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A Century of Excellence: 1926-2026

STRIDES

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All correspondence relating to publication of the Journal should be addressed to:
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Shri Ram College of Commerce
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Principal's Message

The mission statement of the college signifying its existence and road map to the achievement of its vision, reads as:

"To achieve and sustain excellence in teaching and research, enrich local, national and international communities through our research, improve skills of alumni, and to publish academic and educational resources"

To achieve and promote excellence in applied research and publication, the college had taken the initiative in 2017 to launch a journal exclusively to publish students' research papers and articles. It is an add-on to the enriched catalogue of college's publications and academic literature. The college had successfully released the foundation issue of the Journal **"Strides - A Students' Journal of Shri Ram College of Commerce, Volume 1, Issue 1, 2016-17"** on the occasion of 91st Annual Day of the College held on 13th April, 2017. The Journal was released by **Shri Prakash Javadekar, the then Hon'ble Union Minister of Human Resource Development, Government of India.**

This year the college has taken the initiative to extend the call for research papers invitation to the students and faculty of all the constituent colleges of University of Delhi and published its current issue i.e. Volume 10, Issue 1, July 2025 - December 2025.

The college encourages students and faculty to focus on collaborative research, and publish their joint research work in co-authorship in Strides. In order to encourage and to create healthy competition among researchers, the college awards best three papers from each issue as a mark of acknowledgement of the research contribution of best three research paper awardees.

I would like to congratulate the Students and Faculty whose papers are published in this issue of the Journal and simultaneously encourage all the researchers to contribute their research papers for the successive issues of the Journal.

Best wishes for their future endeavors.

Prof. Simrit Kaur
Principal

www.srcc.edu/publications/principals-message

Editor's Message

Shri Ram College of Commerce is well known for its academic excellence and dedicated approach towards dissemination of knowledge in the academic world. The college appreciates the role of research in education and is committed to developing an inclination towards research in both faculty and students. In this pursuit, the college has taken the initiative to launch a Journal named 'Strides - A Students' Journal of Shri Ram College of Commerce' to encourage students to pursue research. The foundation issue of the Journal "Strides - A Students' Journal of Shri Ram College of Commerce, Volume 1, Issue 1, 2016-17" was released on 91st Annual Day of SRCC held on 13th April, 2017 by Shri Prakash Javadekar, the then Hon'ble Union Minister of Human Resource Development, Government of India.

Strides is a peer-reviewed bi-annual journal of Shri Ram College of Commerce, University of Delhi, India [ISSN: 2581-4931] to publish research papers on contemporary topics and issues in the area of commerce, economics, management, governance, policies etc.

This year, the journal took another stride by extending the call for research papers invitation to the students and faculty of all the constituent colleges of University of Delhi and published its current issue i.e. Volume 10, Issue 1, July 2025-December 2025.

Under the New Education Policy, in the light of the course-curriculum of the research track of the fourth year of undergraduate programs like B.Com.(Honors), B.A. Economics (Honours) etc., the journal provides a platform to publish collaborative research of students and faculty.

A Committee on Publication Ethics (COPE) has been constituted to oversee the high standards of ethics in publication. The COPE is the apex authority to take all the decisions related to the publication of research papers in Strides. The decision of the COPE is final and binding.

I express my sincere thanks to all the students and faculty for their research contribution to the journal.

Best wishes and regards.

Prof. Santosh Kumari
Editor

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STRIDES – A STUDENTS' JOURNAL OF SHRI RAM COLLEGE OF COMMERCE

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ABOUT THE JOURNAL

Strides is a peer-reviewed bi-annual academic journal of Shri Ram College of Commerce, University of Delhi, India. The journal provides an opportunity to the students and faculty of all the constituent colleges of University of Delhi to publish their academic research work in Strides. The journal bi-annually publishes academic research papers of students and faculty in co-authorship on contemporary topics and issues in the area of commerce, economics, management, governance, policy etc.

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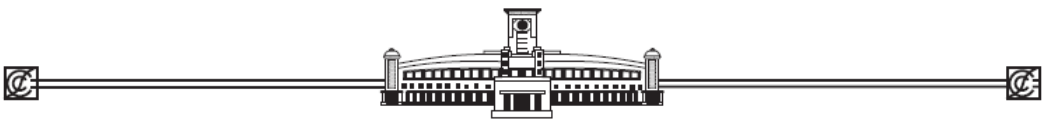

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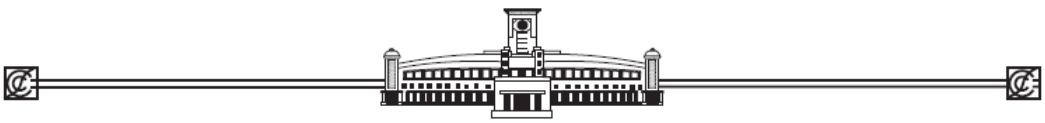

STRIDES – A STUDENTS' JOURNAL OF SHRI RAM COLLEGE OF COMMERCE

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RESEARCH PAPERS

Preyosee Das
B.Com. (Hons.)
4th Year
Shri Ram College of Commerce
University of Delhi
INDIA

The Startup Bubble in India: Craze, Culture or Capital Misallocation?

ABSTRACT

India's startup boom produced over 100 unicorns and attracted unprecedented venture capital between 2016 and 2022. Yet the subsequent funding contraction exposed a wave of governance failures, valuation collapses, and insolvencies that market volatility alone cannot explain. This study argues that such instability is better understood as institutional misalignment: a condition in which investor behavioral dynamics, culturally legitimised growth norms, and governance structures within firms fail to reinforce financial discipline. Drawing on corporate governance theory, behavioral finance, and cultural institutionalism, the paper proposes an integrated Governance-Behavior-Culture (GBC) framework and applies it through a comparative case analysis of BluSmart Mobility and Lenskart, two similarly-funded startups with sharply divergent outcomes. The analysis reveals that governance quality, not sector conditions or founder capability, is the primary determinant of startup sustainability. Where governance is independent and operationally disciplined, firms weather contractions. Where it is symbolic, behavioral exuberance and cultural legitimacy amplify capital misallocation until collapse becomes inevitable. The paper reframes startup failure as a systemic institutional outcome and offers actionable implications for founders, investors, and policymakers.

Keywords: *Startup Governance, Venture Capital, Behavioral Finance, Capital Misallocation, Entrepreneurial Culture in India.*

1. Introduction

Over the past decade, India has emerged as one of the world's three largest startup ecosystems, ranked alongside the United States and China in terms of venture-backed firms, unicorn count, and overall capital deployment (DPIIT, 2023; NASSCOM, 2024). This transformation was driven by the expansion of digital infrastructure through the Unified Payments Interface (UPI) and Aadhaar-based identity systems, a growing internet-user base crossing 800 million by 2023, and government initiatives including Startup India and the Fund of Funds for Startups (IVCA, 2024).

Between 2016 and 2021, venture capital funding into Indian startups grew from approximately USD 4 billion annually to a peak of USD 38 billion in 2021 – a nearly tenfold increase within five years (IVCA, 2024; Bain and Company, 2023). The ecosystem created 107 unicorns by end-2021, including 44 in that year alone, at a rate of nearly one per week (NASSCOM, 2024). However, the post-2022 funding contraction was severe: annual inflows fell to USD 25.7 billion in 2022 and further to USD 9.6 billion in 2023, a 63 percent decline in value and a 45 percent decline in deal count within a single year (IVCA, 2024). Layoffs exceeded 60,000 across the sector between 2022 and 2024, and multiple high-profile startups, including BYJU'S, Go First, BluSmart Mobility, and Zilingo, entered insolvency proceedings or ceased operations entirely (Inc42, 2024; RBI, 2024).

These developments raise a fundamental question that existing research has not fully addressed: why did similarly-funded startups operating in the same ecosystem and macroeconomic environment exhibit sharply divergent outcomes during the contraction? Dominant explanations emphasise market volatility, macroeconomic tightening, or founder capability. While not irrelevant, such accounts remain incomplete. They do not adequately address how investor behaviour, growth-oriented legitimacy norms, and governance structures interact to shape capital allocation decisions within startups.

This study argues that recent instability in India's startup ecosystem is best understood as an outcome of institutional misalignment: a condition in which behavioral dynamics in capital markets, culturally legitimised growth expectations, and governance arrangements within firms fail to reinforce financial discipline. Rather than treating governance, investor behaviour, or entrepreneurial culture as independent explanatory factors, the paper adopts an integrated perspective to examine how their interaction influences startup sustainability. To investigate this argument, the study develops a conceptual framework grounded in corporate governance theory, behavioral finance, and cultural institutionalism, and applies it through a comparative case analysis of BluSmart Mobility and Lenskart. By reframing startup failure as a systemic governance outcome rather than an entrepreneurial deficiency, this paper contributes to the literature on entrepreneurship and governance in emerging markets.

2. Review of Literature and Theoretical Framework

Research on startup growth and failure draws from three intersecting bodies of literature: corporate governance in venture-backed firms, behavioral finance and valuation dynamics, and cultural institutional perspectives on entrepreneurship. While each stream provides valuable insights, existing studies largely examine these mechanisms independently. The interaction between governance design, investor behaviour, and culturally legitimised growth norms, particularly in emerging markets, remains insufficiently theorised. This section reviews these literatures to establish the theoretical foundation for an integrated explanation of startup instability.

2.1 Corporate Governance and Agency Problems in Venture-Backed Startups

Agency theory provides the foundational framework for understanding governance challenges in firms characterised by separation of ownership and control (Jensen and Meckling, 1976). In venture-backed startups, agency problems are intensified by high uncertainty, information asymmetry, and rapid scaling pressures. Founders possess superior operational knowledge, while investors bear substantial financial risk without direct managerial involvement. To mitigate these risks, venture capital governance relies on mechanisms such as staged financing, board representation, liquidation preferences, and convertible securities (Gompers and Lerner, 2003; Kaplan and Stromberg, 2004). However, empirical research indicates that strong contractual controls do not necessarily translate into effective governance outcomes. Metrick and Yasuda (2010) demonstrate that private equity fund economics create incentive structures oriented toward exit timing and valuation continuity rather than long-term operational sustainability.

In emerging market contexts, governance challenges are further shaped by institutional characteristics. Khanna and Palepu (2010) document the persistence of promoter-centric control structures, weak board independence, and limited enforcement capacity as defining features of Indian corporate governance. Majumdar (2024) shows that successive funding rounds frequently dilute founder ownership through convertible instruments, creating conditions in which founders retain operational responsibility while losing strategic autonomy, weakening accountability over capital allocation decisions. More recently, Gupta (2025) identifies board-level failure as a consistent feature across high-profile startup collapses during the 2022 to 2024 contraction, noting that boards frequently functioned as endorsers of founder strategy rather than independent monitors. Saroy et al. (2023) find that governance quality, measured by board independence and financial disclosure standards, is a significant predictor of startup resilience during funding contractions.

Traditional agency theory focuses on principal-agent conflicts between owners and managers. However, in hype-driven funding environments, principal-principal conflicts between founders and powerful investors may be more salient (Khairajani et al., 2024). During India's boom phase, large global institutional investors including SoftBank Vision Fund, Tiger Global, and Sequoia Capital introduced fund-level pressures toward aggressive growth targets that maximised portfolio valuations within specific time horizons. Where governance structures lacked independence to challenge these pressures, boards became instruments of valuation optimisation rather than financial discipline.

2.2 Behavioral Finance and Startup Valuation Dynamics

Traditional finance theory assumes that asset prices reflect rational assessments of future cash flows. Behavioral finance challenges this assumption by demonstrating how psychological biases and collective behaviour influence valuation processes under uncertainty (Shiller, 2000). These dynamics are especially pronounced in startup ecosystems, where objective performance benchmarks are limited and narratives play a central role in shaping expectations (Shiller, 2017). Herding behaviour, overconfidence, and narrative contagion can generate valuation spillovers across firms, independent of fundamentals (Kindleberger and Aliber, 2011). In venture capital markets, investors often rely on social signals, such as peer participation, media attention, and funding momentum, rather than detailed financial metrics (Nisar and Tufano, 2012).

Empirical evidence from India supports these insights. Mishra and Kamal (2025) demonstrate that the emergence of unicorns produces positive valuation externalities for peer firms, inflating valuations even in the absence of commensurate performance improvements. Kalyanasundaram (2018) documents the dominance of growth-oriented indicators, such as user acquisition and gross merchandise value, in funding decisions, frequently at the expense of profitability and unit economics. This metrics displacement, in which vanity metrics that are easily scalable through subsidised growth substitute for genuine value creation measures, represents a governance-adjacent failure: where boards and investors lack independence or incentive to insist on financial discipline, behavioral pressures toward metric inflation go unchecked.

Prasad and Jahan (2020) argue that narrative-driven valuations delay market correction, allowing inefficient business models to absorb capital longer than warranted. The severity of India's post-2022 correction, with the median revenue multiple for late-stage startups falling from approximately 15x to 30x in 2021 to approximately 4x by 2023 (Bain and Company, 2023), is consistent with this prediction: corrections following behavioral excess are not gradual repricing but abrupt unwinding of narrative premiums.

2.3 Cultural Institutionalism and Growth Legitimacy

Cultural institutionalism emphasises that economic behaviour is shaped by socially constructed norms, values, and legitimacy frameworks (North, 1990; Scott, 2014). In India, entrepreneurship has undergone rapid cultural rebranding, from a risky occupational choice to a symbol of aspiration and national contribution (Taneja, 2024). Policy discourse, media narratives, and investor signalling have collectively normalised rapid scaling and high valuation as indicators of legitimacy. Khairajani et al. (2024) find that startups increasingly interpret capital inflows as validation of strategic soundness, reinforcing growth-oriented

behaviour even in the absence of financial viability. This creates a legitimacy trap in which the cultural equation of funding with validation prevents founders and boards from subjecting growth strategies to rigorous financial scrutiny.

Atsan (2016) identifies a tension between the rhetorical normalisation of failure in entrepreneurial discourse and the practical reputational penalties that failure imposes in many institutional contexts. In the Indian context, this produces a governance paradox: the same cultural narratives that attract venture capital and celebrate entrepreneurial ambition also make governance challenge socially costly. When admitting financial difficulties would undermine a culturally celebrated narrative, founders and boards face incentives toward opacity rather than transparency, postponing corrective action until collapse becomes unavoidable.

2.4 Startup Failure, Capital Allocation, and Sustainability

Startup failure has traditionally been framed as an inevitable outcome of experimentation and creative destruction (Schumpeter, 1942). More recent scholarship distinguishes between productive failure arising from market learning and avoidable failure driven by governance breakdowns and inefficient capital allocation (Khairajani et al., 2024). Goswami, Murti, and Dwivedi (2023) show that periods of excessive liquidity weaken capital discipline, allowing structurally unviable firms to persist longer than economically justified. When funding conditions reverse, these latent weaknesses surface abruptly. Kalyanasundaram et al. (2020) find that startups emphasising operational discipline and measured scaling exhibit significantly higher survival rates than capital-intensive peers, suggesting that governance orientation is a more reliable predictor of sustainability than capital availability.

2.5 Synthesis and Theoretical Positioning: The GBC Framework

Existing research identifies governance failures, behavioral biases, and cultural legitimacy pressures as important drivers of startup instability but typically examines these factors in isolation. This study addresses the gap by integrating insights from all three streams into an institutional misalignment framework. The Governance-Behavior-Culture (GBC) Triangle proposes that startup instability arises from the interaction among three institutional dimensions: governance structures (board independence, investor control mechanisms, oversight of related-party transactions), behavioral dynamics (herding, narrative-driven valuation, overconfidence), and cultural orientation (growth-at-all-costs norms, failure stigma, unicorn prestige). Governance functions as the primary mediator: when governance mechanisms are independent and oriented toward financial discipline, they interrupt the self-reinforcing feedback loops between behavioral and cultural pressures. When governance is symbolic or captured, these pressures amplify each other until external liquidity constraints force abrupt correction. This framework provides the analytical lens for the comparative case analysis that follows.

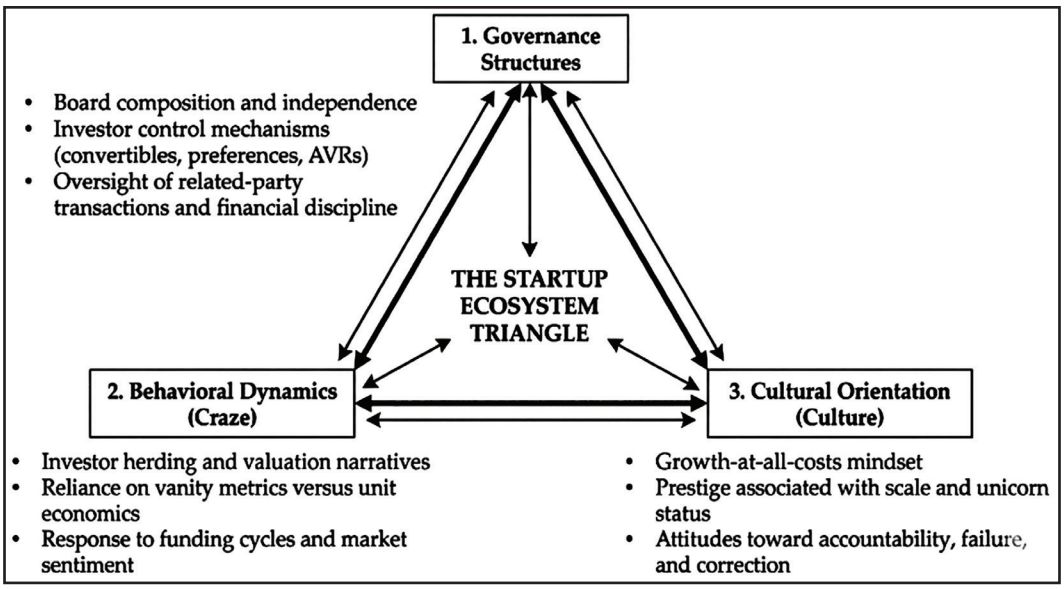


Fig. 1: The Governance-Behavior-Culture (GBC) Triangle

Source: *Author's conceptual framework.*

3. Research Methodology

3.1 Research Design

This study adopts a qualitative comparative case study design, an approach widely used in theory-building research to explain divergent organisational outcomes under similar contextual conditions (Eisenhardt, 1989; Yin, 2018). The objective is analytical generalisation, whereby theoretical propositions are examined through in-depth analysis of carefully selected cases. A qualitative design is appropriate given the study's focus on governance processes, investor behaviour, and institutional context, phenomena that are complex, contemporaneous, and difficult to isolate quantitatively.

3.2 Case Selection Strategy

The study employs a polar-type sampling strategy, selecting cases that represent sharply contrasting outcomes within the same ecosystem and macro-funding environment (Eisenhardt and Graebner, 2007). This logic enables theoretical replication, where differences in outcomes can be attributed to variation in governance orientation rather than exogenous market shocks. Two Indian startups were selected based on four criteria:

1. **Temporal Alignment:** Both firms expanded during the post-2016 venture capital boom and encountered the post-2022 funding contraction.

2. **Exposure to Venture Capital:** Each firm raised substantial external capital and operated within a similar investor-driven growth environment.
3. **Outcome Divergence:** BluSmart Mobility entered insolvency proceedings, whereas Lenskart demonstrated sustained growth and achieved profitability by FY2024-25.
4. **Governance Visibility and Data Availability:** Both cases offer sufficient publicly available information on funding structures, governance arrangements, and strategic decisions.

BluSmart Mobility serves as the negative case, illustrating how governance failures amplify behavioral and cultural pressures, while Lenskart represents the positive case, demonstrating how governance discipline moderates these forces under similar capital conditions.

3.3 Data Sources and Analytical Approach

The analysis relies exclusively on secondary data, triangulated across multiple credible sources to enhance internal validity. These include: regulatory filings and legal proceedings (SEBI disclosures, NCLT records); company financial statements and investor disclosures; reputable media investigations and industry reports (IVCA, NASSCOM, DPIIT, RBI, Bain and Company, PwC); and peer-reviewed academic literature. Data were analysed using a theory-guided thematic approach, mapping observed patterns in each case to constructs derived from the GBC framework. The analysis focused on identifying how governance mechanisms interacted with investor behaviour and cultural growth norms to shape capital allocation decisions over time. The study is based entirely on publicly available information. No confidential data, interviews, or personal identifiers were used.

4. Comparative Case Analysis

This section examines BluSmart Mobility and Lenskart through the three vertices of the GBC framework. The cases are not presented as isolated success or failure stories but as theoretical contrasts illustrating how institutional design shapes startup trajectories under capital abundance.

4.1 BluSmart Mobility: Governance Breakdown Under Capital Abundance

4.1.1 Company Profile and Growth Strategy

BluSmart Mobility was founded in 2019 by Anmol Singh Jaggi and Punit K. Goyal, positioning itself as India's first all-electric ride-hailing platform. The firm operated at the intersection of three powerful cultural narratives during the boom phase: sustainability and environmental responsibility, urban mobility disruption, and the government's FAME scheme for electric vehicle adoption. These narratives created a

highly favourable legitimacy environment, enabling BluSmart to attract venture capital and positive media attention without the financial scrutiny that a conventional business plan might have invited.

The firm adopted an asset-intensive growth model, relying on fleet ownership and leasing arrangements that required continuous capital inflows to sustain expansion. Vehicle acquisition, charging infrastructure, and fixed operating costs remained high irrespective of demand realisation, creating a structural dependency on external funding that made the firm highly vulnerable to any interruption in capital availability.

4.1.2 Governance Structures and Oversight Failures

The central governance weakness in BluSmart did not lie in the absence of formal mechanisms but in their substantive failure to function as independent constraints on financial risk. Board structures existed and investor representation was present through BP Ventures and responsAbility Investments, yet these mechanisms failed to scrutinise the financial arrangements that ultimately precipitated the firm's collapse.

The most significant governance failure was the firm's financial relationship with Gensol Engineering Limited, a solar energy company co-founded by Jaggi. BluSmart's fleet acquisition relied on a leasing arrangement under which Gensol purchased electric vehicles using loans from the Power Finance Corporation (PFC) and the Indian Renewable Energy Development Agency (IREDA), and then leased them to BluSmart. This created a circular financial dependency: Gensol borrowed to buy vehicles, BluSmart leased them from Gensol using investor capital, and lease revenues flowed back to Gensol to service its debt. An independent board with genuine oversight capacity would have required transparent consolidation of financial exposures across both entities and independent assessment of whether the leasing arrangement served BluSmart's interests. The absence of such scrutiny allowed the circular dependency to grow undetected.

SEBI's investigation into Gensol Engineering, which resulted in the suspension of its promoters through an interim order in April 2025, revealed that loan funds raised ostensibly for vehicle procurement had been diverted to personal use and related entities, and that the number of vehicles actually procured was significantly lower than reported to lenders. These findings implicated BluSmart's capital structure directly. The board's failure reflects principal-principal dynamics identified in Section 2.1: the founder's dual role across both entities created information asymmetries that the board lacked either the independence or the incentive to overcome.

4.1.3 Behavioral and Cultural Dynamics

The behavioral dynamics vertex operated powerfully in BluSmart's funding environment. The FAME II scheme and the global surge in ESG-aligned investments during 2020 and 2021 created a narrative environment in which any firm positioned at the intersection

of electric mobility and sustainability could attract capital with limited due diligence on unit economics. BluSmart's primary reported metrics, fleet size, cities covered, and ride completions, were precisely the boom-phase vanity metrics identified in Section 2.2: they demonstrated scale and expansion but provided no visibility into per-vehicle revenue, fleet utilisation rates, or the financial relationship between leasing costs and ride revenue.

The cultural vertex was equally consequential. Acknowledging the financial vulnerabilities of the EV-first, owned-fleet model would have required publicly admitting structural unsustainability, which was culturally costly in an environment where the firm was celebrated as a pioneer of sustainable urban mobility. As Atsan (2016) predicts, failure stigma created incentives for opacity rather than transparency.

4.1.4 Outcome

The convergence of governance failure, behavioral inflation, and cultural legitimacy pressure produced a firm structurally dependent on continuous capital inflows and unable to surface or correct its financial vulnerabilities. Following defaults on Non-Convertible Debenture payments to Catalyst Trusteeship in early 2025, the NCLT Ahmedabad bench formally admitted BluSmart Mobility into the Corporate Insolvency Resolution Process (CIRP) on July 28, 2025, with its technology arm following in October 2025. Operations were suspended across all markets, leaving thousands of drivers without income and investors with significantly impaired positions.

Table 1: BluSmart Mobility – GBC Framework Summary

GBC Vertex	Observed Characteristics	Consequence for Capital Allocation
Governance	Formal board present but substantively compromised; founder dual role across BluSmart and Gensol; related-party leasing structure unchallenged by board	Capital deployed into asset-intensive model without independent scrutiny; circular financial dependency obscured true financial position
Behavioral	ESG and EV sector attracted intense herding; vanity metrics (fleet size, ride completions) dominated; investor momentum drove capital without unit economic scrutiny	Behavioral herding provided capital without governance conditions; valuation narrative created incentives to suppress warning signs
Cultural	Sustainability pioneer positioning; strong EV policy narrative; corrective action would have been culturally costly; failure stigma incentivised opacity	Cultural legitimacy delayed correction; transparency about financial vulnerabilities would have undermined the sustainability narrative

Source: *Author's analysis based on SEBI disclosures, NCLT records, IVCA (2024), and media investigations.*

4.2 Lenskart: Governance Discipline and Sustainable Scaling

4.2.1 Company Profile and Growth Strategy

Lenskart was founded in 2008 as Valyoo Technologies by Peyush Bansal, Amit Chaudhary, and Sumeet Kapahi, launching its online eyewear retail platform in 2010. Over the following decade, the firm evolved into a full omnichannel eyewear business, combining a digital platform with physical retail stores across India and several international markets. By 2022, Lenskart had raised capital from SoftBank Vision Fund (which led the 2019 Series G round), Temasek Holdings and Alpha Wave Global (which led the 2021 round), and the Abu Dhabi Investment Authority and KKR, reaching a peak valuation of approximately USD 4.5 billion.

The strategic contrast with BluSmart begins with the business model architecture. Lenskart's omnichannel model imposed natural financial discipline through the retail economics of physical stores: every store had to justify its existence through measurable inventory turnover, footfall conversion rates, and store-level contribution margins. This discipline was actively enforced through governance mechanisms that treated operational metrics as the primary basis for capital allocation decisions.

4.2.2 Governance Orientation and Capital Allocation

Several governance features distinguish Lenskart's approach. First, investor oversight consistently emphasised operational metrics alongside growth targets. Despite SoftBank's well-documented track record of aggressive growth orientation, the evidence from Lenskart's trajectory suggests that governance within the firm resisted purely growth-driven capital deployment, maintaining consistent investment in supply chain infrastructure, lens manufacturing capability, and store-level operational quality. Second, the absence of related-party financial arrangements in Lenskart's capital structure contrasts sharply with BluSmart's Gensol dependency: capital was deployed within the firm's own operational infrastructure, with transparency that allowed investors to assess the relationship between inputs and outputs. Third, governance mechanisms retained functional independence during the contraction, enabling measured operational adjustment, including rationalisation of underperforming stores and refocusing capital toward highest-margin categories, without destabilising founder authority.

4.2.3 Outcome

When the post-2022 contraction removed the behavioral driver of continuous capital availability, Lenskart's governance-disciplined foundation proved resilient. The firm completed its acquisition of Owndays, a Japanese eyewear chain, for approximately USD

400 million in 2022, and continued international expansion into the UAE, South-East Asia, and Japan through the contraction period. By FY 2024-25, Lenskart had achieved profitability, providing direct confirmation of the governance argument: operational discipline enforced through the boom phase produced the financial foundation for genuine profitability during the contraction, rather than the collapse that characterised governance-compromised peers.

Table 2: Cross-Case Comparative Summary – BluSmart Mobility Versus Lenskart

Dimension	BluSmart Mobility	Lenskart
Business Model	Asset-intensive owned fleet; continuous capital dependency; high fixed costs regardless of demand	Omnichannel retail; physical stores impose natural financial discipline; store-level unit economics measurable
Governance Independence	Formal board present but compromised; founder dual role across BluSmart and Gensol; related-party structure unchallenged	Board retained functional independence; no related-party dependencies; corrective action possible without destabilising founders
Primary Valuation Metrics	Fleet size; ride completions: susceptible to behavioral inflation; no visibility into per-vehicle economics	Store margins; inventory turnover; supply chain efficiency: harder to inflate; reveal genuine operational performance
Cultural Pressure	Very high; EV sustainability narrative created legitimacy trap; corrective action culturally costly	Moderate; eyewear retail lacks high-prestige cultural narrative; investor expectations grounded in retail economics
Contraction Outcome	NCLT CIRP admitted July 28, 2025; operations suspended; thousands of drivers without income	Resilient; Owndays acquisition completed; international expansion continued; profitability achieved FY2024-25
GBC Outcome	All three vertices self-reinforced in destabilising cycle; governance failed to interrupt feedback loop	Governance moderated behavioral and cultural pressures; sustainable capital allocation produced genuine resilience

Source: *Author's cross-case analysis based on GBC framework. Data from SEBI disclosures, NCLT records, company financials, IVCA (2024), and media investigations.*

5. Discussion and Theoretical Implications

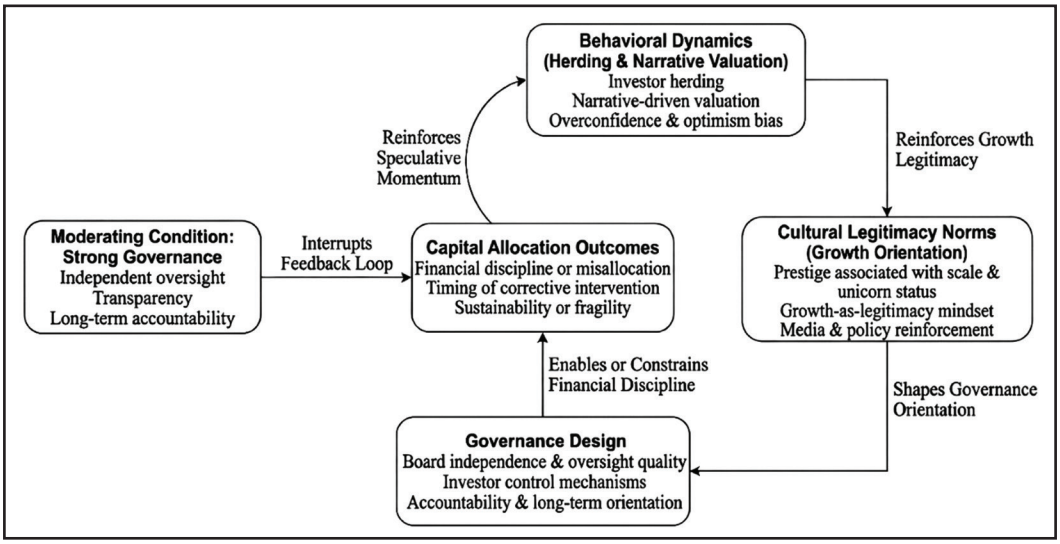


Fig. 2: Craze, Culture and Governance Feedback Loop in Venture-Backed Startups

Source: *Author's Conceptual Framework Based on Literature Synthesis.*

Figure 2 conceptualises startup instability as an institutional feedback loop in which investor behaviour, cultural growth narratives, and governance design interact to shape capital allocation outcomes. Startup fragility does not arise from isolated failures but from the reinforcement of behavioral biases and cultural legitimacy in the absence of effective governance discipline. When governance lacks independence and long-term orientation, it fails to interrupt speculative momentum, allowing inefficient capital deployment to persist until external liquidity constraints trigger abrupt correction.

5.1 Governance as the Central Mediating Institution

The comparative analysis confirms that governance functions as the primary mediator between capital abundance and startup outcomes. BluSmart demonstrates how weak oversight allows speculative momentum to override financial discipline: governance mechanisms existed in formal terms but were compromised by principal-principal conflicts and related-party dependencies that the board lacked independence to challenge. Lenskart demonstrates the opposite: governance mechanisms that retained independence and enforced operational accountability moderated behavioral and cultural pressures without suppressing innovation, producing genuine resilience during the contraction. This finding is consistent with Saroy et al.'s (2023) result that governance quality predicts fundraising resilience, and extends it by identifying the specific mechanisms through which this operates: related-party oversight, metric discipline, and board independence.

5.2 Extending Agency Theory

Traditional agency theory focuses on principal-agent conflicts arising from information asymmetry (Jensen and Meckling, 1976). This study extends the framework by demonstrating that in hype-driven funding environments, principal-principal conflicts between founders and powerful investors can become more consequential. The BluSmart case illustrates this precisely: the governance failure was not founders hiding information from passive investors, but a governance architecture, including investor board representatives, oriented toward sustaining valuation narratives rather than scrutinising financial arrangements. The Gensol related-party dependency was structured into the capital model and left unchallenged because challenging it would have undermined the valuation that all parties had an interest in maintaining. This is a principal-principal failure, not a principal-agent one, and it aligns agency theory with emerging market contexts where institutional enforcement is uneven and cultural legitimacy strongly influences governance behaviour.

5.3 Behavioral Finance in an Institutional Context

The behavioral finance literature documents how herding and narrative contagion distort capital allocation under uncertainty (Shiller, 2017; Kindleberger and Aliber, 2011). This study adds an institutional dimension: behavioral bias becomes destabilising specifically when governance mechanisms fail to counterbalance it. The SaaS sector exception illustrates this point directly: SaaS valuations, grounded in more objective metrics such as Annual Recurring Revenue and Net Revenue Retention, experienced significantly less severe correction during the contraction than edtech or consumer internet sectors, confirming that the problem of behavioral inflation was institutional rather than universal. Where governance enforced metric discipline, behavioral dynamics were moderated; where it did not, they amplified each other.

5.4 Cultural Legitimacy and the Governance Paradox

Cultural institutionalism shows that legitimacy norms shape economic behaviour independently of formal rules (North, 1990; Scott, 2014). This study contributes a specific finding: cultural legitimacy creates a governance paradox in high-growth ecosystems. The same cultural environment that celebrates entrepreneurship and attracts venture capital also creates conditions under which governance challenge is socially costly. In the BluSmart case, the sustainability narrative that elevated the firm culturally was precisely the narrative that made governance challenge most socially costly. The cultural vertex of the GBC framework therefore operates not merely as a positive driver of entrepreneurial activity but as an active constraint on the governance mechanisms that could prevent capital misallocation.

6. Conclusion, Contributions, and Future Research

6.1 Conclusion

This study examined whether recent volatility in India's startup ecosystem reflects temporary market correction or deeper structural weaknesses. The evidence is clear: the instability reflects institutional misalignment rather than entrepreneurial inadequacy or innovation failure. The comparative analysis of BluSmart Mobility and Lenskart shows that capital abundance alone does not determine startup success or failure. Outcomes diverge based on how governance structures mediate the influence of speculative investor behaviour and growth-centric cultural narratives. Where governance is symbolic and oriented toward valuation continuity, behavioral exuberance and cultural legitimacy amplify capital misallocation and ultimately precipitate collapse. Where governance retains independence and long-term orientation, firms demonstrate genuine resilience even during severe funding contractions.

6.2 Theoretical Contributions

This paper makes three contributions to the entrepreneurship and governance literature. First, it extends agency theory in emerging market contexts by demonstrating that principal-principal conflicts, between founders and powerful investors, can be more salient than traditional principal-agent problems in hype-driven funding environments. Second, it advances behavioral finance by embedding psychological biases within an institutional framework: rather than treating herding and narrative contagion as market-level anomalies, the analysis shows how their effects are amplified or moderated by governance design. Third, it proposes the integrated GBC framework, reframing startup failure as a systemic institutional outcome rather than an individual entrepreneurial shortcoming and providing a theoretically grounded and empirically applicable lens for analysing startup sustainability in emerging markets.

6.3 Practical and Policy Implications

For founders, the findings underscore governance discipline as a strategic capability rather than a compliance burden. Sustainable growth requires resisting valuation-driven expansion and insisting on financial transparency and operational accountability, even when cultural and investor pressures encourage otherwise. For investors, the results highlight the limitations of narrative-driven investing and the risks of relying on contractual control without substantive oversight. Governance due diligence, including assessment of related-party structures, metric quality, and board independence, should be a non-negotiable condition of capital deployment. For policymakers, the study suggests that startup support initiatives must extend beyond capital facilitation. Specific recommendations include mandatory disclosure of related-party transactions for startups above defined funding

thresholds, SEBI guidelines requiring minimum board independence standards for late-stage venture-backed firms, and the integration of governance capacity building into incubator and accelerator programmes supported by Atal Innovation Mission and DPIIT.

6.4 Limitations and Future Research

This study is subject to limitations inherent in qualitative, secondary data-based research. The findings are not statistically generalisable across all startup sectors, and reliance on public disclosures limits visibility into internal governance deliberations. The study examines only two cases; conclusions should be understood as theoretically grounded propositions. Future research could operationalise governance quality quantitatively and test its relationship with valuation corrections across larger samples, conduct longitudinal and cross-country comparisons in other emerging ecosystems, and examine whether the GBC framework's predictions hold in the context of the 2024 to 2025 selective recovery phase, where governance quality may be emerging as a more visible differentiator among surviving firms.

6.5 Final Reflection

India's startup ecosystem is not failing; it is undergoing the institutional learning that every maturing capital market must eventually complete. The boom of 2016 to 2022 produced genuine innovation, expanded access to digital services for millions of Indians, and demonstrated the country's capacity for entrepreneurial ambition at scale. The contraction of 2022 to 2024 revealed the governance weaknesses that capital abundance had concealed. By shifting analytical focus from valuation to value, this study contributes to a more mature understanding of entrepreneurship: one that recognises governance not as a constraint on innovation, but as its foundation.

References

Adhana, D. K. (2020). Start-up ecosystem in India: A study with focus on entrepreneurship and university business incubators. Aegaeum Journal, 8(9), 754-772.

Akter, B., and Iqbal, M. A. (2020). Failure factors of platform start-ups: A systematic literature review. Nordic Journal of Media Management, 1(3), 433-459. DOI:10.5278/njmm.2597-0445.6090

Atsan, N. (2016). Failure Experiences of Entrepreneurs: Causes and Learning Outcomes. *Procedia – Social and Behavioral Sciences, 235,* 435–442. DOI:10.1016/j.sbspro.2016.11.054

Bain and Company. (2023). *India venture capital report 2023.* Bain and Company. https://www.bain.com/insights/india-venture-capital-report-2023/

Department for Promotion of Industry and Internal Trade (DPIIT). (2023). *Startup India: Annual report 2022–23.* Government of India. https://www.startupindia.gov.in

Eisenhardt, K. M. (1989). Building Theories from Case Study Research. *Academy of Management Review, 14*(4), 532–550. DOI:10.2307/258557

Gompers, P., & Lerner, J. (2003). *The venture capital cycle.* MIT Press.

Goswami, N., Murti, A., & Dwivedi, R. (2023). *Why do Indian startups fail? A narrative analysis of key business stakeholders.* SSRN. DOI:10.2139/ssrn.5130529

Inc42. (2024). Indian startup layoff tracker 2024. Inc42 Media. https://www.inc42.com

IVCA. (2024). *Indian private equity and venture capital report 2024.* Indian Venture Capital Association. https://www.ivca.in

Jensen, M. C., & Meckling, W. H. (1976). Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure. *Journal of Financial Economics, 3*(4), 305–360. DOI:10.1016/0304-405X(76)90026-X

Kalyanasundaram, G. (2018). Why do Startups Fail? A Case Study Based Empirical Analysis in Bangalore. *Asian Journal of Innovation and Policy, 7*(1), 79–102. DOI:10.7545/ajip.2018.7.1.079

Kalyanasundaram, G., Ramachandrula, S., & Subrahmanya, M. H. (2020). Successful vs. Failed Tech Start-ups in India: What are the Distinctive Features? *Asian Journal of Innovation and Policy, 9*(3), 308–338. DOI:10.7545/ajip.2020.9.3.308

Kaplan, S. N., & Strömberg, P. (2004). Characteristics, Contracts, and Actions: Evidence from Venture Capitalist Analyses. *Journal of Finance,* 59(5), 2177–2210. DOI:10.1111/j.1540-6261.2004.00696.x

Khairajani, D., Thakkar, P., & Shah, D. (2024). Analyzing Factors Contributing to Startup Failures in India: A Comprehensive Study. *Educational Administration: Theory and Practice, 30*(1), 5224–5233. DOI:10.53555/kuey.v30i1.8755

Khanna, T., & Palepu, K. (2010). *Winning in emerging markets: A road map for strategy and execution.* Harvard Business Press.

Kindleberger, C. P., & Aliber, R. Z. (2011). *Manias, panics, and crashes: A history of financial crises* (6th ed.). Palgrave Macmillan.

Korreck, S. (2019). *The Indian startup ecosystem: Drivers, challenges and pillars of support*. Observer Research Foundation. https://www.orfonline.org

Majumdar, A. (2024). *The corporate governance of Indian unicorns.* SSRN. DOI:10.2139/ssrn.5404045

Metrick, A., & Yasuda, A. (2010). The Economics of Private Equity Funds. *The Review of Financial Studies, 23*(6), 2303–2341. DOI:10.1093/rfs/hhq020

Mishra, D., & Kamal, H. (2025). *A boon or a bane: Impact of emergence of unicorns on the valuation of industry peers.* SSRN. DOI:10.2139/ssrn.5296635

NASSCOM. (2024). *Indian startup ecosystem report 2024.* NASSCOM. https://www.nasscom.in

Nisar, T. M., & Tufano, P. (2012). Venture Capital and Valuation: The Role of Narrative. *Harvard Business School Working Paper.*

North, D. C. (1990). *Institutions, institutional change and economic performance.* Cambridge University Press.

Prasad, E., & Jahan, S. (2020). Capital Flows, Narratives, and Market Corrections. *IMF Working Papers, 2020*(145). https://www.imf.org

PwC. (2022). *India venture capital insights. Pricewaterhouse*Coopers. https://www.pwc.in

Reserve Bank of India (RBI). (2024). *Financial stability report.* RBI. https://www.rbi.org.in

Saroy, R., Khobragade, A., Misra, R., Awasthy, S., & Dhal, S. (2023, January). *What drives startup fundraising in India?* Preprint. https://www.researchgate.net/publication/366904926

Schumpeter, J. A. (1942). *Capitalism, socialism and democracy.* Harper & Brothers.

Scott, W. R. (2014). *Institutions and organizations: Ideas, interests, and identities* (4th ed.). Sage Publications.

Shiller, R. J. (2000). *Irrational exuberance.* Princeton University Press.

Shiller, R. J. (2017). Narrative Economics. *American Economic Review, 107*(4), 967–1004. DOI:10.1257/aer.107.4.967

Taneja, H. K. (2024). Exploring the Success of Indian Unicorns: A Study of Growth Trends and Economic Impact. *International Journal of Science and Research Archive, 12*(2), 537–545. DOI:10.30574/ijsra.2024.12.2.1259

Yin, R. K. (2018). *Case study research and applications: Design and methods* (6th ed.). Sage Publications.

Utkarsh Gupta
B.A. Economics (Hons.)
3rd Year
Deshbandhu College
University of Delhi
INDIA

UIP and Capital Flow Dynamics: Bilateral Analysis of India and Singapore

ABSTRACT

This study examines the relationship between interest rate differentials, exchange rate movements, and capital flows between India and Singapore using monthly data from 2020-2025. The analysis tests the holding of Uncovered Interest Parity (UIP) condition and evaluates the effect of Exchange Rate Volatility on Foreign Direct Investment (FDI) inflows. This bilateral analysis provides an insight on global trade and economic activity in the post-pandemic era. OLS regression is employed after constructing the interest rate differential and a rolling measure of exchange rate volatility. Hypothesis testing shows a positive and statistically significant association between the interest rate differential and the INR/SGD rate, supporting the UIP hypothesis. In contrast, exchange rate volatility has no significant effect on FDI inflows, indicating that long-term investment decisions are largely insensitive to short-run currency fluctuations. These findings suggest that interest rate differentials influence exchange rate dynamics, whereas FDI is primarily driven by structural economic factors.

Keywords: *Uncovered Interest Parity, Exchange rate volatility, FDI, Interest rate differential, India–Singapore.*

Introduction

The interrelationship among exchange rate fluctuations, interest rates at home, and international capital flows is an essential part of open economy macroeconomic analysis and has very important implications for emerging markets such as India. The continued integration of India into the global financial system, together with its position as one of the most critical recipients of FDI and Portfolio Investment, makes the stability of the value of its currency, the Indian Rupee (INR), a key policy concern. The report examines the interrelationship of these variables through a comparative analysis between **India** and one of its key economic partners, **Singapore**, over the past five years-October 2020 to September 2025.

The growing integration of these two financial markets has strengthened the interdependence between interest rates, exchange rates, and international capital flows, making their interaction a central concern. The Uncovered Interest Parity (UIP) condition provides one of the most important theoretical frameworks for understanding this relationship. It posits that the expected change in the exchange rate between two countries should offset the nominal interest rate differential, ensuring equalized returns on comparable financial assets across borders.

In practice, however, empirical evidence on UIP has remained mixed, giving rise to the well-known forward premium puzzle and an extensive body of research examining the role of risk premia, expectations, market frictions, and monetary policy regimes in explaining deviations from parity. For emerging market economies, the dynamics of exchange rates and capital flows are particularly significant because external financing plays a crucial role in sustaining investment and growth. India, as one of the world's fastest-growing major economies and a leading recipient of foreign direct investment (FDI), presents a compelling case for examining these macro-financial linkages.

Singapore provides an ideal benchmark for a bilateral analysis with India. As a global financial hub with a highly open capital account and a monetary policy framework centred to exchange-rate, Singapore represents a deeply interconnected economy. It is consistently among the largest sources of FDI into India and plays a pivotal role in feeding portfolio investments into the Indian economy. The India–Singapore corridor therefore offers a unique setting to examine how monetary policy differentials translate into exchange rate movements and how different forms of capital flows respond to currency risk.

Literature Review

The relationship between interest rate differentials, exchange rates, and capital flows is anchored in the Uncovered Interest Parity (UIP) condition, which predicts that currencies with higher interest rates should depreciate to equalize expected returns. However, early empirical researches like **Fama (1984); Frankel & Rose (1995)** shows that there are systematic deviations from UIP, known as the forward premium puzzle, with some deviations being explained by errors related to expectations as well as market frictions. Subsequent research such as **Bekaert & Hodrick (2001)** cites that time-varying risk premia along with global risk factors affect currency returns and provide little insight into the underlying effects. From a macro-financial perspective, exchange rate movements are also linked to external balance sheet adjustments and global financial cycles, which weaken the insulation properties of domestic monetary policy **(Gourinchas & Rey, 2007; Rey, 2015)**.

Evidence from **Chinn & Meredith (2004)** further suggests that UIP holds more strongly at longer horizons and in stable macroeconomic environments, while exchange rate behaviour appears only weakly connected to fundamentals over short periods **(Engel 2016)**. The impact of exchange rate volatility on capital flows remains debated. Early

studies like **Cushman (1985)** find that currency risk discourages investment, whereas the irreversibility framework emphasizes that long-term FDI responds primarily to structural factors rather than short-term uncertainty **(Dixit & Pindyck, 1994)**.

The composition and behaviour of capital flows also play a crucial role in understanding their sensitivity to macroeconomic variables. **Froot and Stein (1991)** show that imperfect capital markets and relative wealth effects influence the pattern of foreign investment, while **Forbes & Warnock (2012)** document the episodic nature of capital flow surges and stops in response to global push factors. These findings imply that different forms of capital flows—particularly FDI and portfolio investment—respond differently to exchange rate movements and financial volatility.

Despite this extensive literature, relatively few studies provide recent bilateral evidence on the joint behaviour of interest rate differentials, exchange rates, and capital flows for emerging market–financial hub pairs using post-pandemic data. In particular, the **India–Singapore corridor** represents a unique case characterized by strong financial linkages and contrasting monetary policy frameworks. The current study brings together both sides of the equation by investigating both the UIP condition and how responsive FDI is to changes in exchange rate volatility; therefore, it contributes to the ongoing discussion regarding what factors affect and or determine international capital movements in an age of global financial integration.

Objectives of the Study

1. To empirically test the validity of the Uncovered Interest Parity (UIP) condition between India and Singapore using monthly data (2020-2025).
2. To examine whether interest rate differentials significantly predict exchange rate movements of the INR-SGD.
3. To analyse the impact of exchange rate volatility on different categories of capital flows, specially FDI and portfolio investment.
4. To evaluate whether long-term capital flows are insulated from short-term currency risks.

Hypotheses

I propose two ***hypotheses***:

1. The Uncovered Interest Parity (UIP) condition holds, implying that the interest rate differential between India and Singapore is a vital predictor of future depreciation or appreciation of the INR/SGD exchange rate.

   H_{01}: Interest rate differential does not significantly affect exchange rate changes.

   H_{11}: Interest rate differential significantly affects exchange rate changes (UIP holds).

2. Foreign Direct Investment is resistant to short-term volatility in exchange rates. We expect that FDI, due to its long-term determinants like market size and policy stability, would be statistically inelastic to the short-term fluctuations of the currency, unlike the more speculative portfolio investments.

   H_{02}: Exchange rate volatility does not affect FDI inflows.

   H_{12}: Exchange rate volatility negatively affects FDI inflows.

Research Methodology

This study employs a quantitative, time-series framework to analyze the monthly data from **October 2020 to September 2025**. The analytical process is divided into two parts: (1) the construction of key analytical variables and (2) the specification of econometric models to test our hypotheses. All statistical analysis was performed using the **R programming** language.

2.1. Variable Construction

To prepare the raw data for analysis, I derived several key variables:

1. **Interest Rate Differential (IRD_t):** This variable forms the basis of the Uncovered Interest Parity test. It is calculated as the simple spread between Indian and Singaporean short-term interest rates at time t:

$$IRD_t = i_{India,\,t} - i_{Singapore,\,t}$$

2. **Exchange Rate Volatility ($Volatility_t$):** To capture time-varying currency risk, I calculated volatility using a multi-step process. First, I computed the monthly logarithmic returns of the INR/SGD exchange rate, defined as $s_t = \ln(E_t) - \ln(E_{t-1})$, where E_t is the spot exchange rate. Volatility was then constructed as the **6-month rolling standard deviation** of these log returns. This method is standard in financial econometrics as it smooths out idiosyncratic daily noise and captures the prevailing medium-term risk environment. *Exchange rate volatility measured through rolling standard deviation of log returns is standard in financial econometrics (Engle, 1982).*

3. **Exchange Rate Change ($\triangle \mathbf{s}_{t+1}$):** To test the predictive power of the interest rate differential, I used the one-month-ahead logarithmic return of the exchange rate, $\mathbf{s}_{t+1}$, as our dependent variable in the UIP model.

4. **Hypothesis Testing:** To examine the proposed relationships, the study uses Ordinary Least Squares (OLS) regression, with statistical inference based on t-tests of the estimated coefficients to test the stated null hypotheses.

2.2. Econometric Models

We specified and estimated three Ordinary Least Squares (OLS) regression models to test our primary hypotheses.

Model 1: Testing Uncovered Interest Parity (UIP)

The UIP theory posits that the expected change in the exchange rate should, in an efficient market, equal the nominal interest rate differential. To test this, we estimate the standard UIP regression model:

$$\Delta s_{t+1} = \alpha + \beta\ (IRD_t) + \varepsilon_t \quad (1)$$

Where:

- $\Delta\ \mathbf{s}_{t+1}$ is the one-month-ahead logarithmic return of the INR/SGD exchange rate.
- α (alpha) is the intercept, representing any systematic exchange rate drift or risk premium.
- IRD_t is the interest rate differential at time *t*.
- β (beta) is the coefficient of interest. A statistically significant $\beta > 0$ would support the UIP hypothesis, implying that a higher domestic interest rate (a larger differential) is associated with an expected future depreciation of the home currency.
- εt is the stochastic error term.
- The regression specification follows the standard empirical UIP testing framework (Fama, 1984; Frankel & Rose, 1995).

Model 2 & 3: Testing Capital Flow Sensitivity to Volatility

To test our second hypothesis on the differential impact of risk on capital flows, we modeled FDI and Portfolio inflows as distinct functions of exchange rate volatility:

$$FDI\_Inflow_t = \alpha + \beta_1(Volatility_t) + \varepsilon_t \quad (2)$$

$$Portfolio\_Inflow_t = \alpha + \beta_2(Volatility_t) + \varepsilon_t \quad (3)$$

Where:

- FDI_Inflow_t and $Portfolio\_Inflow_t$ are the respective capital inflows (in USD Million) at time *t*.
- $Volatility_t$ is our 6-month rolling volatility measure at time *t*.
- β_1 and β_2 are the coefficients of interest. Our hypothesis is twofold:
  1. We expect β_1 to be statistically insignificant (i.e., not different from zero), which would confirm that FDI is **inelastic** to short-term volatility.
  2. We expect β_2 to be negative and statistically significant, confirming that "hot money" portfolio flows are **elastic** and negatively correlated with currency risk.
- Modeling FDI as a function of exchange rate volatility is consistent with investment irreversibility and exchange risk literature (Cushman, 1985; Goldberg & Kolstad, 1995)

Data Collection

1. Foreign Investment Flows/FDI from Singapore-India: RBI - Database on Indian Economy **(DBIE)**.
2. Interest Rate & Exchange Rate database of both countries: **DBIE (India); MAS (Singapore)**.
3. RBI's FDI Inflow Data as per International Practices tables: **DPIIT** FDI inflow data.
4. Macro + FDI summary for Singapore, including inflows & outflows: **UNCTAD** Country Profile (Singapore).
5. **Indiastat** "Month/Route-wise FDI Inflows (INR / USD)" series for India.

3. Results and Analysis

3.1 Descriptive Statistics

Table 1

Variable	Mean	Standard Deviation (SD)	Min	Max
INR/SGD Exchange Rate	58.97	2.69	54.37	63.33
India Short-Term Rate	5.14%	1.20	3.11	7.24
Singapore Short-Term Rate	1.96%	1.09	0.18	3.84
FDI Inflow (Avg. Monthly)	1725.00	290.75	1250	2200
FDI Outflow (Avg. Monthly)	298.25	56.23	42.82	436.01
India Inflation Rate	5.79%	1.00	4.09	7.47
Singapore Inflation Rate	2.32%	1.66	-0.12	5.28

Source: *R*

Key Insight: India consistently maintained a **significantly higher average interest rate** and **inflation rate** than Singapore. Furthermore, **FDI Inflow** (1725 USD Million) vastly exceeded FDI Outflow (298 USD Million), underscoring India's status as a net recipient of capital from the bilateral relationship.

3.2 Time Series Trends (Interpretation of Graphs)

- The bilateral exchange rate exhibits a steady upward trend from approximately ₹54 per SGD in late 2020 to ₹63 per SGD by mid-2025, indicating a gradual depreciation of the Indian Rupee relative to the Singapore Dollar. The depreciation path is smooth with limited short-term fluctuations, suggesting moderate but persistent downward pressure on the rupee.

- A rising INR/SGD rate implies that the rupee has lost value against the Singapore dollar over the study period. This trend aligns with India's relatively higher inflation and looser monetary conditions compared to Singapore. The sustained depreciation may reflect **interest rate differentials, inflationary pressures, and current account imbalances**, consistent with the **Purchasing Power Parity (PPP)** and **Uncovered Interest Parity (UIP)** frameworks.

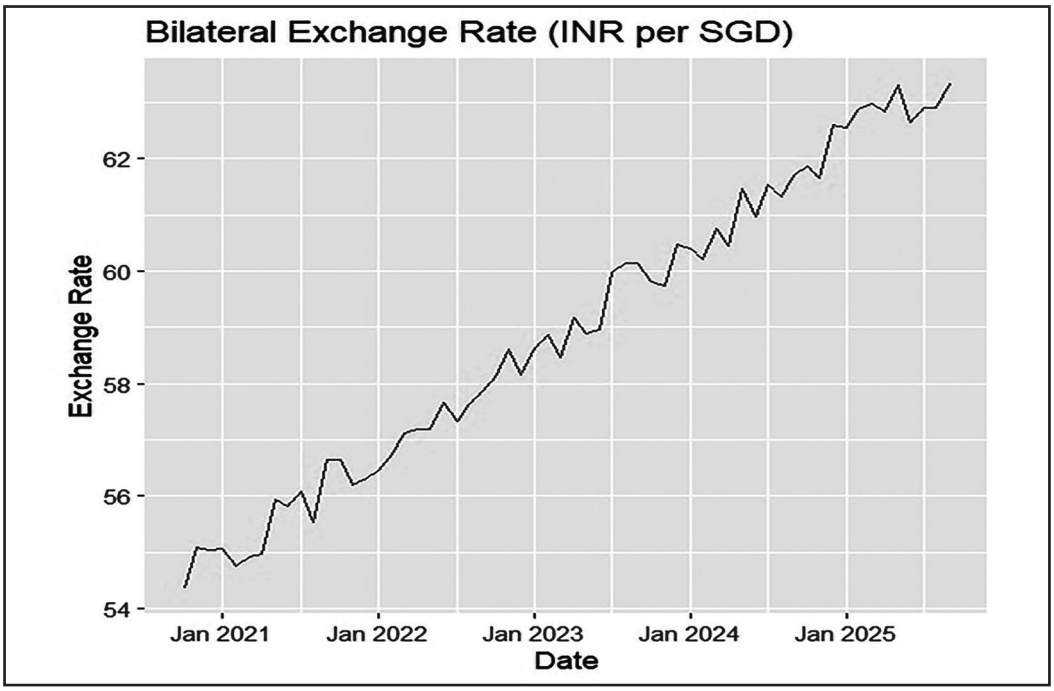


Fig. 1: Time Series Plot of Bilateral Exchange Rate

Source: *R plot*

- The 3-month rolling standard deviation of monthly exchange rate changes shows **periodic spikes in volatility**, with major peaks observed around **early 2022**, **mid-2023**, and **early 2024**. Volatility levels range from **0.3% to 1.5%**, indicating phases of increased exchange-rate uncertainty, likely corresponding to global monetary tightening and risk-off episodes.
- These volatility surges coincide with global economic disruptions, such as post-COVID policy shifts and tightening by major central banks. However, despite these fluctuations, India's FDI inflows remained resilient—demonstrating that **short-term volatility primarily affects speculative capital** rather than long-term investment. The findings imply that **macroeconomic stability and policy credibility** are more influential for sustained FDI inflows than temporary exchange-rate swings.

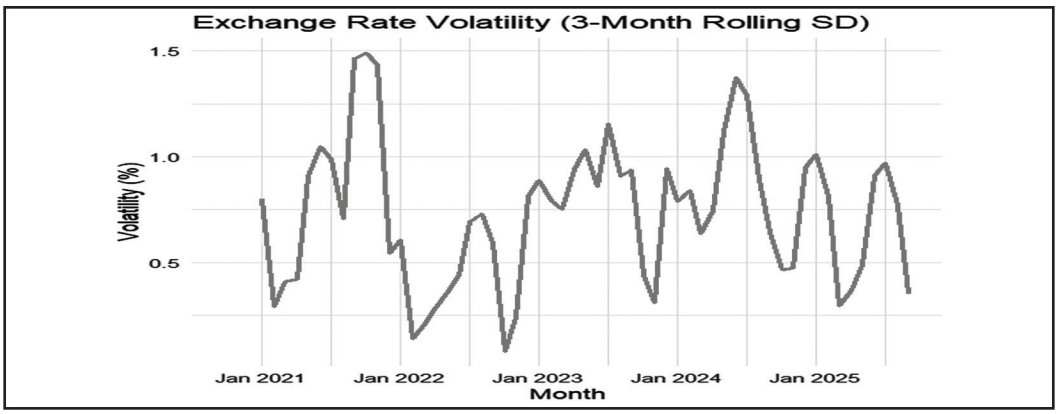


Fig.2: Time Series Plot of Exchange Rate Volatility

Source: *R plot*

- India's short-term interest rates increased sharply from 3.1% in 2020 to nearly 7.2% by 2025, while Singapore's rates rose modestly from 0.2% to around 3.8%. Throughout the sample, India maintained a consistent positive interest rate differential of approximately 3–4 percentage points.
- The widening differential reflects **divergent monetary policy stances**—with India tightening more aggressively to manage inflation, while Singapore maintained relatively low rates due to its exchange-rate-based policy framework. The persistent differential supports the later regression finding that **higher Indian rates coincide with rupee depreciation**, consistent with the **UIP condition** where currencies with higher interest rates are expected to depreciate to maintain parity in expected returns.

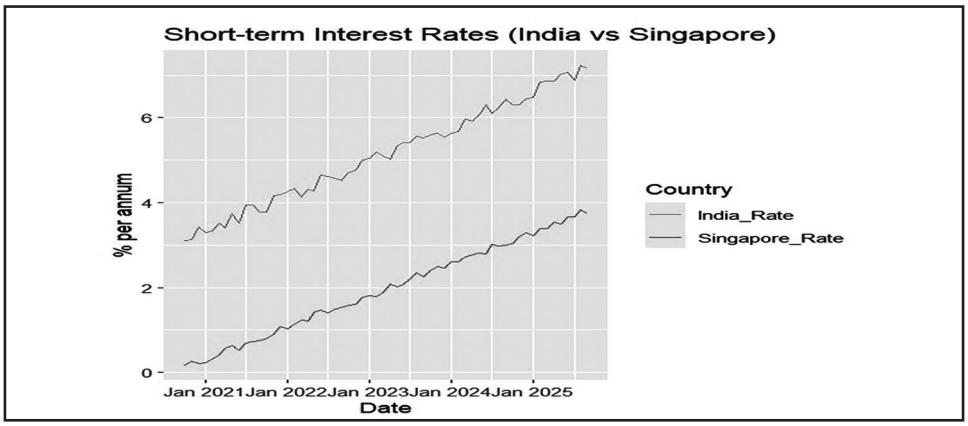


Fig. 3: Time Series Plot of Interest Rate Differential

Source: *R plot*

- **FDI Trend:** FDI Inflows showed a **strong, consistent underlying trend** of investment, with the monthly inflow figures staying above the minimum of 1250 USD Million for much of the period. This consistent level of investment aligns with the high correlation found in the analysis below and supports the idea of structural investment drivers.
- The widening differential reflects **divergent monetary policy stances**—with India tightening more aggressively to manage inflation, while Singapore maintained relatively low rates due to its exchange-rate-based policy framework. The persistent differential supports the later regression finding that **higher Indian rates coincide with rupee depreciation**, consistent with the **UIP condition** where currencies with higher interest rates are expected to depreciate to maintain parity in expected returns.

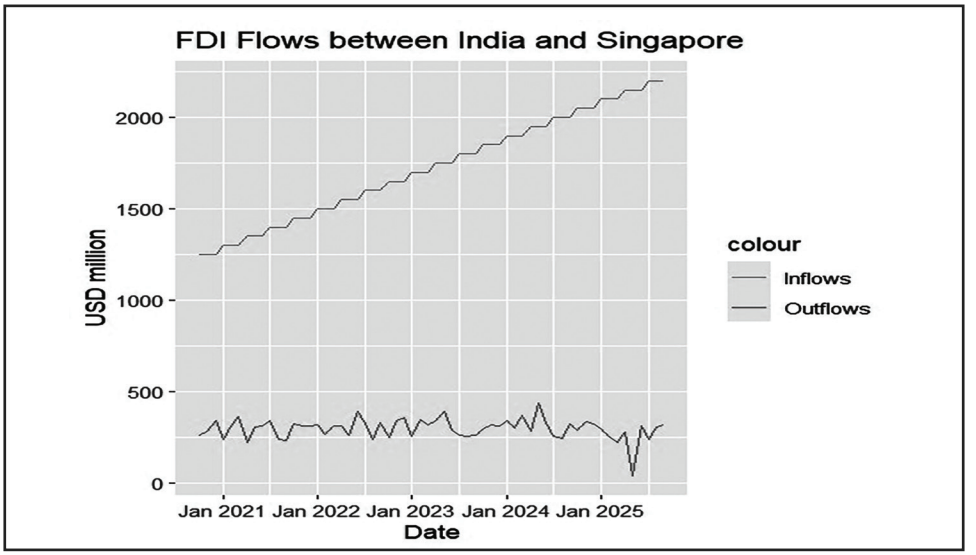


Fig. 4: Time Series Plot of FDI flow

Source: *R plot*

- Inflation in India remains consistently higher than in Singapore across the sample period. India's inflation fluctuates between **4% and 7%**, while Singapore's ranges from **0% to 4%**, with occasional brief deflationary episodes. Peaks in India's inflation correspond to domestic supply shocks and post-pandemic recovery pressures.
- Higher inflation in India reduces purchasing power and increases nominal interest rates, contributing to the observed interest rate differential. This pattern illustrates the **Fisher Effect**, where nominal rates adjust to expected inflation, and further underscores the role of **price stability in maintaining exchange rate competitiveness.**

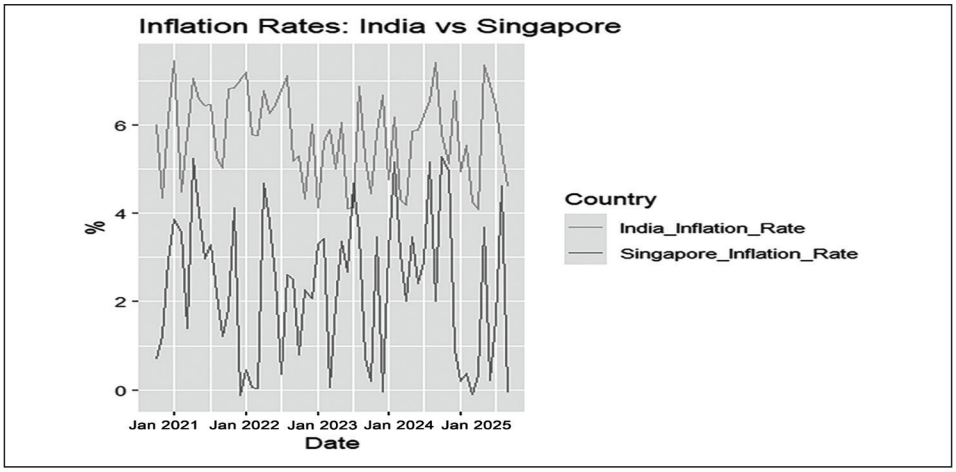


Fig. 5: Time Series Plot of Inflation Rates

Source: *R plot*

3.3 Correlation Analysis

Table 2

Variable Pair	Correlation Coefficient	Interpretation
India Rate vs. Interest Differential	0.689	Strong positive correlation.
Singapore Rate vs. Interest Differential	0.607	Strong positive correlation.
India Rate vs. FDI Inflow	0.993	Extremely high positive correlation.
Singapore Rate vs. FDI Inflow	0.998	Extremely high positive correlation
India Rate vs. FDI Outflow	−0.098	Weak negative correlation.
Singapore Rate vs. FDI Outflow	−0.097	Weak negative correlation.

Key Insights:

1. The strong positive correlation between short-term interest rates and FDI inflows for both countries (≈0.99) suggests a simultaneous upward trend—reflecting post-pandemic recovery and monetary tightening rather than direct causation.
2. The positive association between interest rate differentials and exchange rate levels supports the theoretical expectation under Uncovered Interest Parity (UIP)—higher Indian rates coincide with rupee depreciation.

3. Weak or negative correlations between interest rates and cross-country inflation indicate that inflation differentials have limited short-run influence on bilateral capital movement patterns.
4. The low correlation between FDI outflows and domestic interest rates implies FDI decisions are not immediately responsive to monetary changes, reaffirming their long-term nature.
5. Overall, correlations hint at macro-level co-movements but do not establish causation—necessitating further validation through regression analysis

3.4 Regression Analysis

3.4.1 Uncovered Interest Parity (UIP)

$$INR\_SGD = 26.406 + 10.232 \times IntDiff$$

Table 3

Parameter	Estimate (β)	Standard Error	t-value	P-value
Intercept (beta_0)	26.406	5.380	4.908	$7.83\ 10^{-6}$
Interest Rate Differential (beta_1)	10.232	1.689	6.060	$1.08\ 10^{-7}$
Model Fit: $R^2 = 0.3877$	Adjusted R^2 = 0.3771	F-statistic = 36.72	p(F) = 1.08e-07	

The coefficient of the interest rate differential is positive and statistically significant at the 1% level ($p < 0.001$). Therefore, the **null hypothesis H_{01}** (that interest rate differential does not significantly affect exchange rate changes) **is rejected**. The alternative hypothesis H_{11} is accepted, confirming that interest rate differential is a significant predictor of exchange rate movements between INR and SGD.

The positive and highly significant coefficient implies that when India's short-term interest rate rises relative to Singapore's, the rupee tends to depreciate against the Singapore dollar, consistent with the Uncovered Interest Parity (UIP) condition. This reflects investors demanding a higher expected return to compensate for future currency depreciation. The result reinforces the notion that interest rate differentials are key determinants of exchange rate behaviour, linking monetary policy divergence to currency movements between the two economies.

This result continues the debate on the "Forward Premium Puzzle" identified by **Eugene F. Fama (1984)**, where short horizon UIP failed for major currencies. In contrast,

the present finding aligns more closely with **Menzie Chinn and Guy Meredith (2004)**, who demonstrated that UIP holds better in the longer horizons and in emerging markets contexts. Similar support for UIP in emerging economies was observed by **Michael M. Flood and Andrew K. Rose (2002)**, who argued that institutional structures and capital controls make parity relationships more visible in such markets. The India–Singapore evidence therefore strengthens the argument that UIP may be more applicable in emerging market currency pairs than in advanced economy pairs.

3.4.2 FDI and Exchange Rate Volatility

$$FDI\_inflow = 1727.00 + 31.34 \times Exchange\_Volatility$$

Table 4

Variable	Estimate (β)	Standard Error	t-statistic	P-value
Intercept (beta_0)	1727.00	88.01	19.62	$1.66*10^{-26}$
Exchange Volatility	31.34	108.86	0.288	0.775
$R^2 = 0.0015$	Adjusted $R^2 = -0.016$	F = 0.083	p(F) = 0.775	

The coefficient of exchange rate volatility is statistically insignificant (p = 0.775). Therefore, the null hypothesis H_{02} (that exchange rate volatility does not affect FDI inflows) cannot be rejected. The evidence indicates that FDI inflows between India and Singapore are insensitive to short-term currency volatility.

The lack of statistical significance indicates that **FDI inflows are largely insensitive to short-term exchange rate volatility**. This aligns with economic theory, as FDI typically reflects **long-term strategic investment decisions** rather than speculative responses to short-term currency fluctuations. Hence, exchange rate volatility affects **portfolio and short-term capital flows more strongly than FDI**, emphasizing the relative stability and resilience of FDI in India–Singapore economic relations.

The insignificance of exchange rate volatility on FDI contrasts with the findings of **Linda Goldberg and Charles Kolstad (1995)**, who argued that exchange risk discourages foreign investment. However, the present result strongly supports the investment irreversibility argument of **Avinash Dixit and Robert Pindyck (1994)**, which suggests that long-term investors discount short-term volatility once capital commitment decisions are made.

3.5 Diagnostic Tests

3.5.1 Heteroscedasticity Diagnostics: Breusch-Pagan Test

Table 5

	BP	df	p-value
Model 1	0.021620	1	0.8831
Model 2	0.052789	1	0.8183

In both cases, the p-values are much greater than the conventional threshold of 0.05. This means the null hypothesis of homoscedasticity (constant error variance) cannot be rejected. As a result, there is no evidence of heteroscedasticity in either regression model, supporting the reliability of the estimated standard errors and subsequent statistical inference.

Stable error variance implies that the relationships observed between exchange rates, interest rate differentials, and capital flows are robust to potential variance distortions in the data. This enhances confidence in the reliability of the policy and risk-management implications drawn from the regression results. That is, changes in the independent variables do not disproportionately affect the volatility of capital flows or exchange rate movements, permitting standard regression-based policy analysis in this context.

The Breusch–Pagan test is used to ensure homoscedasticity of residuals (Breusch & Pagan, 1979).

3.6.2 Augmented Dickey-Fuller Test

Table 6

	Dickey-Fuller	Lag order	p-value
Model 1	-4.6562	3	0.01
Model 2	-1.4525e+14	3	0.01

The results for the INR/SGD exchange rate show a Dickey-Fuller statistic of −4.6562 with a p-value of 0.01, while the FDI inflows series yielded a Dickey-Fuller statistic of −1.4525e+14 with the same p-value. In both cases, the null hypothesis of a unit root-that is, non-stationarity-is strongly rejected at 1% significance, indicating that both the series of the exchange rate and FDI inflow are statistically stationary. The result justifies the use of these series in subsequent regression analyses without fear of spurious results.

The confirmation of stationarity through the Augmented Dickey–Fuller test and homoscedastic residuals through the Breusch–Pagan test validates the reliability of the regression results, ensuring that the hypothesis testing is free from spurious regression concerns as highlighted by Dickey and Fuller (1979) and Breusch and Pagan (1979).

4. Economic Interpretation and Theoretical Insights

4.1 Theoretical Connection: Uncovered Interest Parity (UIP)

The **positive and statistically significant coefficient (β_1 = 10.232)** in the UIP regression provides **strong empirical support for the Uncovered Interest Parity condition** in the India-Singapore context.

- **UIP Prediction:** The UIP theorem states that the difference in interest rates between two countries must be offset by the expected change in the exchange rate. For India, the higher interest rate must be offset by an expected depreciation of the INR.
- **Empirical Alignment:** The positive coefficient suggests that an increase in India's short-term interest rate relative to Singapore's leads to a proportional depreciation pressure on the INR against the SGD, consistent with the theoretical prediction of UIP. This indicates that investors and traders generally factor in interest rate differentials when forming exchange rate expectations for the India-Singapore currency pair.

This finding directly addresses the "Forward Premium Puzzle" documented by Fama (1984). Unlike many developed market studies where UIP fails in short horizons, the result here aligns with findings of Chinn & Meredith (2004) for emerging markets.

4.2 Impact of Exchange Rate Volatility on Capital Flows

The failure to reject the null hypothesis in the FDI-Volatility regression **(p = 0.775)** is a significant finding that **contradicts the conventional theory** of investment irreversibility.

- **Theoretical Divergence:** Standard capital flow theories suggest that high volatility increases the risk premium for long-term investors, thus deterring FDI (the "Irreversibility" effect).
- **Alternative Explanation:** The observed **inelasticity of FDI to short-term exchange rate volatility** suggests that:
  1. **Long-Term Focus:** FDI investors in India are primarily driven by **long-term structural growth** and market potential, which outweighs short-term currency risk.
  2. **Hedging:** Sophisticated multinational investors are likely **hedging their currency risk** exposures, effectively neutralizing the impact of volatility on their capital budgets.

The insignificance of volatility contrasts with Goldberg & Kolstad (1995) but supports the irreversibility argument of Dixit & Pindyck (1994), where long-term investors discount short-term uncertainty.

4.3 Interpretation of Interest Rate and FDI Correlation

The near-perfect positive correlation (~0.99) between interest rates and FDI Inflows challenges basic capital theory (which links rates more strongly to portfolio flows) and requires a **policy-based interpretation**.

- **Concurrence, Not Causality:** This relationship is most likely a case of **concurrence driven by a third macroeconomic factor: the Indian business cycle and RBI policy.** The RBI typically raises short-term rates (India Rate) during periods of high economic growth and robust demand. These same periods of strong growth and high investor confidence are precisely when long-term foreign investors commit capital via FDI.
- **Conclusion:** The high correlation indicates that capital (both domestic and foreign) is strongly attracted to the **favourable economic fundamentals** signalled by a tightening monetary policy during a boom, rather than being attracted solely by the interest rate return itself.

4.4 Implications for India's Economic Policy

1. **Monetary Policy and the Exchange Rate:** The RBI must acknowledge that its short-term interest rate policy is fundamentally linked to exchange rate expectations (due to UIP). Policy decisions aimed at domestic stability will be immediately factored into the INR's expected depreciation or appreciation against the SGD, requiring clear communication to the market.
2. **Capital Flow Management:** Policy efforts should continue to focus on long-term macroeconomic stability and improving the business environment to attract and sustain FDI. The resilience of FDI to volatility is a major strength for India, indicating that its capital inflows are less sensitive to speculative swings.

5. Conclusion

5.1 Summary of Key Findings

1. **UIP Holds:** The interest rate differential is proven to be a statistically significant predictor of the INR/SGD exchange rate, providing strong support for the Uncovered Interest Parity condition. [H_{01} is rejected]
2. **FDI Resilience:** The FDI Inflows are statistically inelastic to short-term exchange rate volatility, suggesting FDI is driven by long-term structural factors and hedging practices, not short-term currency risk. [H_{02} is not rejected]

5.2 Results and Interpretations

This study examined the relationship between interest rate differentials, exchange rate movements, and capital flows in the India–Singapore corridor. The empirical findings

provide strong support for the **Uncovered Interest Parity (UIP)** condition by demonstrating that interest rate differentials are a strong predictor of the bilateral exchange rate. This is consistent with long-horizon evidence **(Chinn & Meredith, 2004)**.

In contrast, the analysis finds no statistically significant impact of exchange rate volatility on foreign direct investment inflows. This indicates that **Foreign Direct Investments (FDI)** are primarily driven by structural long-term factors (i.e. macroeconomic stability, market potential and institutional credibility), and that changes in exchange rates are not likely to have an immediate effect on FDI inflows, indicating that FDI is much more stable than would be suggested by short-term fluctuations in currency values. This supports the irreversibility framework **(Dixit & Pindyck, 1994)** rather than exchange-risk discouragement **(Cushman, 1985)**.

5.3 Economic Insight

The paper's analysis of UIP and capital flows between India and Singapore reveals that interest rate differentials drive INR depreciation against the SGD, while FDI remains resilient to short-term exchange rate volatility.

Over the past year, the INR has depreciated against the SGD by about 11.1%, rising from around 64.68 on February 16, 2025, to 71.89 as of February 16, 2026. India's repo rate stands at 5.25%, far above Singapore's SORA at around 1.0%, maintaining a positive differential of roughly 4.25% that drives INR depreciation per UIP principles from the paper.

FDI inflows from Singapore to India rose to $14.94 billion in FY 2024-25 from $11.77 billion in FY 2023-24, a ~27% (source: ibef) increase, maintaining Singapore as the top source. Net FDI trends remain positive but pressured by repatriations; this resilience aligns with the paper's finding that FDI is insensitive to exchange rate volatility.

References

Bekaert, G., & Hodrick, R. J. (2001). Expectations Hypotheses Tests. *The Journal of Finance, 56*(4), 1357–1394. DOI: doi.org/10.1111/0022-1082.00370.

Breusch, T. S., & Pagan, A. R. (1979). A Simple Test for Heteroscedasticity and Random Coefficient Variation. *Econometrica, 47*(5), 1287–1294. DOI: doi.org/10.2307/1911963.

Chinn, M. D., & Meredith, G. (2004). Monetary Policy and Long-Horizon Uncovered Interest Parity. *IMF Staff Papers, 51*(3), 409–430. DOI: doi.org/10.2307/30035964.

Cushman, D. O. (1985). Real Exchange Rate Risk, Expectations, and the Level of Direct Investment. *The Review of Economics and Statistics, 67*(2), 297–308. DOI: doi.org/10.2307/1924722.

Dickey, D. A., & Fuller, W. A. (1979). Distribution of the Estimators for Autoregressive Time Series with a Unit Root. *Journal of the American Statistical Association, 74*(366), 427–431. DOI: doi.org/10.1080/01621459.1979.10482531.

Dixit, A. K., & Pindyck, R. S. (1994). *Investment Under Uncertainty*. Princeton University Press.

Engel, C. (2016). Exchange Rates, Interest Rates, and the Risk Premium. *American Economic Review, 106*(2), 436–474. DOI: doi.org/10.1257/aer.20140736.

Engle, R. F. (1982). Autoregressive Conditional Heteroscedasticity with Estimates of the Variance of United Kingdom Inflation. *Econometrica, 50*(4), 987–1007. DOI: doi.org/10.2307/1912773.

Fama, E. F. (1984). Forward and Spot Exchange Rates. *Journal of Monetary Economics, 14*(3), 319–338. DOI: doi.org/10.1016/0304-3932(84)90046-1.

Forbes, K. J., & Warnock, F. E. (2012). Capital Flow Waves: Surges, Stops, Flight, and Retrenchment. *Journal of International Economics, 88*(2), 235–251. DOI: doi.org/10.1016/j.jinteco.2012.03.006.

Frankel, J. A., & Rose, A. K. (1995). Empirical Research on Nominal Exchange Rates. In G. M. Grossman & K. Rogoff (Eds.), *Handbook of International Economics* (Vol. 3, pp. 1689–1729). Elsevier. DOI: doi.org/10.1016/S1573-4404(05)80033-0.

Froot, K. A., & Stein, J. C. (1991). Exchange Rates and Foreign Direct Investment: An Imperfect Capital Markets Approach. *The Quarterly Journal of Economics, 106*(4), 1191–1217. DOI: doi.org/10.2307/2937961.

Gourinchas, P.-O., & Rey, H. (2007). International Financial Adjustment. *Journal of Political Economy, 115*(4), 665–703. DOI: doi.org/10.1086/521966.

Goldberg, L. S., & Kolstad, C. D. (1995). Foreign Direct Investment, Exchange Rate Variability and Demand Uncertainty. *International Economic Review, 36*(4), 855–873. DOI: doi.org/10.2307/2527262.

Rey, H. (2015). Dilemma Not Trilemma: The Global Financial Cycle and Monetary Policy Independence. *NBER Working Paper No. 21162*. DOI: doi.org/10.3386/w21162.

Economic Resilience and Crisis in Latin America: Comparative Analysis of Chile, Brazil and Argentina

Anvi Mansharamani
B.A. Economics (Hons.)
2nd Year
Shri Ram College of Commerce
University of Delhi
INDIA

Diksha Debnath
B.A. Economics (Hons.)
2nd Year
Shri Ram College of Commerce
University of Delhi
INDIA

Pratham Grover
B.A. Economics (Hons.)
2nd Year
Shri Ram College of Commerce
University of Delhi
INDIA

ABSTRACT

The Latin American debt crisis was one of the major economic crises that took place in the 1980s. Latin American countries had taken excessive loans during the 1970s and 1980s. This made them heavily reliant on short-term external debt. In the long run, the massive debt led to defaults by Latin American Countries. Through this paper, we examined the impact of the crisis on 3 major economies - Chile, Brazil and Argentina. The objective was to draw an analysis of their responses to the crisis and conduct a comparative study of the 3 countries. We also looked into Chile's GDP growth rate, since it is proclaimed to have the best response to the crisis among the 3 countries, and applied regression to analyse which factors helped the Chilean government overcome the crisis. According to our results, Chile has performed comparatively best in all parameters by introducing the banking sector and debt restructuring, debt renegotiation, and export-led growth. The paper also highlighted how a reduction in unemployment and a focus on the current account surplus help in managing an economic crisis.

Keywords: *Latin American Debt Crisis, Chile-Brazil-Argentina Comparison, Macroeconomic Stability, External Debt, GDP Growth.*

Introduction

The Latin American Debt Crisis of the 1980s pivoted the social, political and economic landscape of the region. This was a period marked by huge debts and defaults, and demonstrated the domino effect that occurs when nations are not successful in meeting their financial commitments. This crisis not only significantly impacted political stability and led to heavy economic mismanagement in the region but also affected the global economy as a whole.

The downfall was the confluence of a number of factors from the 1970s, which included the effects of oil price shocks, which worked in favour of the exporting nations, much to the chagrin of the Latin American economy, which was commodity-based. The

region's borrowing from international creditors skyrocketed from a modest $29 billion to an overwhelming $327 billion in a little over a decade. These borrowings formed the basis for the inevitable crash that followed.

In this paper, we aim to analyse the paths followed by three nations: Chile, Brazil and Argentina in this crisis. Nations faced a similar set of problems but with varying response mechanisms. Chile, a country that showed resilience and did not cower under the crisis, got back on its feet rapidly through a set of able and strong reforms. On the other hand, a country like Brazil faced the brunt of the crisis and took the longer road to recovery. Ultimately, Argentina was the worst hit with the crisis relapsing at every hope of a long-term recovery. Their starkly different yet similar journeys form the basis for the analysis of their social, political, and economic indicators.

Beginning the research, first, we provide the background for each of the countries, related to the economic journey that they have experienced so far, and major developments. After that, we compare all the countries based on five parameters- debt sustainability, fiscal health, financial sector stability, growth and development, and institutional stability. The data from 1980 to 2000 is used for the same, for all parameters and their factors.

Argentina

Argentina is also known as the nation of paradox. This arises from the fact that it was one of the earliest nations to achieve economic development, and it also witnessed an extreme reversal. Argentina was known to be one of the most stable nations till the Great Depression hit, post which there was no looking back. The worst period began in the early 1980s, when the economy deteriorated significantly with the first debt crisis in full swing.

This marked the beginning of a period where the growth of real output stagnated, financial markets collapsed, and prices rose as the currency steadily depreciated. In addition to this, capital investment slowly started leaving the country and public sector enterprises gradually began failing, running into huge deficits. This instability of the 80s formed the basis for what was to come in the future, with Argentina running into a deeper peril with the debt crisis. With partial stability over the next decade, with the help of the 'Convertibility Plan' bringing relief, greater trouble knocked on the country's door.

In December 2001, Argentina further plunged into a devastating economic crisis with 'a partial deposit freeze, a partial default on public debt, and an abandonment of the fixed exchange rate'. This not only made the economy unstable again but also shook all the components within, leading to socio-political disharmony, a fiscal imbalance and a fall in human development factors. This collapse questioned the nation's deep-rooted alliance with the IMF and the reversal on the road to recovery.

Chile

By 1925, Chile had already been set up as a fully constitutionalised democratic country under the Presidential Republic, and thus had a strong political foundation with a stable government. From 1960 to 1973, the per capita GDP growth was around 2%, average inflation stood at around 30%, and fiscal deficits were well managed, being around 2% of GDP. In 1970, Salvador Allende came to power and became the World's first democratically elected Marxist President. His socialist policies led to a redistribution of land, nationalisation of copper mines, industries and banks and increased price controls.

While his policies were controversial, they received initial fame. However, such social programmes and nationalisation were fueled by excessive spending. Due to this, Chile already ran into a huge crisis, hyperinflation. In 1974, the inflation rate was at 504.74%, increasing significantly from 20.05% in 1971. After this, on September 11, 1973, military general Augusto Pinochet led a military coup, overthrowing the government and starting a dictatorship which lasted till 1990.

Pinochet brought in economic reforms such as privatisation, deregulation, liberalisation and currency devaluation. These reforms were successful, and the Chilean economy started to rebound by 1978. However, as the economy opened up to the World, Chile's debt increased to US$17.2 billion, one of the highest debts per capita in the World. However, through a mix of policies including bank bailouts, debt restructuring through debt-to-equity swaps, promotion of agricultural exports, decreasing government spending, and increasing taxes, Chile was able to pay off a major portion of this debt, amounting to US$10.5 billion by 1991.

Brazil

Brazil's economic trajectory can be seen as a journey of unfulfilled potential. The nation has achieved rapid industrialisation, but cycles of crisis and stagnation have regressed the trajectory of growth. In the 1960s and 1970s, its state-led economy experienced high levels of growth under the leadership of Getúlio Vargas. But their path towards development was not a stable one. High levels of foreign borrowing, inflationary financing, and overreliance on state monopolies culminated in the 1980s debt crisis, which was later named as "The Lost Decade", which was marked by was a severe economic downturn marked by massive external debt, soaring inflation (leading to hyperinflation later), stagnant growth, and rising poverty, stemming from heavy borrowing during the preceding "economic miracle" and global economic shifts, resulting in austerity measures and increased social hardship. The 1994 Real Plan stabilised prices, but with high interest rates, which further propelled financial vulnerability.

By the start of the century, the government increased its spending on social programs, leading to a temporary period of prosperity. But this did not help in addressing the deep-rooted structural problems that the economy faced in terms of overdependence on raw material exports, low industrial competitiveness, and rampant corruption.

Given the Brazilian economy's dependence on commodities, in 2014, when its prices fell in a global commodity price shock, it experienced the worst recession of the century. The economy experienced high volatility, resulting in Rousseff's impeachment and Bolsonaro's administration. Despite the country's agricultural might and natural resources, it continues to experience low economic growth, with a high GDP-to-debt ratio and rampant inequality. Due to political fragmentation, any possible changes that may have been adopted to help the economy are stalled, hampering the country's chance of achieving its true potential.

Literature Review

The World Bank's website serves as a key repository of resources for this research. Data relevant to each country during the period of 1980-2000 is accessed from this website and utilised. It also provides information on country-specific profiles. Through its research work, it helps in building discourse and structuring analysis with real-time data.

In the article *"Brazil in the 21st Century: A Difficult Path"* by Leonid M. Grigoryev and Marina F. Starodubtseva, published in the *Russian Journal of Economics* (2021), the economic and social trajectory of Brazil is discussed. A main point of its analysis has been that although Brazil experienced many challenges over the years, it has made remarkable progress in terms of social and democratic growth. Social reforms have changed the face of the middle classes but have also provided us with an alternate pathway that can be adopted as many countries make similar journeys in their nations' development.

In Pedro Pou's article, *"Argentina's Structural Reforms of the 1990s,"* published in the IMF's *Finance & Development* (2000), the economic journey of Argentina post the hyperinflation crisis of 1980-1990 is examined. Key changes of this period include the Convertibility plan, where the Peso was pegged to the US dollar. This period also saw major restructuring in the tax regime, liberalisation, privatisation of public enterprises, etc.

These actions, retrospectively, helped in ensuring that the economy stabilised and grew. But it didn't solve many problems, such as labour market rigidities and persistent unemployment. The article overall discussed the difficulties that are faced in implementing structural changes in developing economies.

In the article "Latin American Countries Stuck in the Field of Development Theory: A Case Study of Chile" (2024), the growth trajectory of Chile is examined. The paper starts its analysis with the neoliberal reforms adopted by the economy in the 1970s. These reforms included trade liberalisation, privatisation, deregulation, and fiscal discipline. In their post-implementation analysis, it can be said that although these reforms achieved their purpose in terms of economic stability and growth, they also triggered other problems, such as income inequality, a weaker social safety net, and entrenching structural differences.

The author, from Chile's example, draws a larger conclusion for the continent, stating a wider trend in this continent where development is only envisioned in terms of market efficiency and GDP growth without factoring in social equity or human development. Most mainstream development blueprints don't focus on their assessment of an economy from a socio-political perspective. Mostly, the definition of development doesn't include social equality or justice. In conclusion, the need for context-specific and dynamic development vision is emphasised, with the end goal of sustainability and social equity.

The UNDP Human Development Reports Data Centre provides multi-faceted data on human development across a variety of countries across multiple years. It provides visualisations and metrics to assess human development against many parameters such as health, income, and education.

Objective

Through this report, we aim to:

- To analyse the causes of the Latin American Crisis.
- To comparatively analyse three different economies- Argentina, Brazil and Chile and the economic policies that paved the way to the crisis.
- Testing the usage of the Phillips curve in high inflation situations.
- Regression analysis to identify the most effective policy in crisis situations

Research Methodology

We have compared all the countries based on five parameters- debt sustainability, fiscal health, financial sector stability, growth and development, and institutional stability from 1980 to 2000. Under debt sustainability, we factor in the debt-to-GDP ratio and short-term debt/total debt. For analysing fiscal health, we compare the current accounts of the three countries over a span of twenty years, highlighting the volatility. The inflation rate and unemployment rate are used to highlight financial sector stability by taking a peek into their relationship. This analysis is undertaken by tracing three graphs, devising a fluctuating relationship between the two factors disproving the Phillips Curve in the context of the Latin American Crisis and highlighting new aspects. To understand the growth & development trajectories for these three economies, we account for GDP growth rate, GDP per Capita (USD), and Human Development Index. Lastly, to understand institutional stability, we draw a comparison using the Gini Index and Corruption Competition Index.

Parameter Analysis

GDP and Debt Parameters

Table 1: Debt and GDP Indicators in Argentina, Brazil, Chile (1980-2000)

Year	Chile			Brazil			Argentina		
	GDP (US$ B)	Debt to GDP	Short-term debt to total debt	GDP (US$ B)	Debt to GDP	Short-term debt to total debt	GDP (US$ B)	Debt to GDP	Short-term debt to total debt
1980	29.04	0.381680441	0.250541321	237.39	0.30321412	0.188	76.96	0.3549896	0.38
1981	34.51	0.450362214	0.269913782	258.02	0.317456011	0.187	78.68	0.45513472	0.361
1982	19.53	0.878289811	0.233078762	271.31	0.348052044	0.185	84.31	0.51939272	0.377
1983	20.36	0.856139489	0.177098273	189.66	0.522092165	0.144	103.98	0.44345066	0.193
1984	19.67	0.959684799	0.122900885	188.34	0.554104279	0.106	116.92	0.41960315	0.218
1985	17.72	1.097291196	0.11386546	210.88	0.493977618	0.09	88.15	0.58037436	0.132
1986	18.90	1.031798942	0.102405005	256.48	0.427518715	0.086	105.87	0.49768584	0.084
1987	22.25	0.863280899	0.129945856	283.06	0.425634141	0.111	108.81	0.53965628	0.06
1988	26.04	0.67734255	0.165324867	307.88	0.383396128	0.089	126.89	0.46512728	0.097
1989	29.94	0.542818971	0.228710313	412.99	0.27828761	0.157	76.63	0.85527861	0.13
1990	33.14	0.525799638	0.249411765	464.99	0.258736747	0.197	141.35	0.44202335	0.167

(Table 1 Contd....)

(...Contd. Table 1)

1991	37.85	0.432338177	0.201784405	342.53	0.354246343	0.217	189.72	0.34614168	0.206
1992	45.95	0.396996736	0.253974345	328.19	0.394710381	0.186	228.78	0.2998951	0.236
1993	49.29	0.389247312	0.252996977	368.29	0.392625377	0.217	236.74	0.27321112	0.134
1994	57.00	0.376807018	0.253794581	525.37	0.291032986	0.21	257.44	0.29167961	0.095
1995	73.44	0.295969499	0.237992271	769.33	0.20922101	0.194	258.03	0.38278495	0.216
1996	78.58	0.292428099	0.193742112	850.43	0.21376245	0.198	272.15	0.40841448	0.211
1997	85.74	0.311422906	0.134599684	883.21	0.225291833	0.175	292.86	0.43792256	0.249
1998	81.99	0.386522747	0.131015115	863.71	0.280186637	0.123	298.95	0.4733233	0.219
1999	75.58	0.452064038	0.115462288	599.64	0.408761924	0.119	283.52	0.53579994	0.194
2000	78.34	0.470219556	0.20273095	655.45	0.369990083	0.128	284.2	0.52800844	0.189

Source: *Statista*

The given data indicated the performance of Chile, Brazil, and Argentina, with respect to their GDP growth and debt management from 1980 to 2000. Chile had a stable economic growth with its GDP rising from US$29.04 billion in 1980 to US$78 billion in 2000. Its growth peaked after 1990 with significant boosts. Brazil showed an inconsistent growth trend, with GDP increasing in some years and falling in others. Argentina also showed a similar growth trend, but had relatively higher GDP growth than Brazil. Overall, from 1980 to 2000, Chile grew at a CAGR of 5.08%. This number stood at 5.2% and 6.75% respectively. However, if you look at GDP growth from 1990 to 2000, Chile has grown at a rate of 8.98%, whereas Brazil and Argentina have grown at a rate of 3.49% and 7.23%. This shows that Chile has been more effective in bringing its economy back on track after the Latin American debt crisis in terms of GDP growth.

The debt-to-GDP ratio of Chile had become higher than 1 in 1985 and 1986. This depicts the poor financial condition at that time in the country. However, the ratio improved significantly in the later years, dropping to 0.29 in 1995. Chile was also able to pay off US$ 10.5 billion out of its loan of US$ 17.2 billion by 1991. Brazil had the best debt-to-GDP ratios, which remained consistently lower than Chile and Argentina through these years. Even in 2000, Argentina had a debt-to-GDP ratio of 0.52, Chile stood at 0.47, and Brazil was at 0.36. Thus, Brazil performed much better when it came to managing debt.

The short-term debt-to-total debt figures for all three countries were under control. While it became a little high during 1981 and 1982, with Argentina standing at 36-37%, Brazil at 24%, and Chile at 23%, it was all effectively tackled, and a shift towards long-term debt was observed. By 2000, these figures reduced to 18.9%, 12.8%, and 20.27%. Overall, all three countries stopped short-term debt from becoming a major issue for their economy.

Financial Stability

Table 2: Unemployment and Inflation Rates in Argentina, Brazil, Chile (1981-2001)

Year	Unemployment Rates (1981-2001)			Inflation Rates (1981-2001)		
	Brazil	Argentina	Chile	Brazil	Argentina	Chile
1981	4.30%	4.50%	11.30%	101.70%	104.48%	19.70%
1982	3.90%	4.80%	19.60%	100.50%	164.78%	9.90%
1983	4.90%	4.20%	14.70%	135.00%	343.81%	27.30%
1984	4.30%	3.80%	13.90%	192.10%	626.72%	19.90%
1985	3.40%	5.30%	12.20%	226.00%	672.18%	30.70%
1986	2.40%	4.40%	8.70%	147.10%	90.10%	19.50%
1987	3.60%	5.30%	7.90%	226.70%	131.33%	19.90%

(Table 2 Contd....)

(...Contd. Table 2)

1988	3.80%	6.00%	6.30%	629.10%	342.96%	14.70%
1989	3.00%	7.30%	5.30%	1430%	3079.81%	17.00%
1990	3.70%	7.30%	5.70%	2950%	2313.96%	26.00%
1991	6.90%	5.80%	8.10%	432.80%	171.67%	21.80%
1992	11.58%	6.70%	4.40%	951.60%	24.90%	15.50%
1993	6.03%	10.10%	4.49%	1930%	10.61%	12.70%
1994	6.10%	11.76%	5.87%	2080%	4.18%	11.50%
1995	6.42%	18.80%	4.70%	66.01%	3.38%	8.20%
1996	7.25%	17.11%	7.41%	15.76%	0.16%	7.40%
1997	9.00%	14.82%	7.14%	6.93%	0.53%	6.10%
1998	10.15%	12.65%	7.31%	3.20%	0.90%	5.10%
1999	11.12%	14.05%	11.16%	4.86%	-1.20%	3.30%
2000	10.89%	15.00%	10.49%	7.04%	-0.90%	3.80%
2001	10.65%	17.32%	10.39%	6.84%	-1.10%	3.60%

Source: *Statista*

A crisis such as the Latin American Debt Crisis signifies the contrary of 'stability', specifically in financial and economic terms, where it all went into disarray. The three nations, Chile, Brazil, and Argentina, had contradictory trajectories, but one thing that bound them all together was instability. Here, we analyse the two crucial parameters for the fiscal prudence of states: inflation and unemployment, whose relationship has been fluctuating in economies over the years.

Unemployment, also known as the lingering sign of a cracking economy, in the three countries that we have analysed, shows a clear relationship with the status of fiscal prudence in the country. Taking the case of Argentina, the worst hit of the debt crisis, the unemployment steadily rises from 4.5% to 17.32% over two decades, signifying clear economic doom. On the other hand, for Brazil, the rates also rise significantly from 4.3% to 10.65%, showing fluctuations in the years of deep crisis. Chile, an economy with steady recovery, also had frequently fluctuating unemployment patterns, showing a paradox by falling from 11.30% to 10.39%, tying the three nations together.

Unlike unemployment, the inflation rates of the three countries show a deep contrast, with Argentina reaching its peak of 3079.81% in 1989 and similarly for Brazil, which reached 2950% in 1988, showing deep signs of economic turmoil during the crisis. In these terms, Chile stood out in controlling its inflation rates to a maximum bound of 19.60% in the initial phase of the crisis.

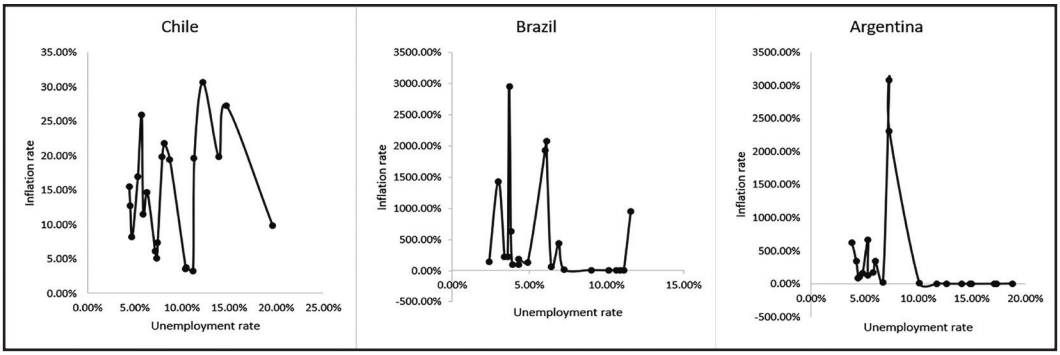


Fig. 1: Graphs Tracing the Relationship between Inflation and Unemployment in Chile, Brazil and Argentina (1981-2001)

Ultimately, on devising a relationship between inflation and unemployment (refer to figures), it can be seen that all three nations have a similarity in tracing the patterns. This lies in disproving the Phillips Curve, which is an economic concept showing the relationship between unemployment and inflation. By breaking the typical pattern of the Phillips curve through erratic patterns, these nations prove that the Phillips Curve's approach towards the modern crisis cannot be modelled.

Instead of an inverse relationship throughout, there was a fluctuating connection between inflation and unemployment due to the complex interconnectedness of geopolitical issues with economic factors; hence, when crises emerge, economic concepts are bound to fail.

Fiscal Balance

Table 3: Current Account Balance in Argentina, Brazil, Chile (1981–2001)

Current Account Balance (1981–2001)			
Year	**Brazil**	**Argentina**	**Chile**
1981	-4.46%	-5.99%	-14.50%
1982	-5.79%	-2.79%	-9.47%
1983	-3.36%	-2.34%	-5.65%
1984	0.02%	-3.15%	-10.98%
1985	-0.13%	-1.08%	-8.57%
1986	-1.98%	-2.58%	-6.72%
1987	-0.49%	-3.81%	-3.52%
1988	1.26%	-1.25%	-0.94%

(Table 3 Contd....)

(...Contd. Table 3)

1989	0.24%	-1.70%	-2.43%
1990	-0.83%	3.22%	-1.54%
1991	-0.24%	-0.34%	-0.27%
1992	1.52%	-2.42%	-2.08%
1993	0.00%	-3.47%	-5.18%
1994	-0.21%	-4.26%	-2.78%
1995	-2.36%	-1.98%	-1.84%
1996	-2.73%	-2.49%	-3.92%
1997	-3.47%	-4.14%	-4.27%
1998	-4.05%	-4.84%	-4.78%
1999	-4.47%	-4.21%	0.13%
2000	-4.05%	-3.16	-1.15%
2001	-4.44%	-1.41	-1.54%

Source: *Statista*

The current account in the early 1980s was collapsing for all three countries, with Chile being the worst hit, making its path to recovery even more unique. The factors these nations shared in common to have such a detrimental current account deficit include, but are not limited to, heavy borrowing in the region during the 1970s and the United States' interest spike, causing the debt service ratio to soar, even further heightening the interest payments.

Argentina, for instance, had a current account deficit of 5.99% at the beginning of the debt crisis, which stabilised towards the middle with reforms and aid from international bodies till 1990. The reversal of this recovery came in the 1990s, when the economy succumbed to the debt crisis, putting the support of international organisations in question, with imports soaring. Towards the late 1990s, the economy had taken a plunge into the crisis again with a huge trade deficit, which supplemented the current account deficit. Ultimately, the current account deficit stood at 1.41% in 2001.

Chile, initially being the worst-affected economy out of the three, took a different path with internal reforms, which initially led to a banking collapse but eventually put the country on the road to gradual recovery. While the economy continued in a current account deficit due to the ghosts of the past alongside the reforms of the present, the value of the same was controlled (under 5% after 1986). By adopting the path of resilience and stability, Chile was swept by the mild dwindles that came its way.

Brazil is an economy that did not get swept away as badly as Argentina, but also recovered a notch slower than Chile. A notable achievement during this period was the Real Plan in 1994, which limited government spending, introduced a new currency and brought in a

series of policy measures. As seen by the Current Account Deficit rates, the nation shifted its approach from stabilisation to rebuilding.

Ultimately, while fraught with similar situations, the three nations' different approaches and adaptability made their outcomes different. Chile's flexibility in reforms to initial shocks made it adaptable, while on the other hand, Argentina remained rigid, leading to peril. Brazil's way was rocky and slow, but ultimately it traversed through standing in the middle of two extreme nations.

Growth and Development (GDP Growth Rate, GDP per Capita, HDI)

Table 4: GDP Growth Rates in Argentina, Brazil, Chile (1981–2001)

Year	GDP Growth (in%)		
	Brazil	Chile	Argentina
1980	9.2	8	1.5
1981	-4.2	6.5	-5.2
1982	0.8	-11	-0.7
1983	-2.9	-5	4.3
1984	5.4	4.1	1.6
1985	7.9	4	-5.2
1986	7.5	5.4	6.2
1987	3.5	6.5	2.7
1988	-0.3	7.3	-1.1
1989	3.2	9.9	-7.2
1990	-4.4	3.3	-2.5
1991	1	7.8	9.1
1992	-0.5	11.2	7.9
1993	4.9	6.6	8.2
1994	5.9	5	5.8
1995	4.2	8.9	-2.8
1996	2.2	6.8	5.5
1997	3.4	7.4	8.1
1998	0.3	4.2	3.9
1999	0.5	-0.3	-3.4
2000	4.4	5	-0.8

Source: *Statista*

Table 5: GDP Per Capita in Argentina, Brazil, Chile (1980–2000)

Year	GDP per Capita Current (in US dollars)		
	Brazil	Chile	Argentina
1980	1958.6	2523.1	
1981	2079.7	2954.9	
1982	2137.6	1648	
1983	1461.3	1693.1	3727
1984	1419.7	1611.4	3787
1985	1556.1	1429.4	2919
1986	1854	1501.1	3454
1987	2006	1739.7	3492
1988	2140.7	1003.4	4005
1989	2819	2265.4	2382
1990	3117.7	2466.1	4330
1991	2257.6	2770.1	5730
1992	2127.3	3309.4	6815
1993	2348.9	3495	6957
1994	3298.7	3981.4	7464
1995	4757.7	5055.6	7383
1996	5179.1	5333.5	7690
1997	5299.4	5742	8176
1998	5105.9	5419.8	8250
1999	3493.6	4933.6	7735
2000	3766.5	8183	5053

Source: *Statista*

Table 6: Human Development Index in Argentina, Brazil, Chile (1990–2000)

Year	HDI		
	Brazil	Chile	Argentina
1990	0.641	0.718	0.733
1991	0.645	0.723	0.739
1992	0.648	0.73	0.743
1993	0.654	0.725	0.748
1994	0.659	0.73	0.753
1995	0.666	0.739	0.754
1996	0.671	0.745	0.76
1997	0.676	0.752	0.768
1998	0.68	0.759	0.772
1999	0.684	0.766	0.783
2000	0.69	0.771	0.789

Source: *Statista*

Brazil's economy experienced an erratic journey through the period of 1980 to 2000. The economy experienced high rates of growth, stagnation, and contraction. Though the country experienced high rates of growth in 1980, 1985, and 1986, it also faced erratic contractions in 1981, 1983, and 1990. Cumulatively, the years of low growth, stagnation, and contraction nullified the progress the country's economy made in its high-growth years. Argentina faced a period of erratic growth, where although the country experienced high growth in the years 1993 and 1997, it also faced severe contraction in the years 1981, 1985, and 1989, and a period of stagnation and low growth. Overall, Chile's economy was the most resilient during this period. Although they began the decade with high contraction at -11% in 1982, they improved significantly, maintaining a good average rate of growth most of the 1990s.

Brazil's GDP per capita grew over time at a modest rate, but it often faced setbacks, such as in 1983 and 1991, declining sharply from the previous year. Chile faced significant growth during this period in terms of GDP per capita, the highest at the turn of the century among the three countries. Argentina had a significant growth in the years between, but culminated in a sharp decline in the late 1990s and 2000, suggesting unsustainable economic policies.

Contrary to previous analysis, Argentina consistently performed better than the other two countries in terms of the Human Development Index. Brazil's score has remained the lowest by the year 2000, highlighting the country's issues of income inequality and unequal access to healthcare and education. Argentina's performance under this indicator, despite lagging in terms of economic growth, shows that human development and economic growth are not necessarily mutual. Chile continued a steady growth in this period, and with the small difference between its HDI and economic growth, it shows overall balanced growth.

Institutional Stability (Gini Index, Corruption Perception Index)

Table 7: Corruption Perception Scale in Argentina, Brazil, Chile (1995–2000)

Year	Corruption Perception Scale		
	Brazil	Chile	Argentina
1995	2.7	7.94	5.24
1996	2.96	6.8	3.41
1997	3.56	6.05	2.81
1998	4	6.8	3
1999	4.1	6.9	3
2000	3.9	7.4	3.5

Source: *Statista*

Table 8: Gini Index in Argentina, Brazil, Chile (1980–2000)

Year	Gini Index		
	Brazil	Chile	Argentina
1980			
1981	57.9		
1982	58.4		
1983	58.9		
1984	58.3		
1985	55.5		
1986	58.4		42.8
1987	59.6	56.2	45.3

(Table 8 Contd....)

(...Contd. Table 3)

1988	61.4		
1989	63.4		
1990	60.4	57.2	
1991			46.8
1992	53.1	54.8	45.5
1993	60.1		44.8
1994		56.4	45.9
1995	59.5		48.9
1996	59.8	54.9	49.5
1997	59.8		49.1
1998	59.6	55,5	50.7
1999	59		49.8
2000		52.8	51

Source: *Statista*

Argentina has faced the worst downfall in terms of its standing on the Corruption Perceptions Index. This index was started in 1995 and scores and ranks countries on their perceived levels of public sector corruption as assessed by Transparency International. Before 2012, the scores were given between the range of 10 to 0, 10 being the cleanest and 0 being the most corrupt. Argentina, at the start of the index, scored a modest 5.24, but by the end of the century had dropped off to 3.5. Although recovery was made in 1998 from the lowest score of 2.81 in 1997, by the end of this period, its score was the lowest among the three. Brazil had shown significant deterioration by 1999, from its initial score of 2.7, but had improved its standing by 2000. Chile had shown considerable recovery in its performance. Although its performance started falling from 1996, it recovered by 2000 and had the best performance out of the three.

For Gini's index, there are gaps within the data available as regular observations were not made in this period. Under this, the countries are given a score from 0 to 1 or 0% to 100%, 0 being perfect equality and 1 being perfect inequality, where one person owns all the resources. From the data available, it can be inferred that Brazil, overall, has experienced the highest levels of inequality, on average. Unlike other metrics, Argentina has performed significantly well under this parameter, with the average being lower than that of the other countries. Chile has performed better than Brazil, having reduced slightly by the end of the century.

Analysis and Interpretation of Data

Methodology

This analysis traces the regression analysis evaluating key parameters such as GDP Growth Rate, Unemployment, Inflation, Current Account Balance, Deposit Interest Rate and other factors.

Table 9: Results Indicating the Methodology of the Regression Analysis

Year	GDP growth rate	Unemployment	Inflation	Current Account balance	Deposit Interest Rate	Debt to GDP
1981	6.50%	11.30%	164.78%	-14.50%	40.90%	45.04%
1982	-11.00%	19.60%	343.81%	-9.47%	48.68%	87.83%
1983	-5.00%	14.70%	626.72%	-5.65%	28.01%	85.61%
1984	4.10%	13.90%	672.18%	-10.98%	27.63%	95.97%
1985	4.00%	12.20%	90.10%	-8.57%	32.10%	109.73%
1986	5.40%	8.70%	131.33%	-6.72%	19.04%	103.18%
1987	6.50%	7.90%	342.96%	-3.52%	25.28%	86.33%
1988	7.30%	6.30%	3079.81%	-0.94%	15.16%	67.73%
1989	9.90%	5.30%	2313.96%	-2.43%	27.79%	54.28%
1990	3.30%	5.70%	171.67%	-1.54%	40.35%	52.58%
1991	7.80%	8.10%	24.90%	-0.27%	22.35%	43.23%
1992	11.20%	4.40%	10.61%	-2.08%	18.29%	39.70%
1993	6.60%	4.49%	4.18%	-5.18%	18.24%	38.92%
1994	5.00%	5.87%	3.38%	-2.78%	15.12%	37.68%
1995	8.90%	4.70%	0.16%	-1.84%	13.73%	29.60%
1996	6.80%	7.41%	0.53%	-3.92%	13.48%	29.24%
1997	7.40%	7.14%	0.90%	-4.27%	12.02%	31.14%
1998	4.20%	7.31%	-1.20%	-4.78%	14.92%	38.65%
1999	-0.30%	11.16%	-0.90%	0.13%	8.56%	45.21%
2000	5.00%	10.49%	-1.10%	-1.15%	9.20%	47.02%

Source: *Statista*

GDP growth rate is one of the most important factors of an economy. There are a lot of variables that can impact GDP growth, especially during periods of economic turmoil. To analyse these factors, we have conducted a regression analysis on Chile's GDP growth rate from 1981 to 2000. Five key independent variables have been taken into consideration - Unemployment rate, Inflation rate, Current Account Balance, Deposit Interest Rate and Debt-to-GDP ratio.

They were analysed with respect to the GDP growth rate and metrics such as p-values, R^2 scores, and regression coefficients to derive conclusions.

Regression Results

Table 10: Results of the Regression Analysis

Regression Statistics	
Multiple R	0.887946129
R Square	0.788448328
Adjusted R-Square	0.712894159
Standard Error	0.027332536
Observations	20

ANOVA			
	df	**SS**	**MS**
Regression	5	0.038980255	0.007796051
Residual	14	0.010458945	0.000747068
Total	19	0.0494392	

	Coefficients	**Standard Error**	**t Stat**	**P-value**
Intercept	0.147537885	0.017910495	8.2375102	0.0000009726
Unemployment	-1.243447263	0.225001151	-5.526404	0.0000746256
Inflation	0.000496443	0.000833593	0.5955460	0.5609832294
Current Account balance	-0.500630331	0.227871312	-2.1969870	0.0453556700
Deposit Interest Rate	-0.107272296	0.075605787	-1.4188371	0.1778246265
Debt to GDP	0.014819889	0.032598835	0.4546140	0.656356095

After running the regression analysis on GDP growth rate, we obtained an R-squared value of 0.7884, indicating that 78.84% of the variation in Chile's GDP growth can be explained using the chosen variables.

Research Findings

- Through the obtained p-values, we can ascertain that unemployment and current account balance are the only prominent predictors of GDP growth of Chile during the 1981–2000 period.
- Unemployment has a p-value of 0.0000257 and a coefficient of -1.2434, while the Current Account balance has a p-value of 0.0453 and a coefficient of -0.5006, meaning that GDP growth can be inversely affected by the unemployment rate and the current account balance.

Conclusion

Through this paper, the journey of the economies Chile, Brazil and Argentina was traced. Over a span of 20 years of turmoil, this culminated in three different situations due to the differences in approaches taken. The difference in terms of how they approached economic, social and political issues shed light on certain key factors which emphasise the need for flexibility in policies and key reforms.

The quantitative analysis on multiple factors, including income and unemployment, helped shed light on the crucial aspects of their economic trajectories. It was also noted that the Phillips Curve doesn't stand in the context of Latin America, showing how economic theories don't hold under extreme crises.

A general conclusion can be drawn about growth and development within these countries: that during 1990-2000, Chile performed, on average, the best among the three, with Argentina struggling in terms of GDP. But this also dispels one of the most persistent economic beliefs that economic growth is accompanied by social development, as can be clearly seen in Argentina has performed the best among the three on the Human Development Index.

In institutional stability, the data available has been limited, as either they were not evaluated on a regular basis or the initiatives were introduced recently. By analysing the Gini Index and the Corruption Perceptions Index, it can be said that Argentina and Brazil have performed poorly in terms of transparency and equity. Chile has consistently performed well across all parameters, maintaining a well-balanced growth.

In conclusion, each had its own set of challenges in terms of structure, economic shocks, and turbulent leadership. Each one chalked out their own set of priorities and trajectories, resulting in multi-faceted results across growth, development and equity.

References

Boughton, J. M. (1994). *The IMF and the Latin American debt crisis: Seven common criticisms* (IMF Policy Discussion Paper No. 023). International Monetary Fund. https://doi.org/10.5089/9781451962154.003

Capraro, S., & Perrotini, I. (2013). Revisiting Latin America's debt crisis: Some lessons for the periphery of the Eurozone. *Cambridge Journal of Economics, 37*(3), 627–651. https://doi.org/10.1093/cje/bet005

CADTM. (2025). *Argentina: Examples and alternatives for understanding the debt crisis in the South (Part 5).* https://www.cadtm.org/Argentina-Examples-and-alternatives-for-understanding-the-debt-crisis-in-the

Devlin, R., & Ffrench-Davis, R. (1995). The great Latin America debt crisis: A decade of asymmetric adjustment. *Revista de Economia Política, 15*(3), 418–445. https://doi.org/10.1590/0101-31571995-0838

Ffrench-Davis, R. (1993). Debt crisis and development in Latin America: 10 years after the outbreak. *Security Dialogue, 24*(4), 441–453. https://doi.org/10.1177/0967010693024004010

Finance & Development. (2000). *Finance & development.* International Monetary Fund.

Grigoryev, L. M., & Starodubtseva, M. F. (2021). Brazil in the 21st century: A difficult path. *Russian Journal of Economics, 7*, Article 78432. https://doi.org/10.32609/j.ruje.7.78432

International Journal of Social Sciences and Public Administration. (2024). Latin American countries stuck in the field of development theory: A case study of Chile. *International Journal of Social Sciences and Public Administration.*

International Monetary Fund. (2003). *The role of the IMF in Argentina, 1991–2002: Issues paper/terms of reference for an evaluation by the Independent Evaluation Office (IEO).* https://www.imf.org/External/NP/ieo/2003/arg/index.html

Latin American debt crisis: A regional overview. (1989). In *Great deal of ruin: Latin American debt crisis, 1982–1989* (pp. 101–140). Cambridge University Press. https://doi.org/10.1017/CBO9780511662198.006

Ocampo, J. A. (2012). The Latin American debt crisis in historical perspective. *International Economic Association Papers.* https://doi.org/10.2139/ssrn.2253958

Organisation for Economic Co-operation and Development. (2006). *Challenges to fiscal adjustment in Latin America: The cases of Argentina, Brazil, Chile and Mexico.* OECD Publishing. https://doi.org/10.1787/9789264022089-en

Pastor, M., Jr. (1989). Latin America, the debt crisis, and the International Monetary Fund. *Latin American Perspectives, 16*(1), 79–110. https://doi.org/10.1177/0094582X8901600105

Sachs, J. (1985). External debt and macroeconomic performance in Latin America. *Journal of Development Economics, 18*(1/2), 49–74. https://doi.org/10.1016/0304-3878(85)90003-3

Weisbrod, S. R., & Rojas-Suárez, L. (1995). *Financial fragilities in Latin America: The 1980s and 1990s* (Occasional Paper No. 1995/012). International Monetary Fund. https://doi.org/10.5089/9781557755025.084

World Bank. (n.d.). *Brazil overview.* Retrieved February 19, 2026, from https://www.worldbank.org/en/country/brazil/overview

World Bank Open Data. (n.d.). *GDP growth (annual %) – Brazil.* Retrieved February 19, 2026, from https://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG?locations=BR

Rishabh Madan
B.Com. (Hons.)
4th Year
Shri Ram College of Commerce
University of Delhi
INDIA

Attention Capital and Market Valuation in Modern Commerce

ABSTRACT

In today's digital economy, consumer attention is now considered an economically valuable resource, as opposed to an observed behavior. The paper aims to study the importance of "Attention Capital" which stands for the total economic value that consumer attention adds to a brand. Companies are increasingly focusing on consumer attention as traditional methods that revolves around assets and revenues are insufficient. The study proposes a conceptual framework along with a set of propositions establishing relationship between attention variables like retention rates, innovation capability and market capitalization. The research also studies the importance of attention capital and its impact on market capitalization in the new digital environment that emerged after Covid-19 pandemic through a case study of major global companies like Meta, Alphabet, Reliance and Netflix from 2020 to 2024. The proposed "Attention Capital Index" enables comparison between different companies and their relative attention intensity through secondary data. The results provide evidence that attention capital is an important variable for explaining market capitalization performance in contemporary times.

Keywords: *Consumer Attention, Market Capitalization, Attention Capital Index, Innovation Capability, Retention Rate.*

Introduction

1.1 Background of the Study

The concept of "economics of attention" was first coined by Herbert A. Simon, which stated that an abundance of too much of information reduces attention. In the 21st century, attention has emerged as a limited and invaluable resource. There exist a bidirectional relationship between attention memory which are relevant to economic modelling (Wojtowicz & Loewenstein, 2020). Companies now focus more on consumer mind share and do not remain confined to traditional market share. In modern markets where firm viability is directly affected by visibility and consumer attention, businesses tend to shift from product-oriented models

to engagement driven frameworks. The post pandemic period supported this shift due to forced digital adoption and hence attention now functions as a measurable economic factor that affects stock performance, market value and investor behavior. 2020-2023 saw a sharp increase of over 62% in global digital engagement. Engagement based metrics such as user retention, click through rates and daily active users are more important to investors. These indicators provide big additions or substitutes to the old systems which are based on profit and turnover. The patterns of engagement, therefore, are better than the market capitalization compared to the financial fundamentals only. Internet has devolved the control attention that enables individuals to exert control over their own share of attention that is economic. (Castell & Jenson, 2004).

1.2 The Transition from Conventional Models to Attention Driven Frameworks

Since time immemorial, the business valuation has been pegged on hard financial measurements such as revenues, assets, profit margins and liabilities. With the increase in digital economy, these models began paying the due significance to Attention, which is an intangible capital. Marketers, particularly the ones focused on increasing their consumer mind share. The brand equity, user information and long-term digital focus became relevant in addition to the conventional metrics. This shift has been proved by recent corporate valuations. In 2024, primarily due to high global engagement levels Meta Platforms maintained a market capitalization exceeding US$1.2 despite slower advertising revenue growth (Meta Annual Report, 2024). Alphabet Inc. and Netflix saw similar patterns which helped them retain strong valuations even when the profit margins were declining. These examples show 'why' engagement metrics affect investor decisions. With the rise of attention economy, attention functions as a form of currency, an independent asset. There is also an economic shift due to creation of competitive equilibrium where signal quality and diversity are essential for getting any share of 'attention marker' (Falkinger, 2007).

1.3 Significance of Attention Economics in Commerce

The economics of attention is central to operations and functioning of modern markets. The concept of attention economics is of great significance both students and professionals. It is no longer a 'choice' for study. Market capitalization i.e. the total market value of a company's outstanding shares, increasingly reflects a company's ability to gain their desired level of attention and to retain the same. As per McKinsey & Company (2024), companies having a sustained engagement growth above 25% saw an average increase of 1.8 times in market capitalization compared to competitors having stagnant engagement. The sole dependence of business valuation on balance and accounts sheets no longer exists. Now, behavioral indicators have a greater impact due to shift in valuation philosophy. Conventional financial factors definitely continue to be relevant but they are now interpreted through consumer engagement data. In digital environments, engagement or attention-based models provide a stronger and future oriented way of

assessing a corporate resilience. American adults spent over 500 billion hours on ad supported content in 2019. Ads should be seen as balanced trade for valuable 'free' content (Loewenstein & Wojtowicz, 2023).

1.4 Scope and Significance of the Study

This paper aims to study how consumer attention affects market capitalization across multiple industries. It focuses on decoding why "Attention" should be treated as an intangible form of "Capital" through case studies and engagement data from global companies. The papers also aim to study how innovation capability and user retention rate affects the relationship between consumer attention and market capitalization while helping investors, policymakers, researchers and student understand how attention driven models enhance traditional views of commerce. The proposed "Attention Capital Index" provides a better base for understanding behavioral economics and marketing analytics.

Table 1: Global Digital Engagement Growth (2020-2024)

Year	Average Global Screen Time per User (hrs/day)	% Increase in Digital Ad Spending	Global Market Cap of Top 10 Digital Firms (US$ Trillion)
2020	3.8	12%	6.5
2021	4.6	18%	7.8
2022	5.2	25%	8.9
2023	5.7	29%	10.1
2024	6.1	33%	11.7

Source: *Statista Digital Economy Report (2024), World Bank Tech Indicators (2024).*

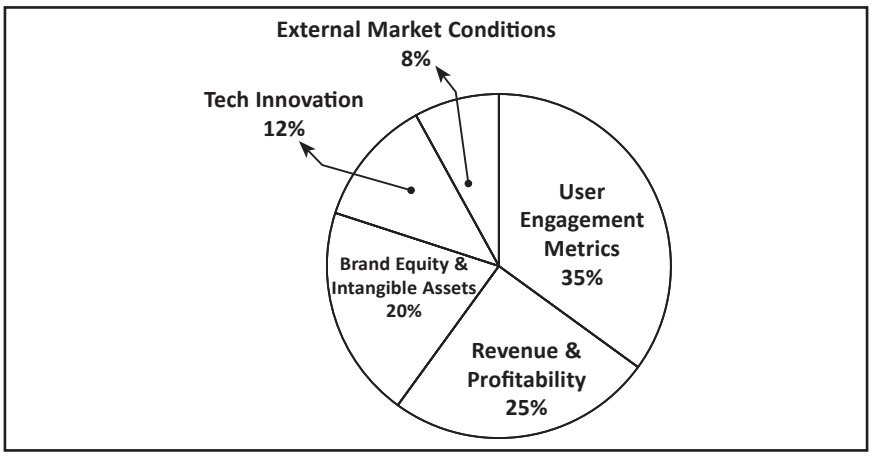


Fig. 1: Share of Key Factors Influencing Market Capitalization in Digital Enterprises (2024)

Source: *Deloitte Global Digital Valuation Survey (2024), PwC Intangible Asset Report (2024)*

Review of Literature

2.1 The Attention Economy and Modern Commerce: A Theoretical Foundation

The concept of attention economy came out as a result of Herbert Simon's work in 1971. Simon's work stated that too much information reduces the level of attention that companies get. Hence, companies should mindfully manage information availability. Later on, many economists extended this idea by using scarcity-based models. In this framework, consumer attention is treated as a limited resource being dealt in digital markets (Goldhaber, 1997). Recent studies focus on converting human attention into quantifiable economic output. Factors such as viewing duration, interaction frequency and user retention are measurable forms of capital (Wu, 2022). A study by Harvard Business Review, published in 2023, revealed that the better the digital engagement companies placed, the better the growth rates in market capitalization. This move shows that focus ceases to be an intangible aspect of action but a measurable factor of corporate worthiness. Another missed transition is also the difference between the disclosure of ESG risks by the top companies, as well as the recommendations they provide to leave the compliance level behind and strive towards actual environmental responsibility (All, 2024). The breadth and depth of online attention remain really stable with social media platforms (Boik et al., 2017).

2.2 Empirical Studies on Market Capitalization and Digital Engagement

According to a comparative study by McKinsey & Company (2023), organizations that had at least 25% year-over-year increases in consistent user engagement achieved a market capitalization almost twice that of their industry peers. Among the top performers are Meta, Amazon, and Netflix, for which the study linked market strength to sustained consumer attention rather than purely financial indicators. "Collaborative Digital Marketing" (CDM) is a counter-intuitive but effective way for authors to increase sales by supporting and sharing the work of peers within their genre (Ireland, 2018). Role of attention in education and news consumption can be comprehended by understanding curiosity as a drive of information seeking (Wojtowicz & Loewenstein, 2020). An analysis by the World Economic Forum found that 67% of global institutional investors now assess a company's "digital engagement ratio" before investing. In sectors like e-commerce and streaming, companies with stronger consumer retention rates witnessed market capitalization appreciation of 32% more on average between 2020-2024. Digital marketing practices like E-Mail advertising and AR marketing should be used within technical and legal framework to help policymakers restrict the promotion of harmful products (Including Cross-Border Marketing and Digital Marketing, 2023). There exists a positive relationship between stock market capitalization, stocks traded and financial growth. They affect economic growth and show that increasing market capitalization is a major indicator of healthy financial system (Alshubiri, 2021).

2.3 Consumer Attention as a Valuation Multiplier

Deloitte's 2024 and PwC's 2023 studies introduce the "Attention Multiplier Effect" where for every incremental increase in average user engagement-or time spent on the platform-the incremental value to a company's market perception, and therefore share price, increases proportionally. For example, when Netflix's average watch time per subscriber increased by 9% in 2024, its market capitalization rose 18% despite flat revenue growth. This would seem to indicate that attentional valuation provides investors with an important leading indicator of financial success in the digital era. A 2023 MIT Sloan paper further ascertained that brand loyalty metrics derived from consumer attention analyzes flow directly into stock volatility and investor confidence. Attention, therefore, acts as a behavioral anchor, making company valuation resistant to financial downturns. Firms should focus on strategically engaging with the market for capturing the attention and transactions of consumers. Innovation related activities enhance the organizational performance when they are mediated through “market engagement” and “market transformation” strategies (Liao & Rice, 2010).

2.4 Regional Perspectives: India and Emerging Economies

The Indian digital economy provides a very good example of how attention gets translated into valuation. According to a study by KPMG India (2024), firms like Zomato, Nykaa, and Reliance Jio from India derive more than 40% of their market capitalization from brand perception and digital engagement indicators rather than tangible assets. According to the NASSCOM Digital Value Index (2024), attention-driven sectors in India's market have grown 27% CAGR in market value post-COVID, primarily consisting of fintech and streaming. At the same time, infrastructure of digital marketing is being exploited to spread disinformation and the ethical and political implications for democratic norms (Affairs *et al.,* 2018). Besides, the ₹85,000 crore jump in Reliance Jio's market capitalization in 2023 was mainly due to its expanding digital subscriber base and social engagement campaigns, without a corresponding increase in profitability.

2.5 Key Constructs

2.5.1 Consumer Attention

Consumer attention has been recognized in contemporary research as a scarce cognitive and economic resource that influences firm outcomes, especially in digital markets. Attention helps companies understand what individuals are focusing on. It also affects market dynamics, competitive positioning and firm values in digital environments (Loewenstein & Wojtowicz, 2023).

2.5.2 User Retention Rate

User retention helps in understanding sustained and repeated interactions across digital platforms. Commonly used in engagement research, it captures the duration and continuity of activity rather than noting just one time. Sustained engagement significantly influences online performance results (Ding et al., 2023).

2.5.3 Innovation Capability

A concept in management research, innovation capability refers to company's ability to develop and implement new ideas and technologies. Existing literature shows that innovation capability positively affects a firm's competitiveness and operational efficiency (Table, 2005).

2.5.4 Industry Type

Industry type shapes how strategic relationship function across different environments. Differences in industry characteristics and structural conditions leads to differences in behavioral and financial outcomes. Foundational industry research show that sectoral context strongly influences how strategies convert into performance (Waring, 2017).

2.5.5 Market Capitalization

Market capitalization is a widely established financial performance indicator representing the market's evaluation of a firm's value, size, and growth potential. It is commonly used in financial and strategic management research to assess firm performance outcomes and is considered a reliable measure in linking market dynamics with corporate valuation (Roosmawarni et al., 2023).

2.6 Gaps in the Existing Literature

Although there is extensive literature on the valuation models based on financial performance, assets, and revenues, relatively scant attention has been paid to the role that sustained consumer attention might play in explaining market capitalization in digital markets. Traditional valuation frameworks often neglect the economic value of attention-driven dynamics, especially from the platform-based and digitally mediated firm. This represents a gap toward which conceptual models on market valuation need to be oriented by embedding attention-based factors. Existing studies focus less on impact of user retention rate and innovation capability on market capitalization which provides less base for marketers to formulate strategies accordingly. The study of "attention" as an intangible "capital" remains mostly untouched.

Objectives of the Study

1. To understand the impact of consumer attention as a capital on market capitalization of a firm.
2. To understand the impact of user retention rate on the relationship between consumer attention and market capitalization.
3. To understand the impact of innovation capability on the relationship between consumer attention and market capitalization.
4. To understand how type of industry moderates the relationship between consumer attention and market capitalization.

Research Framework & Proposition Development

4.1 Conceptual Framework

Based on the literature on attention economics and digital valuation, the thesis develops the concept of consumer attention as a non-tangible economic asset that has a market value impacting the market capitalization of a corporation. Parameters such as average time spent, interaction intensity and user retention play an important role in measurement of consumer attention. Innovation capacity and retention rates as support and moderation variables acknowledge the importance of technological capacity and sustained participation as they enhance Attention-Value links. The concept of market capitalization often comes out as a dependent variable which defines market value in financial terms. It also reflects market sentiments related to attention.

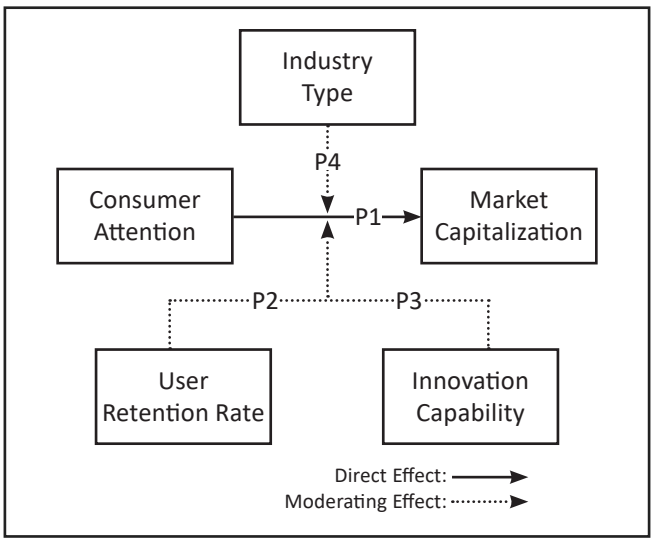


Fig. 2: Conceptual Model of Consumer Attention and Market Capitalization

4.1.1 Attention Capital - An 'intangible' Economic Asset

In the context of digital economy, the current study introduces the concept of "Attention Capital" to lay emphasis on the economic value which arises from consistent and persistent consumer engagement. Attention capital refers a firm's ability of gaining, retaining and monetizing user attention. User attention is determined by several specific metrics such as the amount of time spent, the level of interaction and the retention rates. Attention capital is reinvented in real time user behavior unlike other traditional intangible resources such as brand equity and goodwill. To measure attention capital, platform-level engagement measures may be considered. The findings of this study point to the significance of the Attention Capital as a strategic economic capital in its influence on investor perceptions, long term market capitalization and revenue potentialities quite evidently. The current study theorizes consumer attention as a kind of capital extending the logic of valuation existing in current commerce in terms of financial and physical assets to the behavioral aspects of value-generation and extending them to consumer attention.

4.2 Proposition Development

Based on the theoretical bases of the attention economy and the empirical evidence from the earlier studies, the following propositions are advanced:

P1: Consumer attention is expected to positively influence the market capitalization of firms.

P2: Higher user retention rate is expected to strengthen the relationship between consumer attention and market capitalization.

P3: Innovation capability is expected to transform consumer attention into higher market capitalization.

P4: The relationship between consumer attention and market capitalization is expected to vary across industries, with digital-native industries demonstrating a larger impact.

Research Methodology

5.1 Research Design

The study follows a quantitative, descriptive, and comparative design to analyze how consumer attention metrics affect the market capitalization of top digital firms in India and abroad. The research is purely based on data sourced from various verified databases such as Bloomberg, Statista, McKinsey Digital Index, IMF and RBI Annual Reports (2020-2024). The data focuses on the post-pandemic phase of digitalization and digital growth. A total five firms including Amazon, Meta, Netflix, Reliance Jio and Zomato were selected, each representing e-commerce, social media, streaming, telecom and online services. The conceptual analytical model along with its variables aligned with the proposed propositions

is used as a conceptual research framework to assess the relationship between consumer attention and market capitalization. The examination is done with the help secondary data trends to facilitate a comparative analysis and conceptual evaluation of the proposed propositions. The proposed "Attention Capital Index", comparative and indicative in nature is used to assess relative attention strength across firms. The ACI is not treated as a statistically estimated metric and assessment uses secondary digital engagement data.

5.2 Data Collection and Variables

Secondary data collected from sources including Bloomberg, McKinsey, KPMG along with corporate annual reports from 2020 to 2024. The datasets were cross checked and standardized before analysis to ensure consistency and reliability.

Table 2: Key Research Variables, Indicators and Data Sources Used for Analysis

Variable	Indicator	Unit	Source	Type
Market Capitalization	Annual avg.	USD Bn	Bloomberg	Dependent
Consumer Attention	Time spent/day	Minutes	Statista	Independent
Retention Rate	Returning users	%	McKinsey	Moderating
Innovation Index	R&D spend	% Revenue	World Bank	Supporting
Trading Turnover	Quarterly volume	Mn shares	IMF	Control

Sources: *Bloomberg (2024); Statista Digital Economy Report (2023); McKinsey Global Consumer Insights (2024); World Bank R&D Indicators (2023); IMF Trading Statistics (2024)*

5.3 Conceptual Analytical Model

A conceptual analytical model was used and presented for illustrative purposes to depict the conceptual relationships among variables and does not represent an empirically estimated regression model:

$$MC = \alpha + \beta(CA) + \gamma(RR) + \delta(II) + \varepsilon$$

where CA = Consumer Attention, RR = Retention Rate, II = Innovation Index.

5.4 Attention Capital Index (ACI)

The study revolves around the notion of Attention Capital, hence for an effective assessment an "Attention Capital Index" (ACI) is introduced. The ACI is a composite measure reflecting the significance and economic value of consumer attention. The ACI is used as a framework to compare the relative strength of attention across corporations on the basis of secondary data. Technically, the ACI is not a strictly numerical measurement and acts as a comparative tool for understanding relative strengths and weaknesses in consumer attention among corporations in the digital age. The ACI makes it possible to investigate correlations between relative "attention capital" and relative "market capitalization" while using secondary data.

ACI is a conceptual framework and should not be interpreted as a metric or numerical measure.

5.5 Sample Data Summary

Table 3: Comparative Summary of Market Capitalization, Consumer Attention, and Growth Trends (2024)

Company	Market Cap (USD Bn)	Attention (min/day)	Retention (%)	Growth (2020-24, %)
Amazon	1810	29	84	52
Meta	920	58	87	45
Netflix	245	52	81	33
Reliance Jio	225	44	79	41
Zomato	140	36	76	52

Sources: *Bloomberg Company Profiles (2024); McKinsey Digital Consumer Pulse (2023); Statista Global Digital Time-Spent Index (2024); Annual Reports of Amazon, Meta, Netflix, Reliance Jio, and Zomato (2024)*

5.6 Consumer Attention Distribution (2024)

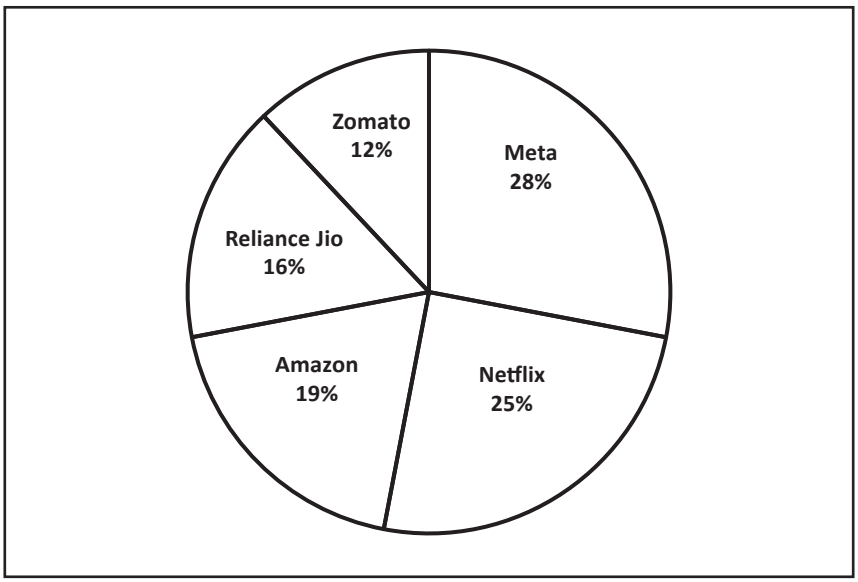


Fig. 3: Global Consumer Attention Share

Sources: *Statista Digital Market Overview (2024); McKinsey Global Attention Metrics (2023); Bloomberg Tech Market Data (2024)*

Data Analysis and Interpretation

The value creation idea in contemporary business is also a change that has been attained tremendously over the past decade. The "economics of attention" has contributed to this change to a significant degree. Some of the consumer engagement measures like average time of attention, the intensity and frequency of interactions have come out to be the major forces that determine the growth of market capitalization. The interpretation that was conducted relative to the proposed framework noted the attention related trends to analyze the trends between consumer attention, retention, innovation capability and market capitalization. The purpose of this chapter, therefore, is to test a particular association between attention-based measures and financial performance results. Based on quantitative data with the help of graphical examples and analytical commentary, the discussion concerns the most successful international companies in the period between 2018 and 2024. The analysis determines the conceptual links between attention measures and corporate financial performance.

Disclaimer: The analyzes presented in this section identifies associations and patterns among variables. They do not establish causal links and intend to illustrate relationships. Readers should interpret these outcomes accordingly.

6.1 Relationship between Consumer Attention and Market Capitalization

The empirical evidences indicate a clear pattern that firms demonstrated sustained increase in consumer attention experienced proportional rise in market capitalization. These patterns prove that there exists a strong relationship between attention levels and overall corporate value. As reflected in table 4, indicators such as average global daily attention duration, growth in market capitalization and advertising return on investment move in alignment over the period from 2018 to 2024.

Table 4: Comparison of Global Attention and Market Capitalization Growth (2018–2024)

Year	Avg. Daily Digital Attention (Minutes)	Global Market Capitalization Growth (%)	Average Advertising ROI (%)
2018	124	5.8	3.5
2019	138	6.2	3.9
2020	165	7.5	4.4
2021	183	8.4	4.9
2022	197	9.3	5.5
2023	208	10.7	6.0
2024	219	11.8	6.5

Sources: *Statista (2024); Bloomberg (2024); McKinsey Digital Index (2023)*

6.2 Graphical Interpretation: Attention Growth and Trends (2018-24)

The line graphs present below show upward movements in both consumer attention and market capitalization over the period from 2018 to 2024.

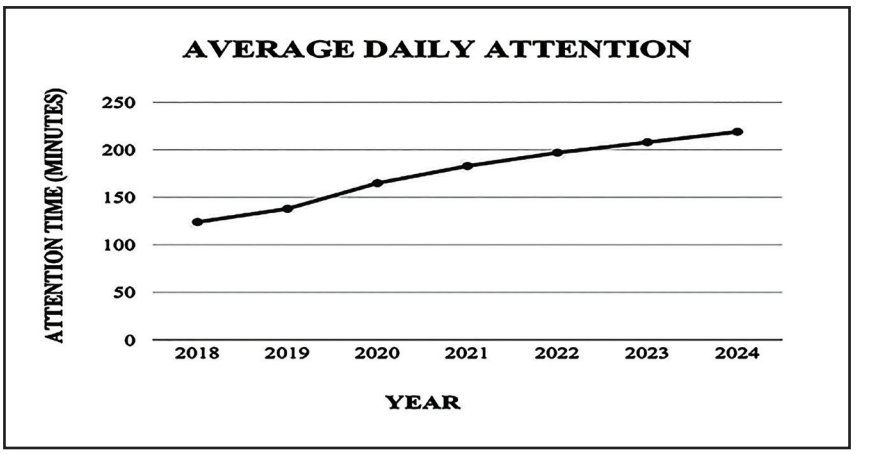


Fig. 4: Average Daily Digital Attention (2018-24)

Source: *Statista (2024) Global Digital Economy Report*

From the graph, it is evident that digital engagement increases at a relatively consistent rate, rising by approximately 12 to 15 minutes each year. This growth occurred because the digital environment including more online users, engaging short videos and smart AI recommendations supported it.

6.3 Graphical Interpretation: Global Market Capitalization Growth (2018-24)

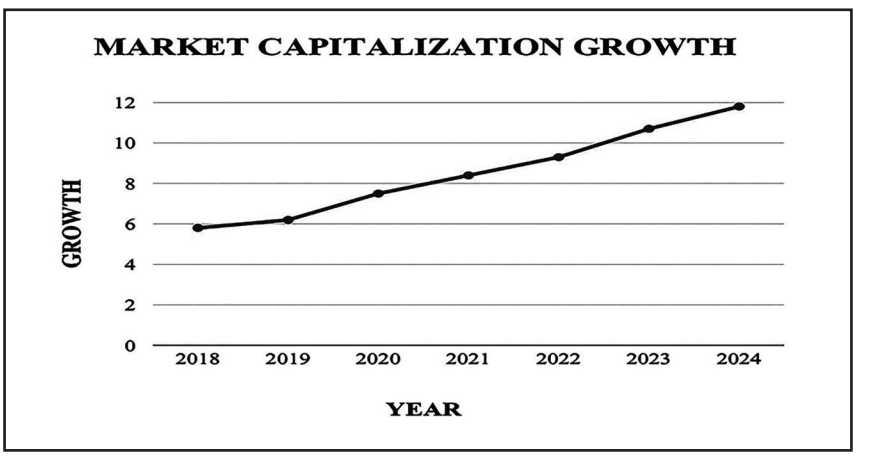


Fig. 5: Market Capitalization Growth

Source: *World Bank (2023) Global Digital Transformation Indicators*

The graph shows compounding growth rate in corporate valuation. Even during the pandemic years of 2020-2021, attention centric firms have shown resilience and outperformed traditional sectors.

6.4 Cross-Sectional Industry Analysis

Figure 6 shows the share of global attention-driven market capitalization by sector in 2024. The pie chart divides attention capitalization among five major industries.

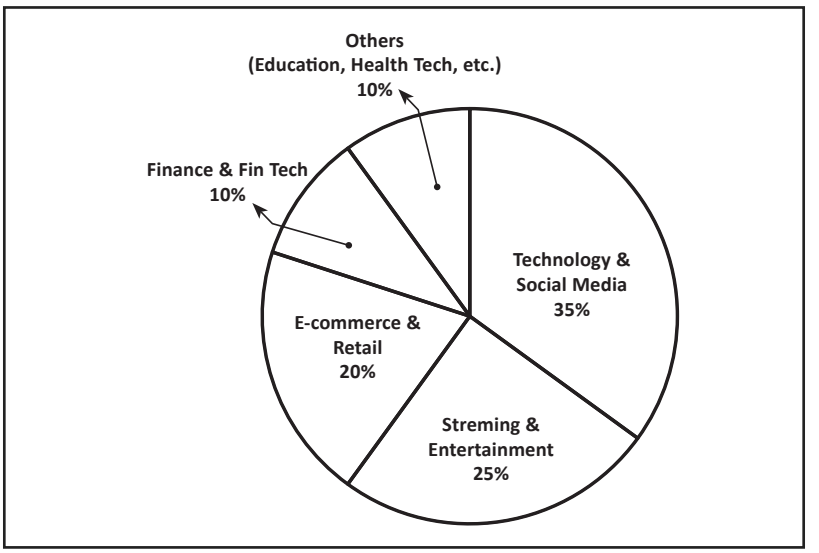


Fig. 6: Share of Attention-Driven Market Capitalization by Sector (2024)

Source: *Bloomberg Intelligence (2024); McKinsey Global Consumer Study (2023)*

Technology and streaming platforms, with a combined 60% attention driven market capitalization dominate the field. This shows how intangible consumer engagement today stands in for tangible assets in defining corporate worth. Traditional industries are comparatively slower in this transition, however they are integrating attention analytics into their valuation frameworks.

6.5 Statistical and Economic Implications

Written analysis by McKinsey Digital Consumer Index (2023) suggests that the consumer attention and the market capitalization are directly related in the sense every 1 per cent growth in consumer attention translates into 0.45 per cent growth in quarterly market capitalization amid digitally active corporate entities. This connection is termed as the Attention to Capital Multiplier, and this portrays attention as a measurable output such as financial capital or man labor. Organizations are also shifting their marketing resources to data analytics, algorithm-based optimization and digital media that are geared

towards ensuring a continued user interaction. Focus has become an essential source of competitive edge. Bloomberg Intelligence (2024) projects that attention economy will contribute almost $1.7 trillion to the capitalization in digital markets every year. Attention has consequently, emerged as a quantifiable economic asset that can determine investor attitude, and have an impact on more extensive pointers of national productivity.

6.6 Interpretation Summary

The analysis reveals patterned associations between consumer attention dynamics and market capitalization across industries and time. Observed trends suggest that variations in engagement intensity, retention patterns, and industry context correspond with differences in valuation outcomes. These insights provide the analytical foundation for the formal research findings presented in the subsequent section.

Research Findings

1. Consumer Attention is Positively Associated with Market Capitalization

The observed data pattern indicates that there exists a positive relationship between consumer attention and market capitalization as firms with high indicators of consumer attention also show higher market capitalization levels. The indicators of attention such as online engagement trends and attention metrics co-vary with market capitalization. This observation aligns conceptually with P1 since P1 indicates a positive association between consumer attention and firm market value. Figure 4 and 5 show closely aligned upward trends in average daily attention and global market capitalization growth. Market capitalization growth rose from 5.8% in 2018 to 11.8% in 2024, nearly a doubling with 7 years. McKinsey's Digital Consumer Index (2023) reports a quantitative association in which 1% improvement in consumer attention leads to average quarterly increase of 0.45% in market capitalization in case of digitally active firms.

2. Higher User Retention Rate Positively Affects the Relationship Between Consumer Attention and Market Capitalization

Comparative trends indicate that firms with sustained user retention patterns show a stronger relationship and demonstrates a significant co-movement between attention related indicators and market valuation measures. This observed trend aligns conceptually with P2 as P2 indicates that user retention rate strengthens the relationship between consumer attention and market capitalization.

3. Innovation Capability Positively Affects the Relationship Between Consumer Attention and Market Capitalization

Industry examples reveals that firms with high innovation capability display clearer relationship between attention metrics and market capitalization. This observed pattern aligns with P3 which indicates that innovation capability enhances firm's ability to convert attention into valuation outcomes.

4. The Relationship Between Consumer Attention and Market Capitalization Varies Across Industries

Comparative analysis across industry types reveals variations in how attention metrics correspond with market capitalization. It can be observed that digital native sectors show comparatively stronger links between attention and valuation. This pattern supports P4 which indicates that type of industry shapes the attention-market capitalization relationship. Figure 6 shows that following three sectors combined account for 80% of market capitalization driven by consumer attention.

1. Technology & Social Media (35%)
2. Streaming & Entertainment (25%)
3. E-commerce & Retail (20%)

The distribution also indicates that firms that rely heavily on digital platforms tend to gain greater financial advantage from increase in consumer attention.

5. Consideration of Consumer Attention as a 'Quantifiable' Economic Asset

A major observation is that consumer attention can no longer as purely abstract marketing variable instead, it has become quantifiable, measurable carry the ability of being monetized. Consumer attention now serves equally as labor, capital and technology. Between 2028 and 2024, average global daily attention increased significantly from 124 minutes to 219 minutes which represents 76% increase as reported by Statista in 2024.

6. Attention-Based Ecosystems are More Resilient and Capable of Expansion

The Covid-19 period provides various evidences highlighting the resilience of attention-focused firms. Between 202 and 2021, traditional industries experienced stagnation whereas companies such as Netflix, Amazon and major social media platforms saw a surge in engagement levels which drove continuous growth in market capitalization (Worl Bank, 2023). These observations support a broader conclusion that attention driven ecosystems are effective at maintaining growth during periods of economic disruption. Firms that give importance to "attention" also demonstrates:

1. Scalability
2. **Retention Efficiency:** AI personalization increases repeat engagement.
3. **Monetization Flexibility:** ads, subscriptions, commerce integrations.
4. **Investor Confidence:** predictable engagement patterns support long-term value.

This combination enabled attention-centric firms to outperform the average growth rate of the S&P 500 between 2018 and 2024, and their valuation has been more stable.

7. Behavioral Insights and Micro-Engagement Emerge as Determinants of Value

One emerging finding is the rising importance of micro-engagement behaviors such as scroll depth, swipe duration, tap-rate, rewatch probability, and attention drop-off points. In other words, companies that successfully analyze and optimize these micro-interactions-such as TikTok's "Infinite Scroll" or YouTube Short's personalized feed-drive disproportionately high increases in aggregate attention time. Value creation is shifting from macro metrics of engagement, such as views and reach, to micro attention indicators, which are better predictors of future revenue.

8. Attention-to-Capital Multipliers

Attention-to-Capital Multipliers are becoming standard in valuation models in all the datasets used, the evidence is clear that financial analysts and investors are increasingly considering attention variables in the valuation framework, especially for tech, media, and e-commerce firms. Metrics such as:

1. Cost per minute of attention
2. ARPU attention elasticity
3. Engagement-to-revenue conversion ratio

are now significantly recognized as predictors for future market capitalization growth.

Theoretical Contributions

This paper gives three important theoretical contributions. To begin with, the establishment of a new intangible economic asset named "Attention Capital" that can be used to expand the definition of corporate value beyond financial capital. The second significant input is the introduction of "Attention Capital Index" as a conceptual operational tool that is employed to standardize and explain the meaning of consumer attention. Third, the research creates proposition conceptual framework that help to create relationship among attention, retention, innovation capability, industry context and market capitalization. These are contributions that enhance theoretical bases of attention led valuation in contemporary commerce.

Conclusion

The paper conceptualizes consumer attention as "attention capital", which dwells upon its significance as an intangible but economically significant asset in the contemporary valuation system. Attention is a type of currency within digital economy that has a direct influence on corporate value. The research compares the trends of the engagement in 2018-2024 and the trends of market capitalization that have demonstrated that the consumer attention is now a measurable resource with the potential of being monetized.

The level of global daily attention has risen by 124 minutes to 219 minutes that has largely changed the way companies make money, create brand equity and raise shareholder value. Companies that have high engagement ecosystems are always performing better than conventional business models which are good conceptual relationship between attention and market capitalization (P1). These conclusions are further supported by the proposition-based framework presented in this paper. The positive retention reinforces the attention effect on the value of the firm (P2), the capability of innovation enhances the transformation of attention into the quantifiable monetary results (P3), and the industry variations determine the strength of the effect of attention on valuation (P4). All these combined prove that attention has become a significant force of economic output next to capital and labor. Thing is industry variation is a key dimension. The combination of technology, entertainment and e-commerce has 80 percent of attention motivated capitalization as they point to the use of attention embedded in platform-based models that depend on personalization and predictable behavioral patterns. Such trends and personalization enhance retention and monetization efficiency in users, the Covid-19 was a demonstration of the power of attention centric firms Netflix, Amazon, Meta and YouTube increased the level of engagement as opposed to traditional industries, which encountered great difficulties. Another critical theoretical input of this study is the introduction of the “Attention Capital Index” (ACI). Although conceptual in nature, ACI offers the framework to apply in future empirical research in the measurement of economic value of consumer attention by utilizing standardized engagement measures, and comparison of sectors. This will enable, speaking more of the relative comparison of the relative attention capital with the relative market capitalization in the digital age. All in all, the study demonstrates that emphasis has shifted on the aspect of attention as a marketing measure to a component of financial valuation. The measures that are more commonly used by analysts and investors include cost-per-minute-of-attention, retention elasticity, and engagement-conversion ratio which is an indicator of the attainment of attention as a financial variable. The ability to attract, maintain and tactically transform the attention of consumers has become the center of competitive edge, improvement in revenues and market value. The companies controlling attention as capital will shape the next wave of commercial value generation in the digital market.

Limitations

1. The assessment is done entirely on the basis of secondary data.
2. Broader applicability may be constrained due to restricted sample size of five companies.
3. There may be volatility in market valuation outcomes due to external macroeconomic factors.
4. The Attention Capital Index (ACI) is proposed as a comparative framework rather than a specific quantitative measure.

5. The propositions are conceptually framed to guide analytical interpretation rather than being statistically tested using primary data.

Scope for Further Study

The current paper presents the concept of "Attention Capital Index" as a framework in which the economic importance of consumer attention is assessed in the context of the corporate valuation. Nevertheless, the empirical data of ACI remains open for future research. Further studies may operationalize ACI with measurable indicators and weighting mechanisms using primary data and econometric testing. The usefulness of ACI may also be tested with respect to various industries over time to determine the predictive value and practical value of the tool to firms and investors. Therefore, ACI creates a platform of wider investigation agenda on standardizing attention as an element of financial evaluation.

References

Affairs, I., Board, E., & Affairs, I. (2018). *NARRATIVES : DIGITAL TECHNOLOGY AND THE ATTACK ON LIBERAL DEMOCRATIC. 71*(1).

All, U. T. C. (2024). *Centre for Science and Environment.*

Alshubiri, F. (2021). The Stock Market Capitalisation and Financial Growth Nexus: an Empirical Study of Western European Countries. *Future Business Journal, 7*(1), 1–20. DOI: 10.1186/s43093-021-00092-7

Amazon. (2024). Annual Report 2024. Amazon Inc. Available at: https://s2.q4cdn.com/299287126/files/doc_financials/2025/ar/Amazon-2024-Annual-Report.pdf

Bloomberg Intelligence. (2024). Attention Economy Outlook 2024. Bloomberg L.P. Available at: https://www.bloomberg.com/professional/insights/trading/indices-2024-outlook-sustainability/

Bloomberg. (2024). Global Tech Market Data 2024. Bloomberg L.P. Available at: https://www.bloomberg.com/search?query=Global%20Tech%20Market%20Data%202024

Boik, A., Greenstein, S. M., & Prince, J. (2017). The Empirical Economics of Online Attention. *SSRN Electronic Journal, December*, 1–42. DOI: 10.2139/ssrn.2807046

Castell, S. De, & Jenson, J. (2004). Paying Attention to Attention: New Economies for Learning Suzanne de Castell. *Educational Theory, 54*(4), 381–397.

Davenport, T. H., & Beck, J. C. (2001). The Attention Economy: Understanding the New Currency of Business. Harvard Business School Press Available at: https://books.google.co.in/books?id=j6z-MiUKgosC

Deloitte. (2024). Global Digital Valuation Survey. Deloitte Insights Available at: https://deloitte.wsj.com/cio/realizing-value-from-digital-transformation-investments-780a29aa

Ding, R., Xie, R., Hao, X., Yang, X., Ge, K., Zhang, X., Zhou, J., & Lin, L. (2023).

Fader, P. S., & Hardie, B. G. S. (2013). The Value of Simple Customer Lifetime Value Models.

Journal of Marketing Research Available at: https://faculty.wharton.upenn.edu/wp-content/uploads/2012/05/Simple-Models-ASMBI-20051.pdf

Falkinger, J. (2007). Attention economies. *Journal of Economic Theory, 133*(1), 266–294. DOI: 10.1016/j.jet.2005.12.001

Goldhaber, M. H. (1997). The Attention Economy and the Net. First Monday, 2(4). Available at: https://firstmonday.org/ojs/index.php/fm/article/view/519

Harvard Business Review. (2023). Digital Engagement and Long-Term Firm Value. Harvard Business Publishing Available at: https://maaw.info/Journalsbyyear/HarvardBusinessReview2023.htm

International Monetary Fund. (2024). Trading Statistics Database Available at: https://www.imf.org/en/search#q=international%20monetary%20trading%20statistics%20database%202024

Interpretable User Retention Modeling in Recommendation. *Proceedings of the 17th ACM Conference on Recommender Systems, RecSys 2023, September 2023,* 702–708. DOI: 10.1145/3604915.3608818

Including Cross-Border Marketing and Digital Marketing. (2023).

Ireland, B. (2018). No Title. 379(379), 16–17.

KPMG. (2024). Global Tech Report 2024 KPMG India Available at: https://assets.kpmg.com/content/dam/kpmgsites/xx/pdf/2024/09/kpmg-global-tech-report-2024.pdf

Liao, T. S., & Rice, J. (2010). Innovation Investments, Market Engagement and Financial Performance: A Study Among Australian Manufacturing SMEs. *Research Policy, 39*(1), 117–125. DOI: 10.1016/j.respol.2009.11.002

Loewenstein, G. F., & Wojtowicz, Z. (2023). The Economics of Attention. *SSRN Electronic Journal, October 2017,* 1–41. DOI: 10.2139/ssrn.4610993

McKinsey & Company. (2023). Digital Consumer Index 2023. McKinsey Global Institute Available at: https://www.mckinsey.com/featured-insights/2023-year-in-review

McKinsey & Company. (2023). Global Consumer Study. McKinsey Digital Available at: https://www.mckinsey.com/featured-insights/2023-year-in-review/2023-the-year-in-charts

McKinsey & Company. (2024). Engagement Elasticity and Market Capitalization Trends. McKinsey Global Valuation Report Available at: https://www.mckinsey.com/featured-insights/2024-year-in-review

Meta Platforms. (2024). Annual Report 2024. Meta Platforms Inc. Available at: https://investor.atmeta.com/investor-news/press-release-details/2025/MetaReports-Fourth-Quarter-and-Full-Year-2024-Results/default.aspx

MIT Sloan School of Management. (2023). Attention Analytics and Stock Volatility. MIT Sloan Research Papers Available at: https://mitsloan.mit.edu/search?keyword=Attention+Analytics+and+Stock+Volatility+2023

Nasscom. (2024). Digital Value Index 2024. Nasscom. Available at : https://lnkd.in/gyFMhbUw

Netflix. (2024). Annual Report 2024. Netflix Inc. Available at: https://stocklight.com/stocks/us/nasdaq-nflx/netflix/annual-reports/nasdaq-nflx-2024-10K-24567688.pdf

PwC. (2024). Intangible Asset Report 2024. PricewaterhouseCoopers Available at: https://www.pwc.co.uk/annualreport/assets/2024/pwc-uk-financial-statements 2024.pdf

Reliance Jio. (2024). Annual Report 2024. Reliance Industries Ltd. Available at: https://www.ril.com/ar2023-24/pdf/RIL_IAR_2024.pdf

Roosmawarni, A., Fatihudin, D., & Mauliddah, N. (2023). Market Capitalisation and Financial Performance: Evidence from Banking Listed Company in Indonesia. *Jurnal Analisis Bisnis Ekonomi, 20*(2), 124–136. DOI: 10.31603/bisnisekonomi.v20i2.7835

Simon, H. A. (1971). Designing Organizations for an Information-Rich World. Johns Hopkins University Press Available at: https://gwern.net/doc/design/1971-simon.pdf

Statista Research Department. (2023). Global Digital Time-Spent Index 2023 Available at: https://www.statista.com/statistics/1203127/digital-time-spent-worldwide

Statista Research Department. (2024). Digital Economy Report 2024 Available at: https://www.statista.com/search/?q=Digital+Economy+Report+2024.&Search=&p=1

Statista Research Department. (2024). Digital Market Overview Available at: https://www.statista.com/search/?q=Digital+market+overview+2024.&Search=&p=1

Studies, I. (2026). *E-Commerce Development and Regulation in Indonesia. 2021.*

Table, R. (2005). Innovation Capability. December.

Waring, B. G. F. (2017). *American Economic Association Industry Differences in the Persistence of Firm-Specific Returns Author (s): Geoffrey F . Waring Source: The American Economic Review, Vol. 86 , No. 5 (Dec., 1996), pp. 1253-1265 Published by: American Economic Ass. 86*(5), 1253–1265.

Wojtowicz, Z., & Loewenstein, G. (2020). Curiosity and the economics of attention. *Current Opinion in Behavioral Sciences, 35,* 135–140. DOI: 10.1016/j.cobeha.2020.09.002

World Bank Group. (2023). Global Digital Transformation Indicators Available at: https://www.worldbank.org/en/publication/digital-progress-and-trends-report

World Bank Group. (2024). Tech Sector Valuation Indicators 2024 Available at: https://ieg.worldbankgroup.org/evaluations/results-and-performance-world-bank-group-2024

World Economic Forum. (2023). Institutional Investor Digital Engagement Survey Available at: https://www3.weforum.org/docs/WEF_Annual_Report_2023_2024.pdf

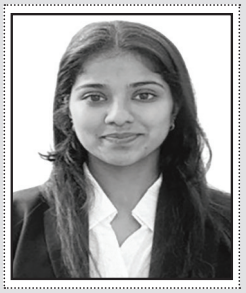
Wu, T. (2022). The Measurement of Attention in Digital Markets. Journal of Digital Economics, 14(2), 88–107 Available at: https://www.sciencedirect.com/journal/journal-of-digital-economics/vol/14/issue/2

YouTube / Alphabet Inc. (2024). Annual Report 2024. Alphabet Inc. Available at: https://www.sec.gov/Archives/edgar/data/1652044/000130817925000513/goog012714-ars.pdf

Zomato. (2024). Annual Report 2024. Zomato Ltd. Available at: https://b.zmtcdn.com/investor-relations/Zomato_Annual_Report_2023-24.pdf

The Invisible Economics of Shrinkflation and Skimflation: Product Downsizing and Service Deterioration

Savy Satija
B.A. Economics (Hons.)
3rd Year
Deshbandhu College
University of Delhi
INDIA



Shaili Gupta
B.A. Economics (Hons.)
3rd Year
Deshbandhu College
University of Delhi
INDIA

ABSTRACT

Have you ever noticed your favorite bag of chips getting smaller or airlines reducing legroom, yet the price remains the same? This phenomenon, known as shrinkflation and skimpflation, allows businesses to offset rising costs without visibly increasing prices. While these changes often go unnoticed in short term, they impact consumer behavior. This paper explores effects of these tactics on consumer perception. Using research and online survey, we examined historical trends in product sizing and consumer reactions. The findings reveal a sharp rise in shrinkflation within the snacks and household products, whereas skimpflation is more prevalent in hospitality and transportation. Many consumers don't immediately notice these changes, but when they do, frustration grows. Businesses use such strategies to stay profitable, but fairness concerns remain. These hidden cost-cutting measures make consumers pay more for less value. This study emphasizes that true market fairness requires transparency, enabling consumers to make informed choices and hold businesses accountable. Overall, the study concludes that long-term consumer trust and sustainable market relationships depend on greater transparency, ethical pricing practices, and balanced regulatory oversight.

Keywords: *Shrinkflation, Skimpflation, Hidden Inflation, Pricing Strategies, Market Transparency.*

1. Introduction

In recent years, consumers across the globe have noticed subtle yet significant changes in the products and services they daily rely on. Food packages have shrunk, household goods contain fewer units, and service quality in various industries has declined, while prices have remained steady or even increased. These unnoticed but impactful shifts reflect an evolving marketplace where businesses strive to balance rising production costs and

inflation without openly increasing prices. While some consumers initially overlook these adjustments, over time, they realize they are paying the same amount or more for diminished value. This growing phenomenon, which includes shrinkflation and skimpflation, raises concerns about corporate transparency, consumer rights, and overall economic fairness.

Shrinkflation is a pricing strategy in which companies reduce product size, weight, or quantity while keeping the price unchanged. This approach is commonly used in industries such as food, beverages, personal care, and household goods. For instance, a bottle of juice may now contain 900 millilitres instead of 1 litre, or a snack pack may have fewer chips than before. These changes are rarely advertised, making it difficult for consumers to notice the difference until they compare past and present product sizes. While this allows companies to mitigate rising production expenses, it often leads to consumer dissatisfaction when the realization sets in.

Skimpflation, on the other hand, does not involve changes in product size but instead focuses on reducing quality or service standards. Many businesses adopt this strategy by using cheaper ingredients, lowering customer service levels, or eliminating previously included benefits. For example, fast-food chains may reduce the amount of cheese or meat in a sandwich, hotels may discontinue daily room cleaning services, or streaming platforms may remove features while keeping subscription prices the same. This approach enables companies to cut costs without openly raising prices, but it often leads to consumer frustration, particularly when the reduced quality becomes noticeable.

The rise of shrinkflation and skimpflation is largely driven by economic pressures such as inflation, supply chain disruptions, and increased labour costs. Businesses must find ways to sustain profitability, and these strategies offer a means to do so without immediately alienating customers. However, these practices raise ethical concerns, as consumers are often unaware of these hidden cost-cutting measures. A lack of transparency in such adjustments can erode trust in brands, influencing long-term purchasing decisions and overall market competition.

Beyond individual purchasing decisions, these pricing strategies contribute to a broader issue known as hidden inflation, a phenomenon where the true cost of living rises without being fully reflected in official inflation metrics. As a result, consumers may feel financially strained even if inflation rates appear stable. This creates challenges for policymakers and economists in accurately assessing economic conditions and making informed decisions. Additionally, as more businesses adopt these tactics, the lack of clear consumer protections or regulations becomes increasingly evident.

Shrinkflation and skimpflation are not merely economic concepts; they have a profound psychological impact on consumer behaviour. When customers discover they are receiving less for the same price, or that the quality of a once-reliable product or service has diminished, they often feel deceived. This perceived deception can damage brand

loyalty, prompting consumers to seek alternative products or services. However, in some cases, consumers may have limited choices, especially when multiple companies in the same industry adopt these practices simultaneously. This scenario creates a market trap, where consumers are left with no better alternatives, forcing them to accept suboptimal purchases despite their dissatisfaction.

Moreover, these practices disproportionately affect lower-income consumers, who are more sensitive to price changes and product downsizing. For households operating on tight budgets, even small reductions in product size or quality can have a noticeable impact over time. The cumulative effect of shrinkflation and skimpflation means that consumers must spend more money to maintain the same standard of living, exacerbating financial strain. This is particularly concerning essential goods such as groceries, hygiene products, and public services, where affordability and accessibility are crucial.

From a business perspective, shrinkflation and skimpflation may offer short-term financial relief, but they carry long-term risks. Once consumers become aware of these tactics, companies may face backlash, including negative publicity, declining sales, and damaged reputations. Social media and online review platforms amplify consumer dissatisfaction, making it easier for people to share their experiences and warn others. Additionally, regulatory bodies in various countries are beginning to scrutinize these practices more closely, with some governments considering policies that mandate clearer labelling and disclosure of product changes.

Shrinkflation and skimpflation extend beyond pricing strategies; they reshape consumer trust, perceived fairness, and long-term market relationships. While these practices help firms manage rising costs, they raise ethical concerns about transparency and informed choice. When consumers realize they are receiving less value without clear disclosure, brand loyalty weakens and dissatisfaction grows.

This study examines how these hidden adjustments influence consumer awareness, purchasing behaviour, and attitudes toward corporate transparency and regulation. By analysing survey evidence and market trends, the research seeks to clarify the broader economic and behavioural implications of shrinkflation and skimpflation and contribute to ongoing discussions about fairness, accountability, and consumer protection in modern markets.

2. Literature Review

Existing research on shrinkflation and skimpflation highlights their growing importance in understanding hidden inflation and consumer behaviour. Scholars have examined these practices from economic, behavioural, and ethical perspectives, emphasizing their impact on trust, pricing transparency, and market fairness.

Conceptual Foundations of Shrinkflation

Shrinkflation refers to the practice of reducing product size or quantity while maintaining the same nominal price. Early empirical evidence by **Imai and Watanabe (2014)** during Japan's deflationary period demonstrated how firms used product downsizing as a hidden price adjustment mechanism to manage cost pressures without explicitly raising prices. Their findings show that such strategies are particularly common during periods of economic instability when firms aim to avoid consumer backlash associated with direct price hikes.

More recently, **Rojas, Jaenicke, and Page (2024)** quantified the inflationary impact of package-size reductions in food markets, arguing that shrinkflation contributes to understated inflation measurements. Their research indicates that conventional inflation indices may fail to fully capture the real increase in cost per unit faced by consumers.

Similarly, **Melmiès (2024)** approaches shrinkflation from a macroeconomic perspective, linking hidden price increases to broader structural adjustments in corporate pricing behavior. He argues that shrinkflation represents a strategic response within post-Keynesian frameworks, where firms prioritize margin stability under demand constraints.

Consumer Preference and Behavioral Reactions

From a behavioral standpoint, consumer response to shrinkflation has been widely studied. **Kim (2023)** finds that many consumers prefer downsizing over explicit price increases, particularly when the reduction is subtle. This suggests that consumers may perceive smaller packages as less psychologically painful than visible price hikes.

However, research by **Evangelidis (2023)** introduces the concept of "shrinkflation aversion," demonstrating that once consumers recognize downsizing, their negative reaction can exceed that of a transparent price increase. In a subsequent study, **Evangelidis (2024)** shows that reductions in quality (skimpflation) generate even stronger perceptions of unfairness than size reductions, highlighting the emotional dimension of perceived value loss.

Further extending this discussion, **Janssen and Kasinger (2025)** analyze the demand-side implications of shrinkflation and find that while short-term demand may remain stable, long-term brand loyalty can decline once consumers detect hidden adjustments.

Microeconomic and Firm-Level Responses

At the firm level, pricing strategies under economic shocks have been examined by **Antoniades, Clerides, and Xu (2018)**, who identify product modification, promotions, and strategic adjustments as common micro-responses to cost pressures. Although not exclusively focused on shrinkflation, their findings provide theoretical grounding for understanding why firms opt for indirect price adjustments.

Milan and Singh (2024) specifically analyze shrinkflation within the FMCG sector, particularly in food packaging industries. Their findings show that companies frequently redesign packaging and adjust net weights while retaining key price points (e.g., ₹5 or ₹10 products), especially in highly price-sensitive markets.

Additionally, **Budianto (2024)** conceptualizes shrinkflation as a hidden inflationary tool embedded within broader corporate pricing strategies, emphasizing the role of consumer inattention and bounded rationality.

Skimpflation and Perceived Unfairness

While shrinkflation focuses on quantity reduction, skimpflation refers to quality deterioration without price changes. **Evangelidis (2024)** empirically demonstrates that quality reductions are perceived as significantly more unfair than equivalent size reductions or price increases. This aligns with fairness theory, which suggests that consumers evaluate not only price but also perceived value and effort.

Survase, Chormunge, and Pandey (2025) further explore consumer perceptions and conclude that transparency significantly moderates negative reactions. When consumers feel informed and respected, dissatisfaction decreases even if prices rise.

Research Gap

Although substantial international research exists on shrinkflation's pricing dynamics and consumer psychology, limited empirical evidence focuses on direct consumer perceptions in emerging urban markets, particularly in the Indian FMCG and service sectors. Most prior studies rely on secondary price data or experimental designs rather than primary survey evidence capturing real-world experiences.

This study addresses this gap by integrating primary survey data with documented case evidence (such as Parle-G) to examine awareness levels, behavioral adjustments, and attitudes toward regulation among urban consumers. By doing so, it contributes context-specific insights to the expanding literature on hidden inflation and corporate transparency.

3. Objectives of the Study

To guide the study in a structured manner, the research is organized around the following objectives:

1. How aware are consumers of shrinkflation and skimpflation in everyday products and services?
2. How do these practices affect consumer purchasing behaviour and brand trust?
3. What are consumer views on corporate transparency and government regulation regarding hidden inflation strategies?

4. Data and Research Methodology

The study employs a descriptive research design to analyze consumer awareness and perceptions regarding shrinkflation and skimpflation. Descriptive research is used to systematically describe characteristics of a phenomenon, helping to understand how product quantity reduction and quality degradation influence consumer behaviour. A combination of qualitative and quantitative methods is applied to collect and analyze data. Responses are gathered from participants across different age groups through structured questionnaires distributed online via Google Forms.

4.1 Research Design

The research integrates descriptive and analytical approaches, utilizing both qualitative and quantitative techniques. Data is collected through survey, enabling a comprehensive understanding of consumer experiences. Additionally, secondary data sources such as industry reports and market analysis are utilized to examine pricing trends and company strategies.

4.2 Population

The target population consists of consumers aged 18-60 who actively purchase packaged goods, household items, and food products. The study focuses on urban consumers who frequently engage with retail markets and are likely to notice changes in product size, quality, and pricing. Respondents are selected based on their purchasing habits and exposure to brands that have implemented shrinkflation or skimpflation strategies.

4.3 Instruments

Data is collected using structured questionnaires distributed through Google Forms, featuring questions to assess consumer awareness and attitudes toward shrinkflation and skimpflation. The questionnaire includes multiple-choice and open-ended questions to capture consumer perceptions of product size reductions and quality changes. Respondents provide information on their purchasing habits, brand preferences, and the extent to which they notice subtle alterations in product packaging or composition. Secondary data sources, such as consumer surveys and market trend reports, supplement the analysis for broader validation.

4.4 Questionnaire Design

The questionnaire is designed to assess consumer awareness, experiences, and perceptions of shrinkflation and skimpflation. It begins by collecting demographic information, specifically the respondent's age group. Following this, it examines awareness levels by asking whether participants have heard of these concepts before. The next section explores consumer experiences, including whether they have noticed a reduction in

product size or service quality without a corresponding price change and which industries they have observed this phenomenon in. Additionally, the questionnaire investigates consumer reactions, such as switching brands, complaining, or continuing purchases as usual. Finally, it gathers opinions on corporate transparency, government regulation, and alternative solutions companies could adopt instead of reducing product size or quality.

4.5 Data Collection

The data collection for this study is conducted primarily through an online survey using Google Forms, allowing for a wide and diverse reach. Industry reports and case studies are also analysed to compare consumer perceptions with market trends. This mixed- method approach ensures a well-rounded evaluation of shrinkflation and skimpflation's impact on consumer behaviour.

4.6 Sampling Technique

The study uses a non-probability convenience sampling technique, where respondents were selected based on accessibility through online platforms. The questionnaire was distributed via Google Forms and shared through student networks and social media, allowing for quick and cost-effective data collection. While convenience sampling is appropriate for exploratory consumer perception research, it does not guarantee that every member of the broader population has an equal chance of being selected. Therefore, the findings primarily reflect the experiences of digitally active urban consumers rather than the entire population.

4.7 Questionnaire Reliability

To improve reliability, the questionnaire was designed using clear, simple, and non-leading questions. A pilot review was conducted with a small group of peers before final distribution to identify ambiguous wording and ensure consistency in interpretation. Most questions used structured response options, reducing subjective variation and improving comparability across responses. However, as the study relies on self-reported perceptions, responses may be influenced by recall bias or personal interpretation of shrinkflation and skimpflation.

4.8 Limitations of the Sample

A key limitation of the study is the age skew toward young adults, with the majority belonging to the 18–24 age group. This reflects higher online participation among students but limits the generalizability of results to older age groups. Younger consumers may be more price-sensitive, more active on social media, and more aware of trending economic discussions, potentially exaggerating awareness levels compared to the broader population.

Additionally, the urban and digitally connected sample may not represent rural or offline consumers who experience shrinkflation differently. As a result, the findings should be interpreted as indicative rather than universally representative. Future research should include a larger and more demographically diverse sample to strengthen external validity.

5. Case Study: Shrinkflation and Skimpflation in Parle-G

Introduction

Parle-G, a household name in India, has been a staple biscuit for decades. Known for its affordability and wide reach, Parle-G has adapted to economic shifts over time. However, the brand has also witnessed shrinkflation and skimpflation, where product quantity and quality have been subtly altered while maintaining the price. This case study explores how these strategies have impacted consumer perception and the broader biscuit market in India.

Historical and Market Trends

Parle-G has been available at an affordable price point for decades, often with ₹5 and ₹10 price tags. However, due to rising production costs driven by increasing wheat, sugar, and packaging material prices the company has opted to reduce the weight of its biscuit packs instead of raising prices. This phenomenon, known as shrinkflation, ensures that the product remains accessible to price-sensitive consumers.

Table 1: Shrinkflation Trends Over the Years

Year	Pack Size (₹5)	Pack Size (₹10)	Market Influence
2000	100g	200g	Stable raw material costs
2010	92.5g	185g	Rising wheat and sugar prices
2016	83.5g	170g	Inflation affecting FMCG sector
2020	55g	100g	COVID-19 impact on supply chain
2022	50g	92g	Increased packaging and logistics costs

The shrinkflation trend is clearly illustrated in the provided table, showing a steep decline in biscuit weight over the years.

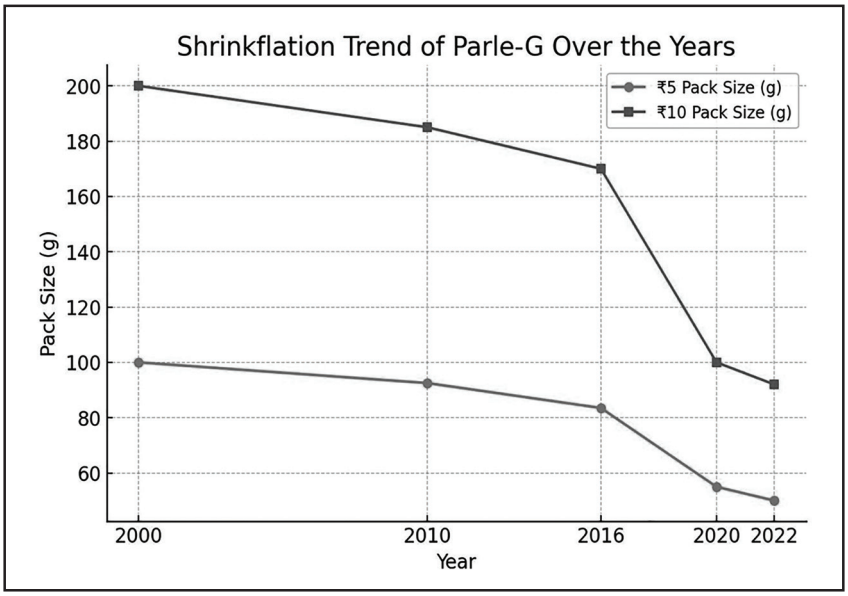


Fig. 1

Skimpflation: Quality Adjustments

Beyond size reduction, Parle-G has also been subject to skimpflation, where slight modifications to ingredients or production processes affect the overall product quality. The biscuit formulation has reportedly been altered to use more cost-effective ingredients. Some consumers have noticed a change in texture and crispiness, indicating a shift in the recipe. The packaging material has become thinner, reducing production costs while maintaining outward appearance.

Table 2

Year	Changes in Ingredients and Quality	Market Influence
2000	High-quality wheat flour, real milk solids, and balanced sweetness	Stable raw material costs
2010	Reduced milk solids, slight increase in artificial flavouring	Rising dairy prices
2016	Lower-quality wheat, increased use of emulsifiers and preservatives	Inflation affecting FMCG sector
2020	Reduced thickness of biscuits, more air pockets in texture	COVID-19 impact on supply chain
2022	Lighter biscuit weight per piece, changes in oil composition	Increased costs for palm oil and packaging

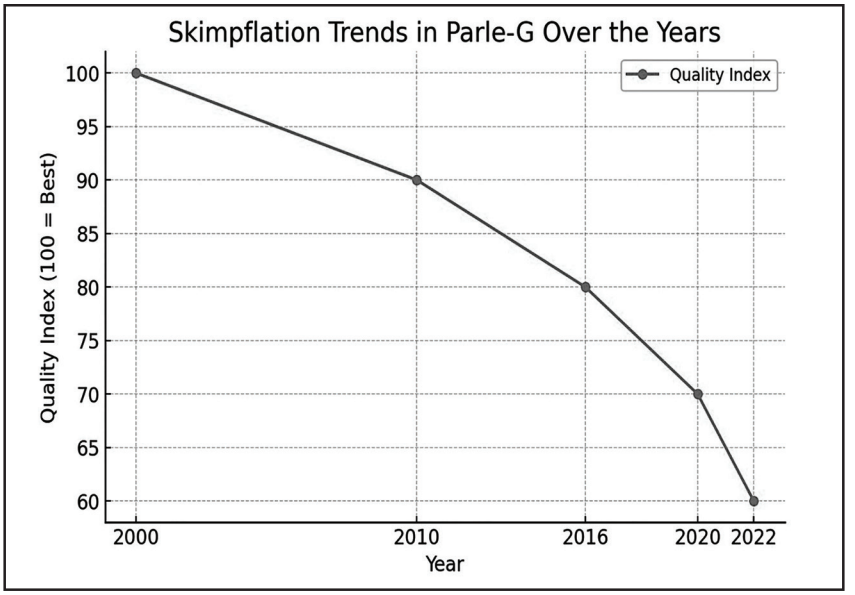


Fig. 2

Consumer Reaction and Market Impact

While Parle-G remains a dominant player in the biscuit market, shrinkflation and skimpflation have led to mixed reactions: Loyal customers express dissatisfaction upon noticing reduced quantity. Price-sensitive consumers continue to purchase as the brand remains affordable compared to competitors. Alternative brands, such as Britannia and ITC's Sunfeast, have gained traction, offering competitive options with more transparent pricing.

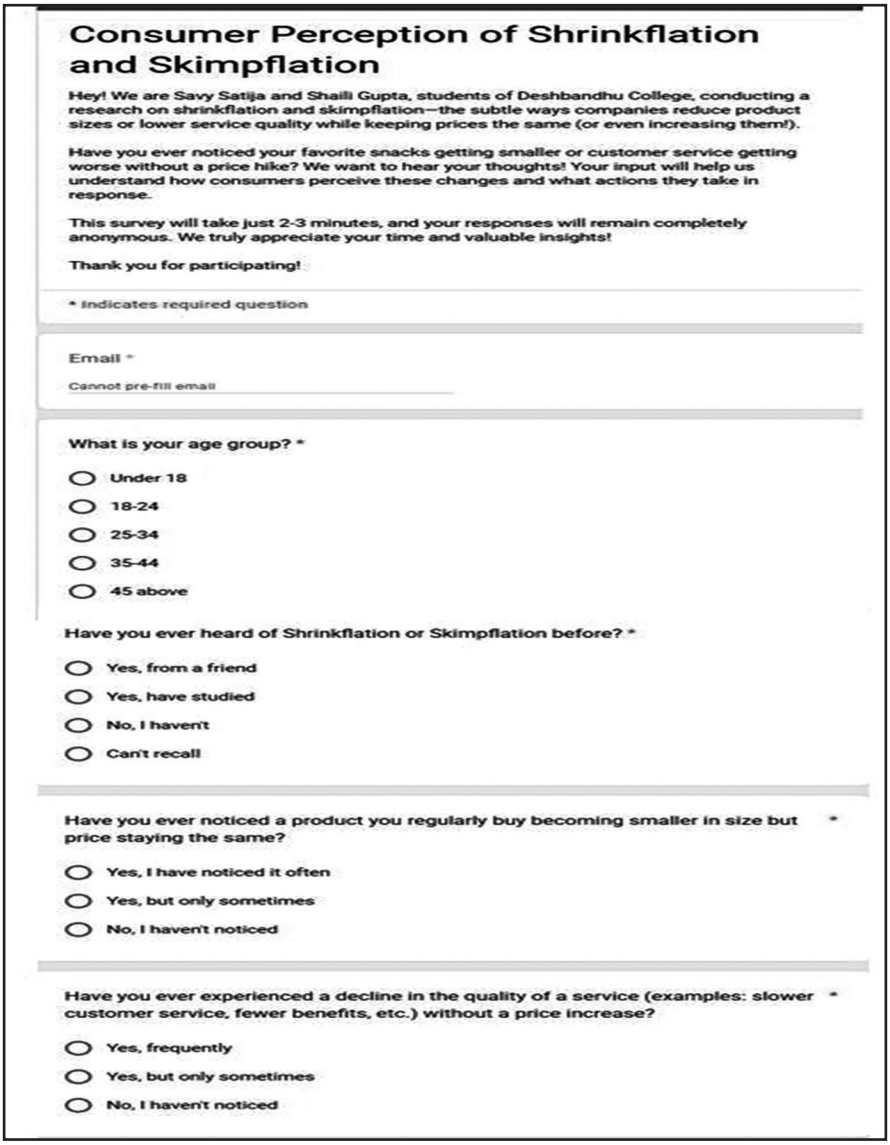
Conclusion

Parle-G's adoption of shrinkflation and skimpflation highlights how brands navigate economic pressures while maintaining mass-market appeal. While this strategy helps retain price- sensitive customers, long-term brand loyalty may be affected. As consumer awareness grows, companies must balance cost-cutting measures with maintaining product trust and transparency.

6. Data Analysis and Interpretation

This section integrates primary survey findings with secondary evidence from industry reports and documented case studies to provide contextual interpretation. While the survey forms the core dataset, secondary sources are used to triangulate consumer

perceptions with observable market trends, particularly in relation to shrinkflation and skimpflation practices. We conducted a survey using Google Forms, gathering 217 responses to analyze consumer awareness and perceptions of shrinkflation and skimpflation. The questionnaire included various aspects such as purchasing habits, brand loyalty, and consumer reactions to changes in product quantity and quality. Below is the detailed interpretation and analysis of each question based on the collected responses along with the google form shared among different age groups.



Consumer Perception of Shrinkflation and Skimpflation

Hey! We are Savy Satija and Shaili Gupta, students of Deshbandhu College, conducting a research on shrinkflation and skimpflation—the subtle ways companies reduce product sizes or lower service quality while keeping prices the same (or even increasing them!).

Have you ever noticed your favorite snacks getting smaller or customer service getting worse without a price hike? We want to hear your thoughts! Your input will help us understand how consumers perceive these changes and what actions they take in response.

This survey will take just 2-3 minutes, and your responses will remain completely anonymous. We truly appreciate your time and valuable insights!

Thank you for participating!

* Indicates required question

Email *

Cannot pre-fill email

What is your age group? *

- Under 18
- 18-24
- 25-34
- 35-44
- 45 above

Have you ever heard of Shrinkflation or Skimpflation before? *

- Yes, from a friend
- Yes, have studied
- No, I haven't
- Can't recall

Have you ever noticed a product you regularly buy becoming smaller in size but price staying the same? *

- Yes, I have noticed it often
- Yes, but only sometimes
- No, I haven't noticed

Have you ever experienced a decline in the quality of a service (examples: slower customer service, fewer benefits, etc.) without a price increase? *

- Yes, frequently
- Yes, but only sometimes
- No, I haven't noticed

Fig. 3

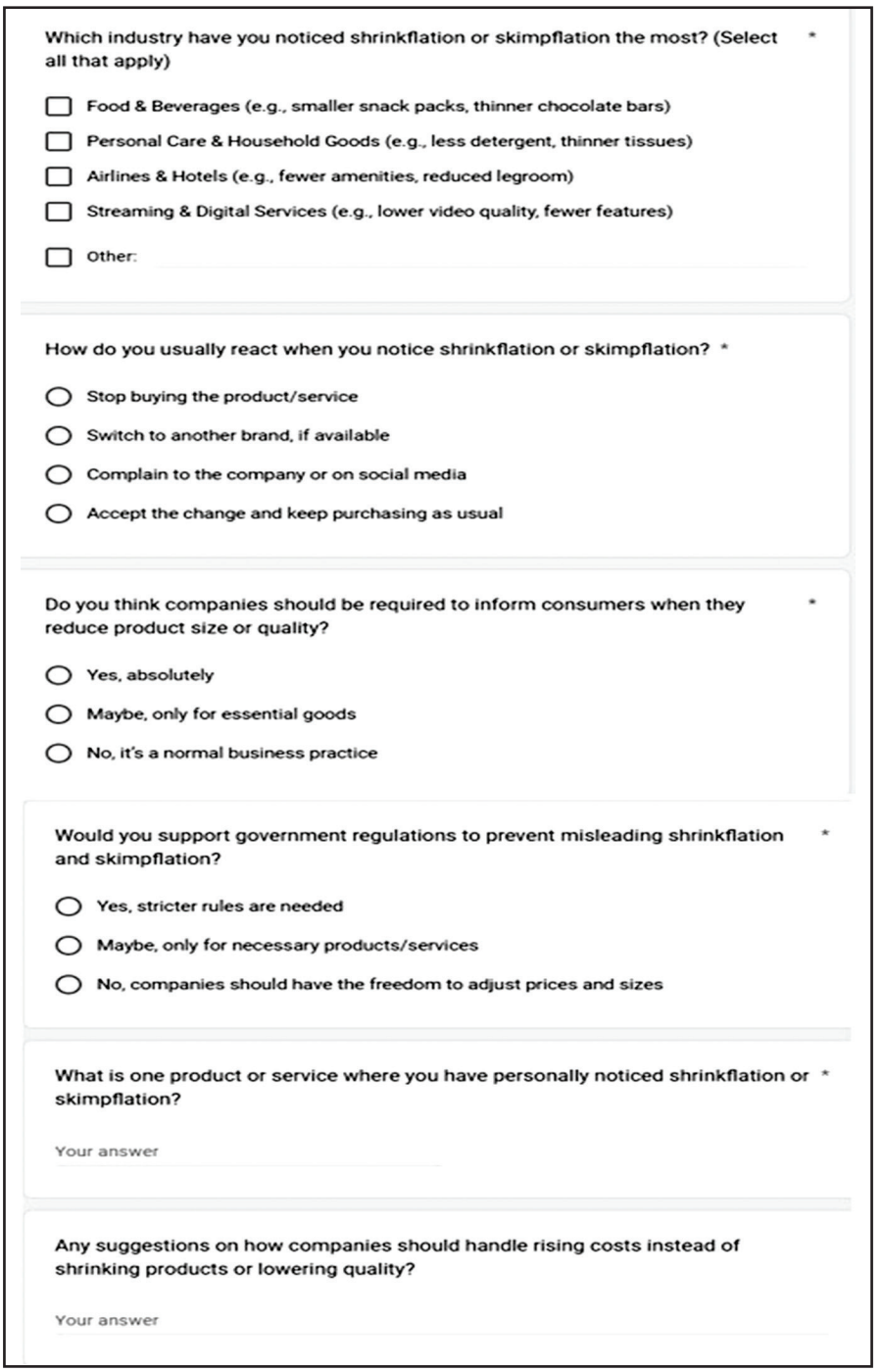

Which industry have you noticed shrinkflation or skimpflation the most? (Select all that apply) *
Food & Beverages (e.g., smaller snack packs, thinner chocolate bars)
Personal Care & Household Goods (e.g., less detergent, thinner tissues)
Airlines & Hotels (e.g., fewer amenities, reduced legroom)
Streaming & Digital Services (e.g., lower video quality, fewer features)
Other:
How do you usually react when you notice shrinkflation or skimpflation? *
Stop buying the product/service
Switch to another brand, if available
Complain to the company or on social media
Accept the change and keep purchasing as usual
Do you think companies should be required to inform consumers when they reduce product size or quality? *
Yes, absolutely
Maybe, only for essential goods
No, it's a normal business practice
Would you support government regulations to prevent misleading shrinkflation and skimpflation? *
Yes, stricter rules are needed
Maybe, only for necessary products/services
No, companies should have the freedom to adjust prices and sizes
What is one product or service where you have personally noticed shrinkflation or skimpflation? *
Your answer
Any suggestions on how companies should handle rising costs instead of shrinking products or lowering quality?
Your answer

Fig. 4

Response Analysis

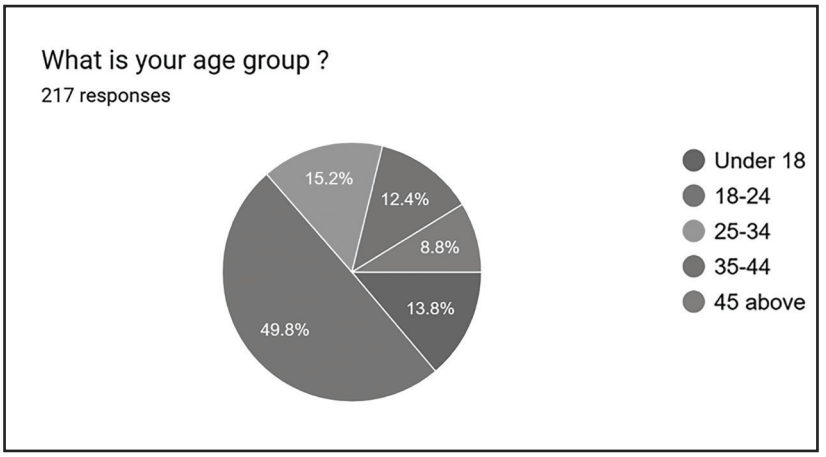


Fig. 5

The survey results show that nearly half of the respondents (49.8%) fall within the 18-24 age group, making young adults the dominant segment of participants. This suggests that this age group is the most actively engaged with the topic and more responsive to online survey participation. The remaining responses are fairly distributed across other age categories: 15.2% are aged 25-34, 13.8% are under 18, 12.4% belong to the 35-44 group, and 8.8% are aged 45 and above. While participation decreases gradually with age, the presence of respondents across all groups indicates that awareness of the issue is not limited to a single generation. However, the stronger representation of younger individuals may reflect higher digital accessibility, greater online activity, and a stronger interest in contemporary consumer and economic trends among youth.

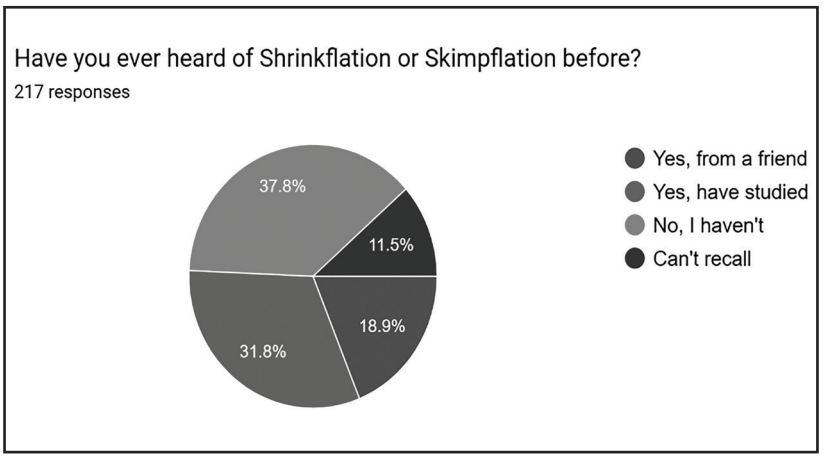


Fig. 6

The survey results suggest that awareness of shrinkflation and skimpflation is mixed among respondents. A combined 50.7% report some familiarity with the terms, with 31.8% saying they have studied them and 18.9% having heard about them from friends. This indicates that about half of the participants have at least some exposure to these economic concepts, either through formal learning or informal discussions.

However, a slightly larger share of respondents (37.8%) state that they have not heard of these terms, while 11.5% cannot recall whether they have encountered them before. This shows that a substantial portion of the population remains unfamiliar with the terminology, even if they may have experienced the phenomena in practice. Overall, the findings highlight a gap in awareness, suggesting the need for clearer communication and consumer education about such pricing and product strategies.

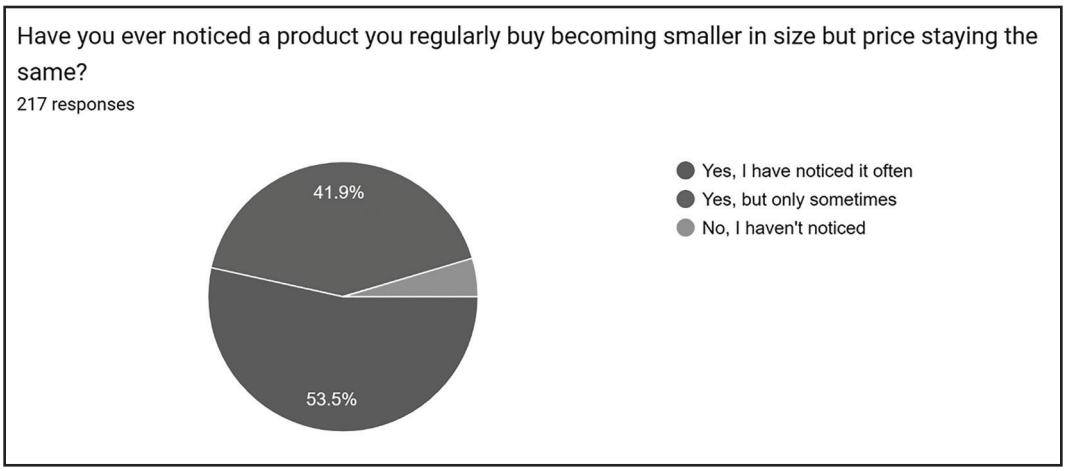


Fig. 7

The survey results indicate that a strong majority of respondents have observed shrinkflation in their daily purchases. Over half of the participants (53.5%) report noticing it often, while an additional 41.9% say they have noticed it sometimes. Together, this means that 95.4% of respondents have at least occasionally observed products becoming smaller in size while prices remain unchanged, suggesting that the experience is widespread and highly visible to consumers.

Only a small fraction of respondents report not noticing this change, indicating that shrinkflation is no longer a subtle or hidden practice for most buyers. The findings imply a high level of consumer awareness based on personal experience, even among those who may not be familiar with the formal term. This widespread recognition highlights how common such pricing strategies have become in everyday markets.

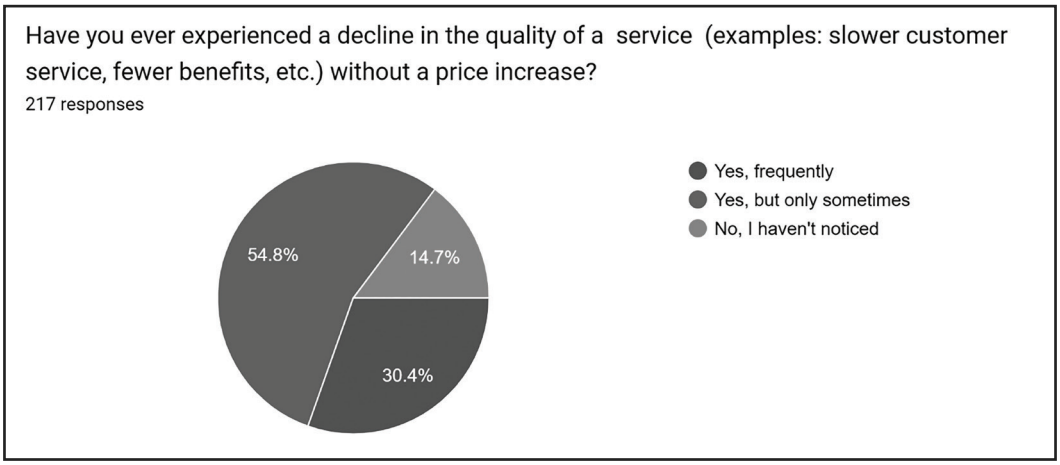


Fig. 8

The survey findings show that most respondents have experienced a decline in service quality without a corresponding price reduction. A combined 85.2% report noticing this issue, with 30.4% saying they experience it frequently and 54.8% encountering it sometimes. This suggests that perceived service skimping is a common consumer experience and not limited to isolated cases. Only 14.7% of respondents state that they have not noticed such a decline, indicating that the majority are aware of changes in service standards. These results point to widespread consumer sensitivity to quality reductions, highlighting that skimpflation is not only associated with physical products but is also strongly felt in service sectors. Overall, the pattern suggests growing consumer awareness of value erosion even when prices remain stable.

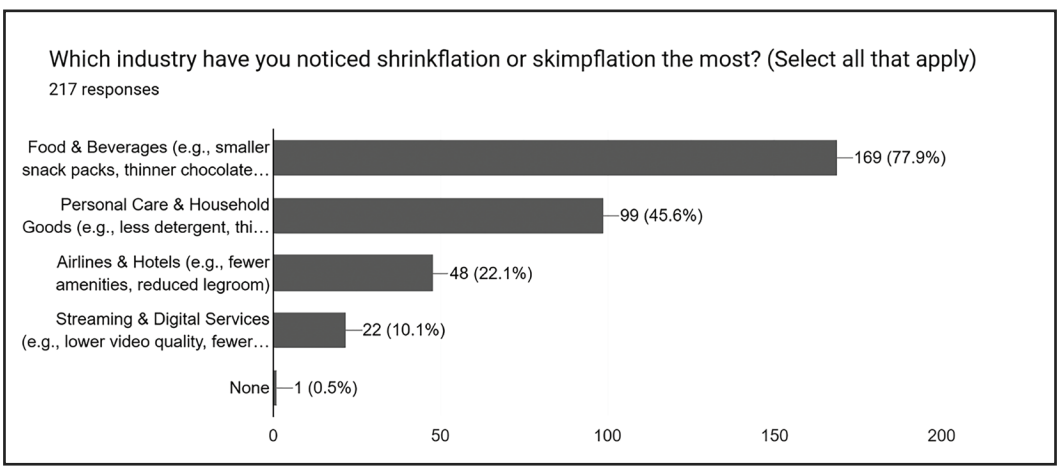


Fig. 9

The survey results indicate that shrinkflation and skimpflation are most strongly noticed in the Food & Beverages industry, with 77.9% of respondents identifying this sector. This dominant share suggests that consumers are particularly sensitive to changes in everyday consumable goods, where reductions in quantity or quality are more visible and directly affect routine spending habits.

Personal Care & Household Goods rank second, with 45.6% of respondents reporting noticeable changes. This indicates that awareness extends beyond food products into essential household items, reinforcing the perception that shrinkflation is affecting multiple areas of daily consumption. Airlines & Hotels are identified by 22.1% of participants, suggesting that service-based industries are also perceived to be reducing value through fewer amenities or lower service standards.

Streaming & Digital Services are mentioned by 10.1% of respondents, showing that even digital sectors are not immune to perceptions of declining value. Notably, only 0.5% of respondents selected "None," indicating that almost all participants have observed shrinkflation or skimpflation in at least one industry. Overall, the findings highlight that while the phenomenon is widespread, it is most acutely felt in sectors tied to everyday consumer essentials.

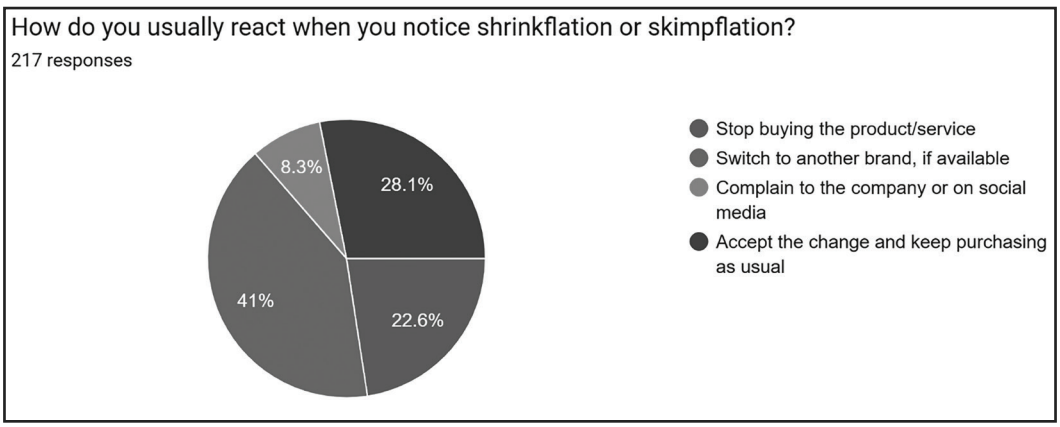


Fig. 10

The survey results indicate that most consumers react to shrinkflation and skimpflation by adjusting their purchasing behaviour. 41% of respondents choose to switch to another brand if available, demonstrating that brand loyalty is heavily influenced by perceived value. Meanwhile, 28.1% accept the change and continue purchasing the product or service, suggesting that some consumers prioritize convenience over price-to-value concerns. Only a small percentage of respondents actively complain to companies or on social media, indicating that while dissatisfaction exists, it rarely translates into direct action against brands. These insights highlight the importance for companies to balance cost-cutting strategies with maintaining customer trust and satisfaction.

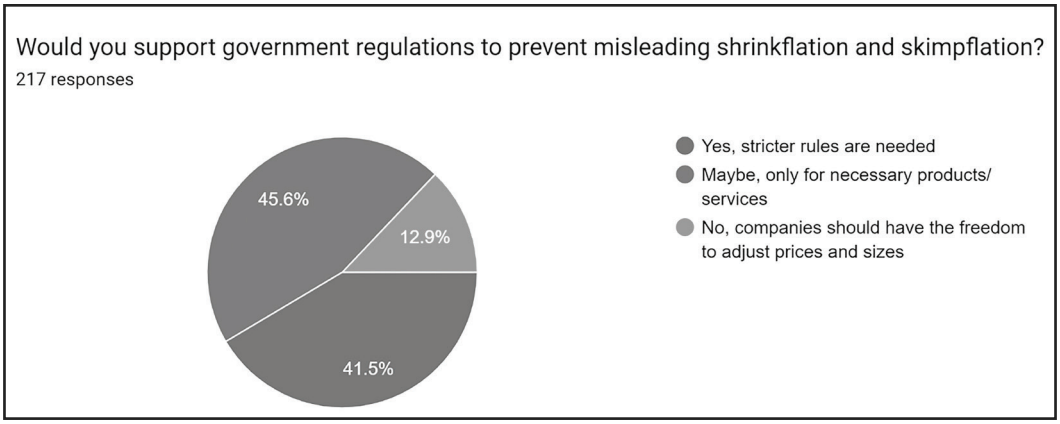


Fig. 11

The survey reveals that a majority (52.5%) of respondents believe companies should be required to inform consumers when reducing product size or quality, emphasizing the demand for transparency in business practices. 37.8% think disclosure should be mandatory only for essential goods, indicating that some consumers see shrinkflation and skimpflation as more concerning when it affects necessities. Meanwhile, 9.7% consider it a normal business practice, suggesting that a small segment accepts these changes as part of market dynamics. The results highlight a strong consumer preference for honesty and openness, which businesses should consider maintaining trust and brand loyalty.

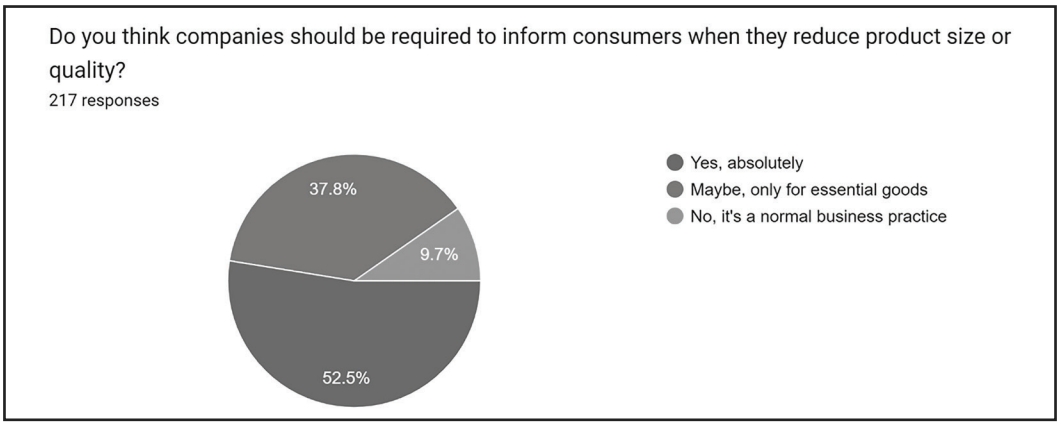


Fig. 12

The responses indicate strong overall support for government intervention to address misleading shrinkflation and skimpflation practices. A clear majority of participants favored stricter regulations, reflecting widespread concern about transparency and fairness in pricing and product quality. A substantial portion of respondents adopted a

conditional stance, supporting regulation mainly for essential goods and services such as food, healthcare, and transportation. This suggests that while consumers value market freedom, they believe basic necessities should be protected from hidden cost-cutting practices. A smaller group opposed regulation altogether, arguing that companies should retain the flexibility to adjust prices, sizes, or quality in response to economic pressures. Overall, the findings highlight a strong demand for regulatory oversight, particularly where consumer welfare and essential needs are concerned, underscoring the importance of balancing business flexibility with consumer protection.

What is One Product or Service Where You Have Personally Noticed Shrinkflation or Skimpflation?

Table 3

Category	Products / Services Reported by Respondents
Snack Foods	Lays, Kurkure, Bingo Mad Angles, Doritos, Haldiram Bhujia, Potato chips, Namkeen
Biscuits & Bakery	Parle-G, Marie Gold, Oreo, Milk Bikies, Little Hearts, Cakes
Chocolates & Confectionery	Dairy Milk, KitKat, Perk, Munch, 5 Star, Gems, Toblerone, Pulse candy
Instant & Packaged Foods	Maggi, Yippee, Buldak noodles, Oats, Kellogg's Muesli, Protein bars
Beverages	Soft drinks, Thumbs Up, Frooti, Real Juice, Coffee, Tea, Gatorade
Dairy Products	Milk, Amul Cheese, Cheese slices, Yogurt, Ice cream, Milkmaid
Personal Care Products	Shampoo, Soap, Toothpaste (Colgate, Pepsodent), Creams (Nivea, Vaseline), Razors
Household Essentials	Detergent, Handwash, Tissues, Oil, Aluminium foil, Phenyl
Health & Hygiene	Sanitary pads, Medicines, Acne creams
Stationery & Utility Items	Pencils, Erasers (Apsara), Crayons, Fevicol
Services (Skimpflation)	Airlines (reduced legroom), OTT platforms (Amazon Prime, streaming quality), Hotel services, Blinkit
Others / Miscellaneous	Perfume, Makeup products, Skincare items, Milton tiffin

The table summarizes the wide range of products and services where respondents have perceived shrinkflation or skimpflation, showing that the phenomenon spans everyday consumer essentials as well as discretionary items. Most reports are concentrated in food-related categories such as snacks, biscuits, chocolates, beverages, and dairy, suggesting

that consumers are particularly sensitive to changes in frequently purchased grocery items. At the same time, the presence of personal care, household essentials, health products, and stationery indicates that perceived value reduction is not limited to food markets but extends into routine living expenses. The inclusion of services such as airlines, OTT platforms, and delivery services highlights that skimpflation is also strongly felt in service sectors, where consumers notice reduced quality or benefits. Overall, the diversity of categories reflects that shrinkflation and skimpflation are widespread consumer concerns affecting multiple aspects of daily life rather than isolated industries.

Any Suggestions on How Companies should Handle Rising Costs Instead of Shrinking Products or Lowering Quality?

The suggestions provided by respondents reflect a strong preference for transparency and fairness in how companies manage rising costs. Many participants expressed that businesses should openly increase prices rather than secretly reducing product quantity or lowering service quality. Respondents emphasized that hidden strategies such as shrinkflation and skimpflation damage consumer trust and create frustration once noticed. Maintaining consistent quality was repeatedly highlighted as a priority, with several respondents noting that declining standards often lead consumers to switch to competing brands. Value-based pricing emerged as a common recommendation, where prices reflect actual product value instead of concealed compromises. Overall, consumers indicated that honesty, clear communication, and quality preservation are essential for sustaining long-term customer loyalty.

7. Research Findings

- A large majority of respondents are aware of shrinkflation and skimpflation, with most participants reporting frequent observation of reduced product quantity and declining service quality without corresponding price changes.
- Shrinkflation is most visible in food and beverage products, while skimpflation is more noticeable in services such as digital platforms, airlines, and hospitality, indicating that hidden inflation spans both goods and services sectors.
- Consumer behaviour is significantly affected: most respondents prefer switching brands rather than accepting hidden reductions, suggesting that perceived value strongly influences brand loyalty.
- Consumers show a strong preference for transparency, with a majority supporting mandatory disclosure and government regulation to prevent misleading size or quality reductions.
- Hidden price adjustments are widely perceived as unfair, and repeated exposure to such practices risks weakening long-term trust between firms and consumers.

Conclusion

This study shows that shrinkflation and skimpflation are increasingly recognized by consumers and have meaningful effects on purchasing behaviour and brand trust. While firms use these strategies to manage rising costs, hidden reductions in value are widely perceived as unfair and create a strong demand for transparency. The findings suggest that sustainable market relationships depend not only on pricing efficiency but also on ethical communication. Strengthening disclosure practices and consumer awareness will be essential for maintaining trust and fairness in modern markets.

References

Antoniades, A., S. Clerides, and M. Xu (2018): "Micro-responses to shocks: Pricing, promotion, and entry," Available at SSRN 3274624.

Budianto, Flora (2024): *"Shrinkflation."* SSRN Electronic Journal (preprint). DOI: 10.2139/ssrn.4788863

Evangelidis, I. (2023). *Frontiers: shrinkflation aversion. Marketing Science,* 43(4). DOI: 10.1287/mksc.2023.0269

Evangelidis, I. (2024). *Skimpflation outrage: Decreases in product quality are seen as much more unfair than decreases in size and increases in price. SSRN Electronic Journal.* DOI: 10.2139/ssrn.4731245

Imai, S., and T. Watanabe (2014): *"Product Downsizing and Hidden Price Increases: Evidence from Japan's Deflationary Period,"* DOI: 10.1111/aepr.12047

Janssen, A., & Kasinger, J. (2025). *Shrinkflation and consumer demand. Marketing Science.* DOI: 10.1287/mksc.2024.0948

Kim, I. K. (2023). *Consumers' preference for downsizing over package price increases. Journal of Economics & Management Strategy, 33(3)*. DOI:10.1111/jems.12548

Melmiès, Jordan (2024):*"Hidden price increases, product downsizing, and shrinkflation: a post-Keynesian macroeconomic perspective." Industrial and Corporate Change.* DOI: 10.1093/icc/dtae035

Milan, R., & Singh, S. (2024). *Analysing shrinkflation in FMCG industry with special reference to food packaging industry. Research Review International Journal of Multidisciplinary, 9(3)*. DOI: 10.31305/rrijm.2024.v09.n03.029

Rojas, C., Jaenicke, E. C., & Page, E. T. (2024). *Shrinkflation? Quantifying the impact of changes in package size on food inflation. SSRN Electronic Journal.* DOI:10.2139/ssrn.4804636

Survase, Balaji; Chormunge, Shreya; Pandey, Priyanka (2025)*"Shrinkflation: An Overview of Causes, Impacts, and Consumer Perceptions." International Journal of Advance and Applied Research, 6(19).* DOI: 10.5281/zenodo.15112795

Bridging the Gap: An Analysis of the Literature on Gender Diversity in Economics

Prarthana Drolia
B.Com. (Hons.)
3rd Year
Shri Ram College of Commerce
University of Delhi
INDIA

Gaurav Rana
Assistant Professor
Department of Commerce
Shri Ram College of Commerce
University of Delhi
INDIA

ABSTRACT

This paper examines the persistent gender gap in economics, highlighting the underrepresentation of women and the biases they face in hiring, pay, and publication. It reviews literature from 1995 to 2022, revealing that gender diversity enhances research quality and decision-making. Statistical evidence from two reports has been used to assess the severity of the issue and evaluate the impact of measures implemented over the years across various countries. Despite gradual improvements, systemic barriers continue to hinder women's advancement in the field, necessitating targeted interventions to promote equity. Drawing on insights from reports and experimental studies, I have proposed measures such as enhancing early exposure to economics for women, ensuring unbiased recruitment processes, encouraging gender diversity in teams, and adopting double-blind peer reviews to promote fair assessment of academic work.

Keywords: *Gender inequality, Representation, Bias, Diversity, Equity.*

Introduction

Gender diversity in economics can lead to better and more relevant knowledge. Research has proved that due to the different views of male and female economists on important policies. For example, women economists are more likely to support policies that reduce income inequality and to disagree that labour market conditions are equal for men and women than their male counterparts. Thus, having more women in this field can help to balance the perspectives and reduce biases. Diverse groups can make better decisions and solve problems more effectively due to higher "collective intelligence." Research teams that are multi-authored by a group of men and women economists are found to produce higher impact and receive more citations because of the wider range of perspectives and greater deliberation. Thus, gender diversity in economics is not only important to ensure

that women have a fair chance in the field but it is also important for enhancing the quality of economics research and policy and decision making. (Bayer & Rouse, Diversity in the Economics Profession: A New Attack on an Old Problem, 2016)

Despite the above-proven advantages, women have been underrepresented in the field of economics for a long time. They have been facing implicit and explicit bias and start at lower job levels than their male counterparts even with equal abilities. Recovery has been noticed through the years but has remained quite slow when compared to other male-dominated fields such as STEM. The "Glass Ceiling" in the discipline prevents them from achieving higher job positions due to being deemed unfit for high-ranking jobs.

This difference is not only reflected in how many women graduate with economics as their major, but also after they graduate and receive jobs. Although they are forced to start at lower levels than their male counterparts, even on the same level, they face a significant difference in pay and promotions. The problem does not end here. They have to tackle bias even when they author or co-author papers that receive fewer citations or are not published or selected to be presented at conferences, merely due to their female-sounding names. They even have to deal with prejudice when getting recommendations or reviews from their peers, students and mentors.

Research Methodology

Many surveys have been conducted that provide us with data to prove the problem described above. A lot of studies and experiments have been done across countries to detect the main reason behind this scenario. In this paper, I have tried to highlight this issue by presenting evidence from two reports by INOMICS and CSWEP. Following this, I have conducted a literature review of 30 papers that range from 1995 to 2022 that aim to determine the reason behind this gap and through surveys and experiments, try to discover methods to overcome the same.

Literature Review

Gender diversity refers to an equal representation of all genders in economic activities. For economics, it specifically focuses on enabling access to education, jobs, pay and opportunities. Evelyn (Forget, 2011) highlights how historically women have been facing significant bias with lesser support and pay as also described by Anne P. Carter in her 2009 interview. Society pressurises them to focus on family matters which has made it difficult for them to pursue demanding careers. Lack of opportunities has been visible in instances such as women students at Harvard cohort of 1945 receiving degrees from Radcliffe College instead and male advisors helping only male students find jobs. The proportion of economics doctorates awarded to women in economics decreased between the 1920s and 1950s considerably with many universities and colleges hiring only men after the 1930s. (Forget, 2011)

Women respond differently than men to grades with their choice of degree being influenced by both math and verbal abilities as compared to math abilities primarily for men. Relative grades (grades compared to other courses) significantly impact women's persistence in economics. (Sakhno, 2019) Faculty were found to act as role models in a study conducted at Colgate University in which data of 8167 students from graduating classes of 1988 to 2000 were examined. Apart from this collegiate academic success, human capital, and pre-college and college socialisation were also found to be players in the choice of major by women. The grades in sophomore year and verbal and math aptitudes were found to be the biggest factor influencing the choice. (Rask & Bailey, 2002) In harmony with this result, another study conducted on introductory economics students enrolled at a Connecticut University from 1987 to 1989 showed that women were more grade-sensitive as compared to men and attributed failure to themselves. This need for greater validation might be due to the classroom climate and a changed approach to how economics is taught at the introductory level was needed to overcome this. (Horvath, Beaudin, & Wright, 2014) Data from 4723 grades awarded to 2999 students between 2004 and 2014 at Wellesley College also showed that receiving higher grades in introductory economics courses significantly increased the prospects of women majoring in economics. This was stronger for those receiving financial aid. (McEwan, Rogers, & Weerapana, 2021) The inclination of women towards grades can also be made out from a research study done using the data of undergraduate students from the University of Delaware which revealed that women with higher verbal SAT scores chose B.A. or an Economics minor. Higher grades in intermediate microeconomics increase their likelihood of obtaining a B.S. in contrast to a decreased likelihood of obtaining a B.A. (Ahlstrom & Asarta, 2019) A survey of introductory economics students at Harvard in 1991 and 1992 revealed that the lesser grades of women in economics than men was a major factor for them not to choose it as a major but a similar situation in Math had a very little impact. It also found that the role model effect had a small impact, with proxies for the classroom environment demonstrating a similar result. Even after controlling the above factors, the gap was around 5.5 percentage points which signalled that other factors such as knowledge about the nature of economics upon entering college might also sway women's choices. (Dynan & Rouse, 2010) In contrast to the above discussion, a study of data from the Erasmus School of Economics showed that there was no significant difference in grade sensitivity between men and women. (Arnold, 2020)

Unlike the findings at Harvard, a field experiment of role models' visit at Southern Methodist University was found to positively influence women's choice of major with the probability of them majoring in economics increasing by 8 percentage points due to the intervention as compared to the initial level of 9 per cent. It involved two female alumni of the University visiting four Principles of Economics classes to tell about their experiences as economics majors, how this course helped them succeed in their careers and the jobs that they were currently working. These role models were selected by the present two female

undergraduate students at the same university who found them the most inspiring out of the list of alumni who graduated between 1985 and 2010 based on their interest in their current jobs and work sector. Interviews, of seven alumni who replied to the invitation mail that did not mention the purpose of the study (to avoid changes in their behaviour), were conducted, out of the 18 short-listed alumni. (Porter & Serra, 2010) More women instructors need to be hired to encourage female students to choose economics as their major as the faculty role model effect has a high effect on females. Instead of making the size of the economics department larger, the stereotypes need to be done away with by catering for the gaps in information and influencing more women to choose economics while at the same time drawing more men towards majors such as literature, psychology and education. The hiring managers need to ward off the prevailing explicit and implicit bias and implement a recruiting process that is not influenced by stereotypes. (Bayer & Wilcox, 2019) The data reported to the American Economic Association from 159 departments of economics annually from 2001 to 2010 about the number of men and women being awarded with undergraduate degrees was used to find no significant impact of the number of female faculty on the proportion of women opting for economics as their majors. The requirement of one semester of calculus increased the number of females opting for economics majors within liberal arts colleges and universities granting degrees in business. An additional semester with similar requirements had the same effect in liberal arts colleges but a contrasting effect at PhD granting institutions. Institutions offering business degrees granted fewer economics degrees to women than those which do not offer business degrees. (Emerson, McGoldrick, & Siegfried, The Gender Gap in Economics Degrees: An Investigation of the Role Model and Quantitative Requirements Hypotheses, 2017)

Women were found to be less productive than men due to their higher engagement in domestic responsibilities, a higher propensity to engage in service activities instead of research, disparities in collaborative networks and access to mentors, and experiences of gender harassment. They face more stringent evaluation standards than men and are required to produce greater volume of higher-quality work to attain similar outcomes in the field of economics. (Lundberg & Stearns, 2017) Due to institutional gender bias women begin their academic careers in lower-ranked departments as compared to men which limits their access to equally productive coauthors, subsequently reducing the number of publications in leading journals. This hampers their publication success and career prospects even after being equally productive. (Ghosh & Liu, 2019) A sample from the 1989 edition of the American Economic Association Membership Directory revealed that top-fifty schools reward the average female economist less than her male counterpart for certain positive traits but penalise her less for negative traits like age at PhD. Even after controlling for the lesser productivity due to a mismatch of skills, women do not face equal opportunities as men which requires research on opportunities within a profession as well as between related professions. (McMillen & Singell, 2016) A study that used data from 238 universities and business schools with a focus on the top 300 institutions globally depicted that higher-ranked institutions had fewer women, especially in senior positions,

with even the junior positions exhibiting the same trend in the US. The various forms of discrimination like bias in evaluations and lesser opportunities are considered to be the contributing factors in this gap. Even after controlling for factors such as productivity, women were found to be receiving lesser pay and promotion, and reported lower job satisfaction. (Auriol, Friebel, Weinberger, & Wilhelm, 2022)

It has been found that male and female faculty members exhibit equal bias offering higher starting salaries to male-sounding resumes and considering them more fit for the job than similar resumes with female-sounding names. Women were found to face bias for co-authoring papers, especially when their coauthors were men. Papers written by women were found to receive fewer citations. Even the students were found to demonstrate an implicit bias towards women faculty, rating them annoying in contrast with the word "brilliant" used for male faculty. (Bayer & Rouse, 2016) Women are a minority in general economics and the cited authors in this field are more likely to be male authors only irrespective of whether the citation has been made by a males-only authorship, a female-only or a group of males and females as authors. These citations are important as they not only play an important part in salaries and promotions but also in deciding tenure. (Ferber & Brün, 2011) Using the data of submissions to three of the largest general-interest academic conferences (EEAC, SAEe and SMYE), it was found that women receive fewer citations as compared to men and face challenges to get their research funded, published, and recognised. There is a bias in evaluation due to stereotypes, because of which men's research is often rated higher than that of women, even when the quality of their works is similar. This makes it difficult for women to attain senior academic positions. (Hospido & Sanz, 2020) Interestingly, a study of publications in Economics and Management between 2008 and 2018 in the WoS Database found that single male authors are at the greatest disadvantage in receiving citations with single female authors being the next in line. Mixed-gender publications were found to receive more citations than both of the above, even more than multiple authors of the same sex, indicating a positive influence of gender diversity on citations. (Maddi & Gingras, 2021)

Even with similar GPAs, women were found to perform poorer than men by 50 points on the economics assessment of Graduate Record Exam (GRE). A possible explanation for this was estimated to be the format of the test. Discrimination against female colleagues was found to be the most probable reason for women with identical backgrounds as their male counterparts having scantier chances of promotion. However, some evidence suggests that the choice of women to maintain more restricted professional networks might be responsible for the above. (Kahn, 1995) The discouragement of women from studying economics during their K-12 level is believed to be the source of the "leaky pipeline." A change in the curriculum is required to remove the misperception of economics only being associated with finance and business-related careers whereas intellectual and policy roles are ignored. Further, another stage of the leak was found to be in the shift from doctoral training to entry-level faculty positions due to a lack of networks and mentors. Due to an increase in family commitments and the absence of formal mentoring, women find it difficult to make their way from assistant to associate professor. (Buckles, 2019) A study conducted by analysing data from MIDFIELD showed that students with higher SAT

scores tend to choose engineering or other quantitative disciplines instead of economics which was equally true for women. It was found that if women were given early exposure to economics at the school level, they might commit and stick to the major as they are generally less likely to have an early interest in economics, and tend to start their study of the subject later than men. The gender composition of the classroom was found to affect the likelihood of female students majoring in economics which decreased if the percentage of male students was higher. The database of the study mainly consisted of large, public institutions in contrast with most of the previous studies being conducted at liberal arts colleges. (Emerson, McGoldrick, & Mumford, 2012) A study that included a sample of 1,277 students from a German-speaking part of Switzerland revealed that females with high economic knowledge were more likely to choose economics. The effect of interest was more on females than males in their choice of major. (Jüttler & Schumann, 2019) A meta-analysis of 68 studies published since 1980 revealed that the type of study design significantly impacts the gender gap. Studies that used standardised exams such as the Test of Understanding in College Economics showed a gender gap more often as compared to the ones that used course grades or other assessment types. (Johnson, Robson, & Taengnoi, 2014) A study that examined the university application process using data from Universities and College Admissions Services found no evidence of discrimination against female applicants. Females are less likely to apply for Economics degrees than men even though their chances of enrolment are equal. Women might be deterred from applying as they are less likely to study Math in high school but even those who do study, are less likely to apply which suggests the existence of other factors. (Tonin & Wahba, 2014)

A survey of economists in UK universities with CHUDE membership showed that males in full-time in academia were nearly two times more probable to hold senior ranks than women. (Mumford, 1997) Fewer nominations of women and higher bars set for them have resulted in them being underrepresented Econometric Society fellows. This is similar to the pattern being followed at other prestigious societies such as the American Academy of Arts and Sciences (AAAS), the National Academy of Sciences (NAS), and the American Economic Association (AEA). (Card, DellaVigna, Funk, & Iriberri, 2022) Using data from RePEc to analyse the rankings of top economists it was found that women are less visible in these rankings. Even after controlling for various measures of excellence, women were significantly disadvantaged. Women need to achieve more to earn the same recognition as men even with high performance in RePEc rankings. (Zacchia, 2020)

An experiment at Colorado State University revealed that targeted messages (nudges) and provision of information could encourage high-performing female students, primarily freshmen and sophomores to major in economics increasing the probability by 5.41-12.6 percentage points. (Li, 2018) The results of an experiment at the University of California, Santa Barbara showed that positive feedback (nudge) increased the attendance of both men and women at an informational meeting about the majors of economics and accounting. For women, it increased enrolment in both majors whereas for men, it increased enrolment in economics. However, it had no significant impact on actual enrolment but only caused an increase in interest, thus indicating the need for personal interventions. (Bedard, Dodd, & Lundberg, 2021)

Statistics and Data

According to INOMICS, 2023 Annual Salary Report (Nash, 2023), we were able to gather the following statistics on the status of the gap in pay by gender in economics over the world:

An average female economist is paid 24.2% less than average male economists. Except for Central or International Banks, it was found that there was a pay gap in favour of men across most employer types with the situation the worst in the government domain.

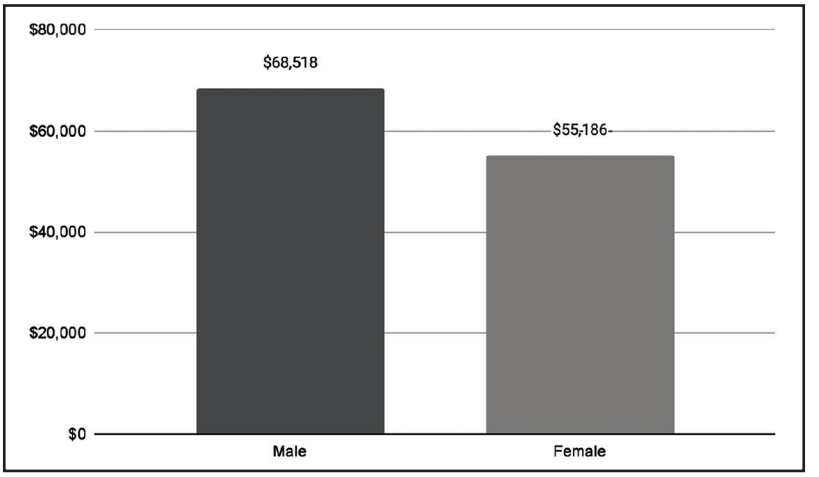


Fig. 1: Average Economist Pay by Gender (USD)

Source: *Salary Report, INOMICS, 2023*

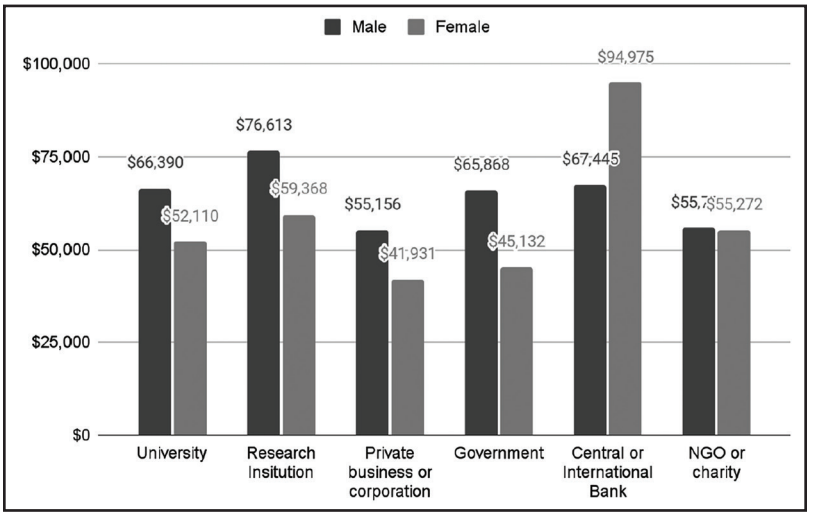


Fig. 2: Average Gender Pay Gap by Employer Type (USD, Regional Cross-Segment Average)

Source: *Salary Report, INOMICS, 2023*

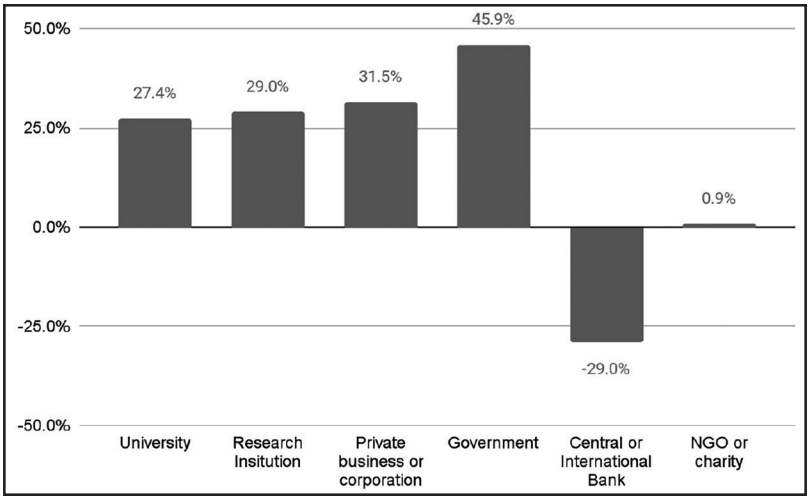


Fig. 3: Average Gender Pay Gap by Employer Type (%)

Source: *Salary Report, INOMICS, 2023*

An average male economist who has completed bachelors earns nearly 27.2% higher than his woman counterpart; who has completed masters by 19.9% more; and 25.8% more with a PhD.

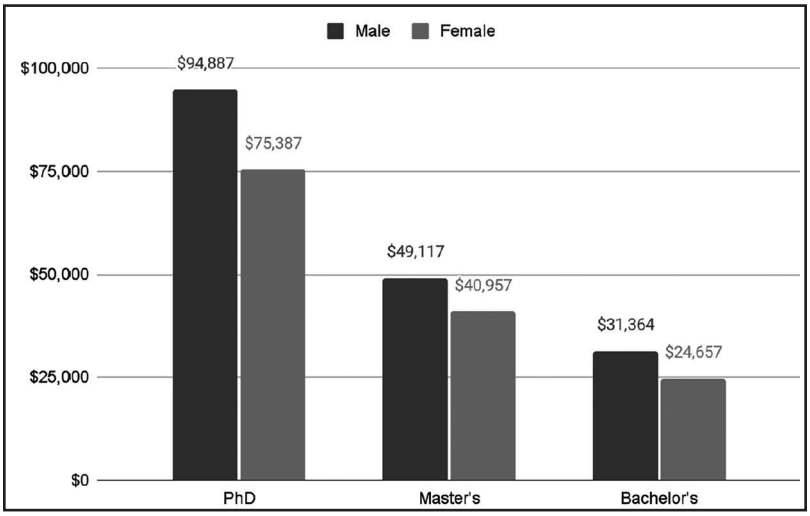


Fig. 4: Average Earnings by Gender and Highest Degree Attained (USD)

Source: *Salary Report, INOMICS, 2023*

By years of experience, male and female economists are paid almost the same early in their careers but the gap increases significantly with 10-19 years of experience.

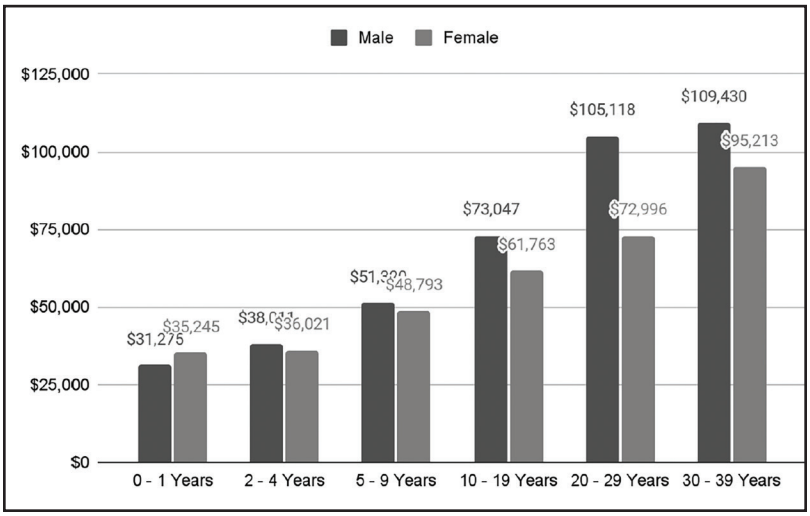


Fig. 5: Average Earnings by Gender and Years of Experience (USD)

Source: *Salary Report, INOMICS, 2023*

The existence of a glass ceiling can be understood by the observation that females have a higher probability of working in junior positions than men who work in advanced academic roles.

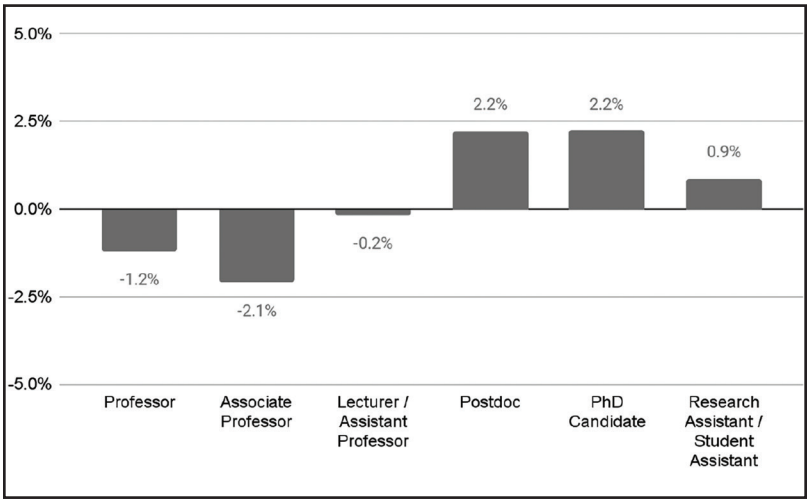


Fig. 6: Percentage Employment Gap in Academic Roles Favouring Women

Source: *Salary Report, INOMICS, 2023*

Even after being more active than men in internships or traineeships, women are lesser found in executive and leadership positions.

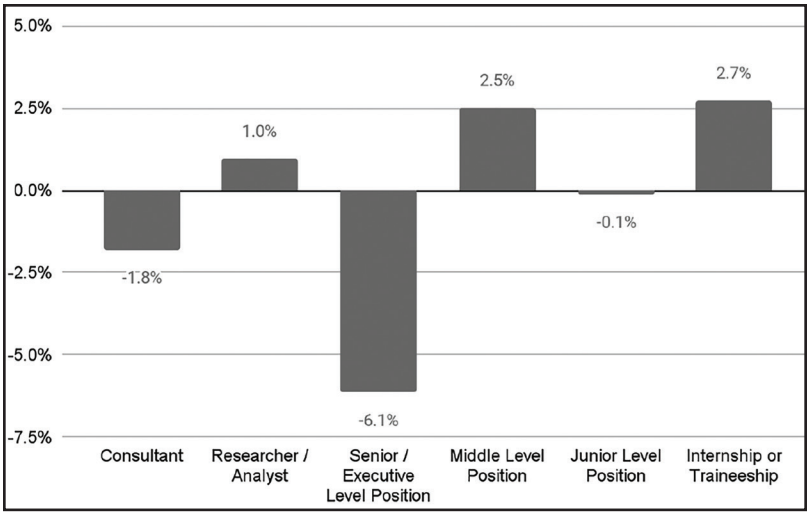


Fig. 7: % "Employment Gap" in Favour of Women, Industry Roles

Source: *Salary Report, INOMICS, 2023*

Except in North America where they are almost paid the same as men and in Africa where they appear to be paid more, female economists are paid considerably less than men.

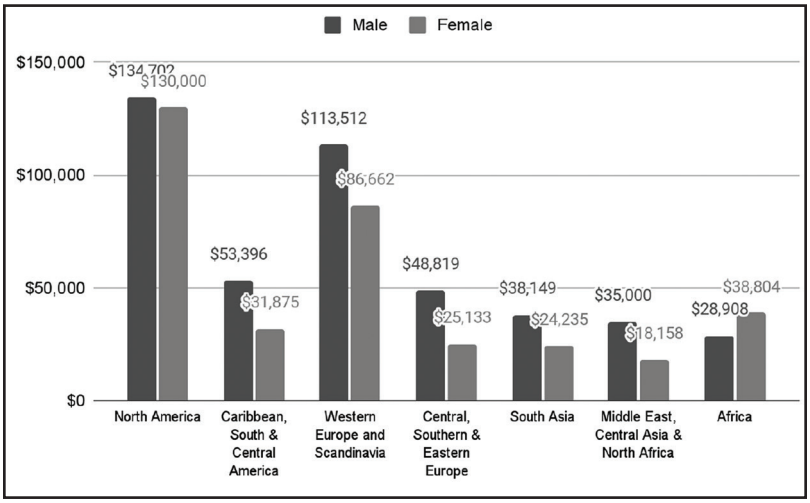


Fig. 8: Average Economist Pay by Gender Regionally (USD)

Source: *Salary Report, INOMICS, 2023*

A 2023 survey by CSWEP of U.S. economics departments (Chari, 2023) of 128 doctoral and 127 non-doctoral departments had the following results:

The leaky pipeline phenomenon can be understood with the following figure showing that with the increasing level of seniority, the share of women decreases with 37.1% females as first-years, 33.7% as assistant professors, 27.6% as tenured associate professors, and 17.5% as complete professors.

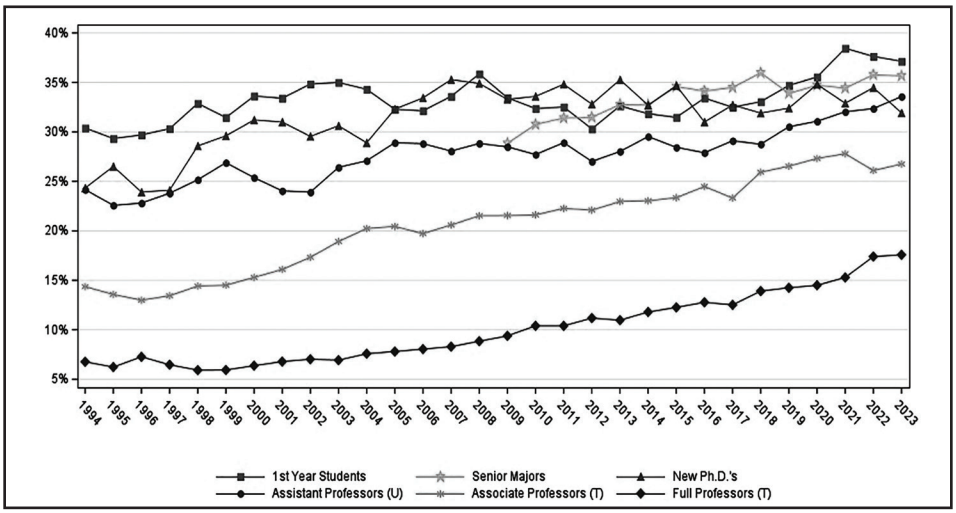


Fig. 9: Pipeline in Departments with PhD Programs

Source: *The 2023 Report of the Committee on the Status of Women in the Economics Profession, American Economic Association, 2023*

The non-doctoral departments showed a similar pattern.

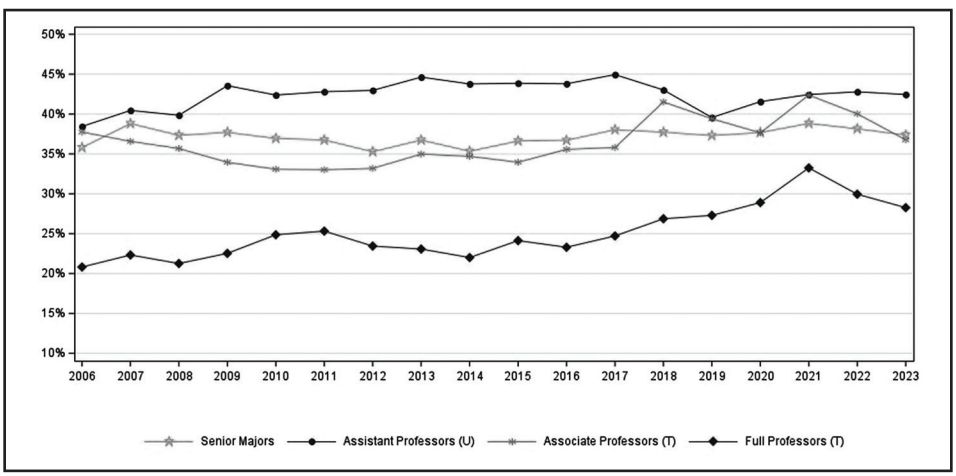


Fig. 10: Pipeline for Non-Doctoral Departments

Source: *The 2023 Report of the Committee on the Status of Women in the Economics Profession, American Economic Association, 2023*

Figures 11 and 12 show that women earn PhDs and start as assistant professors at rates similar to men, but many leave before completing their tenure. Recently, more women have successfully become tenure-track professors, and the number of associate professors leaving has also decreased.

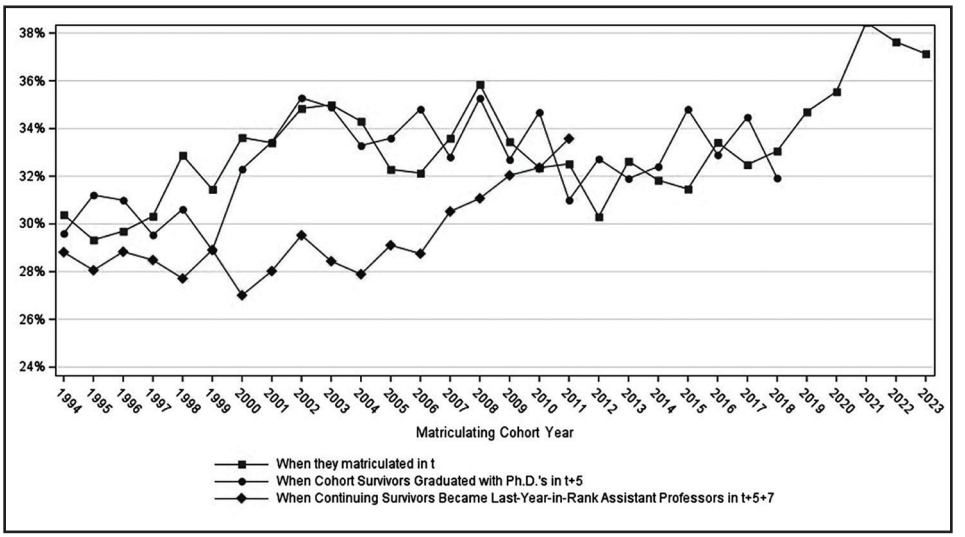


Fig. 11: Lock-Step Model: Share of Women Across Entering PhD Cohorts

Source: *The 2023 Report of the Committee on the Status of Women in the Economics Profession, American Economic Association, 2023*

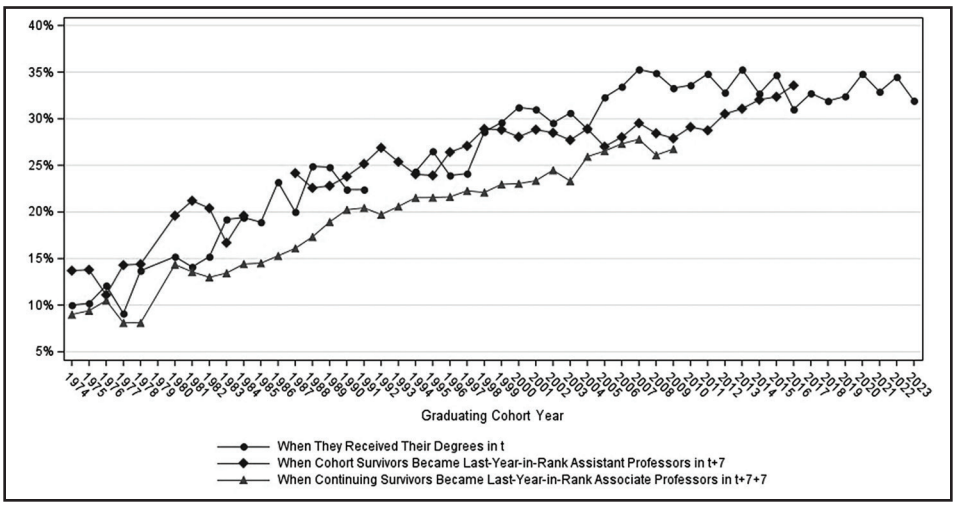


Fig. 12: Lock-Step Model: Share of Women Across PhD-Receiving Cohorts

Source: *The 2023 Report of the Committee on the Status of Women in the Economics Profession, American Economic Association, 2023*

Figure 13 shows that since 2015, about 35% of senior undergraduate majors are women, with slightly more in non-PhD departments. This might be representative of the greater proportion of women as faculty in non-PhD departments.

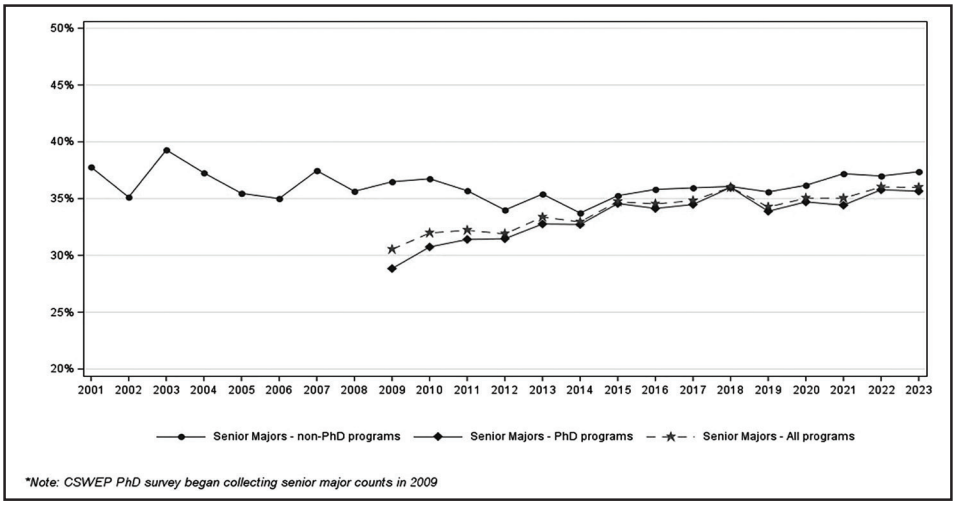


Fig. 13: Senior Undergraduate Economics Majors

Source: *The 2023 Report of the Committee on the Status of Women in the Economics Profession, American Economic Association, 2023*

Limitations

However, my findings are faced with the limitations of not having collected the data through surveys or analysed records of colleges and universities to ascertain the existence of the gap and the main triggers behind it. Additionally, the papers reviewed are geographically scattered and the attitudes of people might vary across countries which makes it difficult for us to detect the exact causes for the bias due to the conflicting outcomes of the various investigations. As a furtherance of this study, I will visit the various institutions in India that offer economics as a field of study to interact with the students as well as the faculty and try to identify the major factors influencing women's choice of economics as a discipline that might be inducing the gender gap, if any.

Conclusion

Through the above discussion, we can conclude that women do face bias when entering male-dominated fields and this has led to their discouragement from choosing economics as a major or as a profession. While several authors have tried to find exact reasons for this underrepresentation through different experiments and surveys, their analyses have often produced contrasting results.

From my analysis of this literature, I have been able to identify the various factors that might be responsible for this gap such as women being more grade sensitive than men, role model effect either due to faculty or due to women who previously majored in economics doing well at jobs that excite the undergrad females, the format of tests as well as the structure of and the methods employed to teach the curriculum at schools, the degree of exposure to economics at early stages, the proportion of females as compared to males found in classrooms and work spaces, lesser productivity exhibited by women on account of different underlying causes, implicit bias towards women considering them unfit for male-dominated jobs such as those in economics and setting higher standards for them to hold them equal to their male counterpart.

The most common solution recommended by the majority of the authors was taking steps to provide more exposure to women at early stages about the subject and the career prospects after it so that they develop an interest and commit to the subject. As regards grade sensitivity, while some authors found the choice of major of women to depend upon their previous performance in related subjects, others found either very little impact or no such relation. Even the role model effect was found to be strong in some studies but not in others. However, since this is a low-cost intervention and might even improve the gap in economics as a profession if the faculty are used as role models for women, I believe that this can be a good step to address the issue of the gender gap. With regards to the implicit bias towards women, it will be very difficult to cause a shift in the pre-established notions of persons hiring but a recruitment process should be tried to implement such that it is not influenced by stereotypes. The existing managers can even be educated on the importance of having gender-diverse teams for higher efficiency. The problem of higher standards being set for publications can be tackled by using methods such as "double-blind peer review" to rate the papers. Even after controlling for the pressures of household chores, women were found to be less productive, the driver of which is a mismatch of women's skills with their jobs due to a smaller professional network and discrimination faced by them. The quality of their research work was found to be lower due to the lower quality of authors that they had to work with as a result of starting their jobs at a lower level than men with the same competencies. Thus, significant efforts on the part of the people and the government are required to bridge this gender gap. From the government's side, community networks need to be established specifically for women to ensure access to information and mentorship, and facilitate progress tracking. As far as the people are concerned, a mental shift is necessary to eliminate the implicit and explicit biases that women face in institutions and workplaces. Unless this is done, we are far from achieving the dream of "equal" in economics.

References

Ahlstrom, L. J., & Asarta, C. J. (2019). The gender gap in undergraduate economics course persistence and degree selection. AEA Papers and Proceedings, 109, 255–260. 10.1257/pandp.20191103.

Arnold, I. J. (2020). Gender and major choice within economics: Evidence from Europe. International Review of Economics Education, 35, 100191. j.iree.2020.100191.

Auriol, E., Friebel, G., Weinberger, A., & Wilhelm, S. (2022). Underrepresentation of women in the economics profession more pronounced in the United States compared to heterogeneous Europe. Proceedings of the National Academy of Sciences, 119(16), e2118853119. 10.1073/pnas.2118853119.

Bayer, A., & Rouse, C. E. (2016). Diversity in the economics profession: a new attack on an old problem. The Journal of Economic Perspectives, 30(4), 221–242. 10.1257/jep.30.4.221.

Bayer, A., & Wilcox, D. W. (2019). The unequal distribution of economic education: A report on the race, ethnicity, and gender of economics majors at U.S. colleges and universities. The Journal of Economic Education, 50(3), 299–320. 10.1080/00220485.2019.1618766.

Bedard, K., Dodd, J., & Lundberg, S. (2021). Can Positive Feedback Encourage Female and Minority Undergraduates into Economics? AEA Papers and Proceedings, 111, 128–132. 10.1257/pandp.20211025.

Buckles, K. (2019). Fixing the Leaky Pipeline: Strategies for making economics work for women at every stage. The Journal of Economic Perspectives, 33(1), 43–60. 10.1257/jep.33.1.43.

Card, D., DellaVigna, S., Funk, P., & Iriberri, N. (2022). Gender differences in peer recognition by economists. Econometrica, 90(5), 1937–1971. 10.3982/ecta18027.

Dynan, K. E., & Rouse, C. E. (2010). The Underrepresentation of Women in Economics: A Study of Undergraduate Economics Students. *The Journal of Economic Education.* 10.1080/00220489709597939

Emerson, T. L. N., McGoldrick, K., & Mumford, K. J. (2012). Women and the choice to study economics. The Journal of Economic Education, 43(4), 349–362. 10.1080/00220485.2012.714306.

Emerson, T. L. N., McGoldrick, K., & Siegfried, J. J. (2017). The Gender Gap in Economics Degrees: An investigation of the role model and quantitative requirements hypotheses. Southern Economic Journal, 84(3), 898–911. 10.1002/soej.12247.

Ferber, M. A., & Brün, M. (2011). The gender gap in citations: Does it persist? Feminist Economics, 17(1), 151–158. 10.1080/13545701.2010.541857.

Forget, E. L. (2011). American Women and the Economics Profession in the Twentieth century. OEconomia, 1–1, 19–30. 10.4000/oeconomia.1807.

Ghosh, P., & Liu, Z. (2019). Coauthorship and the gender gap in top economics journal publications. Applied Economics Letters, 27(7), 580–590. 10.1080/13504851.2019.1644420.

Horvath, J., Beaudin, B. Q., & Wright, S. P. (1992). Persisting in the Introductory Economics Course: An Exploration of Gender Differences. The Journal of Economic Education, 23(2), 101–108. 10.1080/00220485.1992.10844744.

Hospido, L., & Sanz, C. (2020). Gender Gaps in the Evaluation of Research: Evidence from Submissions to Economics Conferences*. Oxford Bulletin of Economics and Statistics, 83(3), 590–618. 10.1111/obes.12409.

Johnson, M., Robson, D., & Taengnoi, S. (2014). A meta-analysis of the gender gap in performance in collegiate Economics courses. Review of Social Economy, 72(4), 436–459. 10.1080/00346764.2014.958902.

Jüttler, M., & Schumann, S. (2019). Is economics a man's business? Exploring the long-term effects of the gender gap in economic competencies at the upper secondary level on students' choice to study economics at university. Citizenship Social and Economics Education, 18(3), 177–197. 10.1177/2047173419885628.

Kahn, S. (1995). Women in the economics profession. The Journal of Economic Perspectives, 9(4), 193–205. 10.1257/jep.9.4.193.

Li, H. (2018). Do mentoring, information, and nudge reduce the gender gap in economics majors? Economics of Education Review, 64, 165–183. 10.1016/j.econedurev.2018.04.004.

Lundberg, S., & Stearns, J. (2019). Women in Economics: Stalled progress. The Journal of Economic Perspectives, 33(1), 3–22. 10.1257/jep.33.1.3.

Maddi, A., & Gingras, Y. (2020). Gender Diversity in Research Teams and Citation Impact in Economics and Management. Journal of Economic Surveys, 35(5), 1381–1404. 10.1111/joes.12420.

McEwan, P. J., Rogers, S., & Weerapana, A. (2021). Grade sensitivity and the economics major at a women's college. AEA Papers and Proceedings, 111, 102–106. 10.1257/pandp.20211045.

McMillen, D. P., & Singell, L. D. (2016). Gender Differences in First Jobs for Economists. Southern Economic Journal. 10.2307/1060577

Mumford, K., & Royal Economic Society Women's Committee. (1997). The gender balance of academic economics in the UK. 1997/9721.

Porter, C., & Serra, D. (2020). Gender differences in the choice of major: The importance of female role models. American Economic Journal Applied Economics, 12(3), 226–254. 10.1257/app.20180426.

Rask, K. N., & Bailey, E. M. (2002). Are Faculty Role Models? Evidence from Major Choice in an Undergraduate Institution. The Journal of Economic Education, 33(2), 99–124. 10.1080/00220480209596461.

Sakhno, H. (2019). The Gender Gap in Undergraduate Economics Course Persistence and Degree Selection: An Extended Referee Report. ResearchGate. 10.13140/RG.2.2.19782.80966

Tonin, M., & Wahba, J. (2014). The sources of the gender gap in economics enrolment. CESifo Economic Studies, 61(1), 72–94. 10.1093/cesifo/ifu033.

Zacchia, G. (2020). What does it take to be top women economists? An analysis using rankings in REPEC. Review of Political Economy, 33(2), 170–193. 10.1080/09538259.2020.1848624.

Taranpreet Singh
B.A. Economics (Hons.)
2nd Year, SRCC
University of Delhi, INDIA

Kumar Aryan
B.A. Economics (Hons.)
2nd Year, SRCC
University of Delhi, INDIA

Dev Kumar
B.A. Economics (Hons.)
2nd Year, SRCC
University of Delhi, INDIA

Ashwani Kumar
Assistant Professor
Department of Economics
SRCC
University of Delhi, INDIA

Demystifying the Indian Investor: Age, Income, and the Move to Stocks

ABSTRACT

The purpose of this research was to understand investment behaviour in lieu of recent developments in the Indian economy and financial sector and more importantly, to understand the same through the demographic lenses of age and income. For this purpose, we conducted a survey of college students and working professionals and amassed a total of 500 responses. From our study, we were able to come to a variety of conclusions. We safely concluded that the Indian investors are becoming more rational in their approach and are strongly confident about the direction of equity markets and this is visible in how stocks beat out every other asset class in terms of preference by a huge margin. Platforms like Groww are taking over as the preferred means of investment and a significant proportion choose to invest into MFs via SIPs as opposed to lump sum. Additionally, we ran correlation tests for every question posed to respondents with age and income and have included the important findings here.

Keywords: *Investor Psychology, Behavioural Finance, Fintech Adoption, Financial Markets*

Introduction

In recent years, there has been a dramatic shift in the investment preferences and psychology of Indians. Similar to how Americans perceived it in the 1930s, investing in stocks in India used to be conflated with speculation and gambling. However, today, we see quite the opposite; where almost every other person has a demat account and has had some experience in the world of investing. Such a change in attitude has two primary reasons driving it: easier access to the markets as well as the rally over the last couple years. The effect of this shift in favour of stocks has had an adverse impact on traditional assets like FDs which have become all the more unpopular.

This research study aims to verify the reasoning behind this shift and quantify its scale and impact using various parameters and a sample of 500 college students and working professionals has

been taken for this purpose. To carry out the research, a questionnaire was created on Google forms and circulated primarily amongst communities of college students (who invest or may invest eventually) and working professionals. The questionnaire contains a grand total of 19 questions, of which a select few were shortlisted for the analysis. The summary of the responses, as available on Google Forms by default, was used to get a rough idea about the sample in general. On the basis of this summary alone, some of our hypotheses regarding the general Indian investor base stood their ground. Furthermore, we intended to find demographic specific correlation with various factors to determine how investment patterns vary within the Indian investing population. No restrictions were placed as such on the quality of financial knowledge possessed by the respondents or prior experience in terms of investing. The aim had been to get raw data that is representative of the current and future state of the Indian investor base and understand the rationale behind the responses received. Thus, emphasis has been placed on the behavioural aspect as stated by the respondent and not actual investment behaviour. Many college students rarely invest or have had little to no knowledge and experience in terms of investing. Despite this, the reason behind their inclusion is that these individuals are to eventually enter into the workforce and would have to adopt some sort of investment regimen. Therefore, their responses might give us an idea of how investment behaviour may change with age. Additionally, the focus on the younger side of the population might help one understand the future of investment patterns.

Prior to the analysis, we expected to observe a shift in favour of equities, naturally replacing traditional asset classes like gold and FD in terms of popularity. Additionally, our hypotheses included an expectation of rationality from Indian investors; whereby they do not feed into fear and greed. In addition, we expect younger investors and investors belonging to lower income groups to practice proactive short term investment regimen in hopes of quick speculative returns. On the other hand, older investors and investors belonging to higher income groups are expected to have long term priorities and more risk tolerance capacity.

Literature Review

Investment behaviour has been widely studied by examining factors such as financial literacy, risk perception, and demographic characteristics along with studying the influence of social and technological adoption by Indians which is changing how people invest. This review focuses on how age and income, particularly among students and working professionals, influence trends and patterns in financial market investments. It also explores whether the younger generation is more inclined toward modern asset classes such as stocks and prefers using digital investment platforms, including stockbroking apps.

According to *"Analysis of investment factors and decisions among Generation Z and Generation X in the Indian capital market" by M. Savithri, & D. Rajakumari. (2024, November)*, compared to their predecessors, Gen-Z has displayed a much greater

willingness to take risks, though this is not backed by their risk taking ability. Another paper, *"Is Gen-Z in India moving towards financial independence? - A study of their investment preferences." by Dugar, M., & Madhavan, V. (2023)*, claims that Gen-Z has remained bullish and is more open to take risks on new assets while also maintaining a long term position in traditional assets. This is further backed by the paper *"Investment Behavior of Gen Z in India: A Behavioral Finance Approach" by Dr. Preethi S L (2025)*, which in addition to the previous findings, concludes that Gen-Z investors display moderately high levels of financial literacy but are susceptible to emotional biases and peer influence. The paper could trace higher incomes and greater financial literacy to more risk taking ability (highlighted by reluctance to stick to traditional assets like FDs) and attributed changes in investing habits and preferences of Gen-Z to fintech applications and digital media.

An important observation noted by "*An Analysis of Factors Determining Selection of Stocks: An Empirical Study of Indian Retail Investors" by P. R. Mishra and S. Kumar (2025)* is that younger investors prefer high growth stocks while older investors have a bias towards more stable investments. In addition, the paper claims that Indian investors often are susceptible to herd behaviour and following trends more so than doing their own analyses and attributes this to the rise of social media. This is contradicted by another paper titled *"An Empirical Analysis of Factors Influencing Indian Individual Equity Investors' Decision Making and Behavior" by S.T. Sultana and S. Pardhasaradhi (2012)*, which claims that Indian investors are by and large rational and carry out proper due and diligence while deciding where to invest instead of merely heeding to the advice of friends and peers. The discrepancy in results between the two papers could be attributed to the latter paper being published at a time when the influence of social media was not as strong as it is now. This is a point of ambiguity which we seek to address in our research paper.

The older generations, as per the findings of *"Growth and dynamics in the Indian mutual fund industry: Analyzing investor preferences and investment strategies" by Kavya, M., & Prakash, C. (2024)*, have a strong bias towards traditional assets such as Real Estate and Fixed Deposits and demonstrate a reluctance towards adoption of newer and more speculative asset classes. The breakdown of age demographics in existing research studies has not been as stratified and the analyses were restricted in their coverage of factors influencing investment in various asset classes. Our research not only delved into which asset classes one would prefer to invest in; but also made an attempt to figure out the why behind their choices.

"Role of social media information in influencing investment preferences of retail investors" by Sagar, B., Deshpande, M., & Gautam, I. (2023) pointed out the impact of social media on the investment decisions of the young generation. In particular, the study could trace the dominance of the youth in ownership of new age asset classes to their widespread use of social media. Our research used multiple factors to analyse the various channels that influence the minds of the younger generation vis-a-vis the generations that preceded them.

Finally, tracing the investment goals and tenure of investment for the Indian investor,*"Investment behavior of short-term versus long-term individual investors of PAN India – An empirical study." by Kannadas S. (2021)* observed that most Indian investors prioritised safety of capital, highlighting a conservative outlook and concluded that there exists a negative association between income levels and tenure of investments. Another paper, *"Market Trading in India - Customer Perception" by S. Sankar and K. Maran* found that there does exist a positive correlation between age and amount invested in the stock market. The paper also points out the dominance of online trading platforms and the openness of Indian investors towards Futures and Options as hedge instruments.

Objective

Our research objective is to analyse the evolving investment behavior of Indian investors across demographics, with a focus on investment goals and preferences, tenure of investment, risk appetite, and responsiveness to market developments.

Research Methodology

This study was conducted using a **cross-sectional quantitative approach** to better understand current investment trends in India. Responses were collected from around **500 participants** by distributing a questionnaire made on Google Forms via a multitude of channels: primarily (but not limited to) in-person outreach, WhatsApp and Linkedin. Due to practical limitations of time and resources, **convenience sampling** was used. Although the survey included participants from various age groups (under 18, 18-26, 27-40, 41-54, 55 and above), the '**18–26' category** had the highest number of participants because of high accessibility. While this provided valuable insight into the behaviour of young investors, it may slightly limit the scope of our analysis and findings to young investors only. Another limitation of our study which should be pointed out is that the vast majority of our respondents hail from well-educated backgrounds or belong to tier-1 cities; so the results of our study must not be interpreted in the context of the general Indian population.

The questionnaire gathered basic demographic details including age, gender, income, and occupation, along with investment related questions including investment preferences, risk tolerance, market behaviour, and reactions to policy changes. The responses included **multiple-choice, ranking, and multi-select questions** to understand the psychology of the participants. To analyse the data, categorical responses were converted into numerical form using **one-hot encoding**, and ranking responses were assigned weighted scores. Statistical analysis was carried out using **Python (specifically the SciPy library)**, where the **Point-Biserial correlation coefficient** was used to examine relationships between binary and scaled variables. Descriptive statistics were also used to identify key patterns, and **Microsoft Excel** supported data visualisation. Participation was completely voluntary, and all responses were kept anonymous to ensure confidentiality.

Findings and Interpretation

(i) Age and Factors Influencing Investment Decisions *(Refer to Figure 1.1 and Table 2.1)*

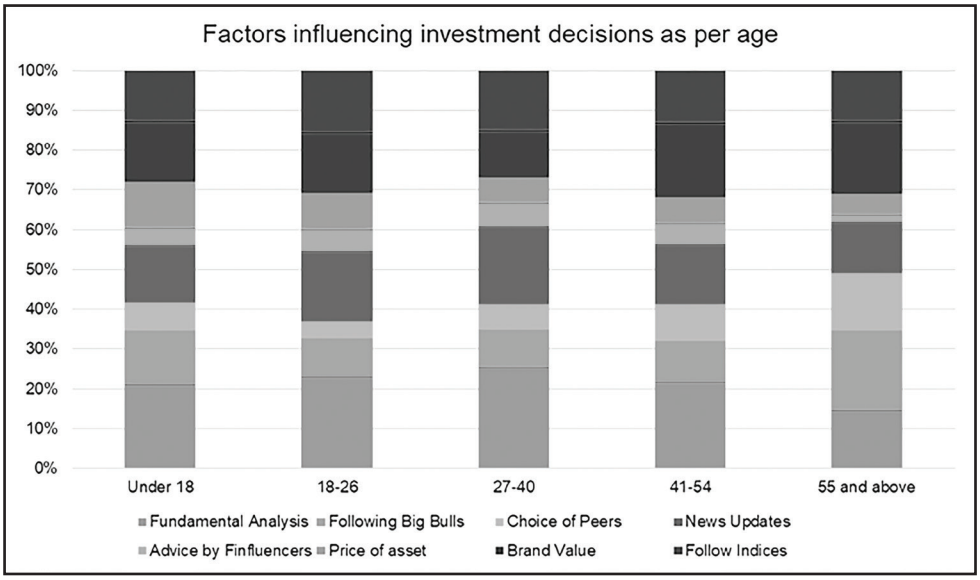


Fig. 1.1: Factors influencing investment decisions (in general) by Age Group (n = 500)

Table 2.1: Correlation Table between Factors Influencing Investment Decisions and Age Groups

Factors influencing investment decisions	Correlation with Age
Choices of peers	0.154
Decisions of big bulls	0.065
Brand value of the company	0.029
Follow the indices	-0.068
Advice by finfluencers	-0.089
News updates	-0.091
Fundamental analysis	-0.158
Price of the underlying asset	-0.172

Following big bulls and peers is the most popular amongst '55+'. Older age groups generally seek stability and safety of capital and base their investment decisions on the choices of respectable, knowledgeable, and trustworthy individuals such as the aforementioned groups.

Brand value is also very popular amongst '55+' and '41-54'. Big bulls are also really popular amongst the younger age groups which are likely to have the least experience in investing and would be more likely to invest as per the preferences of the industry experts and giants. This is substantiated by the findings of the paper *"Do Older Investors Make Better Investment Decisions?" by G.M. Korniotis and A. Kumar (2011)*, which states that investment skill deteriorates with age and that while older investors exhibit greater investment knowledge and have more experience than their younger counterparts, they fail at the application of said knowledge. Therefore, older investors would not be able to carry out proper analysis before taking investment decisions and instead choose to take such decisions in consultation with peers or by replicating portfolios of big bulls.

Upon carrying out statistical tests, we found out that the correlation coefficient with age for 'Choice of Peers' is positive at 0.1537. This supports our claim that with rise in age, people seek reliability and trust as key factors before making investment decisions. 'Brand value' and 'Decisions and recommendations by industry leaders' too have a positive but negligible correlation coefficient of about 0.029 and 0.065 respectively.

Doing fundamental analysis enjoys a sizable share amongst all ages, but dips somewhat as we approach the '55+' age group This showcases how the Indian investor base, especially those belonging to younger age groups, is starting to exhibit rational behavior, by choosing to carry out proper analysis of assets before deciding to invest. Another visible trend is that the share of fundamental analysis dips with the '55+' segment. This can be attributed to unfamiliarity with the various parameters (like P/E ratios and PCR ratios) to consider during analysis. A senior citizen may experience difficulty in or exhibit resistance to learning and adopting a new investment regimen, which requires a lot of background technical knowledge. Our statistical tests show a negative correlation of -0.157 between age and 'Fundamental Analysis', suggesting that as one ages, preference for analysis is replaced by other factors while making investment decisions.

Following news updates has the greatest share amongst the '27-40' age group, followed by '18-26'. People aged '27-40' often have a lot of responsibilities (in particular, the median age of marriage is 27, the years after which are spent in family planning) and therefore, there is a pressure to earn more and invest wisely to meet the surge in expenses. The average individual in said age group would practice a more proactive investment regimen to generate high returns to counteract the expenses. On the other hand, '18-26' might also take a proactive approach in investing and this is because they are currently at a stage in their career where their incomes are too low and would prefer to take a more proactive approach by following the happenings in the financial markets closely to leverage opportunities that emerge and make passive income to add onto their current income stream.

Price appears to have the greatest appeal amongst the below 18 segment and to a degree, the '18-26' age segment as well, which tends to be the most price-sensitive due to budget/capital constraints. Younger investors generally invest out of pocket money or

past savings; marginal utility of money is greater among them as compared to older age groups with a lot of income and capital. The correlation between age and 'Price of Assets' comes out to be -0.171, supporting our claim that this particular factor is popular mostly amongst younger age groups.

Finfluencers have minimal influence

Across all age groups, finfluencers are not felt to be a very credible source to base investment decisions on. It may be seen as a complement to other factors at best (judging by the fact that its maximum share doesn't go beyond 10 per cent in any age group) but it is highly unlikely that respondents went with influencers as the primary driver behind their investment decisions.

Indices have general appeal

All age groups have a similar share according to the option of following indices such as NIFTY and SENSEX. This can be attributed to the fact that the indices of late have offered better rates as compared to traditional sources like FDs (which makes them stand out to younger investors) as well as the fact that they include the largest companies by market cap (which might make them more trustable to the older segment).

(ii) Age and Factors Influencing Investments into IPOs *(Refer to Figure 1.2 and Table 2.2)*

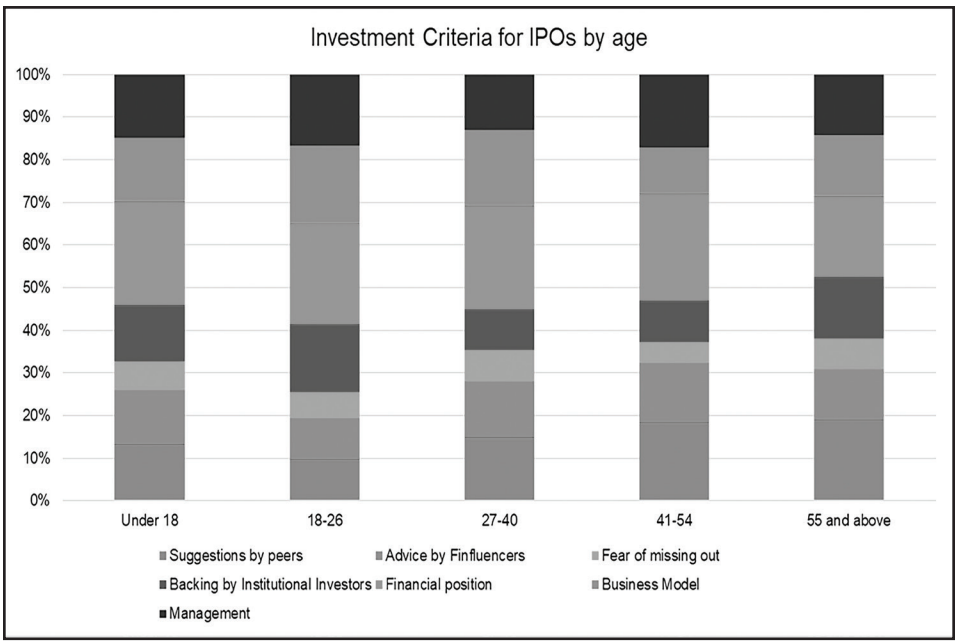


Fig. 1.2: Investment Criteria for IPOs by Age Group (n = 500)

Table 2.2: Correlation Table between Factors Influencing Investment into IPOs and Age Groups

Factors influencing IPO decisions	Correlation with Age
Suggestions by peers	0.089
Advice by finfluencers	-0.017
Fear of missing out	-0.04
Management and leadership of the company	-0.058
Backing by big private equity firms and institutional investors	-0.078
An innovative and dynamic business model	-0.11
Financial position of the company	-0.123

Many trends from the previous chart actually carry onto the chart on the correlation between age and the factors one might consider while investing in an IPO. An important point to note is that the distribution of responses is non-uniform and skewed and therefore, the correlation between the other factors and age fails since the proportion of respondents varies excessively across different age groups (as in marked by rises and dips in between) or the variance ends up being negligible.

Suggestions by peers continue to be the most popular amongst the older age groups, confirming our assumption that this segment values trust more so than anything. The share of this factor also seems to be increasing with age.

Analysis of business models enjoys the least support amongst the '41-54' segment compared to other age groups owing to time constraints in an increasingly competitive working environment. The correlation coefficient for this factor is negative at -0.109 which backs our assertion of low popularity amongst older age groups.

Backing by PE firms and institutional investors enjoys support amongst both the older segment as well as the younger age groups. The '55+' segment might accord importance to the brand value and reputation held by such entities. On the other hand, 'under 18' and '18-26' age groups might rely on the experience, advantage, and analytical capabilities of such entities. Support by such firms and anchor investors might instill some confidence among investors in general and therefore, push stock prices up during bids and listing, thereby enabling short-term gains. This could also explain the heightened interest amongst the younger age groups which have a greater tendency to seek high returns in the short term. **The '27-40' age group has the least interest in following PE firms and institutional investors,** as they might often prefer to take a more proactive long-term stance while investing to generate sufficient returns and meet expenses.

Financial position has the greatest appeal among all factors across all age groups. This corresponds to a long-term trading regimen, which also seems to be the predominant trend amongst all age groups. Similar to financial position, **the management practices of the company and its leadership have a sizeable share amongst all age groups** as they are seen to be critical to a firm's operational efficiency

FOMO seems to be unpopular across all age groups and from this, we may conclude that the respondents are exhibiting rational behavior by not letting fears of potentially lost profits dictate their investment decisions and would prefer to carry out proper analysis or invest based on the suggestions of trusted individuals and entities.

Compared to the previous chart, **advice by finfluencers enjoys a sizable share in each age group as one of the factors taken into consideration while investing in IPOs**. The reason for this could be the unfamiliarity of the respondents with companies that seek to register themselves on the stock exchanges. Because such companies are relatively new players, there is often not much data available to go off of, and therefore, evaluation of IPOs becomes too hard for retail investors. The article*"Only 2% of finfluencers are Sebi-registered. Can you trust the rest?" by Anil Poste (2025)* states that finfluencers have a considerable effect on the investment decisions of Indians. Our finding is in sync with this but with reference to investment decisions in IPOs only.

(iii) Age and Tenure *(Refer to Figure 1.3 and Table 2.3)*

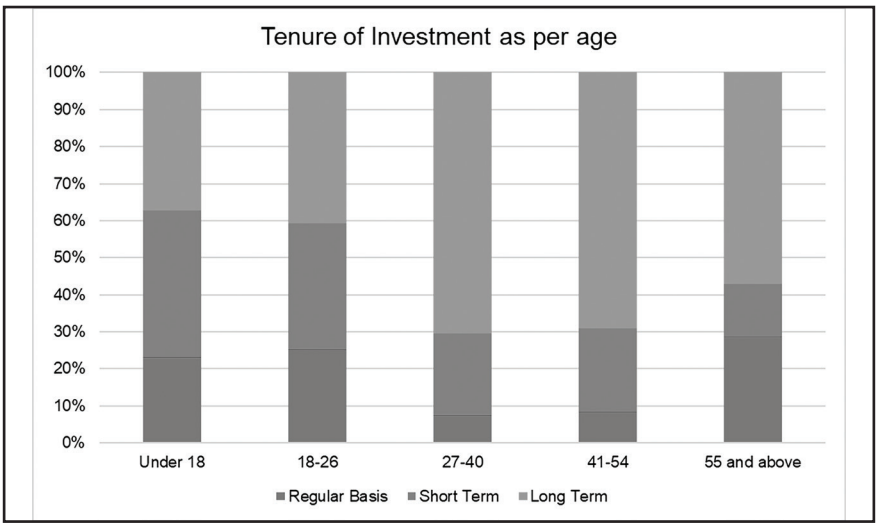


Fig. 1.3: Investment Tenure by Age Group (n = 500)

Table 2.3: Correlation Table between Investment Tenure and Age Groups

Tenure of Investment	Correlation with Age
Long term	0.186
Regular trading	-0.016
Short term	-0.193

The responses correctly align with the notion that as we grow older, individuals prefer to invest in the long term as opposed to the short term. **Younger age groups seek high returns as soon as possible (which comes with high risks) to meet the surge in expenses**.

Our statistical tests showed a negative correlation coefficient between age and a short investment tenure of about -0.193, which is suggestive of a shift towards long-term investment regimen with age. The coefficient between age and a long-term investment tenure, on the other hand, is positive at 0.186. People aged '18-26' often demonstrate poor financial discipline and this is backed by the dominance of younger people in taking on excessive debts and living on the edge. Oftentimes, their lifestyle and demands may clash with low incomes. However, with easier availability of credit cards and buy now, pay later options, this demographic is starting to exhibit more spending. The articles "*Buy now, pay later: A boon for Gen Z, or a potential debt trap?" by Outlook Money (2024)* and "*Buy now pay later, credit card spending reducing savings of youth: RBI Deputy Governor*" *by The Economic Times (2024)* stress upon the gravity of this issue. This surge in debt along with low incomes would encourage the younger population to seek in investing a means to generate more income and thus be able to timely meet their expenses.

On the other hand, **older age groups are more patient since they have a lot more capital to lose and so they settle for low returns in exchange for low risks**. Additionally, incremental income in the form of returns does not have as much importance as the marginal utility of money has an inverse relation with age. Investors in their retirement would also prefer a stream of income as opposed to windfall gains to sustain themselves.

'Under 18' and '18-26' have sizeable shares in trading and the largest share when it comes to investing in the short term. This could be attributed to the abundance of time as well as lack of patience required for a long-term approach. As a result, this age group would be the most proactive in continuous assessment and revisions of portfolios which is required for traders and short-term investors.

(iv) Age and Goal of Investment *(Refer to Figure 1.4 and Table 2.4)*

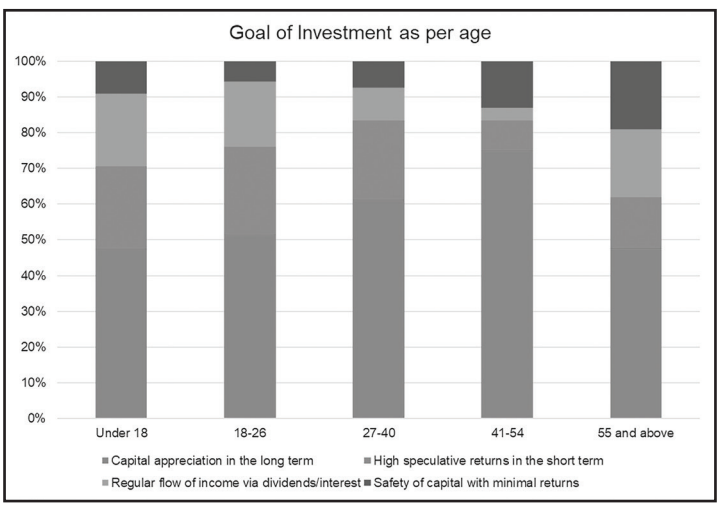


Fig. 1.4: Investment Goal by Age Group (n = 500)

Table 2.4: Correlation Table between Goals of Investment and Age Groups

Goal of Investment	Correlation with Age
Safety of capital	0.125
Capital appreciation	0.067
Regular flow of income	-0.063
High speculative returns	-0.122

It can be seen that **the majority of respondents across all age groups, prefer to invest in the long term and seek capital appreciation, with the '41-54' age group leading here**, with the ultimate aim of generating enough wealth to sustain themselves in case of emergencies or during the post-retirement period of their lives.

The share of capital appreciation increases until the age group '41-54' after which it falls in the '55+' segment. This could be attributed to the uncertainty at that age regarding one's life expectancy which would cause some to shift towards a short-term approach or become more conservative with their money.

The greatest share of safety of capital is amongst the '55+' age group compared to other age groups. This aligns with the notion that it is most probable that senior citizens would be the ones to seek the safety of the capital which they have amassed over the years through safer assets like FD, gold or bonds. The overall correlation between 'Safety of Capital' and age is also positive at 0.1248, which provides some backing to this finding.

Regular flow of income is the most amongst the younger age groups which also happen to be the ones overwhelmingly belonging to the not currently working segment. Thus, it would make sense why this age group would look at investing as a side hustle that they can pick up which does not require them to have any prerequisite skills as opposed to a job. **The younger age groups are followed by the '55+' segment** which might seek to sustain themselves post-retirement with such earnings.

The segments '**18-26' and '27-40' have the most share in 'high speculative returns in the short term'**. This could be attributed to dissatisfaction with low compensation compared to expenses in early career. As one transitions from parental support to lower entry-level salaries, he might find it hard to adjust living standards to this new reality. Eventually, after marriage, expenses might increase even further owing to family responsibilities. This generates pressure to earn more in the short term to finance these liabilities. A relatively weak negative correlation between age and the aforementioned goal of about -0.1223 suggests that younger aged individuals indeed have a tendency to seek high returns in a short period of time.

(v) Favourite Asset Classes *(Refer to Figure 1.5)*

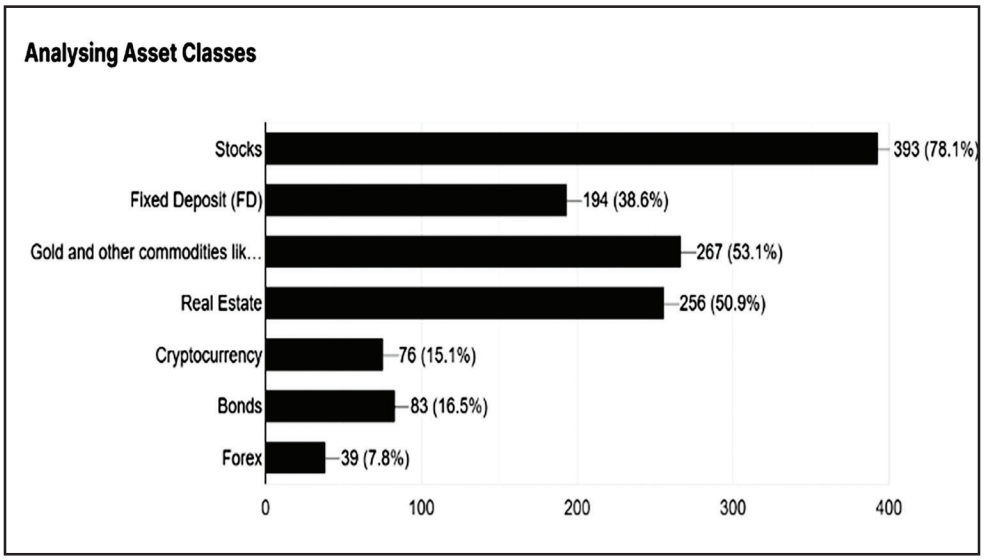


Fig. 1.5: Favourite Asset Classes (n = 500)

The respondents had been asked to choose any three assets out of a list of seven in which they would prefer to invest. **Stocks seem to be the most dominant asset class, making up one of the asset class choices of 400 respondents.** This owes to the recent rally in stocks and easier access for the common man via broking applications and platforms. Stocks are also one of the most liquid assets available to retail investors as transactions can be carried out within seconds.

'Gold & other commodities' and 'Real Estate' both are tied as one of the asset class choices of about 260 respondents, since they have a high potential for capital appreciation as well as passive income in the case of residential/commercial properties and hold their value in the long term, beating inflation. Similarly, **FD offers the safety of capital and a sense of guarantee when it comes to returns and thus makes up one of the choices of just about 200 respondents**. However, a new trend is emerging whereby people are shifting from FDs towards stocks as the former offers comparatively low returns as compared to equities and has the disadvantage of a lock-in period and therefore, is an illiquid investment.

Crypto-currency after having shed much of its value over the past few years has lost its shine and relevance in the present scenario and therefore, does not have the same appeal that it may have had earlier. Bond markets are not as easy to access as equity markets for retail investors, which explains why only 83 respondents would prefer to invest in bonds. Similarly, the unpopularity of forex can be attributed to unfamiliarity and complexity.

(vi) Age and Preferred Asset Classes *(Refer to Figure 1.6 and Table 2.5)*

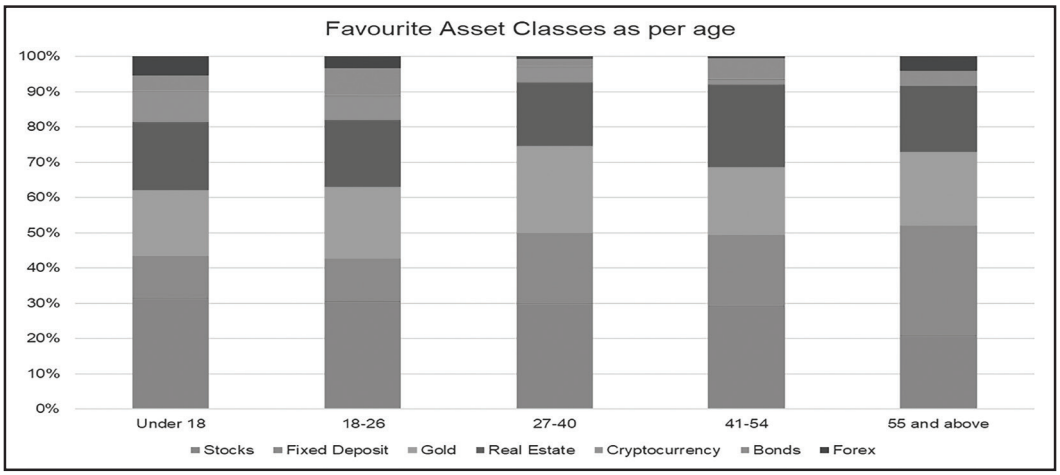


Fig. 1.6: Favourite Asset Classes by Age Group (n = 500)

Table 2.5: Correlation Table Between Asset Classes and Age Groups

Asset Classes	Correlation with Age
Fixed Deposit (FD)	0.284
Gold and other commodities	-0.018
Real Estate	-0.023
Bonds	-0.03
Forex	-0.092
Stocks	-0.247
Cryptocurrency	-0.265

In the chart, only the first preference of asset class is plotted for simplicity. It can be observed that **for all age groups till '41-54', stocks seem to enjoy a similar level of popularity**, owing perhaps to the consistently high returns the stock markets have offered over the past few years as well as the rise of fintech which has enabled the common man easy access to the financial markets via broking apps like Groww, Upstox, etc. This popularity somewhat dips with **the '55+' age group which also has the highest share of FD**, showing that this age group would prefer the safety offered by FD as compared to the volatility inherent in stocks. The correlation between age and preference for FDs also comes around to be positive at 0.284, indicating a shifting preference towards safer assets as age increases. On the other hand, there is a negative correlation coefficient between preference for stocks and age of about -0.247, which indicates that, in general, stocks are more favourable to younger age groups.

The case with gold is similar to that of stocks, with the greatest appeal amongst the '27-40' age group. This could be attributed to its safe haven asset status as well as its cultural significance in India. There is minimal to no correlation between gold and age, which supports the idea that the yellow metal enjoys popularity amongst all age groups. **Real Estate is also an attractive option to respondents across all ages,** given the potential rental income as well as the scope for appreciation in its value.

The hype around new age asset classes like cryptocurrency has mostly faded due to the industry having suffered heavy blows in the past couple of years, which is why it seems to not be very popular across all age groups. Even then, **this new age asset class is more popular amongst the newer generation as compared to the older age groups, and this is quite visible from a negative correlation of around -0.265**.

(vii) Income and Tenure *(Refer to Figure 1.7 and Table 2.6)*

Here, for simplicity, we have combined the income brackets as follows:

- **Under 3 LPA and 3-7 LPA:** Low-Income Groups
- **7-12 LPA and 12-15 LPA:** Middle-Income Groups
- **Above 15 LPA:** High-Income Groups

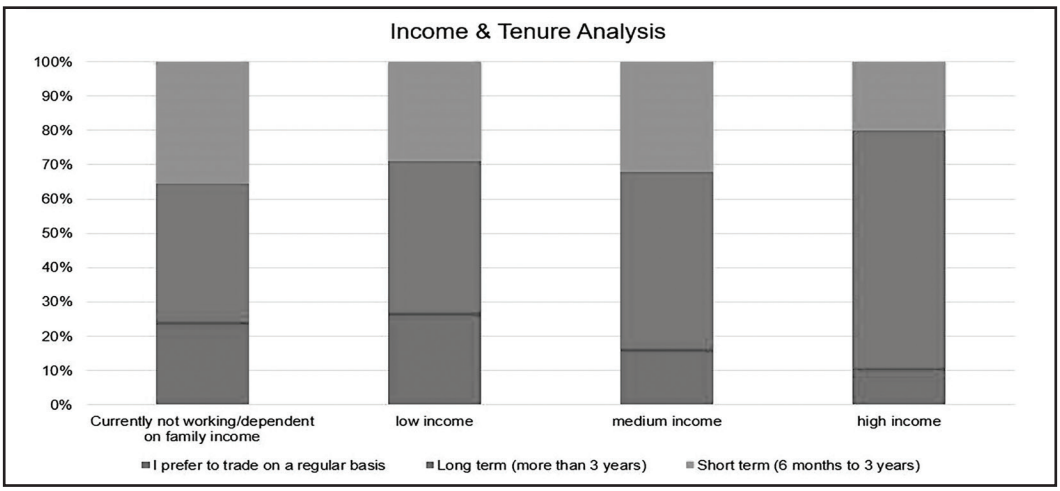


Fig. 1.7: Investment Tenure by Income Group (n = 500)

Table 2.6: Correlation Table Between Tenure of Investment and Income

Tenure of Investment	Correlation with Income
Long term	0.238
Short term	-0.075
Regular trading	-0.219

We can observe that as incomes rise, a long-term approach (in particular targeting capital appreciation) becomes preferable at higher income levels and the overall corpus becomes more important than the incremental income in the form of returns/dividends on it. This is due to the diminishing marginal utility of money with increase in income. This is supported by a moderate positive correlation of 0.238 between age and preference for long-term tenure.

On the other hand, the lower income and dependent groups would be more willing to adopt a short-term approach or trading to generate returns quickly so as to supplement their incomes (or the lack thereof). Such income groups do not possess much capital and have smaller corpuses. Due to the greater marginal utility of money, additional returns on this capital bring more utility to such individuals. There is a moderate negative correlation between age and preference for trading of -0.219 which lends support to our finding.

The paper *"Investment behavior of short-term versus long-term individual investors of PAN India – An empirical study" by K. Kannadas S (2021)* backs up our observation, suggesting that Indian investors belonging to lower income groups do not prefer to invest on a long term basis due to low risk appetite and liquidity constraints. As the income of an individual increases, preferences tend to incline towards long term investments.

(viii) Income and Responsiveness to Tax Changes *(Refer to Figure 1.8 and Table 2.7)*

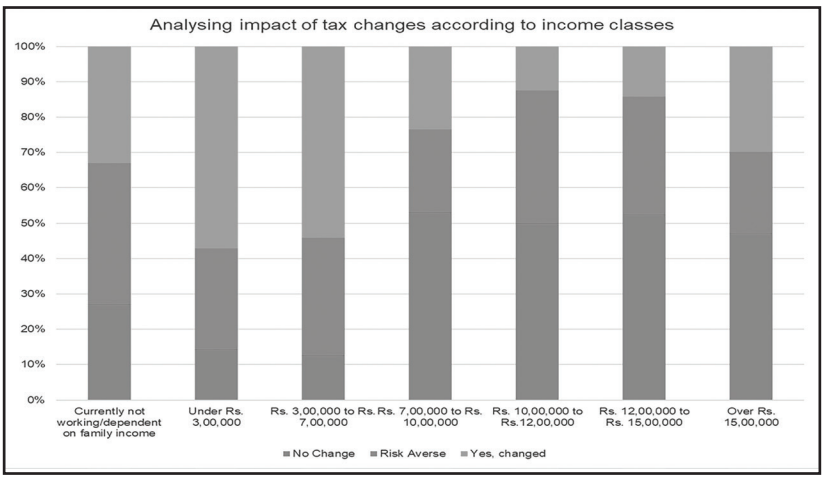


Fig. 1.8: Likelihood of Change in Portfolio by Income Group (n = 500)

Table 2.7: Correlation Table Between Responsiveness to Tax Changes and Income

Factor	Mean Correlation
No Change	0.267884
Risk Averse	-0.06202
Yes, changed	-0.2133

The respondent was asked how his portfolio might change following the tax hikes and removal of indexation announced in FY2024 and had three options: shift towards other safer assets, continue unaffectedly with the same pace of investments in equity, or stick to equity but reduce the pace of investments. We must note that changes in fiscal policy have a greater impact in the short term. With changes in governments over a period of time or in the priorities of the current government itself, tax regimes are also susceptible to change.

We can see that **the lower income groups** (which also have a greater preference for short-term investing and trading compared to higher income groups) would be more sensitive to such fluctuations and **would shift towards safer assets that are not in the purview of such tax changes**. In other words, the **demand for equities amongst low-income groups is elastic with respect to such short term developments.** As disposable income increases, the marginal utility of money falls and investment priorities shift towards long-term gains; so a **respondent belonging to a higher income bracket would not drastically change his portfolio, continuing to pour money into equities**. Because of the abundance of capital, risk-taking ability and loss tolerance would be greater in the short-term amongst higher-income groups. **The higher income groups would thus have an inelastic demand for equity.** A positive correlation coefficient of 0.2678 between income and 'No change in portfolio' and a negative correlation of -0.2133 between income and 'Reallocation in favour of safer assets' indicate that higher incomes are associated with lower tendency to drastically deviate from initial allocation. Higher income brackets are the least affected as they generally seek capital appreciation and safety of their capital (which are both long-term approaches) more so than returns. Incremental income in the form of returns does not have as much value to them as lower income groups.

(ix) Mode of Investment *(Refer to Figure 1.9)*

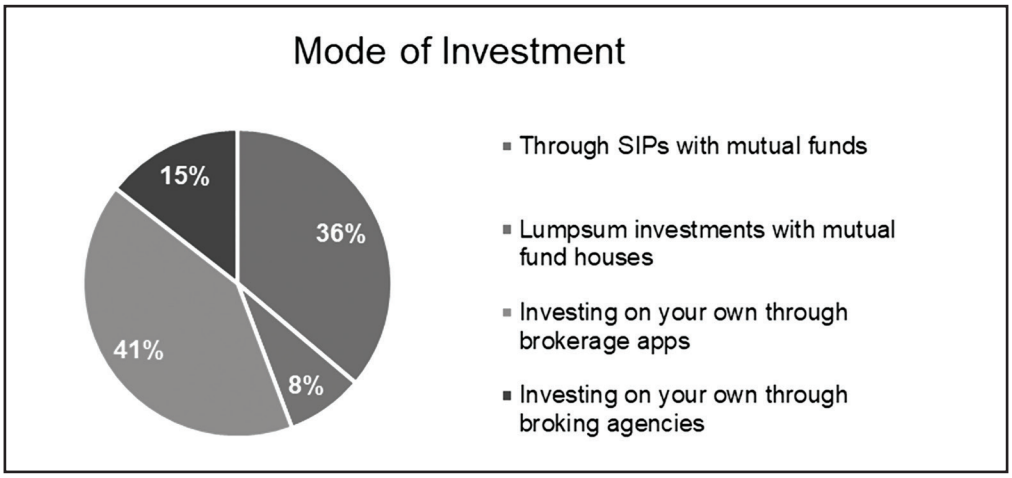


Fig. 1.9: Preferred Mode of Investment (n=500)

The vast majority of respondents are choosing to invest on their own through broking apps like Groww, Zerodha, etc. On the other hand, investors who invest on their own but via an actual broker/broking agency are minimal, only occupying a 15 per cent share. This trend of **investors shifting away from broking agencies towards broking apps has only accelerated with greater Internet penetration** as well as **the rise of fintech companies oriented towards the broking business** which have made it easy for a common man to invest. **Furthermore, the post-COVID rally** in the stock market has made investments in stocks lucrative.

Around **44% of respondents might not have the time or the experience/knowledge to invest themselves and trust mutual funds with their money**. However, the overwhelming trend is that the average investor in MFs would prefer the SIP route as opposed to a lump sum. This is because SIP, based on the logic of dollar cost averaging, would bring down the average cost of investments in the long term and through compounding, create a significant corpus in time.

(x) Perception Regarding F&O Trading *(Refer to Figure 1.10)*

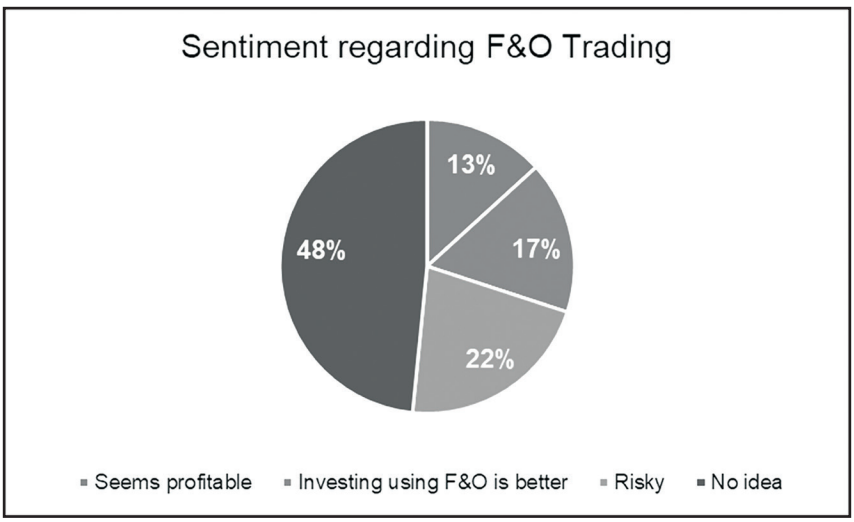


Fig. 1.10: Sentiment regarding F&O (n = 500)

About half the respondents did not know much about futures and options trading. Of those that did, there are two prevailing perspectives which are both opposed to option trading, deeming it to be too risky. Most of the respondents either prefer to stick to other asset classes or prefer investing in F&O as it might aid in risk management on large corpuses. Only 13% of respondents believe that F&O trading has the potential for profits. The research paper *"Market Trading in India - Customer Perception" by Sankar and Maran (2013)* supports the idea that Indian investors generally tend to look at F&O as a means to hedge risk as opposed to an avenue to generate profits.

Moreover, according to *"Budget 2024: How tax changes impact investors",* the high gain tax upon liquidation in the short term has also made it less profitable and lucrative to invest in the F&O segment. Similarly, an article titled *"SEBI report reveals the ugly truth of F&O trading in India – 93% of retail traders incurred losses."* reported that 93% of retail traders incurred losses in the F&O trading, making it riskier for low-income individuals. All of these reports and papers only support our finding that F&O largely remains unpopular in India or has a negative connotation associated with it.

Conclusion

From our analysis, we can safely conclude that Indian investors (primarily younger generations since they constitute a majority of our sample) are increasingly exhibiting rational behavior by not feeding into hypes and fears surrounding IPOs, new age asset classes and F&O. The young Indian investor base appears to have a bullish outlook in regards to the general direction in which the equity market is headed and this confidence is reflected in the recent rally in benchmark indices, with both NIFTY and SENSEX delivering returns of about 20% in the recent past. As a matter of fact, stocks beat out asset classes like gold and FD by a heavy margin as the top pick of respondents. Another notable finding is a shift towards online broking platforms and reduced reliance on traditional broking agencies; which can be attributed to a growth of the fintech sector as well as increasing digital penetration. A significant chunk of Indian youth prefer to invest in the markets through mutual funds, and among them there is a preference for SIP over lump sum, highlighting knowledge of and belief in the power of compounding.

The general trend indicates that capital appreciation in the long term is the primary goal of investment. However, certain goals have more popularity amongst some particular age groups as compared to other age groups. Safety of capital appealed most to the '55+' segment compared to others. High speculative returns in the short term had the greatest share amongst younger age groups (can be attributed to lack of sufficient incomes) and the '27-40' segment (owing to family obligations and rise in expenses). Regular flow of income received the most traction amongst the '55+' segment (seeking sustenance through retirement) and younger age groups (seeking one or multiple income streams due to insufficient income).

Additionally, we could also establish a linkage between the concept of diminishing marginal utility of money with rise in income and responsiveness to breakthrough events in the short term. It was found that the demand of equities becomes inelastic to developments in geopolitics, fiscal policy etc as we approach higher income brackets.

References

M. Savithri, & D. Rajakumari. (2024). Analysis of Investment Factors and Decisions among Generation Z and Generation X in the Indian Capital Market. International Journal of Economics and Financial Issues, 5(1), 337-344. DOI: 10.32479/ijefi.17526

Dugar, M., & Madhavan, V. (2023). Is Gen Z in India Moving Towards Financial Independence? - A Study of Their Investment Preferences. Journal of Student Research, 12(2). DOI: 10.47611/jsrhs.v12i2.4446

Kavya, M., & Prakash, C. (2024). Growth and Dynamics in the Indian Mutual Fund Industry: Analyzing Investor Preferences and Investment Strategies. International Journal of Advanced Research in Science, Communication and Technology, 4(1), 175-183. DOI: 10.48175/IJARSCT-19531

S, K. (2021). Investment Behavior of Short-Term versus Long-Term Individual Investors of PAN India – An Empirical Study. Investment Management and Financial Innovations, 18(2), 223–233. DOI: 10.21511/imfi.18(2).2021.18

L, P. S. (2025). Investment Behavior of Gen Z in India: A Behavioral Finance Approach. International Journal on Science and Technology, 16(3). DOI: 10.71097/ijsat.v16.i3.6835

Sankar, S., & Maran, K. (2013). Market trading in India - Customer perception. International Journal of Exclusive Management Research 3(2). DOI:

Mishra, P. R. (2025). An Analysis of Factors Determining Selection of Stocks: An Empirical Study of Indian Retail Investors. Journal of Informatics Education and Research, 5(1). DOI: 10.52783/jier.v5i1.2220

Sultana, S. T., & Pardhasaradhi, S. (2012). An Empirical Analysis of Factors Influencing Indian Individual Equity Investors' Decision Making and Behavior. European Journal of Business and Management, 4(18), 50-61. DOI:

Korniotis, G. M., & Kumar, A. (2010). Do Older Investors Make Better Investment Decisions? The Review of Economics and Statistics, 93(1), 244–265. DOI: 10.1162/rest_a_00053

Jain, S. (2024, September 24). *SEBI report reveals the ugly truth of F&O trading in India – 93% of retail traders incurred losses. The Economic Times*. Retrieved from https://economictimes.indiatimes.com/markets/stocks/news/sebi-report-reveals-the-ugly-truth-of-fo-trading-in-india-93-of-retail-traders-incurred-losses/articleshow/113620397.cms?from=mdr

Debnath, P. (2024, September 16). *Buy now, pay later: A boon for Gen Z, or a potential debt trap? Outlook Money.* Retrieved from https://www.outlookmoney.com/banking/loan/buy-now-pay-later-a-boon-for-gen-z-or-a-potential-debt-trap

ANI. (2024, December 17). *Buy now, pay later, credit card spending reducing savings of youth: RBI Deputy Governor*. *The Economic Times.* Retrieved from https://economictimes.indiatimes.com/news/economy/policy/buy-now-pay-later-credit-card-spending-reducing-savings-of-youth-rbi-deputy-governor/articleshow/116385882.cm

Gupta, V., & Acharyya, S. (2024, July 24). *Budget 2024: How tax changes impact investors*. *The Economic Times.* Retrieved from https://economictimes.indiatimes.com/markets/stocks/news/budget-2024-how-tax-changes-impacts-investors/articleshow/111965779.cms?from=mdr

The Managed Mind

Gargi Tripathi
B.A. Philosophy (Hons.)
4th Year
Lady Shri Ram College
for Women
University of Delhi
INDIA

Dr. Lipi Saxena
Associate Professor
Department of
Philosophy
Lady Shri Ram College
for Women
University of Delhi
INDIA

ABSTRACT

Does the authority of the modern state end at the threshold of the human mind? While classical political theory defines liberty as the absence of external interference, contemporary governance has undergone a quiet transition toward the management of subjective autonomy. This paper addresses a definitive research question: How can meaningful agency be sustained when the mechanisms of power ranging from algorithmic architectures to institutional norms operate within the very fabric of the citizen's consciousness?

The study identifies a significant vacuum in current legal and political frameworks, where the private sanctum of the consciousness remains vulnerable to non-coercive yet pervasive forms of influence. This epistemic colonization suggests that traditional rights of non-interference are no longer sufficient to guarantee true freedom of choice in a digitally mediated world. The paper concludes by proposing a necessary evolution of the social contract: the recognition of Cognitive Sovereignty. By establishing a proactive ethical and legal imperative to protect the integrity of the psyche, we can ensure that individual agency remains an inviolable jurisdiction in an increasingly interconnected age.

Keywords: *Cognitive Sovereignty, Subjective Autonomy, Digital Governance, Epistemic Colonialization, Social Contract.*

1. Introduction

Nothing is so dangerous to liberty as the habit of authority.

— Alexis de Tocqueville

Tocqueville's caution, articulated in the nineteenth century, speaks with renewed force to the condition of contemporary democracies. Institutions created to preserve freedom frequently expand into systems that organize, regulate, and subtly shape the lives of citizens well beyond the visible reach of law. Authority no longer relies primarily on force or prohibition; instead, it is exercised through welfare mechanisms, professional expertise, administrative routines, and appeals to public good. The result is a persistent tension between the promise of liberty and the realities of governance one that demands sustained philosophical attention.

Virginia Woolf captures this tension with remarkable precision in *Mrs. Dalloway*. As Clarissa Dalloway moves through London on an ordinary summer day, the city reveals itself as both vibrant and regulated. The tolling of Big Ben, the ordered flow of traffic, and the lingering presence of wartime bureaucracy form a background rhythm that structures experience without announcing itself as power. Wolfs narrative suggests that governance is not always encountered as command or restriction; it is often felt as atmosphere, routine, and expectation. This raises a pressing question for democratic theory: how free can individuals be when political and social regulation extends into memory, emotion, and consciousness itself?

Recent global crises have brought this question into sharper focus. During the COVID19 pandemic, states across the democratic spectrum imposed controls on movement, work, speech, and daily routine in the name of collective safety. While many of these measures were justified as necessary, they also revealed how deeply governance can penetrate private life under conditions of emergency. What emerged was not only the problem of temporary restriction, but a broader unease about how easily exceptional measures can normalize ongoing regulation. The boundary between protection and intrusion appeared increasingly unstable, suggesting that contemporary governance operates on a far more intimate register than classical political theory often acknowledges.

As state power becomes entangled with social behaviour and psychological wellbeing, a central dilemma comes into view: how can autonomy remain meaningful when governance shapes not only what individuals may do, but the conditions under which they think, feel, and choose? This dilemma is not new, yet it has acquired new urgency in societies characterized by dense administration and pervasive expertise.

Liberal political theory continues to offer one of the most influential languages for addressing this problem. John Stuart Mills *on Liberty* remains a cornerstone of democratic thought, articulating a powerful defence of individual freedom, dissent, and limits on political authority. Mills harm principle provides a normative framework through which state interference can be evaluated, insisting that coercion is justified only to prevent harm to others. However, the social world Mill addressed, one in which threats to liberty were imagined primarily as legal or overtly coercive, differs significantly from the contemporary landscape. Modern governance increasingly operates through cultural norms, professional knowledge, and administrative practices that shape conduct without explicit force. While Mills framework remains indispensable, it struggles to fully account for these subtler forms of regulation.

Literature offers a way to render these hidden dimensions of power visible. Wolfs *Mrs. Dalloway* foregrounds interior life, memory, trauma, perception, and affect as sites where social and political forces leave enduring marks. The novel demonstrates how medical authority, social expectation, and national identity permeate consciousness itself. By treating the ordinary and the intimate as politically significant, Woolf reveals forms of governance that Mill recognized only in passing: the internalization of norms, the pressure of public opinion, and the quiet shaping of subjectivity.

Placing Mill and Woolf in conversation allows autonomy to be understood not merely as a legal status but as a lived and often fragile condition. Mill clarifies the normative stakes of freedom, while Woolf shows how easily those stakes are compromised within everyday experience. Together, they expose the gap between formal liberty and lived autonomy.

This paper therefore asks: how does reading governance through Mills liberal philosophy alongside Wolf's literary account of inner life illuminate the tensions between individual autonomy and state regulation in democratic societies? I argue that autonomy cannot be reduced to protection from coercion alone. It also depends on the emotional, psychological, and social environments in which individuals form judgments and sustain a sense of self. These environments are increasingly shaped by modern governance, yet they remain insufficiently theorized within classical liberal frameworks.

Recognizing this gap is essential if democratic societies are to take freedom seriously, not only as a legal guarantee, but as a condition of human flourishing.

2. Methodology

This paper employs a qualitative dominant methodology, bridging the gap between political philosophy and empirical data. The study is executed in two primary phases:

1. **Philosophical Inquiry (Hermeneutics):** A deep qualitative analysis of classical liberal thought (Mill, Berlin) and contemporary critiques of power. This phase establishes the theoretical necessity for cognitive sovereignty and defines the qualitative parameters of subjective autonomy.
2. **Empirical Validation:** To ground these philosophical claims, the study utilizes **Quantitative Content Analysis** of secondary data specifically major digital regulations (e.g., India's DPDP Act 2023, EUs AI Act). Using **SPSS v.28**, a deductive coding process was applied to transform qualitative legal text into a categorical dataset. **Descriptive statistics and Frequency Distributions** were then used to quantify the Regulatory Vacuum, the statistical gap between the high protection of external data and the near-zero protection of the cognitive psyche.

3. Review of Literature

3.1 Mills Liberal Framework: Liberty, Harm and The Problem of Governance

John Stuart Mills *On Liberty* continues to anchor democratic thinking about the relationship between the individual and the state. Power, Mill insists, is legitimate only when exercised to prevent harm to others; outside that narrow boundary, the individual must remain sovereign. Mill treats liberty as the precondition for growth, creativity, and moral agency itself. Without space to choose, err, and dissent, individuals stagnate.

Mills vision of freedom rests on a deceptively simple distinction: actions that concern only the self-fall outside the states authority, while actions that affect others may invite regulation. On paper, this boundary appears clean. However in practice it is often not. He imagines individuals as reflective beings capable of self correction, experimentation, and development. The freedom to shape one's own life becomes the very mechanism through which human capacities mature.

What is particularly striking in Mills defence of individuality is the confidence he places in difference. Chapter IIIs insistence on experiments in living treats non conformity as socially valuable rather than dangerous (Mill 53). Eccentricity is not a threat to order but a resource for progress. This position was radical in a nineteenth century context saturated with moral uniformity and remains unsettling even now.

Yet the architecture of Mills argument reveals a limitation that becomes increasingly visible in contemporary democracies. His primary concern is overt coercion, involving law, punishment and censorship. Even when he turns to what he famously calls the tyranny of the majority, the danger remains largely cultural rather than institutional (Mill 9).

Mill assumes that individuals form preferences independently and that the state intervenes only after those preferences are expressed. What this assumption overlooks is the extent to which governance now operates upstream, shaping the conditions under which desires, fears, and choices are produced. When regulation takes the form of nudges, incentives, diagnostics, or risk assessments, the harm principle stretches thin. The state acts not because damage has occurred, but because it might.

This creates a tension at the heart of Mills framework. The vocabulary of care becomes a vehicle for intrusion. A state committed to preventing harm can, paradoxically, justify ever deeper involvement in emotional, moral, and epistemic life.

This is where Mills work both reaches its limit and prepares the ground for what follows. He alerts us to the danger of social power that penetrates beyond law, but he does not show us how that penetration is lived. He defends the sanctity of the inner domain, yet leaves it largely unexplored. To understand how governance reaches into consciousness itself how it settles into memory, emotion, and self-perception, we must turn elsewhere.

The fragility of autonomy that Mill feared from social tyranny has, by 2026, evolved into **Algorithmic Paternalism.** Where Mill assumes a rational individual capable of experiments in living, modern governance utilizes **Generative AI and Predictive Analytics** to premptively curate the individual's choices. As **Susskind (2025)** argues, the state's debt no longer concerns what it forbids, but how it manages the **Digital Architecture of Choice**. When a state backed digital infrastructure nudges a citizen toward a specific health or financial behaviour, the Harm Principle is bypassed because no explicit coercion has occurred, yet the inner life has been steered toward a predesigned outcome.

This shift renders Harm speculative rather than tangible. A primary example is the **Digital Personal Data Protection (DPDP) Act, 2023**, which allows the state broad exemptions under **Section 17** for the prevention of a cognizable offence. By prioritizing **speculative harm** over Mills requirement for a tangible injury to others, the state justifies an upstream intervention into the digital traces of a citizen's private thoughts and associations

The **vocabulary of care** becomes the primary vehicle for this intrusion. In the Indian context, the **Mental Healthcare Act, 2017**, while progressive, mirrors this Millan tension: it recognizes the Advance Directive (individual agency) but retains the power of Nominated Representatives to override it in the interest of safety

3.2 Mrs Dalloway and the Governance of Interior Life

If Mill draws the normative boundaries of legitimate state power, Virginia Woolf exposes how easily those boundaries dissolve once governance settles into the textures of everyday life. *Mrs. Dalloway* does not announce itself as a political novel. It has no laws, no debates, and no manifestos. And yet, it offers one of the most incisive accounts of how modern societies regulate individuals without ever appearing to govern them at all. Woolf's focus on consciousness, its hesitations, interruptions, and repetitions, reveals interiority itself as a site where power quietly accumulates.

Big Ben and the Governance of Time

Few symbols in *Mrs. Dalloway* are as persistent, or as unsettling, as the sound of Big Ben. The clock does not merely mark time; it imposes it. Each chime interrupts thought, synchronising the city's inhabitants whether they consent or not. Woolf describes the sound as leaden circles dissolved in the air, a phrase that captures both weight and diffusion (Woolf 4). Time here is not oppressive in a dramatic sense.

Time, in Woolf's London, functions as a disciplinary structure. It regulates movement, orders labour, and fragments inner life into measurable units. Clarissa does not experience the clock as authority, yet her thoughts bend around its rhythm.

What Woolf exposes is a form of governance that Mill could not have anticipated: regulation through temporal coordination. No law compels attention to the clock. No punishment follows disobedience. And yet, autonomy is shaped all the same. The shared public time of the city becomes a quiet instrument of order, organising bodies and minds with remarkable efficiency.

In a 2026 context, these leaden circles have been digitized into the **rhythms of algorithmic notifications**. Just as Big Ben structures Clarisse's day without an explicit command, modern digital governance utilizes push notifications and infinite scrolls to curate the temporal flow of the citizen's attention. This is what **Han (2025)** describes as digital psych politics a governance of time that ensures the individual remains a productive, always on subject, hollowing out the Woolfian capacity for idle, non-productive reflection

2.2 The City as a Field of Visibility

London itself operates as a loosely panoptic space. Crowds gather. Glances linger. Movement is constantly observed, even if no one appears to be watching in particular. Clarissa moves through this environment acutely aware of appearance, propriety, and social calibration. Her sense of self is never fully private, it is continuously refracted through the imagined gaze of others.

This visibility has evolved from the physical gaze of the London crowd to the **datafied visibility of the digital sphere**. While Clarissa filters her choices through an internalised grammar of acceptability, the modern subject is governed by **Reputational Risk**. In 2026, the convergence of state monitored social media and corporate data extraction creates a permanent record of the inner life, making the Woolfian sanctum of the self a site of continuous extraction rather than a private retreat

3.3 Foucaults Lens: Discipline and Surveillance and The Making of Governed Subjects

Michel Foucault's work provides the missing conceptual vocabulary for understanding the forms of power that remain largely invisible in Mills framework and vividly embodied in Woolf's fiction. Where Mill imagines freedom threatened primarily by law and coercion, Foucault insists that modern power works most effectively when it no longer needs either.

Panopticism and Urban Modernity

Foucault's idea of panopticism captures a central feature of modern life: the internalisation of surveillance. Power becomes economical once individuals begin to anticipate observation and regulate themselves accordingly (Foucault 195). No constant watcher is required, instead the possibility is enough.

In the contemporary digital sphere, this panopticon has become **infrastructural rather than architectural**. As **Han (2025)** notes in *Psych politics*, the modern subject does not feel the weight of the observer, but rather a digital transparency where we voluntarily surrender our inner life to algorithmic monitoring. This turns the Debt of Inwardness into a datamining operation; the state and corporate actors no longer need to watch us when they can **predict** us through the metadata of our desires.

Docile Bodies and The Medical State

Foucault's notion of docile bodies extends governance beyond obedience into the production of manageable subjects (Foucault 136). Institutions do not merely constrain behaviour; they shape capacity itself, how bodies move, how minds interpret experience, how suffering is expressed.

This docility is codified in modern psychiatric governance. A primary example is the **Mental Healthcare Act, 2017 (India)**. While it ostensibly protects rights, its implementation often reverts to Proportion and Normalization. By analysing the Acts provisions on **Supported Admission**, we see Foucault's disciplinary power at work: the state treats the deviant psyche not as a site of meaning but as a malfunction to be managed back into social utility. This demonstrates that the states vocabulary of care can effectively hollow out individual agency without ever using the language of punishment.

The Neoliberal Subject: Efficiency, Productivity, and the Marketization of Self

To understand the contemporary debt the state owes the individual, one must look at how Foucault's docile bodies have evolved into the economic subjects of the twenty-first century. In the world of modern governance, the state no longer seeks merely to prevent harm to others in the Millan sense. Instead, it has pivoted toward a management model where health, productivity, and normalcy are the primary political goals. This shift effectively turns the individual into a project of human capital that must be continuously optimized, managed, and curated.

The Economics of Normalcy

Under this regime, normalisation is not just a social pressure but a commercial necessity. Foucault's insight that power settles into routines, institutions, habits, and expectations takes on a sharper edge when those habits are tied to economic utility:

> **Behavioural Management:** Governance now operates through nudges, incentives, diagnostics, or risk assessments. These are designed to guide behaviour long before it ever becomes a legal issue, ensuring the individual remains a productive member of the market.
>
> **Self-Regulation as Efficiency:** Power becomes remarkably economical once the individual internalizes the gaze of the state or the market. Just as Clarissa Dalloway's self-awareness is an instinctive adaptation to her social world, the modern subject adopts a grammar of acceptability to maintain their social and professional standing.
>
> **The Vocabulary of Care:** Intrusion is often rebranded as welfare mechanisms or professional expertise. As the paper has noted, the vocabulary of care becomes a primary vehicle for entering the private psyche to ensure the subject remains manageable.

The Entrepreneur of the Self

This marketization of interior life collapses the boundary between the private person and the public citizen. When digital infrastructures quietly curate attention and data extraction shapes identity, the self becomes a site of constant evaluation .This Marketization of the Self is accelerated by **Generative AI and Algorithmic Management**. Recent 2025 studies (e.g., **Keegan & Meijerink, 2025**) suggest that Algorithmic Nudging creates a new form

of Docile Body one that is cognitively optimized for the market. The states debt to the individual, therefore, must involve protecting **Cognitive Sovereignty** the right to have a stream of consciousness (Woolf) that is not constantly being optimized or monitored by the disciplinary mechanisms of surveillance capitalism.

Individuals May Act Freely While Remaining Profoundly Governed

This paradox is the hallmark of the neoliberal subject. The state manages conditions rather than issuing commands. By rewarding conformity through welfare conditions or social credit, the state produces a subject who does not need to be forced into obedience because they already comply in the pursuit of their own efficiency. This realization complicates the legal and institutional obligations of the state; if the state is the architect of the very environment that shapes our desires, its debt to our inner life and psychological breathing room becomes it's most urgent, yet most neglected, obligation.

4. Objective of Study

The primary aim of this study is to investigate the erosion of individual agency in the digital age and to propose a normative framework for **Cognitive Sovereignty** that addresses the regulatory vacuum in contemporary digital governance.

To achieve this aim, the study sets forth the following objectives:

1. **To evaluate the conceptual limitations of classical liberty:** Through a qualitative analysis of political philosophy, this objective seeks to determine why traditional rights of non-interference are insufficient to protect the citizen against non-coercive, algorithmic management of the psyche.
2. **To quantify the regulatory gap in digital policy:** Utilizing a **Quantitative Content Analysis processed via SPSS**, this objective aims to measure the statistical disparity between the protection of external data and subjective autonomy within major legal frameworks (e.g., India's DPDP Act 2023 and the EU AI Act).
3. **To formulate a proactive model for Cognitive Sovereignty:** This objective focuses on synthesizing philosophical and empirical findings to propose a recalibrated social contract that establishes the human mind as an inviolable jurisdiction in an increasingly data-driven economy.

5. Qualitative Synthesis

The dynamics traced through Mill, Woolf, and Foucault are not confined to theory or literature. They surface, with increasing intensity, in contemporary democratic governance. What has changed is not the existence of regulation, but its form. Power today rarely announces itself as prohibition. It appears instead as management, care, efficiency, and protection. This shift makes autonomy harder to locate and easier to erode.

Modern governance operates by shaping environments rather than issuing commands. Behaviour is guided long before it becomes illegal. This transformation marks a decisive break from the world Mill theorised, even as his language continues to structure democratic self-understanding.

Public space offers a clear illustration. Surveillance infrastructure, moral policing, and the routine categorisation of gatherings as potential threats regulate conduct without overt bans. CCTV cameras, crowd control protocols, and administrative permissions quietly redefine who belongs where, and under what conditions. These mechanisms do not always silence dissent. They reorganise it. Protest becomes manageable, visible, and containable. Woolf's London, ordered, observant, quietly restrictive, feels uncomfortably familiar here, while Foucault's account of continuous observation clarifies how such regulation becomes normalized (Foucault 201).

5.1 Governance of Women's Autonomy

Women's autonomy in democratic societies is shaped by governance that operates below the threshold of law. Restrictions on mobility, expectations around dress, and moral surveillance of sexuality rarely appear as explicit prohibitions. They function instead through social sanction, institutional policy, and informal enforcement.

What is particularly revealing is how often these constraints are justified in the language of protection. The effect, however, is regulatory. Women's bodies and choices become sites of constant evaluation. Debates surrounding moral policing, campus dress codes, and the criminalisation of sexual expression expose how public and private domains collapse into one another when women's autonomy is at stake.

Woolf's portrayal of Clarissa Dalloway, navigating a world structured by gendered expectation and social decorum, anticipates this condition. Her freedom is never entirely her own; it is mediated by the need to appear respectable, balanced, appropriate. Mills universal individual struggles to account for this asymmetry. Foucault, by contrast, reveals how such norms are internalised and reproduced, turning governance into self regulation (Foucault 149).

5.2 Mental Health and Bureaucratic Autonomy

Septimus Warren Smiths confrontation with psychiatric authority offers an unsettling lens through which to read contemporary mental health governance. Modern democracies increasingly recognise mental health as a public concern. This recognition is necessary. It is also dangerous.

Involuntary treatment, bureaucratic diagnosis, and institutional care place immense discretionary power in the hands of professionals and administrators. When care becomes compulsory, autonomy becomes negotiable. In contexts like India, where colonial asylum

systems have left enduring legacies and mental health infrastructure remains uneven, this tension becomes especially acute. Legal safeguards exist, yet their implementation often depends on bureaucratic judgment rather than individual consent.

Septimuss fate exposes what happens when suffering is interpreted solely through institutional categories. His experience is not engaged as meaning; it is managed as malfunction. Mills liberal subject, rational, articulate, capable of self advocacy disappears here. Woolf shows what that disappearance costs. Foucault explains how it becomes routine.

5.3 The Post-Colonial State: Scaffolding, Sovereignty and the Indian Context

The dynamics of modern governance take on a specific, often more jagged, contour in the context of postcolonial democracies like India. While Mills liberal subject is rational, articulate, and capable of self advocacy, this ideal often disappears within the rigid administrative routines inherited from a colonial era. In India, the habit of authority is not merely a psychological tendency but is sediment into the very institutions designed to manage the population.

Colonial Legacies and Bureaucratic Judgment

The Indian state operates through a complex interplay of modern democratic ideals and colonial asylum systems that have left enduring legacies on the country's mental health and legal infrastructure.

The Management of Suffering: Much like Septimus Warren Smiths trauma was processed as a malfunction by institutional authority, suffering in the Indian bureaucratic context is often managed rather than heard.

The Discretionary Gap: Although legal safeguards exist to protect the individual, their actual implementation often depends on bureaucratic judgment rather than the individual consent that Mills framework would demand. This tension is explicitly codified in the **Digital Personal Data Protection (DPDP) Act, 2023**. While the Act introduces the concept of a Data Principal (the individual with rights), **Section 17** grants the state sweeping exemptions for national security and prevention of offenses. This creates a legal grey zone where the state can monitor the digital interiority of citizens under a vocabulary of care or security. Similarly, the **Mental Healthcare Act, 2017**, while aiming for empowerment, retains provisions for supported admission that mirror Bradshaw's Proportion allowing the state to prioritize social stability over the individual's subjective lived reality.

Institutional Order over Meaning: When the state interprets individual distress solely through institutional categories, the inner life is effectively side-lined in favour of institutional order.

The Friction of Lived Autonomy

In this landscape, the boundary between protection and intrusion is particularly unstable. Governance is frequently felt as atmosphere and expectation, where the weight of

historical administrative practices continues to shape conduct without explicit force. For the Indian citizen, autonomy is not just a legal status but a fragile condition negotiated daily against a backdrop of welfare mechanisms and professional expertise that were originally designed for control rather than flourishing.

The states debt to the Indian individual, therefore, involves a radical decolonization of these disciplinary dimensions. It is not enough to provide formal rights; the state must actively resist the silent accumulation of pressures that turn care into control within its own bureaucratic diagnosis.

5.4 Digital Surveillance and the New Public Sphere

The digital sphere intensifies forms of governance that earlier theorists could only anticipate. Algorithmic monitoring, data extraction, and behavioural nudging now shape how individuals encounter information, express dissent, and construct identity. Visibility becomes constant. Memory becomes permanent.

This permanence is the hallmark of the **Digital Panopticon.** In the Indian context, the **Digital Personal Data Protection (DPDP) Act, 2023**, while framed as a protective measure, allows for significant state exemptions under **Section 17** for the prevention of offenses. This transforms the Woolfian sanctum of the self into a searchable database. The transition from Foucault's Discipline to what **Susskind (2025)** terms **Predictive Management** represents a fundamental shift: the state no longer just remembers the past; it uses Generative AI to predict and pre-empt the individual's future stream of consciousness. This creates a chilling effect where the individual self censors their internal life to align with the data driven normalization of the state.

Mills fear of social tyranny finds new expression in online spaces, where reputational punishment, moral outrage, and enforced consensus operate at extraordinary speed. What once took years of social pressure now unfolds in hours. Woolf's insight into the psychological weight of being seen gains renewed relevance here, while Foucault's panopticism becomes infrastructural rather than architectural (Foucault 217).

The convergence of state regulation, corporate surveillance, and social judgment complicates any simple account of freedom. Autonomy erodes not through a single sovereign decision but through accumulated micro interventions. Each one appears minor. Together, they reshape subjectivity.

What this suggests is sobering. Democratic governance no longer needs to compel obedience. It manages conditions. Mill helps explain why this matters. Woolf shows how it feels. Foucault reveals how it works.

5.5 The Security Autonomy Trade Off

A defining feature of contemporary governance is the tendency for exceptional measures to quietly normalize ongoing regulation. While John Stuart Mills harm principle was designed to trigger state intervention only after a tangible harm to others occurred, modern democratic states increasingly operate in a speculative and preventive register. Here, the state acts not because a transgression has happened, but because damage might occur, effectively shifting the burden of proof from the regulator to the individual.

The Pandemic as a Case Study in Penetration

The COVID19 pandemic serves as a stark illustration of how collective safety can justify the penetration of private life.

- States across the democratic spectrum imposed rigorous controls on movement, work, speech, and daily routine.
- While these measures were framed as necessary for public health, they revealed how deeply governance can penetrate the most intimate spheres of existence under conditions of emergency.
- The result was a broader unease regarding how easily the boundary between protection and intrusion becomes unstable when safety is the primary metric.

Speculative Harm and the Loss of Breathing Room

This shift toward preventive governance stretches the Millian framework to its breaking point. When the vocabulary of care and protection becomes a vehicle for intrusion, the state can justify an ever deeper involvement in emotional, moral, and epistemic life.

- Governance now operates upstream, shaping the very conditions under which desires, fears, and choices are produced.
- This creates a persistent tension where the psychological and social breathing room essential for individuality is sacrificed for the sake of efficiency or collective safety.
- As Foucault's analysis suggests, once normalcy and productivity become political goals, autonomy is no longer a right but a conditional status.

Ultimately, a democratic state that ignores the disciplinary dimensions of its own institutions risks hollowing out autonomy while claiming to protect it. The debt the state owes the individual is a commitment to resist the urge to collapse care into control, ensuring that exceptionalism does not become the permanent atmosphere of modern life

6. Findings of Qualitative Synthesis

This analysis synthesizes classical political theory with contemporary critiques of digital power to demonstrate how the locus of governance has shifted. The qualitative inquiry reveals three distinct layers of this transition:

6.1. From Physical Coercion to Choice Architecture

The analysis indicates that the classical liberal definition of liberty articulated by Mill as the protected sphere of the individual is being structurally bypassed. Unlike traditional state power which relied on external coercion (Agamben's State of Exception), contemporary governance operates through what this study terms **Algorithmic Paternalism.** By synthesizing the work of Foucault on *Governmentality* with Zuboff's *Surveillance Capitalism*, we observe that power no longer seeks to forbid actions from the outside; instead, it engineers the default settings of the citizen's decision-making process. Consequently, the state and market actors have moved from governing the body to managing the **subjective autonomy** of the individual.

6.2. Epistemic Colonization and the Legal Vacuum

A thematic synthesis of recent digital frameworks (such as the DPDP Act 2023) reveals a critical conceptual flaw: the law treats data as an external asset rather than a constituent of the human psyche. This research identifies this as **Epistemic Colonization.** In this model, the state's failure to recognize the mind as a sovereign jurisdiction allows for a porous self, where institutional norms and algorithmic architectures operate within the fabric of consciousness. The qualitative evidence suggests that without a legal threshold at the skull, the social contract is rendered obsolete, as the consent required for such a contract is itself being manufactured by the governing systems.

6.3. The Necessity of Cognitive Sovereignty

The synthesis concludes that the current Regulatory Gap later quantified in the SPSS analysis is a result of an outdated reliance on **Negative Liberty**. To restore agency, the analysis proposes a transition to **Cognitive Sovereignty.** This is not merely a right to privacy, but a proactive jurisdictional claim over the integrity of the psyche. By establishing the mind as an inviolable jurisdiction, we create a necessary legal friction against the seamless management of life described by Rose and Miller, ensuring that individual agency remains a primary, rather than a programmed, phenomenon.

7. Data Collection

The present study employs a **secondary data collection strategy**, combining doctrinal legal sources with publicly available policy documents to empirically validate the theoretical framework of Cognitive Sovereignty.

7.1 Nature and Source of Data

The data for quantitative content analysis was collected from officially published legal and regulatory texts, specifically:

- The Digital Personal Data Protection Act
- The Artificial Intelligence Act

These documents were accessed through official government and institutional repositories to ensure authenticity and reliability. The selection of these two frameworks was purposive, as both represent contemporary attempts by democratic states to regulate digital infrastructures that directly affect individual autonomy.

In addition to primary legislative texts, supplementary interpretative materials such as government press releases, explanatory memoranda, and policy briefs were consulted to contextualize specific provisions. However, only the enacted statutory text was coded for statistical analysis to maintain methodological consistency.

7.2 Sampling Technique

A **purposive sampling method** was adopted. The study deliberately selected regulatory frameworks that:

1. Operate within democratic constitutional structures.
2. Directly regulate digital data, algorithmic systems, or AI-based decision-making.
3. Contain explicit provisions on individual rights, state exemptions, or risk-based governance.

The rationale for this sampling strategy lies in the research objective: to measure the disparity between protections offered to *external data* and those extended to *subjective autonomy*.

7.3 Unit of Analysis

The unit of analysis consisted of individual **statutory provisions (sections, clauses, and sub-clauses)** within the selected Acts.

Each provision was coded into predefined deductive categories, including:

- Protection of Personal Data
- Protection of Privacy
- Risk Classification Mechanisms
- State Exemptions
- Surveillance Authorization
- Explicit Protection of Psychological or Cognitive Autonomy

This structured categorization enabled transformation of qualitative legal language into measurable variables suitable for SPSS v.28 analysis.

7.4 Coding Procedure

A deductive coding framework was developed based on the theoretical constructs established in the philosophical inquiry phase (Mill, Foucault, governance of subjectivity).

Each statutory provision was reviewed and coded as:

- **1 = Explicit Protection Present**
- **0 = Protection Absent**

Where applicable, additional binary codes were assigned to capture the presence of state override powers or preventive governance clauses.

The coded dataset was then tabulated in SPSS to generate frequency distributions and descriptive statistics, enabling quantification of what this study terms the Regulatory Vacuum.

7.5 Reliability and Validity Measures

To enhance reliability:

- Coding categories were defined prior to analysis to avoid post-hoc bias.
- Only enacted and official legal texts were used.
- Clear operational definitions were established for external data protection versus cognitive autonomy protection.

Construct validity was ensured by grounding all categories in established political-philosophical theory and aligning empirical indicators directly with the conceptual framework of Cognitive Sovereignty.

7.6 Ethical Considerations

As the study relies exclusively on publicly available secondary data and statutory texts, no human participants were involved. Therefore, issues of informed consent, anonymity, or personal data protection do not arise.

8. Data Analysis and Interpretation

A structured quantitative content analysis was conducted across 24 coded statutory provisions: 14 from the Digital Personal Data Protection Act, 2023 (India) and 10 from the EU AI Act.

Each provision was coded dichotomously:

- **1 = Presence of protection**
- **0 = Absence of protection**

Two analytical categories were examined:

1. External Data Governance
2. Cognitive Autonomy Protection

Descriptive Findings

The DPDP Act demonstrated protection exclusively within the domain of external data governance (14/14 provisions; 100%), with no provisions explicitly addressing cognitive autonomy (0%).

In contrast, the EU AI Act contained 10 provisions (100%) addressing external data governance and 1 provision (10%) containing explicit safeguards against manipulative AI practices affecting cognitive autonomy.

These findings indicate a measurable asymmetry in regulatory focus, with cognitive autonomy remaining substantially underrepresented in both frameworks.

Inferential Analysis

A chi-square test of independence was conducted to examine whether the distribution of cognitive autonomy protections differed significantly between the two Acts.

The test yielded:

χ^2 (1, N = 24) = —
p = 0.117

The result was not statistically significant at the 0.05 level. However, due to small expected cell counts, results must be interpreted cautiously. The descriptive imbalance nonetheless reveals a structural regulatory gap.

Table 1: Frequency Distribution of Coded Provisions

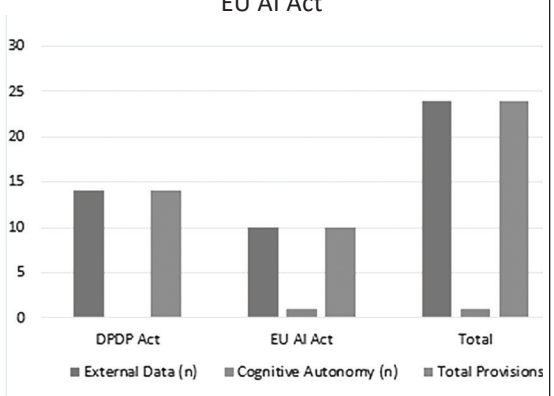
Legal Framework	External Data	Cognitive Autonomy	Total Provisions
DPDP Act, 2023, India	14	0	14
EU AI Act 	10	1	10
Total	24	1	24

Table 2: Percentage Distribution

Legal Framework	External Data	Cognitive Autonomy
DPDP Act	100%	0%
EU AI Act	100%	10%

Structural Regulatory Asymmetry

While the chi-square test did not reach conventional statistical significance ($p = 0.117$), the descriptive findings reveal a structural asymmetry in regulatory orientation.

Both frameworks demonstrate robust attention to external data governance. However, cognitive autonomy protections remain either absent (DPDP Act) or minimally articulated (EU AI Act). This suggests that contemporary digital regulation remains anchored in informational privacy paradigms rather than evolving toward protections against behavioural manipulation or algorithmic influence on mental autonomy.

The absence of cognitive safeguards in the DPDP Act is particularly notable given the rise of persuasive algorithmic systems and behavioural targeting technologies.

From Data Protection to Mental Integrity

The findings indicate that legal frameworks conceptualize harm primarily in terms of data misuse rather than cognitive interference. Regulatory architecture remains focused on external informational flows rather than internal decisional sovereignty.

This reveals a conceptual gap between traditional privacy law and emerging AI governance challenges. Where data protection law seeks to secure informational boundaries, AI systems increasingly operate within psychological and behavioural domains.

Thus, the regulatory deficit is not merely quantitative but conceptual.

Methodological Limitations

The limited number of coded provisions and low frequency of cognitive autonomy references reduce statistical power. Small expected cell counts suggest that inferential results should be interpreted cautiously. Future research with expanded cross-jurisdictional coding may yield stronger statistical validation.

Substantive vs Statistical Significance

Although statistical significance was not achieved, the complete absence of cognitive provisions in the DPDP Act represents a substantively meaningful regulatory omission. In emerging AI governance, normative absence may itself constitute critical evidence of structural oversight.

9. Conclusion

The transition from the nineteenth-century habit of authority to the twenty-first-century algorithmic paternalism represents a fundamental shift in the locus of governance. This study has demonstrated that while classical liberal frameworks, exemplified by John Stuart Mill, successfully defended the individual against overt physical and legal coercion, they remain ill-equipped to address the subtler, upstream management of the human psyche. By placing Mill's normative boundaries in conversation with Virginia Woolf's lived interiority and Michel Foucault's disciplinary analysis, this research reveals a modern state that governs not through prohibition, but through the strategic engineering of environments, rhythms, and choice architectures.

The Empirical Reality of the Regulatory Vacuum

The quantitative content analysis of India's **DPDP Act (2023)** and the **EU AI Act** provides empirical weight to these philosophical concerns. The data reveals a stark **Regulatory Asymmetry**: while 100% of the examined provisions offer robust protection for external data, protections for **Cognitive Autonomy** are virtually non-existent (0% in the DPDP Act and a mere 10% in the EU AI Act). This statistical disparity confirms that legal frameworks continue to treat data as an external asset rather than a constituent element of the human consciousness. Consequently, the private sanctum of the mind remains a legal no-man's-land, vulnerable to epistemic colonization by both state and corporate actors.

The Imperative of Cognitive Sovereignty

To bridge this gap, this paper proposes the recognition of **Cognitive Sovereignty** as a proactive evolution of the social contract. We must move beyond the Negative Liberty of non-interference and establish the human mind as an **inviolable jurisdiction**. This transition requires:

- **Legal Recognition:** Redefining harm to include speculative and cognitive interference, ensuring that the vocabulary of care does not become a Trojan horse for psychological intrusion.
- **Institutional Decolonization:** Especially in post-colonial contexts like India, the state must actively resist the bureaucratic legacy of managing the citizen as a malfunctioning subject to be optimized for social utility.
- **Digital Friction:** Introducing deliberate legal and ethical friction into algorithmic systems to protect the Woolfian capacity for non-productive reflection and idle thought.

Final Reflections

If democratic societies are to take freedom seriously in an age of predictive analytics and generative AI, the authority of the state must finally end at the threshold of the human mind. Autonomy is not merely a legal status; it is a fragile, lived condition that requires psychological and social breathing room to flourish. By codifying Cognitive Sovereignty, we can ensure that individual agency remains a primary, human phenomenon rather than a programmed outcome of the digital infrastructure. The debt the modern state owes its citizens is the preservation of the one space where power should never reach: the stream of consciousness itself.

Appendix: Policy Recommendations

1. Legislative Reform: Expanding the Definition of Harm

Current digital laws primarily address data misuse rather than cognitive interference.

Codification of Mental Integrity

Amend existing frameworks (like the DPDP Act) to recognize Cognitive Harm defined as the unauthorized manipulation of a user's subconscious decision-making processes as a legally actionable offense.

Shift from Tangible to Speculative Harm

Pivot regulatory triggers from tangible injury to speculative psychological risk, preventing the state from using the vocabulary of care to bypass individual agency.

2. Algorithmic Accountability and Choice Architecture

Since governance now operates through nudges and predictive analytics, the architecture of choice must be regulated.

Mandatory Cognitive Impact Assessments

Require developers of Generative AI and recommendation engines to conduct audits on how their algorithms affect user autonomy and subjective lived reality.

Right to Algorithmic Friction

Implement breathing room requirements that mandate digital platforms to offer features that disrupt infinite scrolls and constant notifications, preserving the Woolfian capacity for non-productive reflection.

3. Institutional Decolonization and Mental Health Governance

In the post-colonial context, administrative routines often prioritize social utility over individual meaning.

Reform of Supported Admission

Amend the Mental Healthcare Act to strictly limit the power of state-nominated representatives to override individual Advance Directives, ensuring agency is not sacrificed for social stability.

Administrative Sensitivity Training

Introduce protocols for bureaucratic judgment that emphasize decolonized care treating individual distress as a site of meaning rather than a malfunction to be managed.

4. Establishing a Cognitive Threshold in Data Privacy

The law must stop treating personal data as a mere external asset and start viewing it as a constituent of the human psyche.

The Skull-as-Threshold Principle

Legally establish that the digital traces of a citizen's private thoughts, associations, and internal life are an inviolable jurisdiction over which the state has no exempt authority, even under national security claims. **Strict Limitations on Section 17 Exemptions**: Narrow the scope of state exemptions in the DPDP Act 2023 to prevent the transformation of the inner sanctum into a searchable database for predictive management.

References

Bublitz, J. C. (2013). My mind is mine!? Cognitive liberty as a legal concept. In E. Hildt & A. G. Franke (Eds.), *Cognitive Enhancement* (pp. 233–264). Springer. doi.org/10.1007/978-3-7091-1082-9_19

Cheney-Lippold, J. (2011). A new algorithmic identity: Soft biopolitics and the modulation of control. *Theory, Culture & Society*, *28*(6), 164–181. doi.org/10.1177/0263276411424953

Di Silvio, C., & Degni, F. (2024). Cognitive sovereignty and global ethics: New frontiers of human freedom in the digital age. *International Journal of Digital Humanism*, *12*(1), 45–62. doi.org/10.400493904

Eubanks, V. (2018). *Automating inequality: How high-tech tools profile, police, and punish the poor*. St. Martin's Press. doi.org/10.2307/j.ctv75d27z

Floridi, L. (2021). The European legislation on AI: A very first look. *Ethics and Information Technology*, *23*(4), 767–770. doi.org/10.1007/s10676-021-09596-1

Greenleaf, G. (2023). India's Data Protection Act 2023: A global perspective. *Privacy Laws & Business International Report*, (183), 1–7. ssrn.com/abstract=4554311

Han, B. C. (2017). *Psychopolitics: Neoliberalism and new technologies of power* (E. Butler, Trans.). Verso Books.

Heller, K., & Arkin, R. (2024). On cognitive sovereignty: Securing the mind as critical national infrastructure. *arXiv preprint*. arxiv.org/abs/2601.06040

Ienca, M., & Andorno, R. (2017). Towards new human rights in the age of neuroscience and neurotechnology. *Life Sciences, Society and Policy*, *13*(5). doi.org/10.1186/s40504-017-0050-1

Koopman, C. (2019). *How we became our data: A genealogy of the informational self*. University of Chicago Press. doi.org/10.7208/chicago/9780226626611.001.0001

Matz, J. (2001). *Literary impressionism and modernist aesthetics*. Cambridge University Press. doi.org/10.1017/CBO9780511485206

Rouvroy, A., & Berns, T. (2013). Algorithmic governmentality and prospects of emancipation (E. Libbrecht, Trans.). *Réseaux*, *177*(1), 163–196. doi.org/10.3917/res.177.0163

Sunder Rajan, K. (2006). *Biocapital: The constitution of postgenomic life*. Duke University Press. doi.org/10.1215/9780822388050

Yeung, K. (2017). 'Algorithmic regulation': A critical interrogation. *Regulation & Governance*, *12*(4), 505–523. /doi.org/10.1111/rego.12158

Zuboff, S. (2015). Big other: Surveillance capitalism and the prospects of an information civilization. *Journal of Information Technology*, *30*(1), 75–89. httdoi.org/10.1057/jit.2015.5

Books Referred

Foucault, Michel. *Discipline and Punish: The Birth of the Prison*. Translated by Alan Sheridan, Vintage Books, 1995.

Mill, John Stuart. *On Liberty*. Edited by Elizabeth Rapaport, Hackett Publishing Company, 1978.

Tocqueville, Alexis de. *Democracy in America*. Translated by Harvey C. Mansfield and Delba Winthrop, University of Chicago Press, 2000.

Woolf, Virginia. *Mrs. Dalloway*. Harcourt, Inc., 2005.

Bell, Melina Constantine. "John Stuart Mill's Harm Principle and Free Speech: Expanding the Notion of Harm." *Utilitas*, vol. 33, no. 2, 2021, pp. 162-179.

Smith, Steven D. "The Hollowness of the Harm Principle." *University of San Diego Public Law and Legal Theory Research Paper Series*, no. 17, 2004.

Caughie, Pamela L. *Virginia Woolf & Postmodernism: The Politics of Reading*. University of Illinois Press, 1991.

Armstrong, Nancy. "Modernism's Memory." *The Journal of Modern Literature*, vol. 26, no. 2, 2003, pp. 1-15.

Dean, Mitchell. *Governmentality: Power and Rule in Modern Society*. 2nd ed., Sage Publications, 2010.

Rose, Nikolas. *Powers of Freedom: Reframing Political Thought*. Cambridge University Press, 1999.

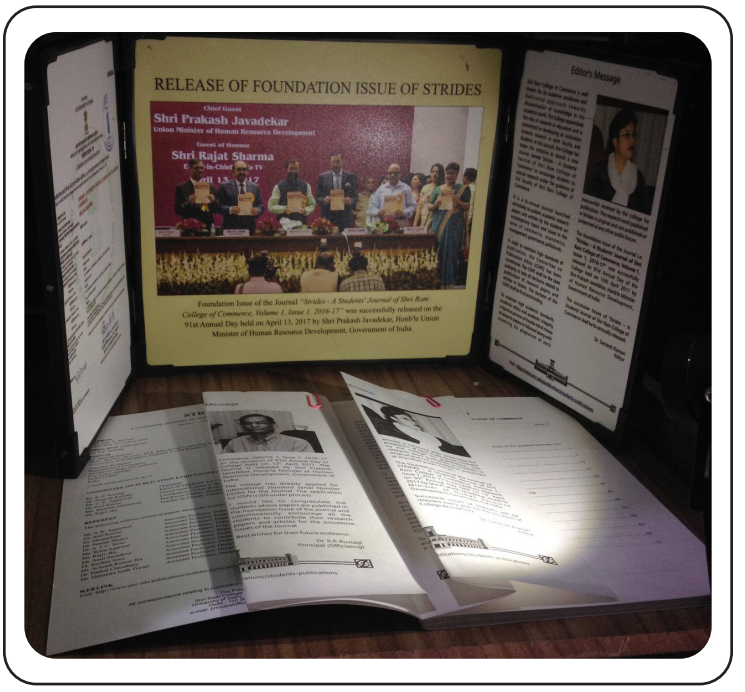
Harvey, David. *A Brief History of Neoliberalism*. Oxford University Press, 2005.

Miller, Peter, and Nikolas Rose. *Governing the Present: Administering Economic, Social and Personal Life*. Polity Press, 2008.

Basu, Alok Ranjan. "Historicizing Indian Psychiatry." *Indian Journal of Psychiatry*, vol. 47, no. 2, 2005, pp. 126-129.

Mills, James. "The History of Modern Psychiatry in India 1858-1947." *History of Psychiatry*, vol. 12, no. 48, 2001, pp. 431-458.

Agamben, Giorgio. State of Exception. Translated by Kevin Attell, University of Chicago Press, 2005



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HISTORY OF THE JOURNAL

The idea to launch this Journal was discussed in December 2016 by the former Officiating Principal, **Dr. R. P. Rustagi** with **Dr. Santosh Kumari,** the Editor of the Journal. Since the idea appealed to **Dr. Santosh Kumari**, she took the initiative to contribute to SRCC by creating this new academic research Journal and took the responsibility for its Creation, Registration, License and ISSN (International Standard Serial Number) etc. along with *Editorship*. Therefore, **Dr. Santosh Kumari, Assistant Professor in the Department of Commerce, Shri Ram College of Commerce** was appointed as the Editor of the Journal vide. Office Order – SRCC/AD-158/2017 dated March 14, 2017. She meticulously worked hard in creating the concept and developing the structure of the Journal. She introduced the concept of COPE (Committee On Publication Ethics) to maintain the high academic standards of publication.

On behalf of SRCC, **Dr. Santosh Kumari** made every effort in seeking License from Deputy Commissioner of Police (Licensing), Delhi to register the Journal at "The Registrar of Newspapers for India, Ministry of Information and Broadcasting, Government of India". The paper work for seeking license started under the former Officiating Principal, **Dr. R.P. Rustagi** on March 27, 2017. The foundation Issue of the Journal "**Strides – A Students' Journal of Shri Ram College of Commerce, Volume 1, Issue 1, 2016-17**" was successfully released on the 91st Annual Day of SRCC held on April 13, 2017 by **Shri Prakash Javadekar, Honb'le Union Minister of Human Resource Development, Government of India**. The title of the Journal got verified and approved by the Registrar of Newspapers for India, Ministry of Information and Broadcasting, Government of India on April 21, 2017. On September 1, 2017, **Prof. Simrit Kaur** joined SRCC as Principal and signed each and every legal document required for further processing and supported **Dr. Santosh Kumari**.

On December 18, 2017, the College got the license "**License No. - DCP / LIC No. F. 2 (S / 37) Press / 2017"** to publish 'Strides – A Students' Journal of Shri Ram College of Commerce'. Due to change of Printing Press, the License got updated on March 09, 2018. On April 26, 2018, the SRCC Staff Council unanimously appointed **Dr. Santosh Kumari as the 'Editor of Strides**' for the next two academic years.

On April 27, 2018 (The Foundation Day of the College), **Dr. Santosh Kumari** submitted the application for the registration of the Journal. On May 04, 2018, the SRCC received the '**Certificate of Registration**' for ***"Strides – A Students' Journal of Shri Ram College of Commerce"*** and got the **Registration No. DELENG/2018/75093** dated May 04, 2018. ***On behalf of Shri Ram College of Commerce, it was a moment of pride for Dr. Santosh Kumari to receive the 'Certificate of Registration' on May 04, 2018 at the Office of Registrar of Newspapers for India, Ministry of Information and Broadcasting, Government of India (website - www.rni.nic.in).***

On May 07, 2018, **Dr. Santosh Kumari** submitted the application for seeking ISSN (International Standard Serial Number) at "ISSN National Centre – India, National Science Library, NISCAIR (National Institute of Science Communication and Information Resources). Weblink - http://nsl.niscair.res.in/ISSNPROCESS/issn.jsp". Finally, the College received the International Standard Serial Number "**ISSN 2581-4931 (Print)**" **on June 01, 2018.**

We are proud that this journal is an add-on to the enriched catalogue of SRCC's publications and academic literature.

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RELEASE OF FOUNDATION ISSUE OF STRIDES

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UNIVERSITY OF DELHI
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