while AI agents outperform humans in response speed (2.1s vs. 45s), human agents achieve higher problem-resolution rates (85% vs. 72%) and superior satisfaction ratings (4.5/5 vs. 3.9/5). Mangipudi (2025) similarly notes that emotional intelligence significantly influences customer trust and loyalty, areas where AI continues to lag.

Moreover, Fan et al. (2022) caution against the personalization-privacy paradox, where attempts to create hyper-personalized AI interactions risk breaching consumer privacy, further eroding trust.

Despite these insights, most studies originate from Western or East Asian markets, with limited focus on emerging economies like India. Given India's distinct consumer behavior patterns, linguistic diversity, and infrastructural challenges, a focused investigation is warranted.

RESEARCH GAP

While global literature extensively documents AI chatbots' potential and limitations, a conspicuous research gap exists regarding their application in India's after-sales service sector. Indian consumers often exhibit unique behavioral traits, such as higher expectations for personal interaction and varying degrees of digital literacy. Moreover, infrastructural factors like inconsistent internet connectivity and linguistic diversity complicate chatbot adoption.

Existing studies primarily analyze Western contexts, where digital ecosystems are more mature, and consumers exhibit greater trust in automated systems. Consequently, findings from these regions may not be directly generalizable to India. This study addresses this gap by empirically examining AI chatbot efficacy in the Indian e-commerce after-sales context, focusing on user satisfaction, technological limitations, and the interplay between automation and human intervention.

RESEARCH OBJECTIVES

This study was conducted to achieve the following objectives

1. To assess the effectiveness of AI-driven chatbots in handling after-sales service requests, such as post-purchase inquiries and returns.
2. To compare consumer perceptions of AI chatbots versus human customer service agents in resolving e-commerce after-sales interactions.
3. To identify the technological limitations of AI chatbots and the specific use cases that necessitate escalation to human intervention.

RESEARCH METHODOLOGY

RESEARCH DESIGN

A quantitative research design was adopted to ensure objectivity. Primary data was collected through a structured online questionnaire targeting e-commerce customers in Kolkata, India. The choice of Kolkata as the sampling location reflects its status as a growing urban market with increasing e-commerce penetration.

SAMPLING TECHNIQUE AND SIZE

A convenience sampling method was employed, resulting in 83 valid responses.

QUESTIONNAIRE DESIGN

The questionnaire comprised 16 close-ended and Likert-scale questions organized into four sections: demographics, usage patterns, satisfaction levels, and perceived limitations of AI chatbots. Questions were pilot-tested for clarity and relevance before full deployment.

Data Analysis

Data was analyzed using descriptive statistics to identify trends and frequencies. We explored relationships between demographic variables (e.g., age, education) and chatbot perceptions. The study's quantitative nature precluded in-depth qualitative analysis, representing a potential avenue for future research.

FINDINGS AND OBSERVATIONS

DESCRIPTIVE ANALYSIS

Gender distribution of respondents:

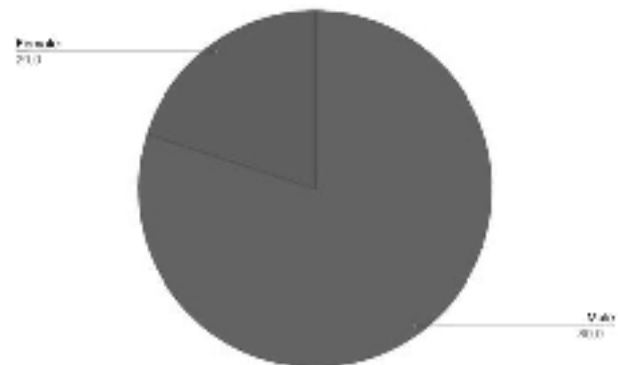


Figure 1 : Female
(Source: Primary Data)

The respondents had the option to not reveal their genders (for privacy reasons). Majority of respondents preferred to stay anonymous, not wanting to report their name or their gender. Only 24 respondents (28%) agreed to say their name and gender, in which majority 80% of them were male and only 20% were female

Age group of respondents:

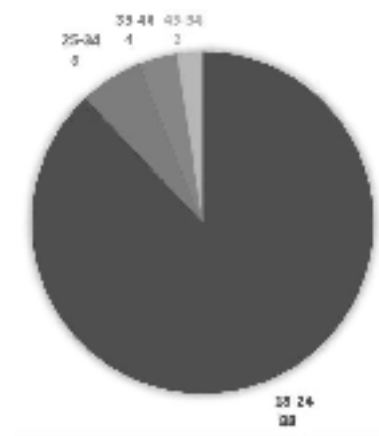


Figure 2 : Age
(Source: Primary Data)

The respondents were majorly college students so they were of mostly from 18-24 age group consisting of almost 88% with 25-34 consisting of 6% and the rest was comprised of 35-54.

Occupation of respondents:

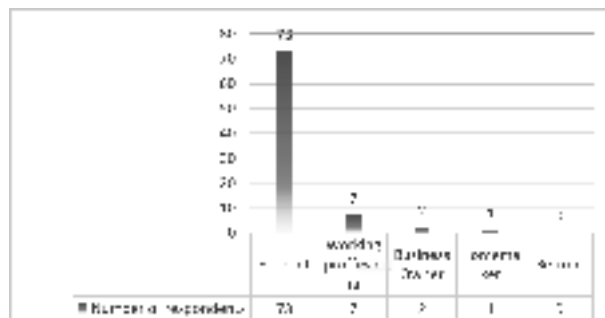


Figure 3 : Occupation
(Source: Primary Data)

The respondents were overwhelmingly below the age group 18-24, so 73 respondents were students by profession whereas 7 were working professionals and 2 were business owners. 1 was homemaker and the no. of retired people was zero.

INTERPRETATION OF RESEARCH QUESTIONS IN LINE WITH OBJECTIVES:

Objective 1: Consumer Perceptions of Chatbots in After-Sales Service

1. How frequently do you shop online?

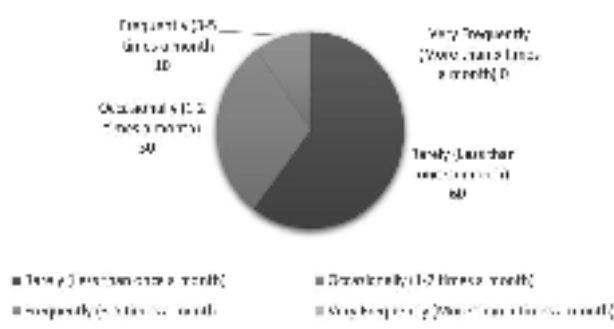


Figure 4 : Frequency of Online shopping
(Source: Primary Data)

Around 60% respondents shopped less than once a month, 30% shopped occasionally i.e. more than 1 time a month and the rest shopped around 3-5 times a month.

2. How did you initiate your return/refund request?

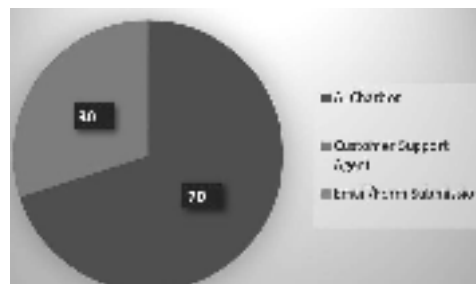


Figure 5 : Way of return
(Source: Primary Data)

Over 70% of the respondents initiated their return/refund request through a chatbot, hence showing the businesses moving to AI automation for the majority of customer service requests.

3. How easy was it to communicate your issue to the chatbot?



Figure 6 : Way of Communication
(Source: Primary Data)

All the respondents faced difficulty in communicating their issue to a AI chatbot, none of them were in the category Neutral, easy or very easy.

4. Which of these situations did the chatbot fail to provide a satisfactory resolution?

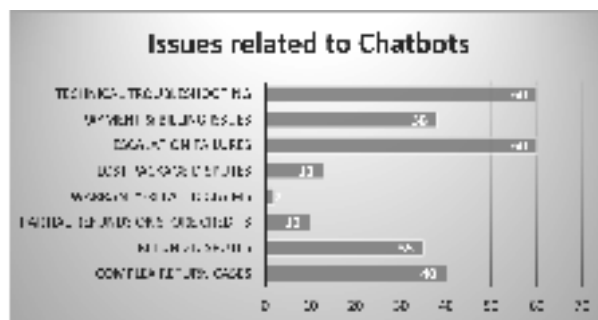


Figure 7 : Chatbot issues
(Source: Primary Data)

The major issues related to Ai chatbot was found to be complex return cases, refund disputes, payment and billing issues, and escalation failures.

5. How long did it take for the chatbot to resolve your issue?

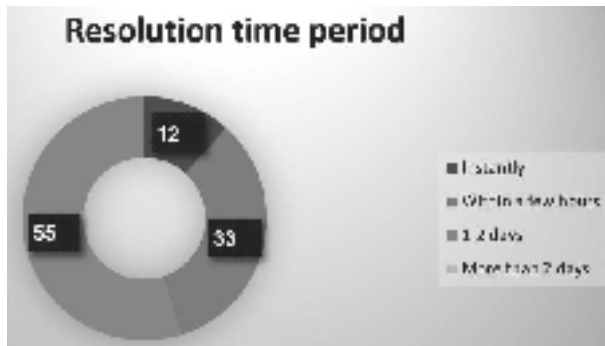


Figure 8 : Resolution Time Period
(Source: Primary Data)

Often times AI chatbot takes atleast 1-2 days to resolve the issues, which is 55% of the cases. Whereas 33% of cases takes a few hours to resolve and only 12% is done instantly. Frustrated customers end up contacting a human agent almost instantly.

6. Was your return/refund request successfully processed?

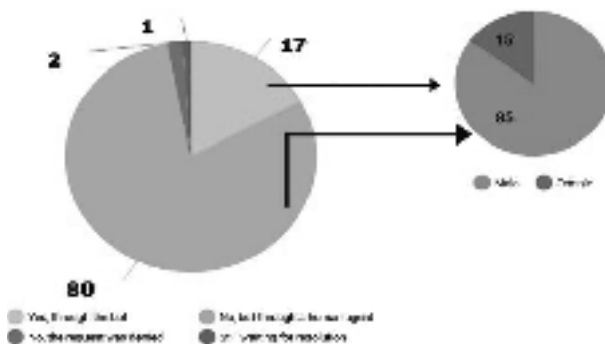


Figure 9 : Status of refund
(Source: Primary Data)

Almost 80% respondents had to escalate the issue to an AI, only 17% could directly resolve their issue through the chatbot. Only 1 peculiar case was found where the user is still waiting for resolution.

7. How satisfied were you with the chatbot's assistance?



Figure 10 : Level of satisfaction
(Source: Primary Data)

45% of the respondents gave a satisfaction rating of 1 star, 42% gave it a 2, and only 10 respondents said that their experience was average compared to a human agent.

Objective 2: AI Chatbots vs. Human Agents in After-Sales Interactions

8. How often do you escalate an issue?

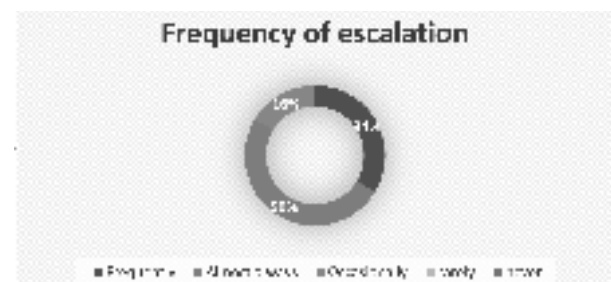


Figure 11 : Frequency of escalation
(Source: Primary Data)

50% of the respondents always escalate the issue to a human agent, 34% of the respondents frequently do it and the rest are neutralish.

9. Chatbot vs. Human agent effectiveness

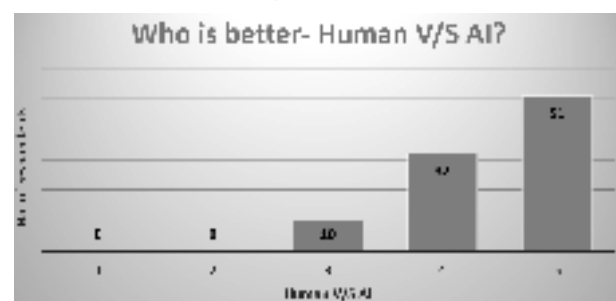


Figure 12 : Human V/S AI
(Source: Primary Data)

Majority of people said that Humans are simply better than AI in handling customer service requests, whereas 10 respondents are neutral in their stance.

10. Situations where you prefer human interaction

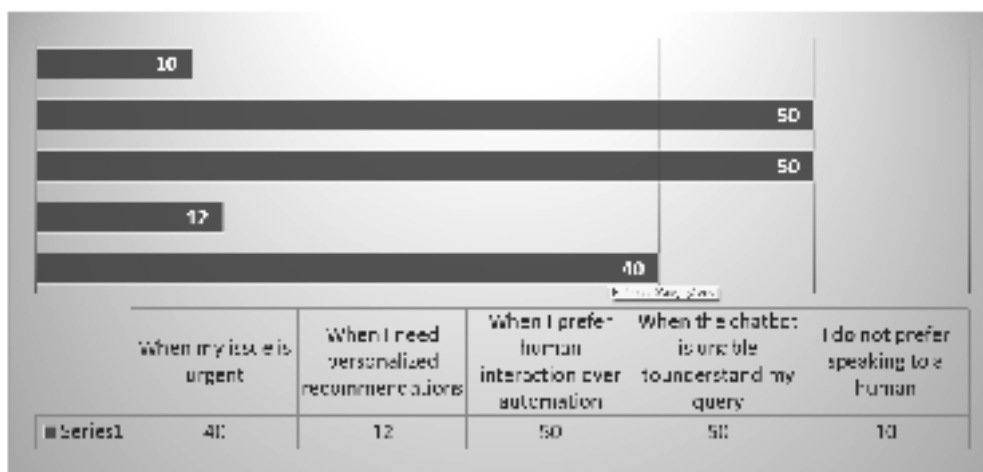


Figure 13 : Preference towards Human Interaction
(Source: Primary Data)

Majority of people preferred human interaction where the issues were 2,3 and 4. People did not require personalized recommendations at all. Some people preferred not to talk to humans at all. 50 respondents preferred human interaction in case of Automation, chatbot unable to understand the query and when the issue is urgent.

11. Importance of human empathy

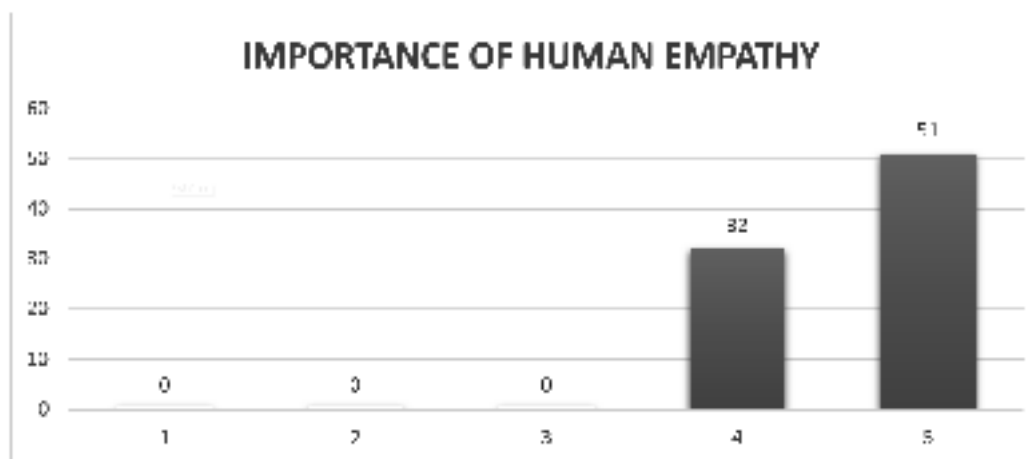


Figure 14 : Importance of Human Empathy
(Source: Primary Data)

51 respondents voted 5 stars when asked about importance of human empathy in after sales service. 32 people voted 4 stars, showing the utmost importance of it.

12. Willingness to use chatbots if they mimic empathy

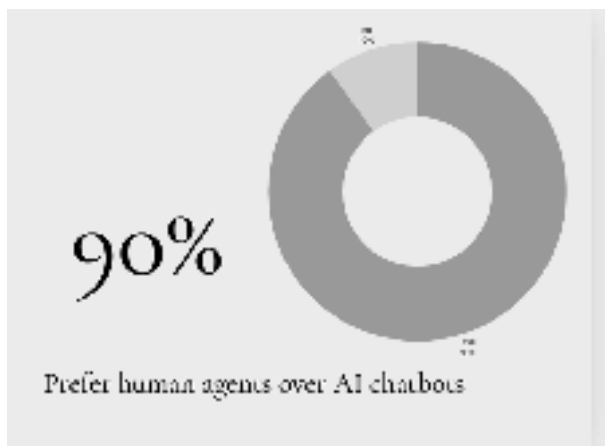


Figure 15 : Willingness to use Chatbots
(Source: Primary Data)

Majority of respondents refuse to use AI chatbot even if they can mimic human agents.

Objective 3: Technological Limitations of AI Chatbots

13. How many times have a Chatbot failed to resolve issue?

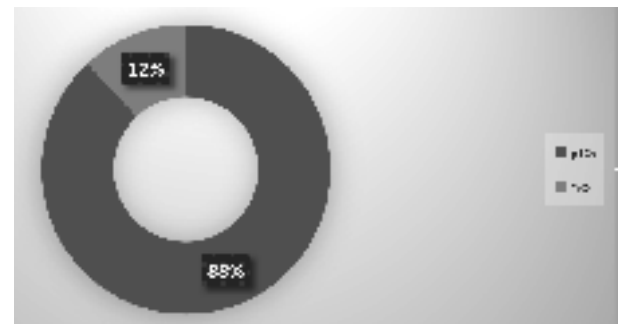


Figure 16 : Times where a chatbot has failed
(Source: Primary Data)

Almost 88% times, an AI chatbot have failed to resolve an issue.

14. Specific limitations experienced with AI chatbots

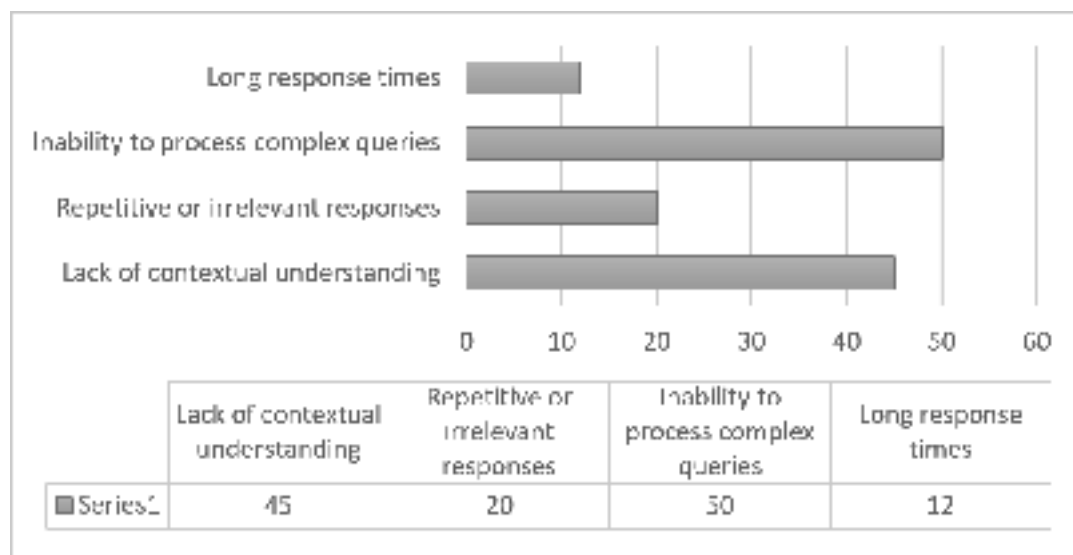


Figure 17 : Specific limitations
(Source: Primary Data)

50 Respondents reported “inability to process complex queries” as a limitation of AI chatbot, with 45 complaining about lack of understanding specific issues.

15. How do you feel when a chatbot is unable to understand or resolve your issue?

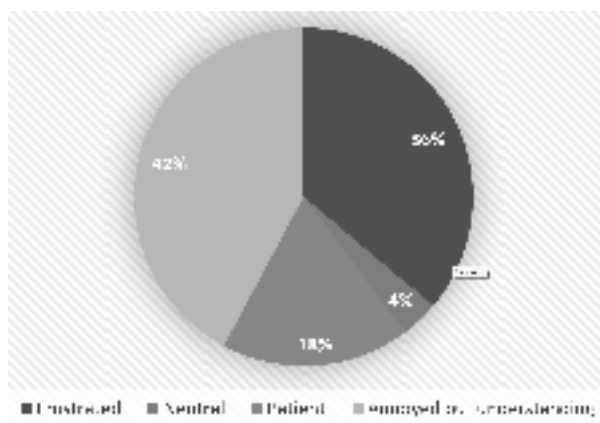


Figure 18 : Reaction to failure of chatbot
(Source: Primary Data)

Majority of people were annoyed i.e. 35 respondents, but were surprisingly understanding whereas 36% of people were frustrated at a chatbot. Only 18% people were patient with the bot.

16. What improvements would make AI chatbots more reliable in after-sales service

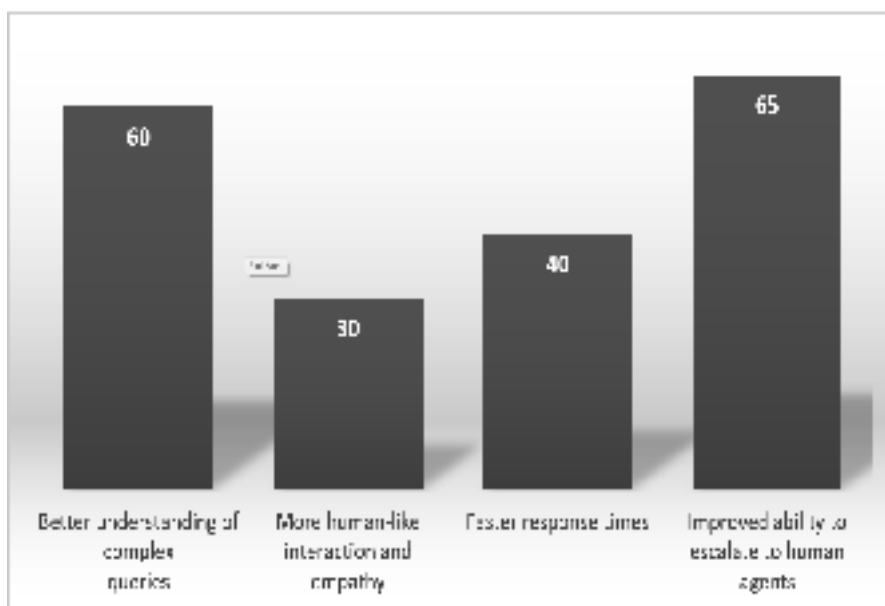


Figure 19 : Improvements in Chatbot
(Source: Primary Data)

Majority of people voted for better understanding of complex queries and improved ability to escalate to human agents, with faster response times closely trailing second. People believed these two features could make AI more reliable in after sales.

The findings reveal several critical insights into chatbot-assisted return and refund processes. While 70% of respondents initiated their requests through AI chatbots, demonstrating high adoption for first-line support, communication proved to be a major barrier, with all respondents reporting difficulty—51% describing it as “very difficult” and 49% as “somewhat difficult.” Chatbots frequently failed in technical troubleshooting (60%), escalation handling (60%), and processing complex return cases (40%), resulting in significant delays; 55% of issues took 1–2 days to resolve, and only 12% were addressed instantly. Notably, 80% of requests had to be escalated to human agents, underscoring the chatbot’s shortcomings as a primary resolver. Consequently, 87% of respondents expressed dissatisfaction, rating the chatbot’s assistance with only 1 or 2 stars, while 84% felt human agents were far more effective, particularly due to empathy, which 61 respondents rated as “very important.” The most cited limitations were the chatbot’s inability to handle complex queries (50 respondents) and its lack of contextual understanding (45 respondents). Respondents emphasized the need for better comprehension of complex issues and improved escalation capabilities to human support.

CONCLUSION AND RECOMMENDATIONS

AI chatbots in after-sales service are proving to be far from effective when it comes to resolving complex or non-standard issues. At best, they function as filters, handling basic queries but struggling badly with problems that require deeper understanding or judgment. This shortfall is evident in the

fact that 80% of cases eventually have to be escalated to human agents. Customers, in turn, have shown an overwhelming preference for human support—not just because humans solve problems better, but because they bring empathy to the table, something AI simply can't replicate. In fact, 90% of respondents said they would still choose a human agent even if a chatbot could “fake” empathy, highlighting how much people value real emotional connection in customer service. On top of this, technological gaps—like the inability to handle complex queries or understand context—are creating frustration and eroding trust. While some customers said they were “annoyed but understanding,” the fact that 88% experienced failures show there is a deeper, systemic issue with the AI tools currently used in India's after-sales service space. This study concludes that while AI chatbots are a ubiquitous feature in Indian e-commerce after-sales service, their implementation is premature for handling the complex, empathy-driven nature of post-purchase support. The technology, in its current form, is far from being a substitute for human agents and often acts as a frustrating barrier between the customer and a solution. The limitations of the study is its reliance on self-reported data may introduce response biases, such as social desirability or recall inaccuracies. Moreover, the sample's demographic skew—88% aged 18–24 and 73% students—reflects a tech-savvy but potentially less experienced consumer group, limiting broader applicability.

Based on the findings, the following recommendations are proposed for businesses:

1. **Hybrid Model Implementation:** Develop a seamless, easily accessible escalation pathway. Customers should not have to navigate menus to reach a human agent. Chatbots should be programmed to recognize frustration and complexity and proactively offer human assistance.
2. **Contextual AI Training:** Invest in training AI models on complex, region-specific, and scenario-based queries prevalent in the Indian market. Moving beyond scripted responses to dynamic problem-solving is crucial.
3. **Empathy-by-Design:** While mimicking human empathy is challenging, chatbot interactions must be designed to be more compassionate, acknowledging customer frustration and setting clear expectations about resolution processes and timelines.
4. **Continuous Feedback Loop:** Implement mechanisms to use failed chatbot interactions as data to continuously train and improve the AI systems, closing the gap between user needs and bot capabilities.

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Price intelligence thus emerges as both a competitive opportunity and a trust imperative: consumers welcome transparency and control, but expect fairness and clarity in algorithmic pricing.

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AI-Powered Predictive Analytics: Revolutionizing Business Strategies in Commerce

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ABSTRACT

In an era during which data is such a new currency, Artificial Intelligence (AI)-powered predictive analytics is reshaping the way in which businesses strategize as well as compete, and innovate. This research explores the important overall awareness, improved accessibility, and large growing

adoption of AI-powered predictive analytics across multiple industries, highlighting its major role in risk management, supply chain efficiency, and personalized marketing. It also explores the ethical concerns, the consumer trust, and a new dimension of AI-powered price intelligence. AI-based data offers gains and a leg up, even though doubts surface. By scrutinizing concrete applications and diverse challenges, this study aims for determining whether AI-powered predictive analytics promotes through sustainable innovation or introduces additional complexities for it. The findings will furnish perceptive understandings into the evolving role of AI in commerce, along with its lasting effect on business strategy.

INTRODUCTION

Artificial Intelligence (AI) is changing the way in which businesses predict future trends by way of analyzing past along with current data. This technology has let companies make sense of how customers act and also make their supply lines better and plan carefully, which makes choices happen faster and be more right. Companies like Amazon and Netflix use it notably for product and movie suggestions specifically based on customer preferences, carefully tailor recommendations, and banks depend on it largely in order to accurately spot fraud and comprehensively assess financial risks. Briefly, AI has changed every part of commerce.

In recent years, AI-powered price intelligence has come about as an important application of predictive analytics. For consumers, it is frequent to compare prices across quick-commerce, for food delivery, and e-commerce platforms. Therefore, businesses are compelled toward adopting intelligent pricing strategies. This intersection of AI, pricing, as well as consumer fairness introduces a vital new parameter to commerce.

AI-powered predictive analytics is more than just an innovation, it's a catalyst for economic growth. As businesses continue to invest in AI, predictive analytics is set to drive progress, enhance efficiency, and redefine industries in the years to come.

RATIONALE OF THE STUDY

AI-driven predictive analytics enables companies to react in advance to many trends and predict them with precision. AI analyses data patterns, providing companies a competitive edge in the fast-changing global market. At the same time, AI use also considerably brings up serious ethical and legal issues about data privacy, openness, and fairness. A pillar of the digital transformation era, AI-driven predictive analytics answers critical questions such as which customers are likely to churn, what products are likely to succeed, and which areas of operation need optimization. Thus, the goal is not only to analyze adoption across industries but also explore how consumers perceive algorithmic pricing and AI-powered price comparison.

LITERATURE REVIEW

Okeleke et al. (2024) in their study discussed how predictive analytics, powered through AI, is changing the way we understand consumer behaviour with predictions of market trends. The study also used AI techniques such as Machine Learning (ML), Natural Language Processing (NLP) and Deep Learning for demand forecasting, together with personalized marketing, and also in inventory management.

Madanchian (2024) in her study examined the changing face of marketing in online retail involves using AI through things such as custom suggestions for customers, automatic sorting of customers in groups, and expectation analysis for future sales. There has been a noted rise in sales as well as how much customers interact with the company.

Antonyraj (2024) in his study, considered how business intelligence (BI) systems might incorporate artificial intelligence (AI). The research is based around a retail scenario in which AI based BI tools analyse structured data and unstructured data in order to forecast. Difficulties like data integration along with scalability are explained.

Hossam et al. (2024) in their study elaborated on the applications of AI in retail analytics include keeping tabs on inventory, predicting sales, and analysing what

customers like and how they buy things. They detailed how models using AI improve how well the operations work along with how correct the business forecasts truly are. The study considers the many challenges in data heterogeneity.

Miah et al. (2023) in their research, assessed the function of AI in helping important business decisions via processing present data. Areas such as pricing that frequently changes, substantially improving supply chains, and dividing up markets are noted as particularly important spots where business analytics using AI can make customer-focused plans greatly stronger.

LITERATURE GAP

While many studies discuss AI-driven personalization along with consumer behaviour, there exists a gap in understanding whether it improves user experience or results in manipulation, notably in relation to targeted advertising as well as consumer autonomy. There has been limited attention given to AI-driven price intelligence and consumer perceptions of fairness in pricing. This study addresses this gap by integrating findings on consumer trust, fairness concerns, and adoption intent for AI-powered price-comparison tools.

OBJECTIVES OF THE STUDY

To evaluate the awareness and usage of AI-powered predictive analytics in commerce

To explore the accessibility of AI-powered predictive analytics across industries and identify the key business areas benefitting from its adoption

To analyse the trust of consumers and ethical concerns in AI-driven business decisions

To examine whether AI-driven price personalization enhances user experience or manipulates behaviour

DATA & RESEARCH METHODOLOGY

This study incorporates both primary data as well as

secondary data for a comprehensive analysis. Wide-ranging primary data was collected through an online survey with a structured questionnaire, while secondary data was obtained from existing research papers to support the findings. The study focuses on individuals aged eighteen and above from Kolkata and immediate suburbs, including students, working professionals, and homemakers, with a total sample size of around four hundred fifty two respondents. Data analysis and visualization were conducted using MS Excel with tabular, pictorial, and graphical representation, including bar graphs and pie charts.

ANALYSIS AND FINDINGS

AWARENESS AND USAGE OF AI-POWERED PREDICTIVE ANALYTICS IN COMMERCE



Figure 1: Price-Comparison Behaviour Across Platforms
(Source: Primary Data)

A small minority had never compared prices at all, while 91.6 per cent of respondents reported doing so frequently or occasionally. This indicates that people have a high awareness of price dispersion, also consumers now compare prices as a mainstream behaviour. The younger respondents (21–30 and under 21) were most engaged. That sort of engagement is consistent with the idea of them being digital natives.

Consumers are aware of the fact that prices do differ and act upon this knowledge too. This shows precisely that awareness in relation to AI-driven dynamics (even if subconsciously) already shapes behaviour, and this validates perfectly that people steadily increase awareness in addition to usage of AI-enabled commerce.

FACTORS INFLUENCING AI-POWERED PREDICTIVE ANALYTICS AWARENESS

AI awareness is influenced by multiple factors which is beyond formal education and work experience. The key contributors include:

Relatively wider access to technology: Specific people through improved access to the internet and particular AI-enabled platforms are greatly more likely to be aware of emerging AI trends.

Industry-Specific Training Programs: Certain companies investing into AI training initiatives increase noticeably in employee knowledge and adoption rates.

Media Exposure & Online Learning: AI-related news as well as online courses in conjunction alongside AI applications within consumer technology improve public awareness.

Government Initiatives: Policies for promoting digital literacy and education on Artificial Intelligence contribute significantly to increasing the AI awareness levels.

CHALLENGES IN AI-POWERED PREDICTIVE ANALYTICS EDUCATION

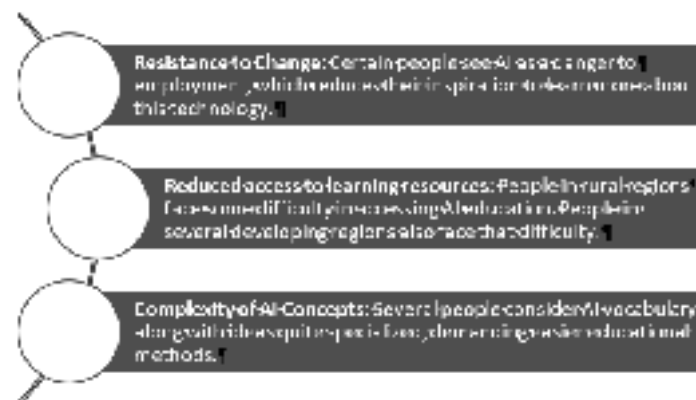


Figure 2: Despite increasing interest in AI, significant barriers in the education of AI-driven predictive analytics
(Source: Primary Data)

ACCESSIBILITY OF AI-POWERED PREDICTIVE ANALYTICS ACROSS INDUSTRIES

When ordering food, how often do you check if the same restaurant item costs more/ less or another delivery app?
452 responses

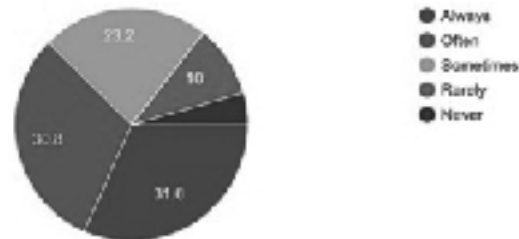


Figure 3: Food Ordering: Cross-Checking as a Habit.
(Source: Primary Data)

62.4 per cent Always or Often cross-check, with the remainder sometimes/rarely/never doing so. Food delivery is a sector within which consumers habitually compare prices. Consumers will develop just such a routine cross-check habit during high-frequency small-ticket decisions such as food. Hence, food delivery can be included as being a focal sector. This explains why users immediately as well as visibly value price intelligence for delivery fees, surges, and platform-specific promotions where savings are possible.

In which type of platform do you find price-comparisons most useful?
183 responses



Figure 4: Where Price Intelligence Matters Most
(Source: Primary Data)

Food delivery (33.0 per cent) and E-commerce (28.5 per cent) were rated most useful, followed by Quick commerce and Beauty products. Sectors with frequent, time-sensitive purchases (meals, groceries) and high-visibility discounts (e-commerce) see the greatest perceived benefit. Beauty trails likely occur since brand or ingredient preferences as well as loyalty may exceed small price differences.

ETHICAL CONCERNS IN AI-POWERED PREDICTIVE ANALYTICS IMPLEMENTATION

Do you feel that prices or delivery charges sometimes change depending on your device (iPhone vs Android), location, or time of the day?
452 responses



Figure 5: Perceived Dynamic Pricing
(Source: Primary Data)

Majority agreed (strongly/somewhat) that such price discrimination exists. People often think algorithmic price discrimination exists. Even without direct proof, trust and platform choice are shaped via this perception. This strongly evidences both ethics and transparency which remain central to the acceptance of users.

When shopping online for products (like beauty or electronics), how much do you trust the "exclusive offers" or "personalized discounts" shown on the platform?
452 responses



Figure 6: Trust in "Exclusive Offers" and "Personalized Discounts"
(Source: Primary Data)

The survey results depict that consumers' trust is fragile and split. A trust gap tied to opacity (how do they compute offers? are they fair?) is revealed by about half leaning positive yet a combined 50.7 per cent being neutral or negative. So, personalization is improving satisfaction and can create value. However, people worry still about privacy, bias, and hidden manipulation.

If you discovered you were being charged more than another customer for the same product, how would you feel?
452 responses



Figure 7: Fairness Sentiment When Charged More Than Others
(Source: Primary Data)

61.7 per cent of respondents felt this would be unfair (very or slightly), with only 17.3 per cent calling it “fair, part of business strategy.” A clear majority 61.7 per cent consider price disparity as unfair. It is still unfair to those conceding that it is “acceptable.” Only 17.3 per cent explicitly sanction it as “fair strategy.” So perceiving fairness is central: charges levied differently are refused acceptance by most respondents.

AI-POWERED PRICE PERSONALIZATION – ENHANCING USER EXPERIENCE VS. MANIPULATING BEHAVIOUR

Would an AI tool that shows real-time prices across platforms make you feel more confident in deciding where to buy from?

452 responses



Figure 8: Would an AI Price-Comparison Tool Increase Confidence?
(Source: Primary Data)

84.5 per cent said “Yes” (definitely or somewhat). Users already compare; they want automation + transparency. This signals market demand for AI-powered price intelligence as a trust-building feature which enhances consumer experience.

Do you think personalized pricing (e.g., Amazon showing you different deals than another user, or Zomato offering a discount based on your order history) helps you save money or pushes you to spend more?

452 responses



Figure 9: Personalized Pricing: Saves Money or Pushes Spend?
(Source: Primary Data)

37.8 per cent of the respondents believe both, 32.3 per cent believe AI-powered price personalization helps save, 15.5 per cent feel it pushes spending, and 14.4 per cent were unsure. Consumers hold a nuanced view: many concede benefits and risks simultaneously. Thus, transparency is essential—show users why or when a deal is offered, provide budget controls, and allow opt-outs of excessive pushes.

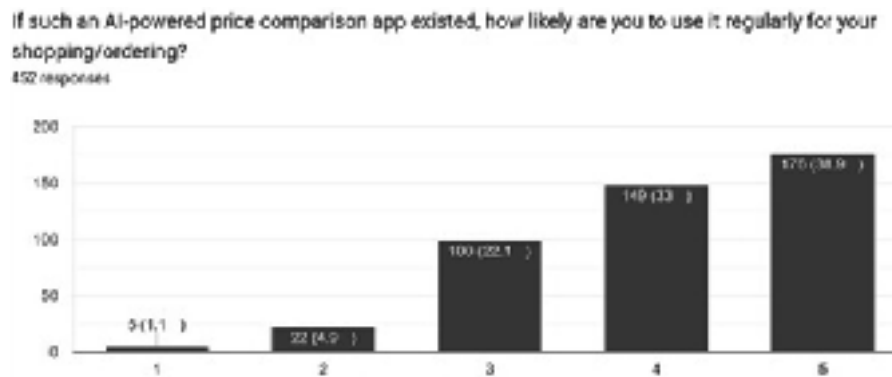


Figure 10: Likelihood of Using an AI Price-Comparison App
(Source: Primary Data)

71.9 per cent rated 4–5, showing strong adoption intent. A well-designed, privacy-respecting app would likely see meaningful uptake, especially among 21–30 and students/salaried segments.

Consumers are very willing toward using AI-driven price intelligence tools. Even though opinions happen to be split on whether or not personalized pricing extracts or even saves more spending, they trust that such tools will empower them. Price intelligence serves as an empowerment mechanism along with a trust-building tool which confirms the overall intent regarding adoption. This shows AI adoption creates efficiency in particular. Its adoption also determines consumer empowerment, transparency, and fairness.

CONCLUSION

In this research paper, it has been found that AI-driven predictive analytics is transforming business strategies in commerce. Many companies across multiple industries are leveraging AI-driven understandings in order for optimizing operations, improving customer engagement, and improving decision-making.

Some of the key aspects examined in this research are the roles of AI in individualizing user experiences. AI-driven personalization improves customer satisfaction by providing tailored recommendations along with automated interactions. However, many ethical concerns surrounding data privacy continue to persist. Additionally, several ethical issues related to algorithmic bias exist.

This study also stresses on the potential for AI to drive both efficiency and innovation within multiple sectors. Businesses using AI for predictive analytics can precisely anticipate market trends, optimize pricing strategies, and effectively improve overall risk management. Larger firms possess an edge competitively because of funds and resources. However, small as well as medium enterprises (SMEs) are slowly narrowing down the divide through scalable AI solutions.

A new dimension explored in this paper is AI-powered price intelligence. Survey results indicate that consumers actively compare prices, remain skeptical about personalized discounts, and strongly support tools that provide real-time comparisons. Price intelligence thus emerges as both a competitive opportunity and a trust imperative: consumers welcome transparency and control, but expect fairness and clarity in algorithmic pricing.

AI-powered predictive analytics isn't just an elementary technical improvement for organizations. It is a plan by the businesses and the design assists to flourish within an increasingly data-driven world. Subsequently, companies must balance leveraging AI for growth and ensure they meet ethical considerations. Organizations investing in AI adoption responsibly will acquire a competitive advantage, and they will build consumer trust, setting the stage for a sustainable and smart future within commerce. As Ginni Rometty (Former CEO of IBM) observed: "Some people call this artificial intelligence, but the reality is this technology will enhance us. So instead of artificial intelligence, I think

we'll augment our intelligence." This is very relevant as AI does not replace humans yet improves their decisions which is vital for business analytics as well as for price intelligence that respects fairness.

RECOMMENDATIONS FOR BUSINESSES

Use AI for Smarter Decisions: Incorporate AI-driven tools into their systems to examine data, forecast customer demand, and reach well-educated decisions. AI can assist with inventory management, pricing strategies, as well as sales forecasting.

Improve Marketing with AI: AI can efficiently examine multiple consumer behaviours to generate highly personalized ads, suggest specific products, and improve email marketing for considerably improved engagement.

Ensure Ethical AI Use: By avoiding several biased algorithms, ensuring sufficient data privacy, and being highly transparent about how AI-directed decisions are being made.

Build or integrate AI price-transparency features: Like cross-platform comparisons, fee breakdowns, alerts, and explain pricing rationale (whenever possible) to prevent distrust and reduce churn.

RECOMMENDATIONS FOR GENERAL USERS

Understand How AI Affects You: Be aware of how AI-driven recommendations influence shopping experiences, streaming choices, along with social media feeds. Recognize AI's important role in daily life helps in making choices that are distinctly more informed.

Use AI Tools to Improve Productivity: AI-powered assistants like chatbots, voice assistants (e.g., Siri, Alexa), and smart scheduling applications can help in managing time and improving efficiency.

Be Cautious About Data Privacy: Be mindful of data sharing, manage privacy settings as well as permissions in multiple apps along with websites.

Verify AI-Generated Content: With AI creating many news summaries, reports, and even images, users should regularly cross-check information to avoid misinformation.

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Institutions may also implement family-centered financial education programs that foster collective responsibilities in planning and budgeting.

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An Empirical Study of Gender Dynamics in Financial Literacy in India

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ABSTRACT

This study examines the persistent gender disparity in financial literacy within India, focusing specifically on the influence of socio-cultural conditioning and gender dynamics born out of the Indian societal structures. While

literature frequently attributes the gap to unequal access to resources, this paper investigates whether the differential persists even among a relatively homogeneous population with equal educational opportunities. The core purpose is to explain the underlying roots of this divide, assessing whether the observed differences are wholly structural or grounded in deeper behavioural and social factors, thereby contributing to a more progressive and comprehensive measure of financial capability where quality of education is not a factor at all. The most important result of the study is how, contrary to popular belief, education, alone, is not responsible for the gender disparity in financial literacy.

KEYWORDS: Financial Literacy, Gender Gap, Sociocultural Conditioning, Confidence Bias, Patriarchal Structures, Gendered Roles, Behavioural Finance

BACKGROUND

Financial Literacy is a term used rampantly today. It usually encompasses the aptitude to interpret and use various financial instruments adeptly. The Organisation for Economic Co-operation and Development (OECD, 2020) defined it as a combination of understanding, information, skills, outlook, and behaviour important to make wise financial decisions and attain financial well-being. A cursory understanding of the term would show that it has three key components namely,

- (i) Financial knowledge, which is an understanding of concepts like interest rates, inflation, diversification, etc.
- (ii) Second, exhibiting good financial behaviour, such as saving regularly or retirement planning, and
- (iii) Finally, adopting healthy financial attitudes like long-term orientation or risk tolerance

These together show financial literacy. However, when such literacy is assessed based on gender, financial literacy seems to be eluding the female population more than the male population across countries. The Global Financial Literacy Excellence Centre (GFLEC, 2017) found men outperforming women in financial

literacy assessments even when critical factors like education and income were levelled for all participants. A similar result was found in India by the National Centre for Financial Education (2019), which reported that only 27 per cent of adult women are financially literate, while the financial literacy percentage of men was found to be 35 per cent. It was also discovered that this gap didn't exist merely due to a lack of education but is grounded in deeper structural and socio-cultural factors.

Through in-depth primary and secondary research, this paper seeks to understand and discover the factors responsible for this divide. It explores the hypothesis that financial literacy levels are not a function of only access to education and income, and that it is, in effect, a culmination of various factors that might go unnoticed.

LITERATURE REVIEW

OECD/INFE (2022) Toolkit offers a global benchmark for assessing financial literacy, with gender-disaggregated data. It measures behaviour, knowledge and attitudes and includes digital financial literacy indicators. The toolkit enables cross-country comparison and encourages countries to use standardized tools to enhance gender-sensitive policymaking.

Blaschke (2022) discusses the mediating role of confidence in narrowing the gender gap between

German teenagers. The author compares elementary and advanced money knowledge and, based on evidence, deduces that confidence is relevant to narrowing differences in elementary understanding and not advanced understanding. Girls and boys have the same mental capacity; however, confidence is less among girls than among boys. Notably, long-term economic education appears to eliminate the gender gap in financial literacy, which points to the importance of long-lasting educational interventions.

Kumar (2022) examines structural as well as cultural impediments to the financial inclusion of Indian women. While efforts such as Pradhan Mantri Jan Dhan Yojna (PMJDY) have resulted in the massive scale of

opening of accounts, penetration is thin because access to mobile phones, digital literacy, and geography remain limited. Kumar highlights that if digital financial services are developed with an inclusive nature, they have the potential to be a game-changer for closing the gap in access as well as the usage of financial services between males and females.

Rani and Goyal (2021) is a systematic review of the literature that synthesizes evidence from more than 75 peer-reviewed studies and National Centre for Financial Education (NCFE) reports in India. It assigns the gender gap to a combination of demographic, socioeconomic, psychological, and cultural reasons. The paper emphasizes that although Indian women have managed to gain access to more financial services, they are denied the same due to a lack of financial confidence and knowledge. The authors recommend policy measures and gender-sensitive education interventions to empower women via financial education.

OBJECTIVES OF THE STUDY

- (i) To examine whether a gap exists in financial literacy between genders among college students who have similar educational exposure.
- (ii) To determine significant factors, such as academic background, financial upbringing, and confidence levels, that may make up the differences in financial literacy between men and women.
- (iii) To explore the influence of nature versus nurture, by checking whether the observed gender gap is the result of built-in attitudes and behaviour or by external sources such as socialization.

RESEARCH METHODOLOGY

Empirical primary data, gathered from a quantitative survey, designed to examine gender differences in financial literacy primarily among college students. A sample of 181 respondents from India, with 52.5 per cent male and 47.5 per cent female participants, across both finance and non-finance academic backgrounds was used. The participants were selected using a mix of

purposive, snowball and convenience sampling. A questionnaire combining items from OECD-INFE Toolkit, NCFE-FLIS and self developed measures was administered through Google Forms. Data analysis was done using Microsoft Excel. Descriptive statistics, t-tests and correlation analysis was done to deduce inferences. Secondary research was also used to validate the findings, benchmarking them against established national and international financial literacy standards.

DATA ANALYSIS AND FINDINGS

1. Primary Research

Table 1 indicates that more male respondents have an academic background in finance (56 per cent versus 45 per cent), showing either greater interest and, therefore, perusal or exposure to financial courses.

Table 2 shows that the mean score for both genders is higher when they have a background in Finance/ Economics, which indicates that formal academic exposure enhances financial literacy. This supports that 'nurture' can improve financial literacy. However, on comparing gender-wise scores for both genders, respondents with a background in finance/economics and those without there is only a marginally statistically significant difference. Men have a 12 per cent higher average financial literacy score compared to women, which shows a statistically significant gender gap, even among college students with similar educational exposure. This suggests that the gender-based differences are not merely structural but may involve behavioural or social components.

Table 3-5 collectively show that males were more confident in all fields mentioned, showing the existence of a confidence gap. The percentage of females who chose the 'Don't know the answer' option was also much more than male percentage. The correlation between the scores and self- confidence rating of women is stronger than that of men, demonstrating that males are more confident even when they have lower scores. This suggests greater practical experience or greater confidence among male respondents and also signals a difference in the self-perception of both genders.

Figure 1 shows that respondents preferred saving in bank accounts, stocks, and cash. The fraction of male respondents not saving is greater than that of female respondents (13.33 per cent versus 4.22 per cent), indicating greater saving discipline or risk aversion among women. Female respondents prefer to save in banks, keep cash at home and invest in real estate as compared to males, who invest more in Bonds, stocks and commodities. This implies that female respondents lean more towards tangible options showing a preference towards security and stability while male respondents prefer financial market-linked products, indicating a higher risk appetite and possibly better market exposure.

Figure 2 demonstrates that friends, family or colleagues are the most used source of financial information demonstrating a greater trust in personal networks over institutional channels. Men have been observed making greater use of TV Channels, News, Advisors, and Brokerage Applications than women to make investments. This behaviour could be induced by greater market participation or confidence in navigating financial tools. Women rely on Company Filings and reports more than men to make investment decisions. This represents a more cautious and research-driven approach to investing.

Figure 3 shows that major respondents rarely follow the news, paying attention only when something major happens. This shows low routine financial awareness. Male respondents are seen following the markets more closely than female respondents. This reflects that there is more engagement, confidence, or interest in market dynamics among men.

Table 6 represents that most households' primary decision-makers are male members- either grandfathers/fathers or uncles. Nearly 89 per cent of respondents belong to patriarchal families which might limit exposure to financial discussions and decision-making for female family members, reinforcing gendered financial roles at an early stage. This structural power contributes to the gender gap observed in financial education, as men tend to be socialized into financial roles, while women are often excluded from direct involvement.

Figure 4 shows that females are asked to take charge of grocery shopping and household chores more than males, while males are expected to support the family's emotional well-being, recommend and make investments, do financial planning or money management and oversee family assets. This highlights an obvious gender-based division of responsibilities within households. Such division reinforces conservative notions of gender roles, where women are associated with operational and nurturing tasks and men with strategic and financial decision-making which conditions them early with experiences in finance, while women's financial involvement remains limited to consumption and budgeting tasks. This role conditioning supports the 'nurture' argument.

Figure 5 indicates that males showed higher interest and frequency of discussion of financial news by choosing 'often' and 'regularly' more often than females. Females majorly discuss financial matters occasionally. This could be linked to their perceived responsibility and higher confidence in financial matters.

2. Secondary Research

Figure 6 shows the percentage of financially literate men and women around the world as per S&P Global Financial Literacy Survey, highlighting the gender gap.

Unfortunately in India also, financial literacy has always been skewed along gender lines, with men making family and business decisions. The government of India as well as financial regulators initiated multiple projects to propel financial inclusion and literacy, however, macro-level awareness remained low.

Figure 7 shows financial literacy rates in India from the 2014 S&P Global Financial Literacy Survey and the 2019 National Centre for Financial Education – Financial Literacy and Inclusion Survey (NCFE-FLIS) survey.

Figure 7 shows the controller of women's earnings according to National Family Health Survey 2019-21, indicating that women have sole control over their earnings only 18 per cent of the time while their husbands solely control their earnings 14 per cent of the time.

Government schemes have enhanced financial inclusion by opening bank accounts for more than 500 million Indians. However, there is still a need for subsequent programmes to help maintain active usage and understanding. Figure 9 shows the lifetime revenue of Jan Dhan Customers by gender, with females showcasing lower overdraft and cross-selling usage and greater savings.

Table 8 summarizes statistics from various sources exploring the gap further, driving home the point that gender gap does exist, even today, in the modern, educated world.

CONCLUSION

This research has confirmed the fact that not only is financial literacy gender inequality a function of unequal resource and education access, but also due to socialization culture, confidence measures, and deep-seated roles of gender. Even within a relatively balanced group of college students similarly exposed to learning, men were perceived as more financially educated and self-assured compared to their female equivalents. The findings highlight the importance of an integrated and multi-dimensional approach to fill this gap. While policy-level initiatives have contributed considerably to increased access to financial instruments, there is still a need for targeted action to increase women's confidence, reframe early social conditioning, and increase the coverage of financial education.

Interventions aimed at developing financial capability and encouraging participation must begin early—within families, schools, and among peer groups—promoting joint decision-making and the normalization of active women's involvement in money matters. It is only when we eliminate structural and psychological barriers that we can hope to construct an economically equal society in which women can become independent economic actors.

RECOMMENDATION

- (i) In an attempt to close the financial literacy gender divide, schools and colleges must integrate

confidence-building modules into financial courses. As part of learning theoretical concepts, such modules should involve students—particularly women—in active, experiential, hands-on learning activities like simulations, case studies, and gamification interfaces. These are not only exciting for learning finance but also enable women to practice decision-making in a risk-free setting, thereby creating self-efficacy and diminishing caution.

- (ii) Government agency-promoted financial literacy initiatives by the Reserve Bank of India (RBI) and the National Centre for Financial Education (NCFE) must use more gender-sensitive stories. Including positive female role models and success stories within them can do away with the myth that finance is a man's field and motivate more women to take part.
- (iii) Another extremely significant suggestion is the establishment of mentor groups and peer groups by women themselves. These groups can be utilized as learning environments, environments to share financial experiences, and environments to develop financial confidence.
- (iv) At the same time, technology needs to be utilised to develop inclusive digital platforms with regional language support, audio assistance, and reduced complexity to provide financial tools to women in rural and semi-urban communities.
- (v) Institutions may also implement family-centered financial education programs that foster collective responsibilities in planning and budgeting. By involving women in these discussions at the home level, early exposure to financial issues can be guaranteed.
- (vi) Finally, academic boards must re-engineer the curriculum for financial literacy to be more experiential and gender-sensitive, with illustrations from real life and equitable gender representation.

These interventions together will make financial literacy an inclusive and empowering tool for everyone.

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TABLES AND FIGURES

Particulars	Female Respondents (in percentage)	Male Respondents (in percentage)
Respondent has a background in Finance/ Economics	45	56
Respondent doesn't have a background in Finance/ Economics	55	44

Table 1: Percentage of respondents with a background in Finance/ Economics
(Source: Primary Data)

Metric	Mean Score of Males [x/5]	Mean Score of Females [x/5]	Difference in Mean Score (in percentage)	p-value	Inference
Overall Financial Literacy Score	3.77	3.38	12	0.05	Statistically Significant
Financial Literacy Score for Finance Majors	3.55	3.76	6	0.48	Not Statistically Significant
Financial Literacy Score for Non- Finance Majors	3.09	3.67	19	0.09	Marginally Statistically Significant

Table 2: Summary of Independent T-tests on Sample Data
(Source: Primary Data)

Finance Domain	{(Mean Male Confidence per cent/ Mean Female Confidence per cent) -1}
Budgeting and Money Management	18
Banking and Payments	20
Accounting and Financial Statements	21
Taxation	6
Investing	14
Confidence Rating	5

Table 3: Percentage Difference in Confidence Levels – Males versus Female
(Source: Primary Data)

Gender	Number of respondents who chose 'Don't Know' response	Total Number of respondents	Percentage of respondents who chose 'Don't Know'
Female	9	86	10
Male	6	95	6

Table 4: Count of 'Don't Know' Response by Gender
(Source: Primary Data)

Gender	Correlation	Particulars	Figure
Female	0.44	Patriarchal Household	142
Male	0.26	Matriarchal/ Gender Neutral Households	17
		Total Respondents who answered the question	159
		Percentage of Patriarchal Households	89

Table 5: Correlation between Financial Score and Confidence Rating
(Source: Primary Data)

Table 6

Aspect	Data	Key Insight
Literacy Rate, 2024 (PLFS-MoSPI)	Overall: 80.9 per cent Male – 87.2 per cent Female – 74.6 per cent	Unequal literacy levels, to the disadvantage of women, exist, which limits financial understanding.
Commerce Education Enrolment, 2021–22 (AISHE- Ministry of Education)	Total – 4.4 million Male – 52.8 per cent Female – 47.2 per cent	Near parity in enrolment, but women's participation drops after graduation, reducing their representation in financial fields.
Representation in Financial Firms (CFA Institute Survey)	Workforce: Females: 21.7 per cent Males: 78.3 per cent Managerial roles: Females: 15.9 per cent Males: 84.1 per cent	Persistent underrepresentation limits mentorship and discourages women from entering or advancing in financial careers.
Bank Account Ownership vs Usage (NFHS-5, 2019–21 and Global Findex, 2021)	Bank accounts women themselves have- 78.6 per cent, with approximately 44 percent of women reporting having no control of the money in it. Inactive accounts: Females: 32 per cent Males: 23 per cent Digital Payments Use: Gender Gap of 13 percentage points	Access alone does not ensure usage — confidence and capability gaps persist.

Table 7: Statistics representing gender gap with key insights
(Source: Author's Compilation)

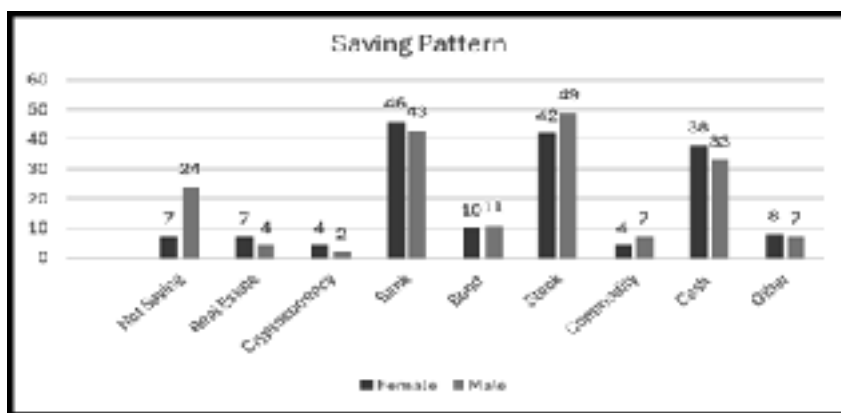


Figure 1: Graph showing respondents' used saving mediums
(Source: Primary Data)

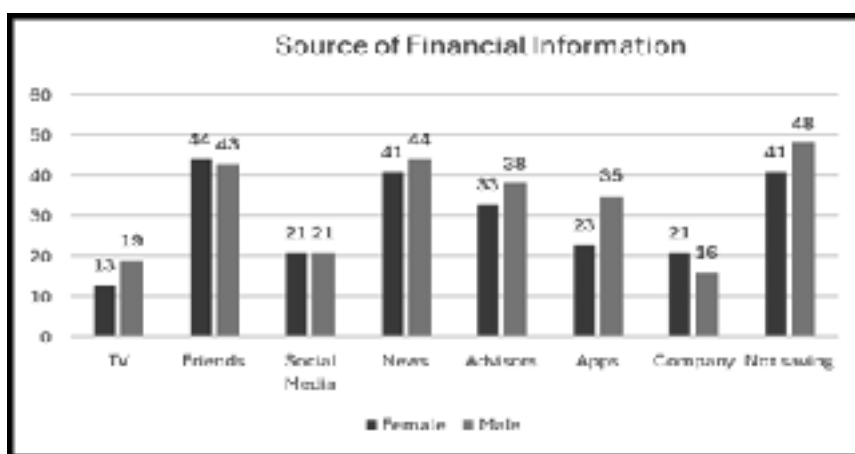


Figure 2: Graph showing respondents' primary sources of financial and economics information
(Source: Primary Data)

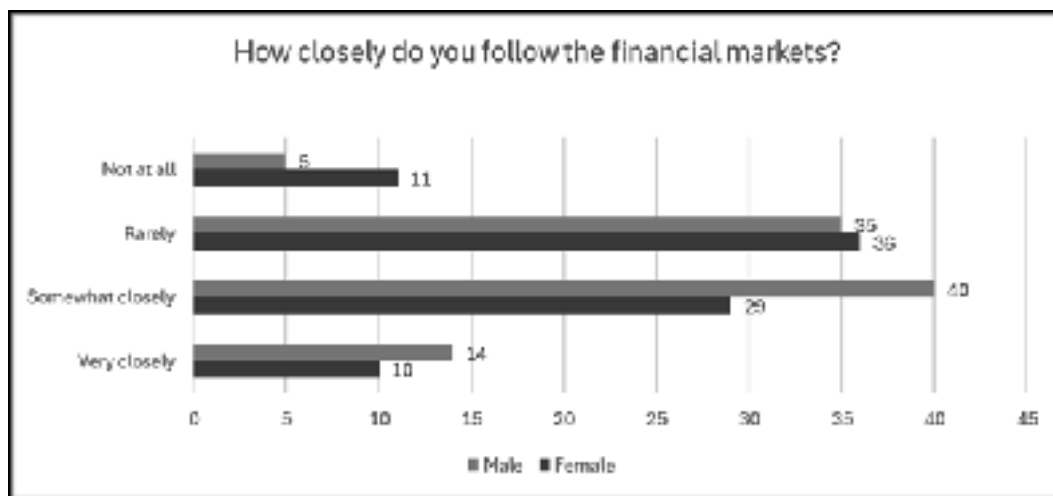


Figure 3: Graph showing the frequency of financial market monitoring by the respondents
(Source: Primary Data)

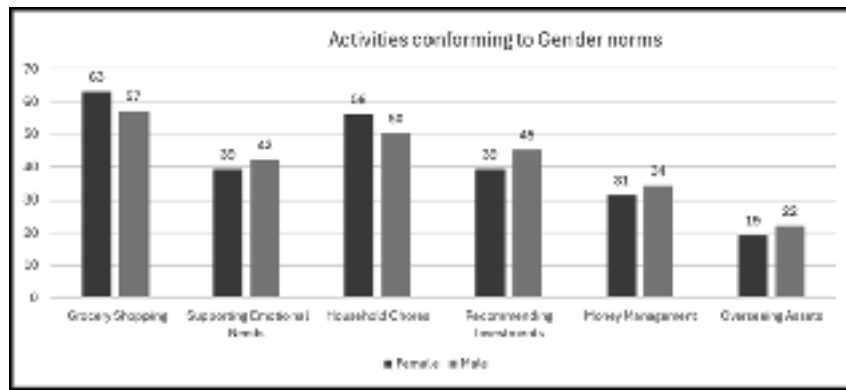


Figure 4: Graph showing engagement in Financial and Non-Financial Activities by Gender
(Source: Primary Data)

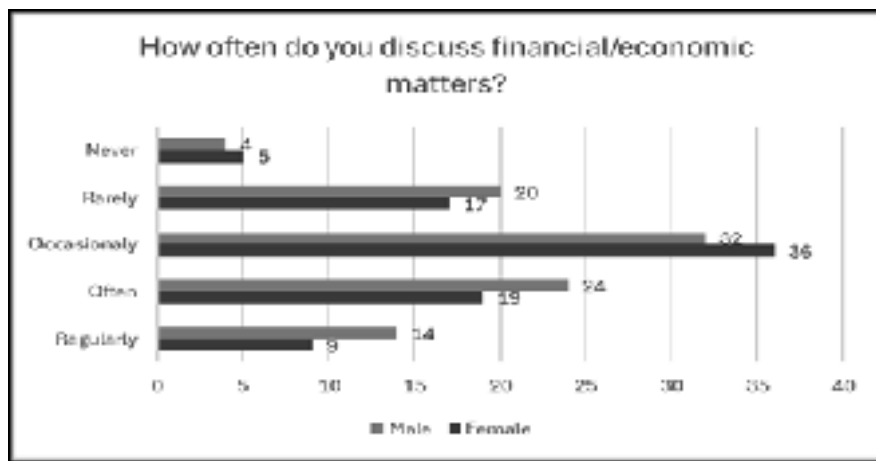


Figure 5: Graph showing the frequency of discussion of financial topics with family/ friends by Gender
(Source: Primary Data)

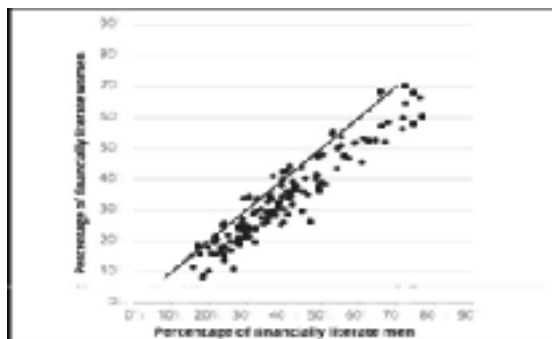


Figure 6: Financial Literacy Percentage among Men and Women around the world
(Source: S&P Global Financial Literacy Survey)

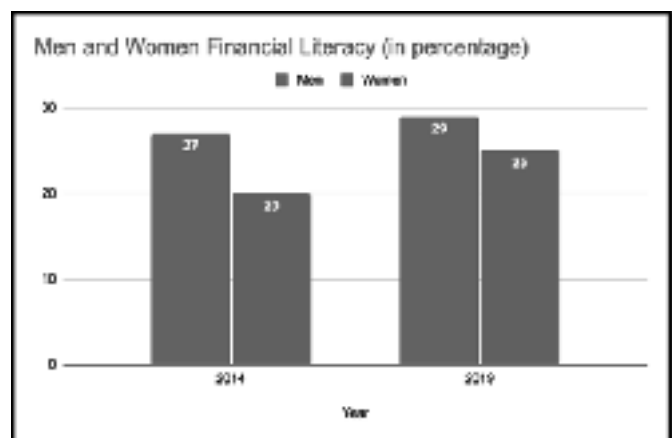


Figure 7: Financial Literacy Trend in India
(Source: Author's Compilation)



Figure 8: Chart presenting control percentage of various contenders over Women's Earnings
(Source: National Family Health Survey)

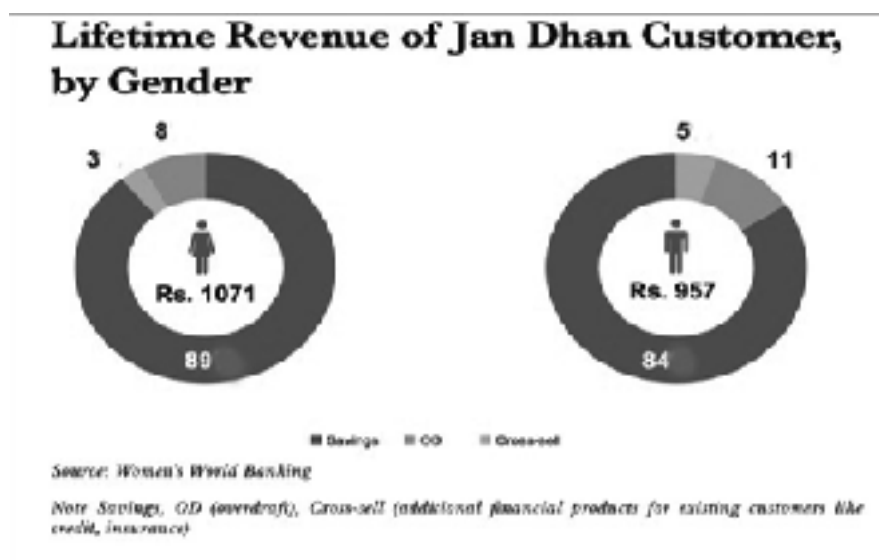


Figure 9: Chart showing Lifetime revenue of Jan Dhan Customer
(Source: Women's World Banking)



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Small-capital stocks are highly volatile, suffering larger losses during recessions due to limited capitalital, lower liquidity

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Small-Cap vs. Large-Cap Indices: A Study on their Behaviour During Recessions and Recoveries with Respect to the Indian Stock Market

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ABSTRACT

This study examines the behaviour of small-capital and large-capital stocks in the Indian market during economic downturns and recoveries. By analysing

historical stock prices, macroeconomic indicators, and performance metrics, it highlights key differences in volatility, risk-adjusted returns, and investor sentiment across market cycles. The findings reveal that small-capital stocks, while more volatile and prone to sharper declines during downturns, tend to rebound more strongly in recovery phases, driven by investor risk appetite and increased liquidity. Large-capital stocks, in contrast, demonstrate greater stability and resilience, making them a safer choice during periods of market stress. These insights provide valuable guidance for investors, policymakers, and portfolio managers in crafting strategies that balance risk and return. The study also identifies opportunities for future research, including sector-specific performance and the role of behavioural factors in shaping stock market outcomes in emerging economies.

KEYWORDS: Indian Stock Market, Small Capital Indices, Large Capital Indices, Recession

INTRODUCTION

The stock market's behaviour across business cycles has long intrigued researchers, with studies highlighting that small-capital stocks often outperform large capitals during recessions and recoveries—a phenomenon known as the small-capital premium. This challenges the Efficient Market Hypothesis (EMH), which claims prices reflect all available information and prevent consistent abnormal returns. The small-capital anomaly shows that small capitals have historically delivered higher risk-adjusted returns, driven by their greater growth potential, limited analyst coverage, and higher sensitivity to economic shifts. While they face more volatility and funding challenges during recessions, they tend to rebound faster in recoveries, benefiting from improved conditions and renewed investor risk appetite.

Research shows that small-capital stocks often outperform large capitals over the long term, as first highlighted by Banz (1981) and later incorporated into Fama and French's (1995) three-factor model. Studies also link stock performance to business cycles: small capitals tend to lag before recessions but outperform

afterward, driven by liquidity, capitalise access, and investor sentiment.

While most research on small- and large-capital performance focuses on developed markets, India's emerging market offers unique insights. Indian small-capital stocks show higher volatility but greater growth potential compared to large capitals. Understanding their behaviour during downturns and recoveries is key for effective portfolio building. This study analyses historical data, risk factors, and investor behaviour to provide empirical evidence on how Indian stocks respond to economic cycles, offering guidance for informed asset allocation.

RESEARCH OBJECTIVE

To explore how small-capital and large-capital stocks perform in the Indian market during times of economic downturns and recoveries, and to determine if small-capital stocks consistently outperform their large-capital counterparts throughout various phases of the business cycle.

To assess how volatility and drawdown differ between small-capital and large-capital stocks during economic cycles and analyse recovery timelines and momentum for small-capital vs. large-capital stocks.

To explore behavioural trends and investor sentiment across market phases using both quantitative data and survey insights.

RESEARCH METHODOLOGY

This study used both primary and secondary data. Primary data was gathered through a structured Google Forms questionnaire shared via WhatsApp and LinkedIn, receiving around hundred responses. Secondary data came from online publications, literature reviews, and National Stock Exchange's (NSE) official website. The research used convenient sampling, with results analysed in Excel and presented through pie charts and bar graphs.

DATA ANALYSIS AND FINDINGS

Performance in 2018

Key Price Extremes in 2018

Nifty 50 (Large-Capital)

- Highest Price (Peak): 11,738.50 (August 28, 2018)
- Lowest Price (Trough): 9,951.90 (March 23, 2018)
- Daily Volatility: 1 per cent
- Maximum Drawdown (MDD):

$$\begin{aligned} \text{MDD} &= \text{Lowest Point} - \text{Previous Peak} / \text{Previous Peak} \\ &= 9,951.90 - 11,130.40 / 11,130.40 \\ &= -9 \text{ per cent} \end{aligned}$$

Nifty Small-Capital 250

- Highest Price (Peak): 8,389.85 (April 30, 2018)
- Lowest Price (Trough): 5,747.95 (October 26, 2018)
- Daily Volatility : 1 per cent
- Maximum Drawdown (MDD):

$$\begin{aligned} \text{MDD} &= 5,747.95 - 7,651.80 / 7,651.80 \\ &= -23 \text{ per cent} \end{aligned}$$

Observation:

In 2018, the NIFTY 50 saw a moderate –9 per cent drawdown (lowest in March), reflecting investor confidence in large capitals, while the NIFTY Small-Capital 250 fell –23 per cent (lowest in October), showing delayed correction and higher vulnerability. Despite similar daily volatility (~1 per cent), small capitals were hit harder due to lower liquidity and higher investor sensitivity. This highlights that small capitals are more exposed to systemic risks (defaults, interest rates, inflation) and behavioural biases (overconfidence, herd mentality), stressing the need for behavioural nudges and financial awareness tools to guide rational decision-making.

Crisis vs. Recovery Performance

Defined Periods.

- Crisis Period:

Nifty 50: Jan 29 - Mar 23, 2018

Small-Capital: Sep 3 - Oct 26, 2018

- Recovery Period:

Nifty 50: Mar 26 - Dec 31, 2018

Small-Capital: Oct 29 - Dec 31, 2018

Metric	Nifty 50 (Large-Capital)	Nifty Small-Capital 250
Peak Price	11,130.40 (Jan 29)	7,651.80 (Sep 3)
Trough Price	9,951.90 (Mar 23)	5,747.95 (Oct 26)
Decline (per cent)	-9 per cent	-23 per cent
Average Daily Return	0.00019 per cent	-0.0010 per cent

Table 1: Performance During Recession
(Source: Primary Data)

Observation:

In tough markets, small-capital indices typically fall harder and recover slower than large capitals. In 2018, the Nifty Small-Capital 250 dropped 23 per cent versus the Nifty 50's 9 per cent, reflecting greater sensitivity to liquidity, risk aversion, and volatility. Large capitals held up better thanks to stronger fundamentals and investor preference for safer assets. The Nifty 50 peaked and corrected earlier (Jan–Mar), while small capitals peaked later (Sep), indicating delayed optimism before a sharper decline. This pattern highlights a split in investor sentiment and common behavioural biases loss aversion, herding, and flight to quality which hit small-capital retail investors harder.

Metric	Nifty 50 (Large-Capital)	Nifty Small-Capital 250
Recovery Start	9,998.05 (Mar 26)	5,747.95 (Oct 26)
Recovery End	11,738.50 (Aug 28)	6,449.15 (Dec 31)
Gain (per cent)	+17 per cent	+12 per cent
Average Daily Return	+0.08 per cent	+0.22 per cent

Table 2: Performance During Recovery
(Source: Primary Data)

Observation:

In 2018, large-capital and small-capital indices showed very different recovery patterns. The Nifty 50 began recovering on March 26, while small capitals lagged by seven months, starting only on October 26. From March to August, the Nifty 50 gained 17 per cent, while small capitals rose 12 per cent between October and December. Interestingly, small capitals had a much stronger average daily return (+0.22 per cent vs. +0.08 per cent), showing a high-momentum catch-up rally once sentiment turned positive. This highlights a clear risk–reward trade-off: large capitals offered an earlier, steadier recovery with lower risk, whereas small capitals delivered delayed but more aggressive gains — rewarding investors who could stomach the volatility and wait for the rebound.

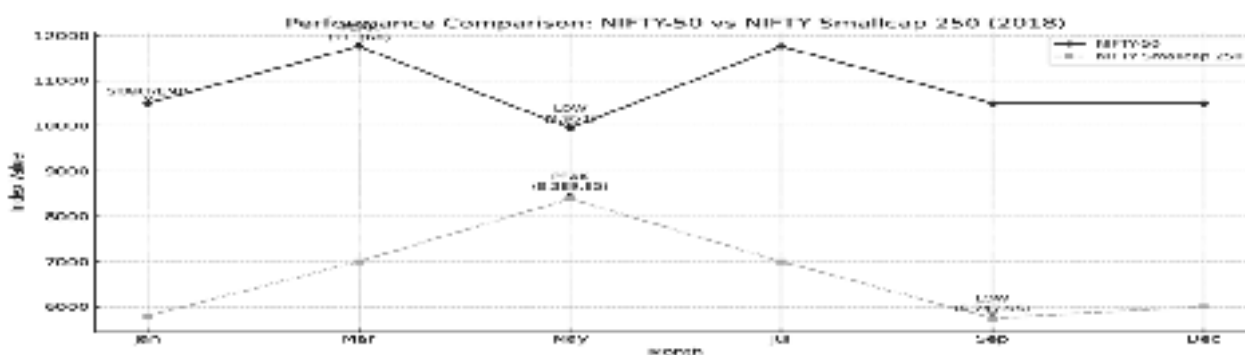


Figure 1: Performance Comparison: Nifty 50 vs. Smallcap250 (2018)
(Source: Primary Data)



Figure 2: Daily Returns Comparison: NIFTY 50 vs NIFTY 250 YEAR 2018
(Source: Primary Data)

Performance in 2020

Key Price Extremes in 2020

Nifty 50 (Large-Capital)

- Highest Price (Peak): 12,174.6 (February 13, 2020)
- Lowest Price (Trough): 8317.85 (March 25, 2020)
- Daily Volatility : 2 per cent
- Maximum Drawdown (MDD):

$$\begin{aligned} \text{MDD} &= \text{Lowest Point} - \text{Previous Peak} / \text{Previous Peak} \\ &= (8,641.45 - 12,174.6) / 12,174.6 \\ &= -29 \text{ per cent} \end{aligned}$$

Nifty Small-Capital 250

- Highest Price (Peak): 5,224.55 (February 10, 2020)
- Lowest Price (Trough): 3,147.2 (March 25, 2020)

- Daily Volatility : 1.8 per cent

- Maximum Drawdown (MDD):

$$\text{MDD} = (3,147.2 - 5,224.55) / 5,224.55$$

Crisis vs. Recovery Performance

Defined Periods (Based on Excel Data)

- Crisis Period:

Nifty 50: Feb 13, 2020 - March 25, 2020

Small-Capital: Feb 10 2020 - March 25 2020

- Recovery Period:

Nifty 50: March 26, 2020 – Nov 6, 2020

Small-Capital: March 26, 2020 – November 18, 2020

Performance During Recession

Metric	Nifty 50 (Large-Capital)	Nifty Small-Capital 250
Peak Price	February 13, 2020	February 10, 2020
Trough Price	March 25, 2020	March 25, 2020
Decline (per cent)	-29 per cent	-40 per cent
Average Daily Return	-1 per cent	-1.70 per cent

Table 3: Performance During Recession
(Source: Primary Data)

Observation:

During the COVID-19 crash of 2020, the NIFTY 50 fell 29 per cent (Feb–Mar) with 2 per cent daily volatility, reflecting heightened uncertainty but relative resilience due to strong blue-chip fundamentals. In contrast, the NIFTY Small-Capital 250 plunged 40 per cent with slightly lower volatility (1.8 per cent), likely because its broader composition smoothed out price swings. The sharper decline highlights small capitals' greater exposure to systemic risks, liquidity stress, and investor panic. This underlines the importance of behavioural nudges and financial literacy tools to help retail investors make rational decisions during crises.

Metric	Nifty 50 (Large-Capital)	Nifty Small-Capital 250
Recovery Start	March 26, 2020	March 26, 2020
Recovery End	November 6, 2020	November 18, 2020
Gain (per cent)	+47 per cent	+74 per cent
Average Daily Return	0.30 per cent	0.36 per cent

Table 4: Performance During Recovery
(Source: Primary Data)

Observation:

In 2020, both the Nifty 50 and Nifty Small-Capital 250 began their recovery on March 26, but the Nifty 50 peaked earlier (Nov 6) than small capitals (Nov 18), reflecting slower but sustained momentum in the riskier segment. The Nifty 50 gained 47 per cent during the recovery, while small capitals surged 74 per cent, with higher average daily returns (+0.36 per cent vs. +0.30 per cent). This shows that once investor confidence returned, small capitals rallied with far greater intensity. The risk–reward trade-off was clear: large capitals offered a steadier, lower-volatility climb, suiting conservative investors, whereas small capitals delivered a powerful, high-risk, high-reward rally — rewarding those willing to tolerate volatility and time their entry well.

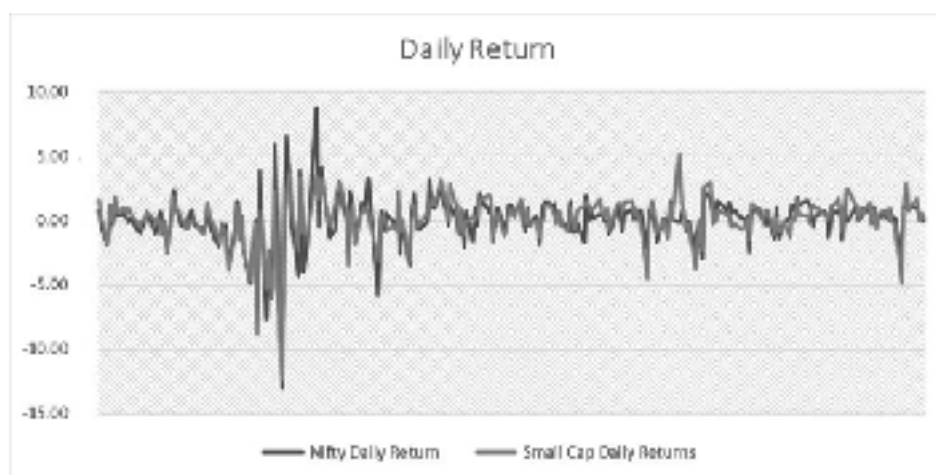


Figure 3: Performance Comparison: NIFTY 50 vs NIFTY 250 Year 2020
(Source: Primary Data)

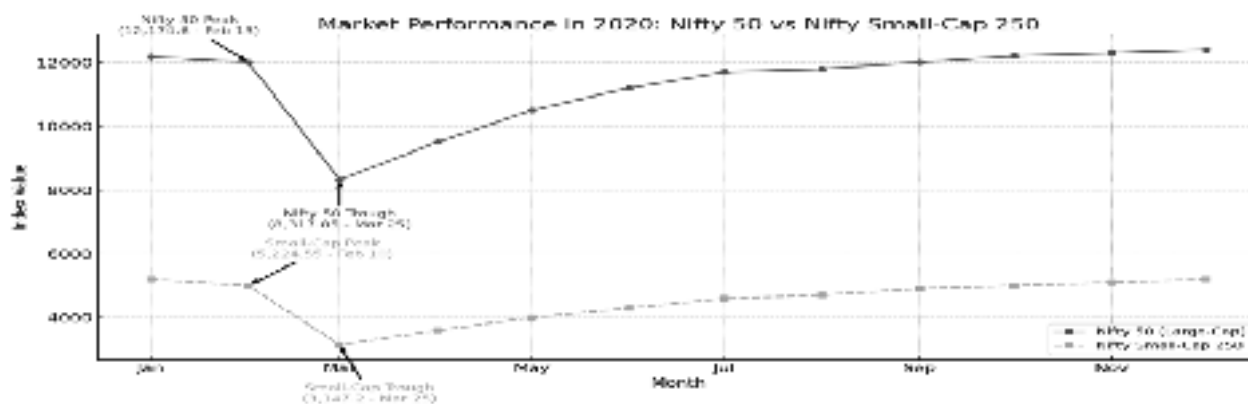


Figure 4: Daily Returns Comparison: NIFTY 50 vs NIFTY 250 year 2020
(Source: Primary Data)

Performance in 2024-25

Key Price Extremes (2024-25)

Nifty 50 (Large-Capital)

- Highest Price (Peak): 26,178.98 (Sep 27, 2024)

- Lowest Price (Trough): 21,964.6 (March 4, 2025)

- Daily Volatility : 1 per cent

- Maximum Drawdown (MDD):

$$MDD = (21,964.6 - 26,178.95) / 26,178.95$$

= –15 per cent

Nifty Small-Capital 250

- Highest Price (Peak): 18,583.3 (Sep 24, 2024)
- Lowest Price (Trough): 13,427.85 (March 3, 2025)
- Daily Volatility : 1 per cent
- Maximum Drawdown (MDD):

$$\text{MDD} = (13,427.85 - 18,583.3) / 18,583.3$$

= –25 per cent

Observation:

In 2024–25, markets have faced another sharp downturn, with the NIFTY 50 falling 15 per cent (Sep 2024–Mar 2025) and the NIFTY Small-Capital 250 plunging 25 per cent over the same period. Both indices showed similar daily volatility (~1 per cent), likely due to the diversified composition of the small-capital

index. However, the deeper drawdown in small capitals highlights their greater sensitivity to rising interest rates, economic uncertainty, and behavioural triggers like panic selling. These patterns reinforce the need for investor education, behavioural nudges, and risk-awareness strategies, particularly for small-capital investors who face higher vulnerability during volatile market phases.

Crisis vs. Recovery Performance

Defined Periods

- Crisis Period:

Nifty 50: Sep 27, 2024 – Mar 4, 2025

Small-Capital: Sep 24, 2024 – Mar 3, 2025

- Recovery Period:

Nifty 50: Mar 5 – Mar 19, 2025

Small-Capital: Mar 4 – Mar 19, 2025

Metric	Nifty 50	Nifty Small-Capital 250
Peak Price	26,178.95	18,583.3
Trough Price	21,964.6	13,755.9
Decline (per cent)	-15 per cent	-25 per cent
Average Daily Return	-0.15 per cent	-0.26 per cent

Table 5: Performance During Recession
(Source: Primary Data)

Observation:

In 2024–25, the NIFTY 50 fell 15 per cent while the NIFTY Small-Capital 250 dropped 25 per cent, confirming that small capitals remain more vulnerable during downturns. Large capitals benefited from stronger fundamentals and investor confidence, limiting losses. Average daily declines were –0.15 per cent for large capitals and –0.26 per cent for small capitals, reflecting deeper and more prolonged weakness in small capitals. This divergence highlights that investors favour quality and stability in volatile markets, while small capitals suffer from sharper sell-offs driven by fear, herd behaviour, and quicker retail exits.

Metric	Nifty 50	Nifty Small-Capital 250
Recovery Start	22,337.30	13,914.10
Recovery End	22,907.60	14,807.00
Gain (per cent)	+2.6 per cent	+6.4 per cent
Average Daily Return	+0.18 per cent	+0.42 per cent

Table 6: Performance During Recovery
(Source: Primary Data)

Observation:

Both the Nifty 50 and Nifty Small-Capital 250 began recovering simultaneously, but small capitals delivered a far stronger rebound — gaining 6.4 per cent versus 2.6 per cent for large capitals. Small capitals also posted much higher average daily returns (+0.42 per cent vs. +0.18 per cent), reflecting renewed risk appetite and bargain-hunting. This underscores the risk–reward trade-off: large capitals offer steady, lower-risk gains, while small capitals deliver sharper, high-momentum rallies once market sentiment turns positive, making them key drivers in recovery phases.

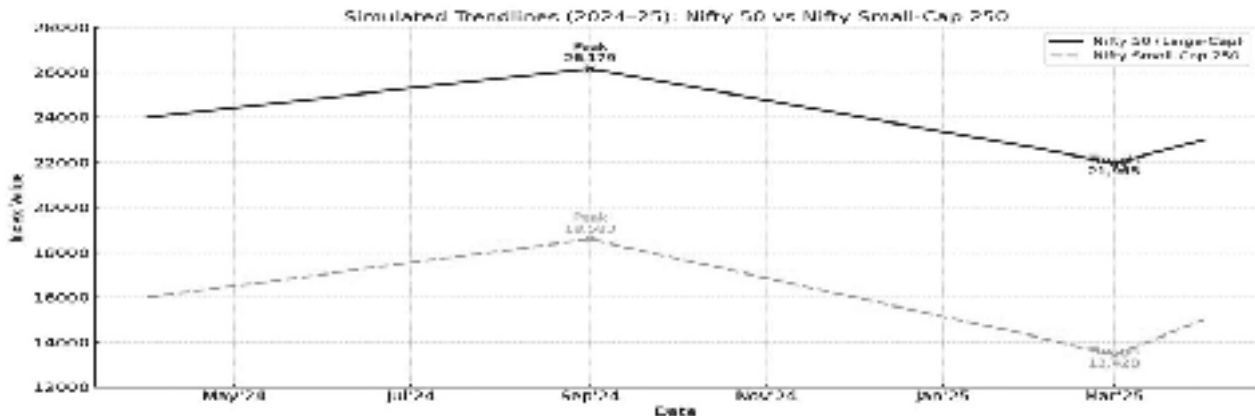


Figure 5: Performance Comparison: NIFTY 50 vs NIFTY 250 Year 2024-25
(Source: Primary Data)

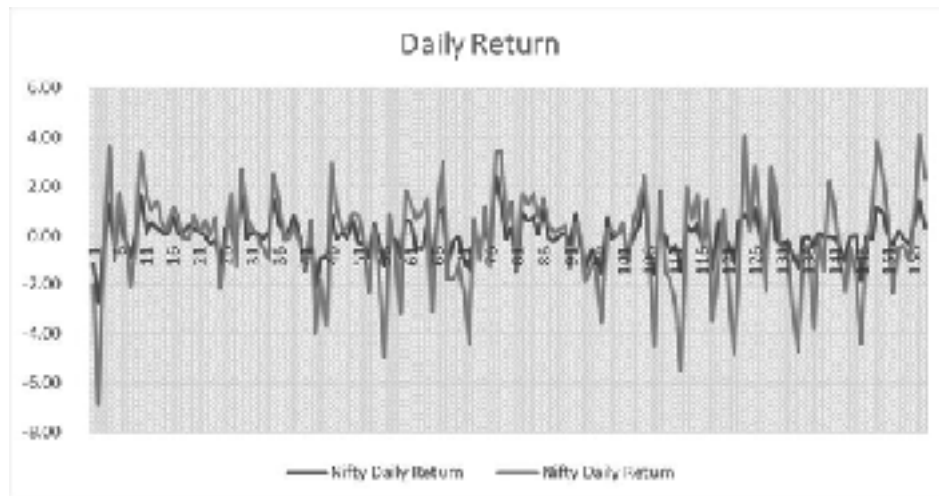


Figure 6: Daily Returns Comparison: NIFTY 50 vs NIFTY 250 Year 2024-25
(Source: Primary Data)

QUESTIONNAIRE ANALYSIS

Primary Data:

A structured questionnaire was used to collect primary data from 100 participants, providing valuable insights while acknowledging potential time and knowledge biases

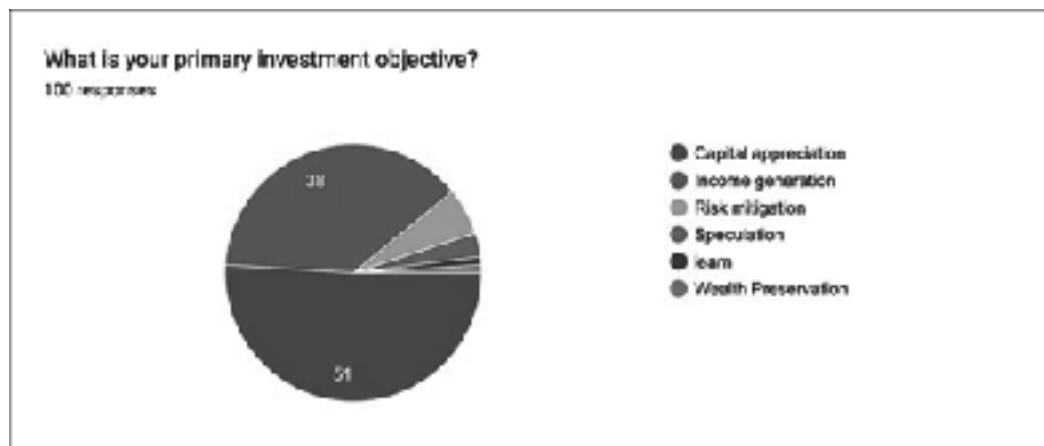


Figure 7: Pie-chart showing Primary investment Objective.
(Source: Generated by the Student)

Interpretation: Investor feedback shows that capitalise appreciation is the top priority, reflecting a strong focus on long-term wealth creation and willingness to ride out short-term volatility. Income generation comes next, highlighting the need for stability and predictable cash flows, often through dividends or fixed income. Fewer investors focus on risk mitigation or speculation, suggesting that most prefer a balanced, sustainable approach that aligns growth with individual risk tolerance.

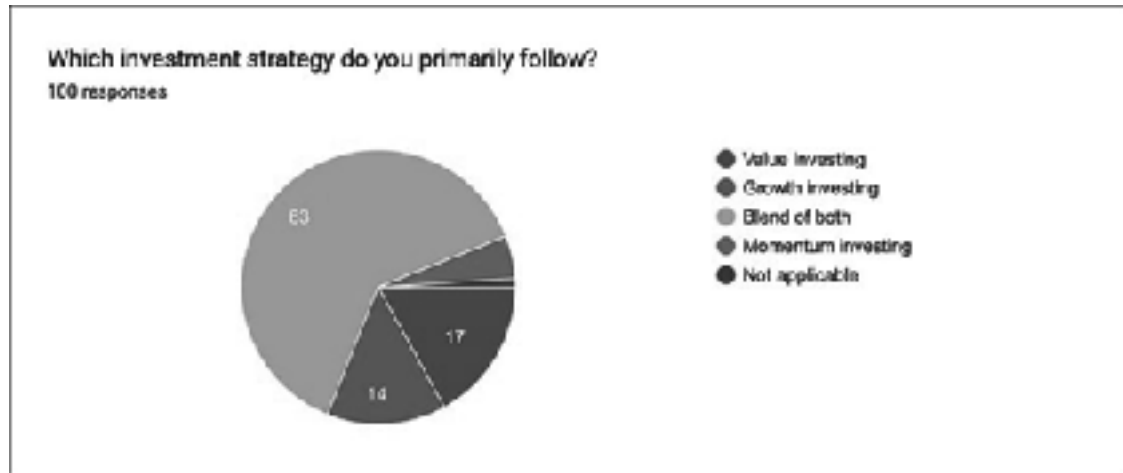


Figure 8: Pie Chart showing investment strategy
(Source: Generated by the Student)

Interpretation: Most investors prefer a blended strategy combining value and growth investing, aiming for steady returns while capitalizing upside potential. When choosing between the two, value investing had a slight edge, reflecting comfort with undervalued companies, strong balance sheets, and lower risk. Pure growth investing drew less interest due to its higher volatility and dependence on future potential, while momentum investing was the least popular. Overall, the responses suggest a cautious, fundamentals-driven approach focused on building diversified and resilient portfolios.

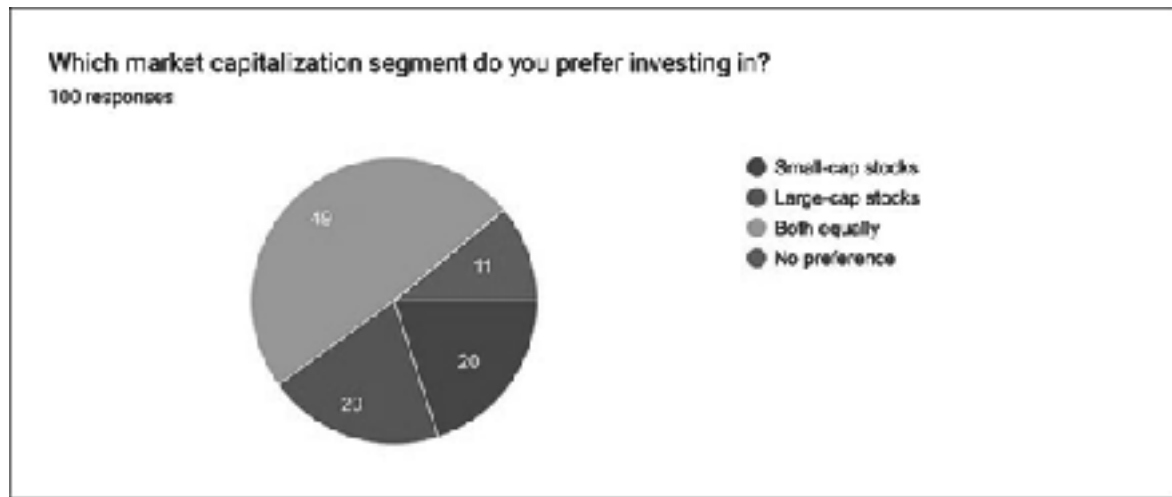


Figure 9: Pie Chart showing market capitalisation.
(Source: Generated by the Student)

Interpretation: The findings show that most investors value diversification over favouring either small- or large-capital stocks exclusively. Large capitals hold a slight edge due to their stability, proven track record, and lower risk, while small capitals are seen as higher-growth but more volatile investments. Many respondents reported holding a balanced mix of both, combining the stability of large capitals with the growth potential of small capitals. Overall, the insights suggest a thoughtful approach to balancing risk and reward, with a growing appreciation for the role of small capitals in driving long-term portfolio growth.

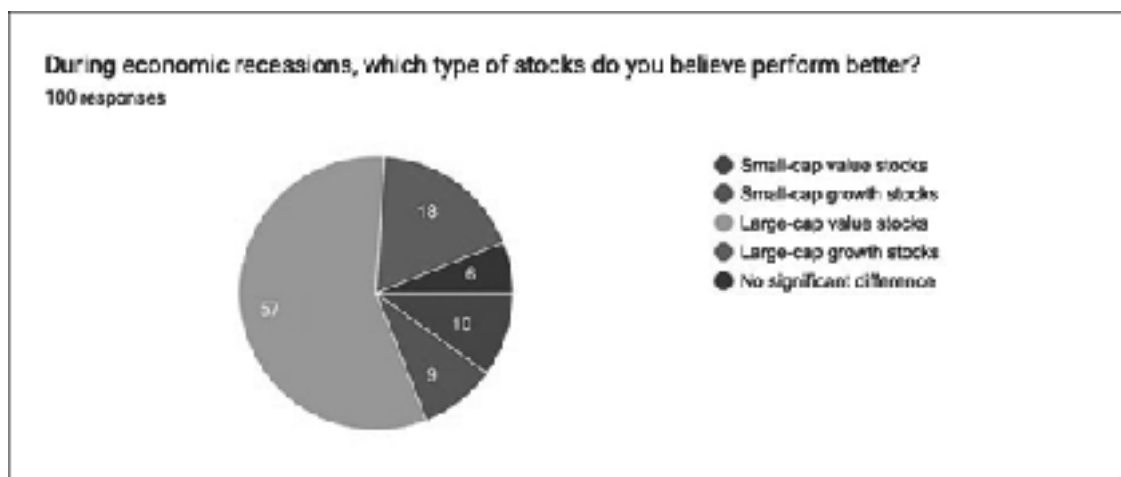


Figure 10: Pie Chart showing economic recession.
(Source: Generated by the Student)

Interpretation: The findings show that during downturns, investors strongly favour large-capital value stocks for their stability, strong balance sheets, and steady cash flows. Defensive sectors like utilities, consumer staples, and healthcare are preferred as safe havens to preserve capital. Small-capital stocks, seen as riskier due to their volatility and weaker financial positions, are often reduced or avoided. Overall, the responses indicate a clear, risk-averse shift toward reliability and capital protection during recessions.

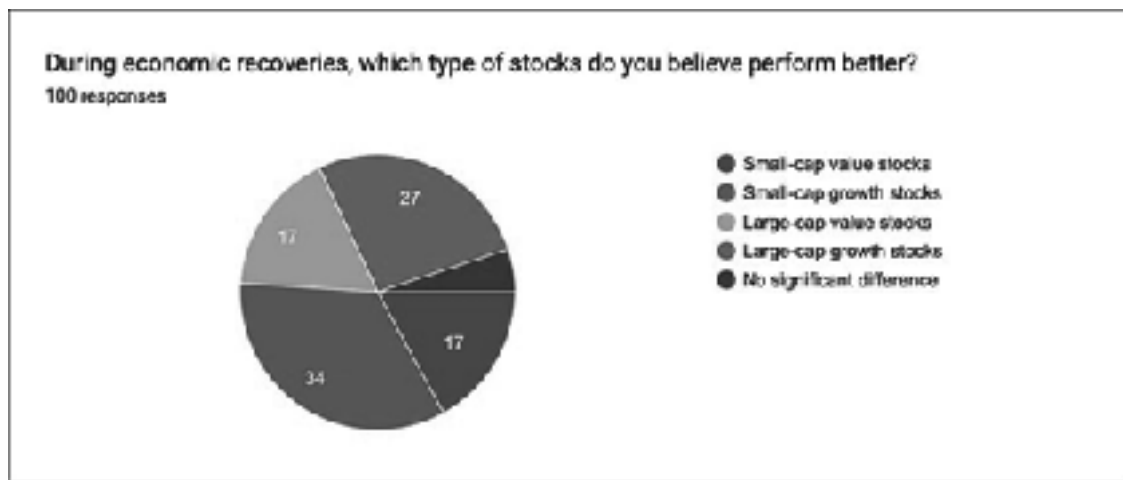


Figure 11: Pie Chart showing economic recoveries.
(Source: Generated by the Student)

Interpretation: The findings reveal that investors largely favour small-capital growth stocks during post-recession recoveries, signalling a greater risk appetite to capture higher returns. These stocks benefit most from renewed economic activity, rising spending, and investor optimism, often delivering outsized gains. While some still prefer large capitals for stability, they are generally seen as offering slower, steadier growth. Overall, the strong tilt toward small capitals reflects investor confidence in the rebound and a strategic push to seize rapid upside potential.

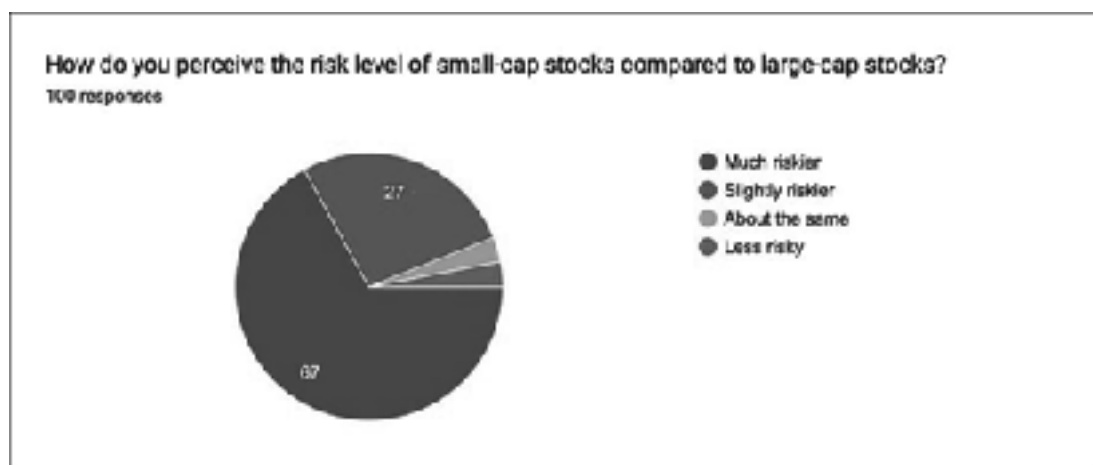


Figure 12: Pie Chart showing small and large capital level.
(Source: Generated by the Student)

Interpretation: The responses show that investors widely view small-capital stocks as riskier than large capitals due to their higher volatility, limited capital access, and vulnerability to economic shifts. Their lower liquidity also makes them prone to sharp price swings. Large capitals, by contrast, are seen as more stable, with stronger financials and the ability to endure downturns. Still, some investors include small capitals for their potential to deliver superior long-term returns, reflecting a willingness to accept short-term risk for the chance at outsized growth when conditions are favourable.

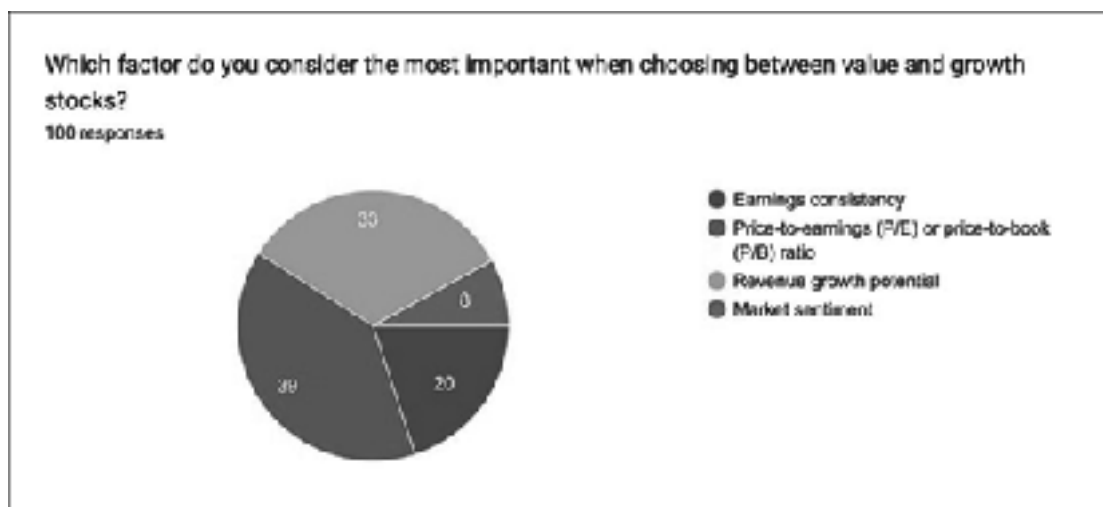


Figure 13: Pie Chart showing which factor to consider.
(Source: Generated by the Student)

Interpretation: The findings show that most investors prioritize solid financial metrics over speculative factors, with P/E and P/B ratios being the most relied-upon tools to spot undervalued, fundamentally strong companies. Growth-focused investors, however, placed more weight on revenue growth potential, reflecting a forward-looking, aggressive approach. Earnings consistency was important for both groups, highlighting the need for financial stability to reduce downside risk. Very few relied on market sentiment or momentum indicators, signalling a strong preference for fundamentals-driven decision-making over short-term hype.

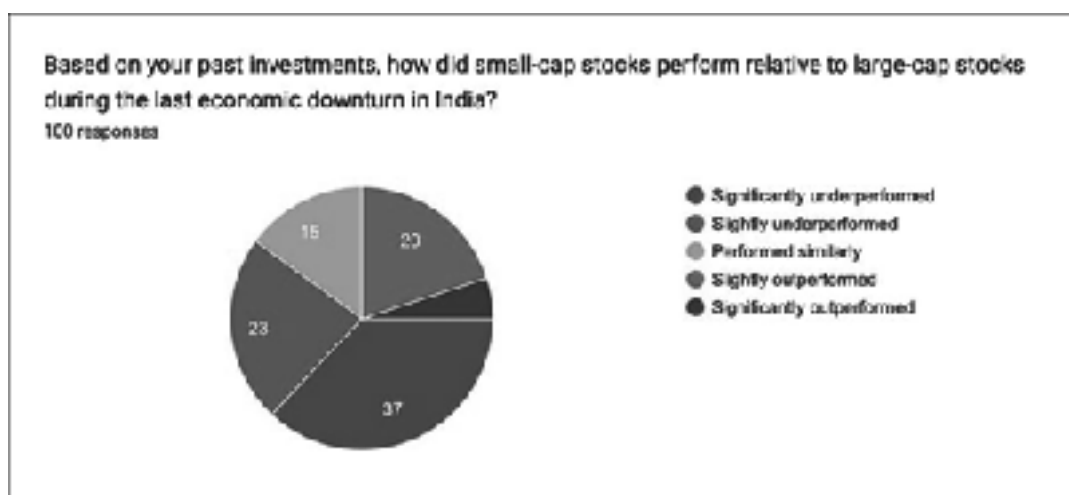


Figure 14: Pie Chart showing capital performance.
(Source: Generated by the Student)

Interpretation: During the recent downturn, small-capital stocks underperformed due to limited financial resources, narrower reach, and higher risks, while investors favoured the stability of large capitals with stronger balance sheets. This widened the performance gap and affected small-capital confidence. However, certain small-capital sectors, like tech and healthcare, performed well during unique events such as COVID-19. Overall, the findings highlight both the vulnerability of small capitals in crises and their potential resilience in specific niches.

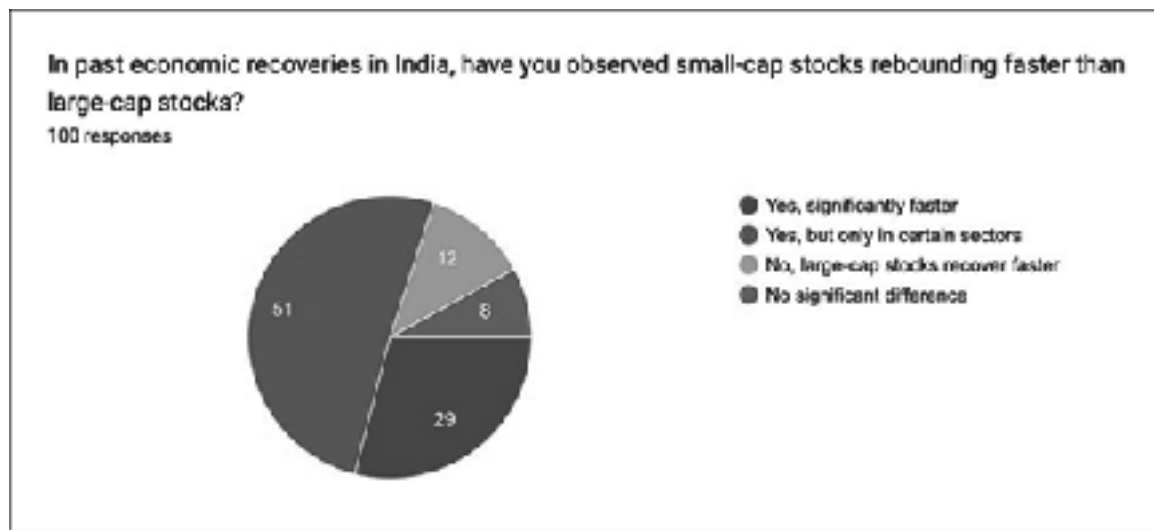


Figure 15: Pie Chart showing rebounding effect.
(Source: Generated by the Student)

Interpretation: The findings indicate that small-capital stocks typically rebound faster than large capitals after recessions, driven by their lower valuations, agility, and strong sensitivity to improving economic conditions. Investors noted that this rebound is most pronounced in sectors like technology, consumer discretionary, and financials, which benefit quickly from rising demand and easier credit. However, recovery is uneven, with small capitals in capital-intensive or slow-growth industries taking longer to bounce back. Large capitals, while steadier, deliver more gradual gains during recoveries. Overall, small capitals present a compelling but riskier opportunity for investors seeking strong early-cycle returns.

CONCLUSION

This study examines the performance of small-capital and large-capital stocks in India across economic cycles. Small-capital stocks are highly volatile, suffering larger losses during recessions due to limited capital, lower liquidity, and sensitivity to economic uncertainties, but they often outperform during recovery periods as growth potential becomes evident. Large-capital stocks, with stronger financial stability and institutional support, decline less in downturns and recover steadily, making them safer investments.

The findings highlight the importance of a flexible investment strategy—using large-capitals as a safety net

and small-capitals for higher growth during recoveries—and stress portfolio diversification, risk assessment, and monitoring macroeconomic indicators. For policymakers, improving small-capital liquidity, boosting investor confidence, and managing volatility can support a more stable market. Future research could explore sector-specific performance to deepen insights.

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It is necessary that the academic institutions should be well equipped with digital resources, redefining online live sessions for better interaction and providing recorded lectures for students' convenience.

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Effects of Differential Teaching Methods on Students Engagement and Learning Efficiency: A Comparative Analytical Study

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ABSTRACT

The Covid-19 pandemic has changed the traditional teaching-learning methods and forced us to go for online digital schooling. This study examines the impact of various learning modes on students' captivation, satisfaction and their academic performances. It is an endeavour to assess the effectiveness of different learning environments, understand the role of external digital platforms and evaluate the classroom teaching with or without modern digital tools and online teaching methods. This study is based on primary data collected from 112 student respondents.

The study reveals that, although from the traditional classroom learning remains highly rated from the students' point of view, hybrid teaching methods that include the digital tools like PowerPoint, videos, and smartboards are much more effective. Institutional live online classes appeared to be the least effective method due to low engagement and technical challenges. External digital learning platforms have become an essential supplement to formal education, with more than 84 per cent of students relying on them for revision and conceptual clarity.

This study also unveils the strong preference for asynchronous learning for its flexibility, whereas synchronous learning provides structure with immediate clearance of arising doubts. The study also identifies areas for improvement in institutional learning methods and emphasizes the necessity of balancing structural and self-paced learning.

KEYWORDS: Hybrid Teaching, Student Engagement, Digital Platforms, Synchronous and Asynchronous Learning.

INTRODUCTION

The COVID-19 pandemic marked a significant turning point in all the sectors of Indian economy and the educational sector was no exception. During the pandemic, all the educational institutions were closed for a long period of time and were compelled to make the necessary transition to online education. Initially, this transition made it difficult for some students to

maintain their motivation in the absence of face-to-face interaction, while others were delighted by its flexibility. Within a short span of time students became accustomed to the online learning system. It has also been observed that over the past few years, the teaching and learning methods have undergone substantial changes. Before pandemic, all educational activities were confined to institutional classroom setups and relied on teachers' lectures, textbooks and assigned homework. Now, both the teachers and students are capable of using technology for educational purposes. At present, it has also been observed that significant academic elements are derived from external digital resources. It seems that this transition makes the learning experience much more effective. Prior to the availability of digital platforms, the system of education was well-structured and straightforward but digital platforms have brought major changes in terms of enhanced flexibility and accessibility to both teaching and learning methods. However, the free play of technology in the educational sector has also brought new challenges the nature of which is yet to be comprehended by teachers and students.

The growth of independent learning is another significant factor affecting education today. The internet and mobile technology have been the major contributors to such changes. Now-a-days, a smartphone, laptop or tablet is available in almost every household and therefore learning is no longer confined to a traditional classroom. More students are inclined to study independently by using resources like educational websites, MOOCs, and YouTube. These platforms give students unrestricted access to information, enabling them to learn in ways that suit them. However, self-paced learning has its own set of challenges. Without proper academic guidance, students may face difficulties because not all online content is trustworthy.

However, present-day younger students, particularly Gen Z, are accustomed to living with technology and are highly inclined towards online materials. They feel at ease with navigating websites, engaging with multimedia materials, and accessing apps for learning. On the other hand, with the evolving mode of education, the role of teachers is also changing.

Teachers are no longer merely knowledge providers; they are learning facilitators who need to manage physical and virtual classrooms. This transformation requires new skills, such as expertise in using digital tools, flexibility in responding to various teaching formats, the ability to generate and maintain student engagement and interest in online learning modes.

In fact, digital tools are increasingly becoming a part of a student's daily life and learning mode. In this regard, some studies have shown the positive aspects of digital tools and argued that they increased interactive classes, customized learning experiences, and access to information. Again, some others studies mentioned possible detriments, such as distractions, digital fatigue, and lack of social interaction, homesickness and learners losing interest in formal learning. As a result, the ongoing debate on technology's influence in the teaching and learning process makes it imperative to study the effects of differential teaching and learning methods on students' engagement and learning efficiency. The present study is an endeavour to make a comparative analysis of the effects of differential learning methods on students' learning and academic efficiency.

Research Gap

Although there exists extensive research on institutional online learning, it has failed to address the impact of self-paced external learning platforms such as YouTube on students' academic engagement. As a result, the role of external resources remains largely unexplored. In addition, existing research does not provide a clear consensus on whether students benefit more from interactive, real-time sessions or the flexibility of recorded content, that is, clarity on the profound effectiveness of synchronous (live) versus asynchronous (recorded) learning in terms of knowledge retention and cognitive load remains limited.

CONCEPTUAL FRAMEWORK

- **Traditional Classroom Learning:** Traditional classroom learning is face-to-face blackboard teaching with no PPTs, smartboards, videos, or computer tools just the old-fashioned method of

teaching that has been adhered to for decades.

- **Institutional Live Online Classes:** Institutional live online classes are sessions held only through digital platforms like Zoom, Microsoft teams et al..
- **Hybrid Learning:** Hybrid learning is a classroom setting where teachers integrate digital tools like PPTs, videos and smartboards alongside traditional classroom teaching.
- **External Digital Learning:** External digital learning happens online through content on sites like YouTube or other open online course platforms.

LITERATURE REVIEW

The landscape of educational delivery has undergone significant transformation with the emergence of digital technologies, fundamentally altering how students engage with learning content. Barbara et al., (2013) highlighted that web-based learning has emerged as a major trend in both K-12 and higher education, with increased capabilities of web-based applications and collaboration technologies raising expectations for online learning effectiveness. This digital revolution has yielded compelling evidence of its potential, as students in online learning conditions have performed modestly better than those receiving face-to-face instruction, with the advantage being particularly significant in blended learning environments compared to traditional face-to-face instruction (Barbara et al., 2013). Noetel et al., (2021) demonstrated that videos are unlikely to be detrimental and usually improve student learning in higher education. Yang and Yeh (2021) observed that students are increasingly using platforms like YouTube as a medium for peer-to-peer learning.

However, the relationship between digital tools and learning effectiveness reveals a complex narrative that challenges simplistic assumptions about technological superiority. While students demonstrate strong preferences for digital presentation tools, with 85 per cent preferring PowerPoint over conventional chalk talk (R V S N S, 2016) and 94.2 per cent of participants viewing PowerPoint as an effective teaching-learning tool (A. Nawale and A. Nawale, 2022), this enthusiasm

masks deeper pedagogical concerns. Sewasew et al., (2015) presented a troubling paradox, noting that 'technology usage is perceived and practiced as effective and helpful for students, but on ground it is the opposite,' with instructors focusing primarily on completing courses. This critique is reinforced by Isseks (2021), who identifies that 'the root problem of PowerPoint presentations is not the power or the point, but the presentation,' emphasizing the inherently one-sided nature of traditional presentation formats.

The theoretical foundation underlying these practical observations centers on a fundamental debate about whether delivery media or instructional methods drive learning effectiveness. Clark's influential theory, supported by Sitzmann et al., (2006), suggested that web-based instruction and classroom instruction are equally effective when identical instructional methods are employed, indicating that media effects may be spurious. Clark argued that delivery media such as computers and the Internet are inconsequential compared to more powerful influences like individual differences and instructional methods, concluding there is nothing uniquely beneficial about computer-aided instructional mediums (Clark and Sugrue, 1995). This perspective is challenged by Kozma (1994), who contended that while isolating individual instructional attributes to any single medium may be difficult, it is possible to identify clusters of attributes like customization and hyperlinking that are more efficiently accomplished in certain media. Web-based instruction's non-linear nature may encourage deeper processing and cognitive flexibility by allowing learners to integrate new information with existing knowledge more effectively (Spiro and Jehng, 1990; Salomon, 1988). The resolution to this debate may lie in recognizing that digital technologies' true value emerges not from passive consumption but through interactive engagement and accessibility enhancement. Bower et al., (2015) demonstrated that interactive elements like polls and quizzes in digital environments effectively activate student cognition and make learning more engaging, while Nouri and Abdus (2005) showed that integrating audio-visual resources improves students' attitudes toward instructors and course presentations. This suggests that the most effective educational

approaches may not involve choosing between traditional and digital methods, but rather strategically combining both to leverage their respective strengths while addressing the diverse needs of contemporary learners.

OBJECTIVES OF THE STUDY

- I. To assess the impact of differential teaching modes on student engagement and to test the following hypotheses:
 - (a) H0: No relation between academic performance and choice of learning mode.
H1: There is a relation between academic performance and choice of learning mode.
 - (b) H0: There is no association between gender and learning mode preference.
H1: There is an association between gender and learning mode preference.
- II. To explore the level of reliance on external digital platforms (e.g., YouTube) that influences students' learning preferences, engagement levels, and overall satisfaction.
- III. To unfold the way of balancing between live and recorded content delivery within online and hybrid learning environments affecting cognitive load and knowledge retention.

DATA AND METHODOLOGY

The study is based on primary data collected from 112 students through canvassing a pre-ordained questionnaire. A convenient non-probabilistic sampling technique was used for the selection of the respondents. The sample consisted of voluntarily participating students. Multiple-choice questions as well as Likert-scale-based responses were designed in the questionnaire for data collection. Various statistical analyses were performed using descriptive measures such as mean and percentage distribution to observe overall trends and variability, correlation analysis to

explore relationships between variables and Chi-square analysis for hypothesis testing. The study used Microsoft Excel 2021 and SPSS version 30 for data processing and analysis. Data are presented in the form of statistical tables, charts, and graphs.

DATA ANALYSIS AND DISCUSSION

This study is based on primary survey and the data has been collected from 112 student respondents. The analysis is carried on the basis of their self-assessment information. At the outset we tried to examine the effectiveness in students' understanding regarding course materials across different learning modes, i.e. among traditional classroom learning, institutional online classes, hybrid classroom learning and external

digital learning. It is observed that hybrid classroom learning is the most effective mode, as it balances structured in-person engagement with digital flexibility (mean 3.93) followed by Traditional classroom learning (mean 3.74) having the highest mode which implies a significant portion of students find it extremely effective. The institutional live online learning becomes the least preferred as a learning mode (mean 3.09). A key insight here is that while hybrid learning appears as the most balanced mode of learning, traditional classroom learning has a stronger polarization, with a notable segment finding them exceptionally effective. External digital learning has a higher mean than institutional online classes indicating that self-paced digital platforms may be better for delivering content than structured virtual lectures (see table-1).

Learning Mode	Mean Effectiveness	Median Effectiveness	Mode Effectiveness
Traditional Classroom learning	3.74	4	5
Institutional Live Online classes	3.09	3	4
Hybrid Classroom learning	3.93	4	4
External Digital learning	3.63	4	4

Table 1: Effectiveness in understandings course material across learning modes.
(Source: Primary Survey, 2025)

Next, we try to observe the impact of different learning modes on students' academic performances and preferences. The outcome of this analysis is an obvious reflection of the effectiveness in understandings course material across learning modes. Hybrid learning emerges as the most effective and preferred learning mode that significantly exert positive impact on students' academic performance followed by traditional classroom learning and external digital learning (see table-2).

Learning Mode	Impact on Academics (Mean)	Impact on Academics (Median)	Preferred learning mode
Traditional Classroom learning	3.79	4	25 per cent
Institutional Live Online classes	3.25	3	8.9 per cent
Hybrid Classroom learning	4.08	4	37.5 per cent
External Digital learning	3.72	4	25 per cent

Table 2: Preferences towards differential learning modes and impact on academic performance
(Source: Primary Survey, 2025)

The analysis also revealed that the digital tools like PPTs, videos, and smart boards play a crucial role in enhancing the hybrid learning experience, with an overwhelming 95.6 per cent of students finding them beneficial to some extent and 65.2 per cent consider them as highly impactful, reinforcing that these tools are more than just supplementary they are essential for engagement and understanding (see Figure-1).

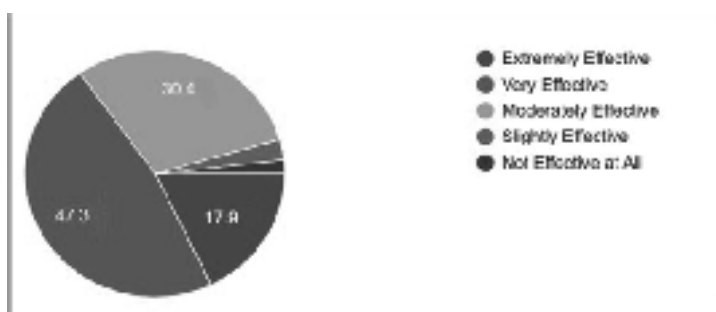


Figure 1: Role of Digital Tools in enhancing learning experience
(Source: Primary survey, 2025)

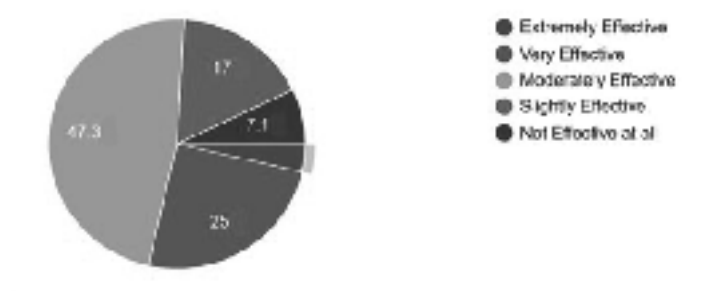


Figure 2: Effectiveness of Live online sessions in the institutions via Zoom/Teams et al.
(Source: Primary Survey, 2025)

Again, live online sessions via Zoom/Teams are not very effective for a significant number of students. Nearly one-fourth (24.1 per cent) of respondents consider them either slightly effective (17 per cent) or not effective at all (7.1 per cent). 25 per cent found them very effective. However, most of the student's opinion is that live online session fails to deliver an optimal learning experience (see Figure 2).

The relationship between student's comfort level with digital tools and their perceived effectiveness of institutional live online classes is found positive. Extremely comfortable with these tools has the highest mean effectiveness 3.28, followed very very comfortable 3.27 and when comfort decreases, effectiveness ratings drop (see table-3). This implies that a lack of familiarity with digital platforms may contribute to lower perceived effectiveness of online learning. It is to be noted here that while comfort with technology improves the experience but it does not fully resolve the engagement and effectiveness challenges associated with online institutional learning.

Table 3: Relation between level of comfort with digital tools (LMS, video conferencing platforms) and effectiveness of institutional live online classes.

Level of Comfort	Mean effectiveness
Extremely Comfortable	3.28
Very Comfortable	3.27
Moderately Comfortable	2.92
Slightly Comfortable	2.88

Table 3: Relation between level of comfort with digital tools (LMS, video conferencing platforms) and effectiveness of institutional live online classes.
(Source: Primary Survey, 2025)

	Traditional Classroom learning	Institutional Live online classes	Hybrid Learning	External Digital Learning	Not Sure	Total
Excellent (80 per cent and above)	9	3	17	11	0	40
Above Average (70 per cent - 80 per cent)	12	3	18	13	2	48
Average (55 per cent - 70 per cent)	7	3	7	4	2	23
Below Average (Below 55 per cent)	0	1	0	0	0	1
TOTAL	28	10	42	28	4	112

Table 4: Relation between learning mode and students of different academic performances.
(Source: Primary Survey, 2025)

It is also revealed from the above table-4 that more than 67 per cent of higher-performing students (scoring 70 per cent and above) prefer hybrid and external digital learning; among them, 70 per cent (28 out of 40) of excellent students and around 65 per cent (31 out of 48) of above-average students show this preference. Among students scoring below 70 per cent, 58.3 per cent (14 out of 24) students prefer a classroom environment, i.e., either a traditional chalk and talk setting or a hybrid learning experience. This indicates that students with lower academic performance might struggle with self-directed learning and prefer structured classroom environments. The reliance on external digital learning is also less among such students. The reliance on institutional live online classes has been low among all students irrespective of their performance showing that this method is not widely trusted (see table-4).

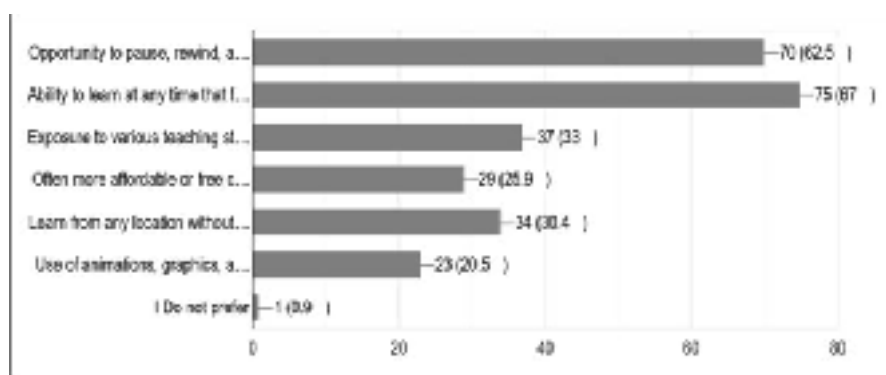


Figure 3: Reasons for preferring external digital learning like YouTube et al.
(Source: Primary Survey, 2025)

It becomes interesting to know what are the reasons behind students preferring external learning like YouTube et al. This study reveals that flexibility and control over learning pace are the most significant reasons why students prefer external learning platforms (see Figure 3). The ability to learn at any time (67 per cent) and the opportunity to pause, rewind and review content (62.5 per cent) are the top two reasons, suggesting that students value self-paced learning over rigid classroom schedules. In addition, external digital learning provides exposure to diverse teaching styles and expert instructors, which highlights a demand for varied pedagogical approaches that may not always be available in traditional classrooms. It is also interesting to note that 30.4 per cent students prefer learning remotely without travel, highlighting the convenience of digital learning.

Let us evaluate the aspects of digital learning that overwhelm students. It is evident from the following Figure 4 that 56.3 per cent of the respondents argued that digital learning has an overwhelming number of resources. 44.6 per cent of students specifically struggle with deciding the right material, reinforcing the need for better filtering mechanisms, recommendations, or structured learning paths to guide students toward high-quality content.

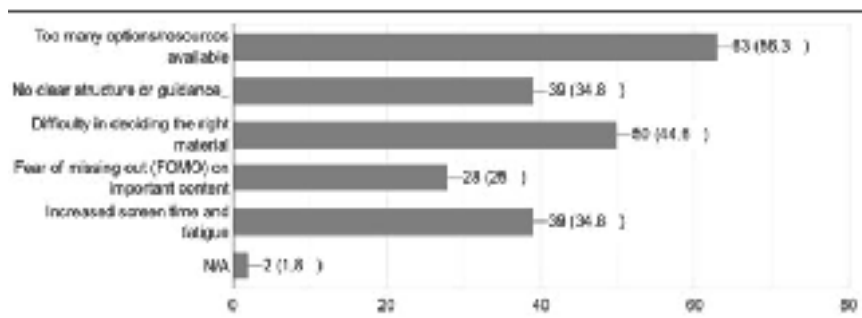


Figure 4: Aspects of Digital Learning that Overwhelm Students
(Source: Primary Survey 2025)

Interestingly, FOMO (fear of missing out) on important content affects 25 per cent of students, suggesting that the sheer volume of available material creates anxiety about not covering everything, which could negatively impact focus and retention. However, many students (34.8 per cent) also struggle with increased screen time and fatigue, highlighting the physical and cognitive toll of prolonged digital learning.

This study also carried out Chi-square test to know statistically whether (a) there is a relation between academic performance and choice of learning mode and (b) there is an association or not between gender and learning mode preference.

(a) Hypothesis:

H0: No significant relation between academic performance and choice of learning mode

H1: There is a relation between academic performance and choice of learning mode

	Chi ²	df	p
How would you describe your academic performance? - Based on your experience, which learning mode do you feel yields the best academic results for you?	15.94	12	.194

Figure 5: Test Results
(Source: Primary Data)

Since p-value is $0.194 > 0.05$, we accept the null hypothesis that there is no significant relation between academic performance and choice of learning mode. The relation is not statistically significant.

(b) Hypothesis:

H0: There is no association between gender and learning mode preference.

H1: There is a significant association between gender and learning mode preference. This means that learning mode preference differs based on gender.

Observed frequencies

Based on your experience, which learning mode do you feel yields the best academic results for you?

		Traditional Classroom Learning	Institutional like online classes	Hybrid Learning	External Digital Learning	Indifferent / Not sure	Total
Gender	Male	17	5	22	24	3	72
	Female	11	5	20	4	1	40
	Total	28	10	42	28	4	112

Expected frequencies for perfectly independent variables

Based on your experience, which learning mode do you feel yields the best academic results for you?

		Traditional Classroom Learning	Institutional like online classes	Hybrid Learning	External Digital Learning	Indifferent / Not sure	Total
Gender	Male	15	6.43	27	15	2.57	72
	Female	13	3.57	15	13	1.43	40
	Total	28	10	42	28	4	112

Chi-Square Test

		Chi ²	df	p
Gender - Based on your experience, which learning mode do you feel yields the best academic results for you?		8.63	4	.071

Pearson contingency coefficients

		C
Gender - Based on your experience, which learning mode do you feel yields the best academic results for you?		0.38

Figure 6: Test Results
(Source: Primary Data)

The p-value (0.071) is greater than the standard significance level (0.05). This means we fail to reject the null hypothesis (H_0). There is no statistically significant association between gender and learning mode preference at the 5 per cent significance level.

Now, the study tried to look into the purpose of using external digital learning platform among the student sample respondents. It is quite evident that the most common purpose (33 per cent of respondents), is doing crash courses or preparing for exams, suggesting that many students rely on digital resources as a last-minute revision tool (see Figure 5), followed by revising difficult topics covered in class (27.7 per cent), indicating that digital platforms serve as a supplementary learning aid rather than a replacement for traditional classes. Learning new concepts from scratch (20.5 per cent) is also a significant reason, showing that a notable portion of students use these platforms to build knowledge foundational, possibly due to lack of attention in the classroom setting, be it traditional or hybrid. Interestingly, only 5 per cent of students explore topics outside their academic syllabus implying that digital learning is primarily used for academic success rather than intellectual curiosity.

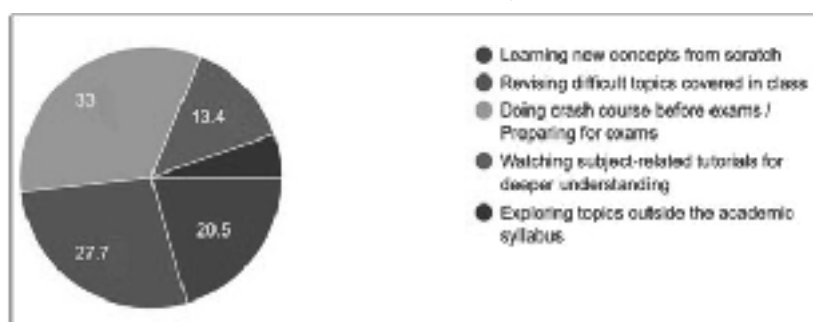


Figure 7: Purpose of using external digital platforms
(Source: Primary Survey, 2025)

Now, the study also tried to understand the students' views on synchronous and asynchronous learning and to uncover if they prefer recorded content over live sessions or vice versa. The study reveals a strong preference for asynchronous learning, with 59.8 per cent of students favouring it over synchronous learning (29.5 per cent). This highlights a clear shift towards flexible, self-paced learning methods which provides control and flexibility (see Figure 6).

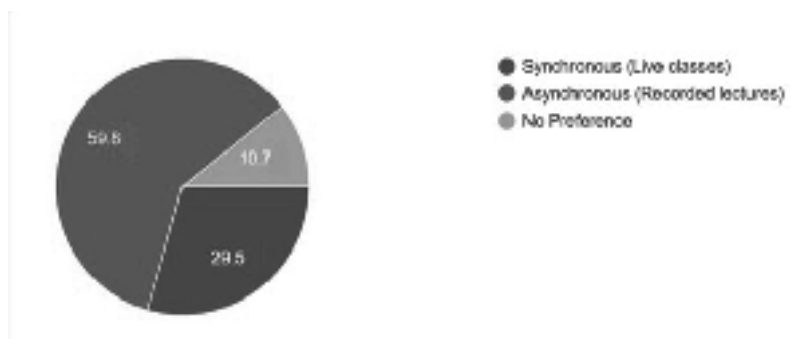


Figure 8: Preference between Synchronous and Asynchronous digital learning.
(Source: Primary Survey, 2025)

It becomes interesting to find out if students really consider synchronous learning to be limiting or restrictive. From Figure 7, we can see that a majority of 66.1 per cent of students agree that live classes limit their ability to learn optimally. This suggests that real-time, scheduled learning may not be the most effective approach for most students, potentially due to its rigid structure and limited flexibility (see Figure 9).

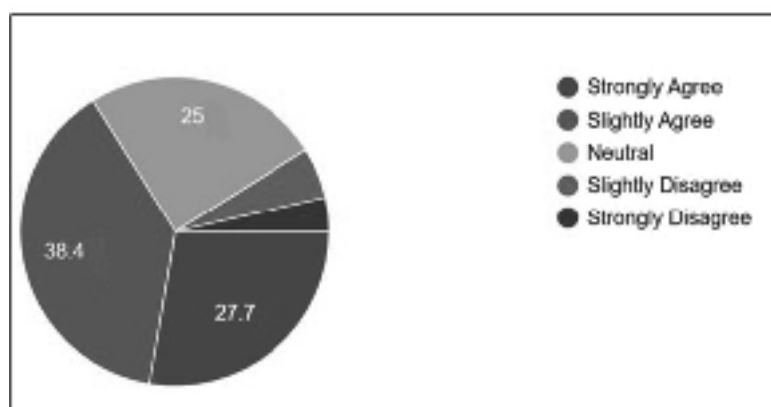


Figure 9: Percentage of students who believe that synchronous learning limits their ability to learn optimally.
(Source: Primary Survey, 2025)

MAJOR FINDINGS

Hybrid learning emerges as the most effective mode of learning. A significant number of students (95.6 per cent) find digital tools like PPTs, videos, and smart boards are beneficial in enhancing their learning experience.

Traditional classroom learning remains highly rated but comparatively less effective than hybrid learning. However, institutional live online classes are happened to be very much unimpressive (nearly one-third respondents found it very ineffective). Regardless of academic performance levels, students show low reliance on institutional live online classes. Over 81 per cent students reported facing technical issues which further disrupt the learning experience.

Self-paced digital platforms outperform institutional online classes. This indicates a potential gap in the institutional online education which necessitates some changes in institutional online teaching methods. This also indicates why students rely on self-paced digital learning to supplement their education.

Lower-performing students prefer traditional classroom learning indicating that such students might struggle with self-directed learning and rely more on structured, instructor-led environments.

Preparation for the examination appears as the common reason for using of external digital learning. About 33 per cent of student respondents are using

external resources through crash courses or for exam preparation, followed by 27.7 per cent using them for revising difficult topics covered in class. This indicates that digital platforms serve as a supplementary learning aid rather than a replacement for traditional classrooms.

Flexibility and self-paced learning drive digital learning preferences. The two most significant factors attracting students to external platforms are the ability to learn at any time (67 per cent) and the option to pause, rewind, and review content (62.5 per cent). About 33 per cent of students appreciate the exposure to varied teaching approaches and expert instructors, which may not provide in the traditional classrooms.

Students strongly prefer asynchronous learning. The data reveals that 59.8 per cent of students favour asynchronous learning over synchronous learning (29.5 per cent), while 10.7 per cent remain indifferent. This highlights a shift toward flexible, self-paced learning methods. However, synchronous learning still holds value for students who require real-time engagement or instructor guidance.

Synchronous learning is perceived as restrictive. A significant 66.1 per cent of students believe that synchronous learning limits their ability to learn optimally. Among students who favour live sessions, 52 per cent appreciate the structured discipline they provide, while 48 per cent value real-time doubt clarification. Again, recorded sessions are overwhelmingly preferred for flexibility (about 72.6 per cent) due to their ability to learn at their own pace.

LIMITATIONS OF THE STUDY

- I. This study is based on small sample size so it cannot be considered as a representative of the entire population. However, the study unveils the valuable insights and ignites fuel for further research with larger samples.
- II. This study is based on self-reported information for academic performance, engagement, and satisfaction. As a result, the scope of bias becomes high which may be reflected in the estimated outcomes of the study.
- III. This study primarily focuses on students' perceptions and does not incorporate direct academic performance indicators, such as test scores or grades.

RECOMMENDATIONS

Institutions should integrate digital tools such as PowerPoint presentations, videos, interactive media, and smartboards into both online and in-person learning environments. These tools have been shown to significantly enhance student engagement and comprehension, making learning more effective and interactive. There is an increasing need to improve institutional live online classes to maximize student engagement. Key initiatives include teacher training to adapt traditional methods for online use, adding interactive tools like quizzes and polls to boost engagement, and ensuring reliable infrastructure with digital literacy support to reduce technical issues. Institutions may also organize digital literacy workshops to assist students and staff by reducing technical obstacles. Providing recorded lessons in addition to live classes could be very helpful for students, as it will allow them to review content at their own pace.

CONCLUSION

This study mainly focused on the growing use of digital learning materials by students and their impact on learning habits compared to the traditional way of

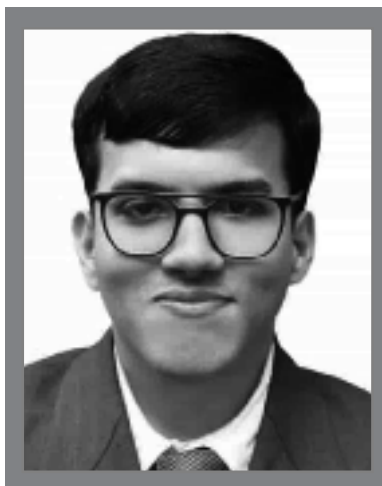
learning. The study shows that students have a clear affinity for asynchronous learning because it is flexible and enables them to learn at their own pace. Although live online classes are structured with synchronous interaction, they need major improvements to enhance students' participation.

The present era is a digital era that demands the incorporation of digital resources more efficiently in every sphere of our life. Therefore, it is necessary that the academic institutions should be well equipped with digital resources, redefining online live sessions for better interaction and providing recorded lectures for students' convenience. However, the growing reliance on AI-based tools such as ChatGPT, Gemini, and other virtual instructors, and their effects on students' learning outcomes, participation, and information retention, has become a major concern. Students are increasingly dependent on AI software for studying and gaining knowledge, as it helps to summarize and provide the needed content concisely. The basic question remains whether total reliance on digital resources and AI-based tools would produce highly skilled human resources or leave us under the control of AI and hybrid resources.

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Social media influencers significantly shape consumer purchase intention in the fashion industry through trust, expertise, and emotional engagement. Influencer marketing is most effective when it prioritises authenticity and credibility over reach.



Impact of Social Media Influencers on Consumer Purchase Intention in the Fashion Industry

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ABSTRACT

The growth of social media has transformed consumer–brand interactions, particularly in the fashion industry, where trends are visually driven and closely tied to identity. This study examines the role of social media influencers in shaping consumer purchase intention in the fashion context. Using survey-based primary data and consumer behaviour frameworks, the research analyses how influencer credibility, relatability, and engagement quality affect purchasing decisions. The findings indicate that micro and mid-tier influencers often exert a stronger influence on purchase intention than celebrity endorsers due to higher perceived authenticity and audience trust.

Additionally, content style—such as honest reviews, product styling, and everyday relatability—emerges as more influential than follower count alone. These results highlight the importance of strategic, value-aligned influencer partnerships for fashion brands and contribute to the understanding of influencer-driven communication in contemporary digital marketing.

KEYWORDS: Influencer Marketing; Purchase Intention; Fashion Industry; Instagram; Consumer Behaviour; Influencer Credibility

INTRODUCTION

The rapid growth of social media has shifted fashion marketing from traditional one-way advertising to influencer-driven engagement, where visual appeal, identity, and aspiration strongly shape consumer behaviour. Social media influencers, particularly on Instagram, act as intermediaries who blend personal storytelling with brand endorsements, enhancing message authenticity.

India provides a relevant context due to its large social media user base and the growing reliance of Gen Z and Millennials on influencers for fashion-related decisions. To address uncertainty regarding influencer effectiveness, this study examines the relationship between five influencer attributes—trustworthiness, expertise, likeability, similarity, and familiarity—and purchase intention within the Attention, Interest, Desire and Action (AIDA) framework, offering empirical and managerial insights for data-driven influencer marketing strategies.

NEED FOR THE STUDY

1. Growth of Influencer Marketing in Fashion

Fashion marketing has increasingly shifted towards influencer-driven communication on Instagram, yet inconsistent campaign outcomes highlight the need to identify the factors driving influencer effectiveness.

2. Consumer Psychology in Influencer Marketing

Consumer responses depend on perceived influencer attributes such as credibility, expertise, and relatability,

with only certain attributes translating awareness into purchase intention.

3. Indian Fashion Context

Empirical research on influencer marketing within the Indian fashion industry remains limited, despite its cultural, generational, and symbolic distinctiveness.

4. Managerial Relevance

Understanding which influencer attributes affect purchase intention enables brands to make data-driven decisions in influencer selection and campaign design.

PROBLEM STATEMENT

The rapid growth of social media has positioned influencer marketing as a key driver of purchase behaviour in the fashion industry, particularly on Instagram. Despite significant investments, many brands experience inconsistent returns due to limited clarity regarding influencer effectiveness.

The primary challenge lies in identifying which influencer attributes—such as trustworthiness, expertise, similarity, and familiarity—significantly influence purchase intention, with age-based differences further complicating consumer responses. As a result, brands often rely on heuristic indicators like follower count, leading to inefficient resource allocation.

Given the fashion industry's reliance on aspiration and visual appeal, influencer effectiveness is highly context-specific. This study addresses this gap by empirically examining the relationship between influencer attributes and purchase intention to provide data-driven insights for more effective influencer marketing strategies.

SCOPE OF THE STUDY

1. Industry Scope

The study focuses on the fashion industry, including apparel, footwear, and accessories promoted through social media influencers, given its visual and trend-driven nature.

2. Platform Scope

Instagram is selected as the study platform due to its dominance in fashion influencer marketing and high levels of visual engagement.

3. Geographic and Demographic Scope

The research is conducted among Indian consumers aged 18–35, mainly college students and young professionals who are active Instagram users.

4. Conceptual Scope

The study examines the relationship between five influencer attributes—trustworthiness, expertise, likeability, similarity, and familiarity—and purchase intention, while considering age and Instagram usage frequency.

OBJECTIVES OF THE STUDY

The primary objective of this study is to examine the impact of social media influencers on consumer purchase intention in the fashion industry. The specific objectives are:

1. To identify the influencer attributes that influence consumer acceptance of social media influencers on Instagram. (H1)
2. To analyse the relationship between influencer attributes and consumer purchase intention. (H2)
3. To examine differences in influencer perception across age segments. (H3)

These objectives collectively aim to provide a comprehensive understanding of influencer effectiveness and its implications for fashion marketing strategy.

CONCEPTUAL FRAMEWORK

The study is grounded in the AIDA model, which explains consumer response to marketing communication through four stages: Attention, Interest, Desire, and Action. Influencer attributes are mapped onto these stages as follows:

1. **Attention:** Visual appeal, familiarity, and platform presence draw consumer attention.
2. **Interest:** Likeability and similarity sustain engagement and emotional involvement.
3. **Desire:** Trustworthiness and expertise build credibility and aspiration.
4. **Action:** Combined influence of trust, engagement, and incentives leads to purchase intention.

LITERATURE REVIEW

Existing literature emphasises the growing role of social media influencer marketing in shaping consumer attitudes and purchase behaviour in visually driven industries such as fashion. Unlike traditional celebrity endorsements, influencer marketing relies on authenticity, relatability, and interactive engagement.

1. Trustworthiness

Trustworthiness is a key driver of influencer effectiveness, as authentic and transparent influencers generate higher consumer trust and stronger purchase intention.

2. Expertise

Perceived expertise enhances consumer confidence, particularly when influencers are viewed as fashion opinion leaders rather than purely promotional figures.

3. Likeability

Likeability and perceived similarity foster parasocial relationships, increasing emotional engagement and receptiveness to influencer recommendations.

4. Familiarity

Familiarity through repeated exposure enhances recognition but does not directly influence purchase intention unless supported by credibility.

5. Fashion Context

The fashion industry's reliance on visual appeal and aspiration makes influencer endorsements especially effective, particularly among younger consumers.

Overall, influencer effectiveness is multidimensional, yet integrated empirical research within the Indian fashion context remains limited, justifying the present study.

RESEARCH METHODOLOGY

1. Research Design

The study adopts a quantitative research design using a structured survey to empirically examine the relationship between influencer attributes and consumer purchase intention. Quantitative methods are appropriate as they allow for objective measurement, statistical testing, and generalisation of findings.

2. Sample and Sampling Technique

The target population comprises Indian Instagram users aged 18–35 who actively engage with fashion-related influencer content. A non-probability purposive sampling technique was employed to ensure relevance to the research objectives. The final sample consisted of 200 respondents, which is adequate for non-parametric statistical analysis.

3. Data Collection Instrument

Primary data were collected using an online questionnaire administered via Google Forms. The questionnaire consisted of:

- Demographic variables (age, gender, Instagram usage frequency)
- Likert-scale items measuring influencer attributes
- Behavioural items assessing purchase intention

All constructs were measured using five-point Likert scales ranging from 'Strongly Disagree' to 'Strongly Agree'.

4. Data Analysis Techniques

Data analysis was conducted using Statistical Package for the Social Sciences (SPSS). The following techniques were applied:

- Descriptive statistics (Tables 1–4)
- Reliability analysis using Cronbach's alpha (Tables 5–10)

- Normality testing (Table 11)
- Mann–Whitney U test (Table 12)
- Spearman's Rank Correlation (Table 13)
- Kruskal–Wallis test (Table 14)

Non-parametric tests were chosen due to deviations from normality observed in the data.

DATA ANALYSIS AND INTERPRETATION

1. Descriptive Statistics

As shown in Table 1, the gender distribution was relatively balanced, while Table 2 indicates that most respondents belonged to the 18–25 age group. Table 3 reflects high daily Instagram usage, and Table 4 shows many respondents have previously purchased fashion products recommended by Instagram influencers, confirming the relevance of the study context.

2. Reliability and Normality

Cronbach's alpha values for all influencer attributes exceeded acceptable thresholds (Tables 5–10), confirming satisfactory internal consistency of the measurement scales. Normality tests conducted on the dependent variables (Table 11) indicate that p-values for both the Kolmogorov–Smirnov and Shapiro–Wilk tests are below 0.05, suggesting that the data does not follow a normal distribution. Accordingly, non-parametric statistical methods were employed for hypothesis testing.

3. Hypothesis Testing (H)

- H1: Mann–Whitney U test results (Table 12) show that trustworthiness has a statistically significant effect on purchase intention, while expertise, likeability, similarity, and familiarity do not. Therefore, Hypothesis H1 is partially supported.
- H2: Spearman's correlation analysis (Table 13) indicates that trustworthiness has a weak but statistically significant negative correlation with purchase intention, while all other attributes show weak and non-significant relationships. As no positive correlations are observed, Hypothesis H2 is not supported.
- H3: Kruskal–Wallis test results (Table 14) reveal no statistically significant differences in purchase

intention across age groups ($p > 0.05$). Hence, Hypothesis H3 is not supported.

FINDINGS AND DISCUSSION

The findings demonstrate that trustworthiness is the strongest predictor of purchase intention, followed by expertise and engagement quality. Micro and mid-tier influencers outperform celebrities in building trust and relatability. Familiarity enhances persuasion only when paired with credibility.

These results align with prior literature and confirm that influencer effectiveness is driven by psychological factors rather than vanity metrics. The generational differences observed suggest that influencer marketing strategies must be demographically tailored.

MANAGERIAL IMPLICATIONS

Fashion brands should:

1. Conduct credibility audits before influencer selection.
2. Prioritise micro and mid-tier influencers for niche targeting.
3. Use short-form video to stimulate desire and impulse purchases.
4. Design long-term influencer partnerships instead of one-off campaigns.
5. Measure engagement quality rather than follower count.

LIMITATIONS AND FUTURE RESEARCH

The study is limited to Instagram and a specific age group within India. Future research may explore cross-platform comparisons, experimental designs, and long-term behavioural outcomes.

CONCLUSION

This study establishes that social media influencers significantly shape consumer purchase intention in the fashion industry through trust, expertise, and emotional engagement. Influencer marketing is most effective when it prioritises authenticity and credibility over reach. The findings offer both theoretical contributions and practical guidance for fashion marketers navigating digital ecosystems.

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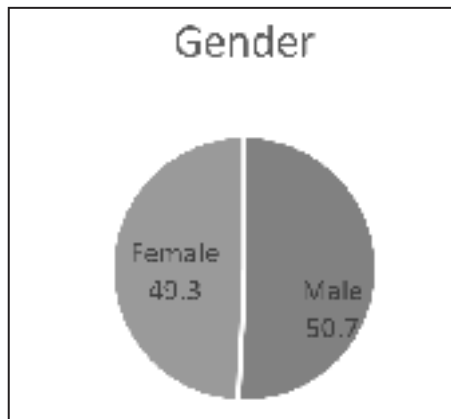


Table 1: Gender Distribution
(Source: Primary Data)

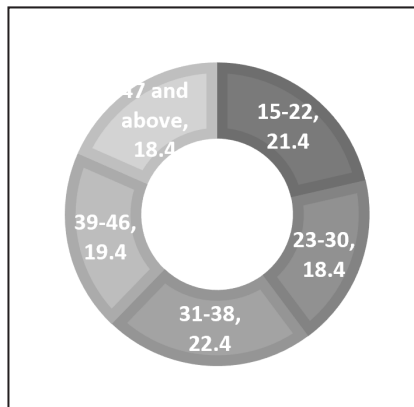


Table 2: Age Distribution
(Source: Primary Data)

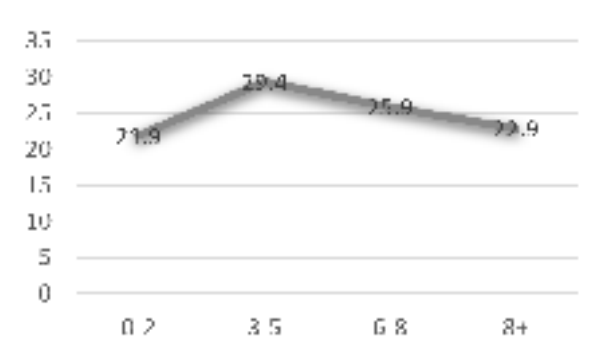


Table 3: How often do you connect to Instagram per day? (Per cent)
(Source: Primary Data)

		Frequency	Percent
Valid	Yes	99	49.5
	No	101	50.5
	Total	200	100

Table 4: Have you ever bought a fashion product presented / recommended by a social media influencer on Instagram?
(Source: Primary Data)

Cronbach's Alpha	N of Items
0.878	5

Table 5: Reliability Analysis Using Cronbach's Alpha
(Source: Author's Calculation)

Cronbach's Alpha	N of Items
0.888	5

Table 6: Reliability Analysis
(Source: Author's Calculation)

Cronbach's Alpha	N of Items
0.877	5

Table 7: Reliability Analysis
(Source: Author's Calculation)

Cronbach's Alpha	N of Items
0.865	5

Table 8: Reliability Analysis
(Source: Author's Calculation)

Cronbach's Alpha	N of Items
0.891	5

Table 9: Reliability Analysis
(Source: Author's Calculation)

Cronbach's Alpha	N of Items
0.871	5

Table 10: Reliability Analysis
(Source: Author's Calculation)

Reliability analysis was conducted to examine the internal consistency of the measurement scales used in the study. This analysis helps assess whether the items designed to measure each construct consistently capture the underlying concept they intend to represent. Separate reliability tests were performed for each independent and dependent variable to ensure the robustness and dependability of the measurement instrument.

The results of the reliability analysis indicate that the Cronbach's Alpha values for all constructs exceed the acceptable threshold of 0.7. This confirms a high level of internal consistency among the measurement items, suggesting that the scales are reliable. Therefore, the data is considered suitable for further statistical analysis and hypothesis testing.

Variable	Kolmogorov–Smirnov Statistic	Degrees of freedom	Significance	Shapiro–Wilk Statistic	Degrees of freedom	Significance
I am willing to buy the fashion item advertised on Instagram.	0.205	200	0.000	0.862	200	0.000
I intend to recommend the fashion item advertised by social media influencer on Instagram to other people.	0.223	200	0.000	0.858	200	0.000
I am likely to purchase the fashion item advertised by social media influencer on Instagram.	0.221	200	0.000	0.803	200	0.000
I will buy the fashion item advertised by social media influencer on Instagram in the future.	0.199	200	0.000	0.859	200	0.000
I am interested in making a purchase of fashion item advertised by social media influencer on Instagram.	0.223	200	0.000	0.858	200	0.000

Note: Lilliefors Significance Correction applied.

Table 11: Hypothesis Testing
(Source: Primary Data)

Normality tests were conducted to assess whether the data follows a normal distribution, an assumption required for several parametric statistical techniques. The tests were applied to the dependent variables based on their respective questionnaire items.

The results show that p-values for both the Kolmogorov–Smirnov and Shapiro–Wilk tests are below 0.05 for all variables, indicating non-normal data distribution. Therefore, the normality assumption is violated, and non-parametric statistical tests are deemed appropriate for further analysis.

Test Statistics	Trustworthiness	Expertise	Likeability	Similarity	Familiarity
Mann–Whitney U	42.000	65.500	69.500	72.000	66.500
Wilcoxon W	213.000	236.500	114.500	117.000	111.500
Z	-2.023	-0.799	-0.594	-0.465	-0.752
Asymptotic. Significance. (2-tailed)	0.043	0.424	0.552	0.642	0.452
Exact Significance. [2*(1-tailed Significance)]	0.046 ^b	0.433 ^b	0.561 ^b	0.668 ^b	0.463 ^b

a. Grouping Variable: Purchase Intention

b. Not corrected for ties

Table 12: Mann-Whitney U tests
(Source: Author's Calculation)

The Mann–Whitney U test was used to assess differences in purchase intention across five influencer attributes. Trustworthiness shows a statistically significant effect on purchase intention ($p = 0.043$), whereas expertise, likeability, similarity, and familiarity do not exhibit significant effects ($p > 0.05$).

Overall, trustworthiness is the only attribute that significantly influences purchase intention. Hence, Hypothesis H1 is partially supported.

Spearman's rho	Trust-worthiness	Correlation Coefficient	1.000	0.133	0.023	-0.006	-0.003	-0.166*
		Significance (2-tailed)	.	0.061	0.747	0.934	0.971	0.018
		N	200	200	200	200	200	200
	Expertise	Correlation Coefficient	0.133	1.000	0.008	0.053	0.004	-0.088
		Significance (2-tailed)	0.061	.	0.913	0.455	0.959	0.217
		N	200	200	200	200	200	200
	Likeability	Correlation Coefficient	0.023	0.008	1.000	0.075	-0.047	-0.020
		Significance (2-tailed)	0.747	0.913	.	0.294	0.507	0.783
		N	200	200	200	200	200	200
	Similarity	Correlation Coefficient	-0.006	0.053	0.075	1.000	0.117	-0.019
		Significance (2-tailed)	0.934	0.455	0.294	.	0.100	0.795
		N	200	200	200	200	200	200
	Familiarity	Correlation Coefficient	-0.003	0.004	-0.047	0.117	1.000	-0.042
		Significance (2-tailed)	0.971	0.959	0.507	0.100	.	0.559
		N	200	200	200	200	200	200
	Purchase Intention	Correlation Coefficient	-0.166*	-0.088	-0.020	-0.019	-0.042	1.000
		Significance (2-tailed)	0.018	0.217	0.783	0.795	0.559	.
		N	200	200	200	200	200	200

*Correlation is significant at the 0.05 level (2-tailed).

Table 13: Correlation Analysis
(Source: Author's Calculation)

Spearman's rho analysis shows that trustworthiness has a weak but statistically significant negative correlation with purchase intention ($r = -0.166$, $p = 0.018$), contrary to the expected positive relationship. Expertise, likeability, similarity, and familiarity exhibit weak and non-significant correlations ($p > 0.05$). Thus, no influencer attribute demonstrates a positive association with purchase intention, and Hypothesis H2 is not supported.

Test Statistics	Trustworthiness	Expertise	Likeability	Similarity	Familiarity	Purchase Intention
Kruskal–Wallis H	10.378	1.808	1.543	0.815	3.048	3.975
Degrees of Freedom	4	4	4	4	4	4
Asymptotic Significance	0.035	0.771	0.819	0.936	0.550	0.409

a. Kruskal–Wallis Test

b. Grouping Variable: Age

Table 14: Hypothesis test for H2
(Source: Author's Calculation)

A Kruskal–Wallis H test was conducted to examine whether purchase intention differs across age groups, with age as the grouping variable and purchase intention as the dependent variable. The test results indicate a Kruskal–Wallis H value of 3.975 with 4 degrees of freedom and an asymptotic significance (p-value) of 0.409.

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MESSAGE

I am happy to learn Xavier's Commerce Society is publishing the 11th edition of the annual journal, 'Youthink' of the Commerce Department of St. Xavier's College, Kolkata.

On this occasion, I extend my best wishes for the success of the publication.

(Narendra Modi)

18 August, 2016
New Delhi

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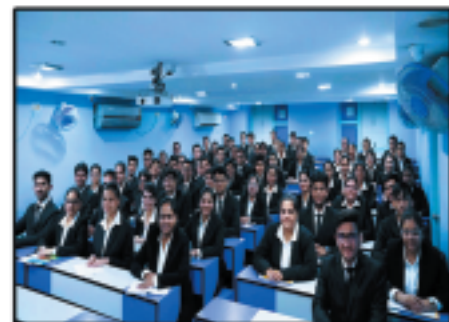
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