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ECONOMICS AS LIVED EXPERIENCES

VOL I

Chairperson's Note

It has been an absolute pleasure to serve as the Chairperson for GAEE India. It was one of my ambitions to start the intitaive for a peer-reviewed journal so that the India chapter can foster a research infrastructure. I am so happy to see that vision come to life. This journal truly feels like a labour of love. We have ideated on multiple meetings, had problems be resolved, and utilised strategic thinking.

Even though the first volume is out. I am excited for what the future tenure's will do because I know it has the scope to grow bigger and better. I hope they refine and use it as a voice of reshaping economics. Economics that is not only centred around numbers and analysis but also that creates a more equal world.

Warm regards,
Shivalee Duara
Chairperson, GAEE India

Editor's Note

Dear readers,

It is with immense pride that I present the inaugural edition of GAEE India's journal – a platform dedicated not just to thought- provoking ideas and insights, but also to collectively curated narratives of economic innovation and financial literacy, with each paper delving deeper into a world yet to be explored.

When I first stepped into the role of Editor-in-Chief at GAEE India, I did so with equal parts excitement and uncertainty. What began as a responsibility soon transformed into a journey of learning and expression. Every single step I took with GAEE India made me realise that there is so much more I am yet to explore.

The mosaic of ideas presented in this issue is a reflection of our inquisitive scholars' wonderful ideas, brought together on a platter for discussion. The papers delve deeper into a world of power, inequalities and agency across diverse sections of the society. From the commodification of human attention in the digital economy to the quiet persistence of gender-based pricing, the research papers presented in this volume grapple with the invisible structures of economy which interfere with everyday choices and individual lives.

The analysis of debt diplomacy and development expands the scope of this journal to a broader political and spatial contexts. This paper opens the door for readers to explore the geopolitical dimensions of economic dependence. The study on the rise of non-metro D2C start-ups draws the readers' attention on how India's consumer economy is being reshaped from its so-called margins. The paper examining gender-based harassment in Delhi University is a memoir of how the fear and embedded insecurity leave a lasting economic and emotional strain on women.

As this journal comes to life, it brings closure to my tenure and , at this moment, I would like to take this opportunity to thank all the authors, reviewers and the editorial team, whose contribution feels invaluable. A big shout-out to all the design team members who crafted these pages with immense passion and dedication . This journal is a testament to economics as lived experiences. I hope this volume urges the readers to keep questioning and helps everyone reflect, and imagine more equitable economic futures.

Signing off

Minna Ann Jacob

Editor- in- Chief, GAEE India

Academic Mentor’s Note

I would like to express my gratitude to the team at the Global Association of Economics Education (GAEE) India for inviting me to be part of the GAEE Journal. It has been encouraging to witness the effort invested in creating a structured and credible academic platform for students and early-career researchers. The editorial process reflects sincerity, academic responsibility, and a clear intent to strengthen research culture in economics and allied fields. I appreciate the professionalism and coordination shown by the team and extend my best wishes for the journal’s growth and long-term contribution to economics education and scholarly dialogue.

Warm Regards
Arzoo Sharma

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The Attention Economy: How Tech Companies Monetize Your Focus

In the digital era, human attention has become a scarce yet highly valuable resource, leading to the rise of the Attention Economy-a system where tech companies design platforms to maximize engagement and monetize user focus. Major platforms such as Google, Meta (Facebook), TikTok, and YouTube employ advanced strategies, including algorithmic personalization, gamification, and behavioral psychology, to keep users engaged, driving advertising revenue and data monetization.
This paper first provides a historical perspective, tracing how attention has been commodified from traditional media (newspapers, television, radio) to the digital age, where algorithmic content curation dominates. It then explores the core economic principles of the Attention Economy, including scarcity of attention, opportunity cost, and behavioral economics.
A key focus of the research is the mechanisms employed by tech giants, such as AI-driven recommendation algorithms, infinite scroll, push notifications, and reward-based engagement systems. These techniques not only enhance user retention but also foster habit formation and compulsive consumption.
While these strategies have led to immense corporate profitability, they also pose ethical dilemmas. The paper examines cognitive and psychological effects on users, including digital addiction, attention fragmentation, and mental health concerns. It also discusses socioeconomic implications, such as the monetization of user data, privacy risks, misinformation proliferation, and political polarization.
To address these challenges, the paper evaluates existing regulations (GDPR, CCPA) and proposes future policy interventions to ensure a more ethical Attention Economy. Additionally, it explores alternative business models, including decentralized platforms (Web3), ethical AI, and digital well-being initiatives like the “Time Well Spent” movement.
This study contributes to the discourse on responsible innovation, corporate accountability, and user empowerment, emphasizing the need for a sustainable and balanced approach to the Attention Economy.

Introduction

“The liberation of human attention may be the defining moral and political struggle of our time.”

~James Williams

“Attention is the substance of thought, and those who control what you pay attention to control what you think.”

~Tim Wu

“In a world deluged by irrelevant information, clarity is power.”

~Yuval Noah Harari

At no other point in history has human attention been so relentlessly pursued, engineered, bought, and sold. In an age where the internet offers boundless access to entertainment, education, news, and social connection, a new form of scarcity has quietly emerged-our capacity to focus. We live in an era where a silent battle for our eyes and minds rages each time we unlock our phones, open a browser, or scroll through a feed. This battle defines the Attention Economy-a system in which the most valuable currency is not money, but minutes.
Historically, attention was considered a passive phenomenon-an invisible byproduct of media consumption. People read newspapers, listened to radio, or watched television largely on pre-scheduled, advertiser-supported formats. Brands competed for airtime, and media companies sold space to advertisers based on generalized audience sizes. While these industries capitalized on attention indirectly, the exchange was relatively simple and one-directional.

That model changed forever with the rise of digital platforms in the 2000s. With smartphones in every pocket, social media became a digital extension of our social selves. Suddenly, platforms were not just places to consume content-they were interactive ecosystems that responded, adapted, and evolved with every tap, click, or swipe. Algorithms tracked our preferences, behaviors, moods, and timing. These systems began to know us better than we know ourselves-and they optimized, relentlessly, to keep us engaged.
What emerged was a redefinition of how we value time and how companies profit from it. As attention became measurable through user metrics-click-through rates (CTR), session duration, scroll depth, view completion-business models evolved accordingly. The longer we look, the more they earn. Every action we take online feeds into massive data warehouses that power hyper-targeted advertising ecosystems. As a result, human attention itself became a unit of transaction, measured, traded, and monetized with staggering precision.

This transformation was not purely technological; it was deeply psychological. Tech designers, drawing on insights from behavioral science and neuroscience, embedded mechanisms that mimic slot machines and social pressure. Infinite scroll, autoplay, streak rewards, and push notifications were not innocent features-they were tools designed to manipulate user behavior and extend time-on-platform. The platforms didn’t just reflect user desire; they shaped it.
The economic magnitude of this shift is profound. As of 2024, the global digital advertising industry surpassed $600 billion-with companies like Google, Meta, and TikTok earning the lion’s share through real-time attention harvesting. These firms do not sell content or services in the traditional sense-they sell audiences to advertisers. Their core product is your focus, and their customers are brands willing to pay for even milliseconds of it.

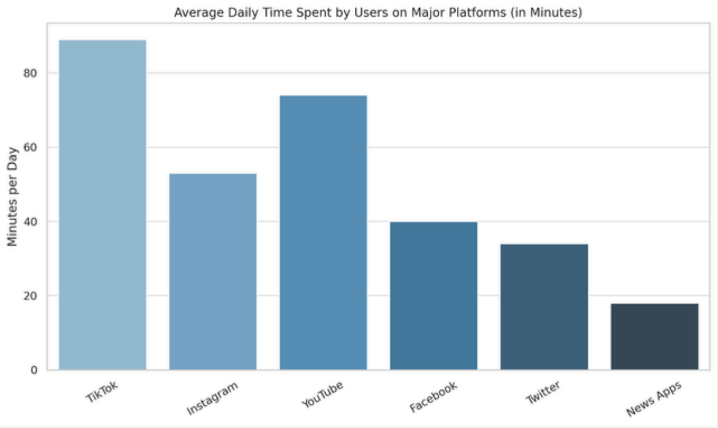
But the consequences extend far beyond advertising. The competition for attention has led to unintended byproducts: digital addiction, increased anxiety, shortened attention spans, and even political polarization. Platforms that optimize for engagement often surface emotionally provocative or sensational content-not necessarily what is true or healthy. The incentive structures are clear: outrage, controversy, and novelty retain attention better than calm, nuance, or balance.
In response, a growing chorus of critics has emerged. Former tech insiders like Tristan Harris and movements such as the Center for Humane Technology warn that we are in the midst of a “crisis of distraction.” Ethical concerns abound: Are we in control of our attention, or are we being manipulated? Do platforms have a duty to prioritize mental well-being over monetization? Can a digital economy survive without exploiting cognitive vulnerabilities?

At the same time, new alternatives are surfacing. Some platforms have introduced digital well-being tools-screen time trackers, focus modes, content limits. Others, like Signal and Brave Browser, offer privacy-focused experiences that don’t rely on attention-harvesting models. Web3 and decentralized protocols are also experimenting with new frameworks, where users retain control over their data and engagement. But these are early steps in a long journey.

This research paper explores the Attention Economy from a multidisciplinary lens: economics, psychology, behavioral science, and ethics. It seeks to answer pressing questions about the systems we now inhabit daily:

- How is attention captured and commodified in the digital age?
- What tools and techniques do tech companies use to manipulate user focus?
- What are the societal, psychological, and economic costs of this model?

Can regulation or ethical design offer a path toward a healthier digital environment?



The goal is not to demonize technology, but to understand its logic-and from there, explore how we might reclaim autonomy in a landscape that profits from our distraction.

The following sections will provide a structured exploration: beginning with definitions and theoretical foundations, followed by the mechanisms of monetization, the impacts on individuals and society, and concluding with ethical challenges and future alternatives.

What follows is not just a study of platforms, algorithms, and policies. It is a reflection on what it means to pay attention in a world that won't stop asking for it.

Defining the Attention Economy

The Attention Economy refers to a system where human attention is treated as a limited resource, and platforms compete to attract and retain that attention for profit . In other words, rather than information scarcity, the core challenge lies in attention scarcity-a shift from material to cognitive resources. As digital platforms grow, they increasingly rely on algorithmic personalization and behavioral nudges to guide users' focus toward monetizable content.

Historical Evolution

Historically, attention has always held economic value-in print, radio, and television advertising. However, the modern version of the Attention Economy intensified with the internet and social media. With ubiquitous connectivity and real-time content, platforms like Google, Facebook, TikTok, and YouTube now compete in micro-seconds for every click, view, and scroll . Each scroll, view, or tap translates to a potential ad impression-economic value measured in time and engagement.

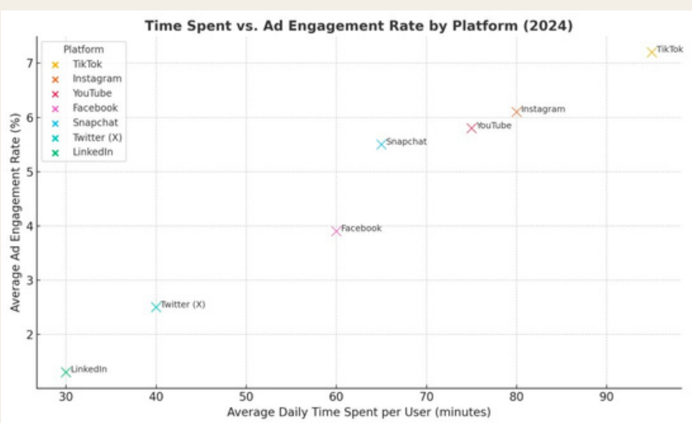
Relevance and Objectives

Today, attention is the currency of the digital world. Platforms design interfaces - from infinite scroll to push notifications - aimed at increasing user time-on-platform, which maximizes ad revenue. Yet, this economic model raises pressing concerns: digital addiction, privacy erosion, reduced productivity, and polarization.

This research aims to provide a comprehensive exploration of the Attention Economy, structured in line with the Table of Contents:

1. Historical perspective-tracing attention monetization from traditional media to modern platforms
2. Economic principles-such as scarcity, opportunity cost, and behavioral economics
3. Mechanisms-like algorithmic recommendation, gamified engagement, and data-driven personalization
4. Psychological and societal impacts, including addiction, mental health, and fragmented discourse
5. Ethical and regulatory challenges, focusing on corporate responsibility and international laws
6. Alternatives and future directions, covering humane tech, decentralized systems, and digital well-being.

Through this framework, the paper seeks to answer critical questions: How do tech firms monetize attention? What are the costs and benefits for individuals and society? And how can we craft a more ethical and sustainable digital ecosystem?



Relevance and Objectives

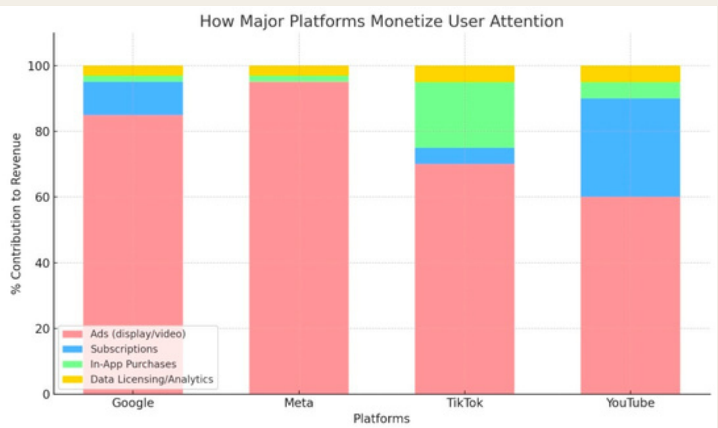
The paper is divided into eight core sections-starting with this introduction-culminating in a conclusion that synthesizes insights and offers actionable recommendations. The 500–600 words in this introduction set the stage by defining key concepts, contextualizing history, and outlining the research trajectory ahead.

Early Monetization of Attention

Before digital platforms dominated, the concept of monetizing attention derived from print newspapers, radio, and television, where advertisers paid for access to audiences. Classic mass media relied on curated, scheduled content aimed at the widest possible audience. This model prioritized reach and frequency-measured in circulation numbers or Nielsen ratings-as proxies for attention value. However, this early economy treated attention as broadcast, one-to-many, without personalization.

Herbert A. Simon's Foundational Insight

The modern notion of the Attention Economy traces back to Nobel laureate Herbert A. Simon, who in 1971 stated "a wealth of information creates a poverty of attention". Simon recognized a fundamental shift: while information became abundant, human cognitive capacity remained finite. He argued that this mismatch necessitated managing attention, not just information-a principle later echoed by Thomas Davenport, Michael Goldhaber, and others . Simon's lectures highlighted the urgency of designing systems that filter content, acknowledging the scarcity and economic value of attention.



The Shift to Digital Platforms

The rise of the internet and social media in the late 1990s and 2000s disrupted old paradigms. Unlike broadcast media, platforms such as Google, Facebook, and YouTube offered on-demand, personalized content, introducing a one-to-one attention market. The algorithmic architecture empowered platforms to constantly adapt to user preferences, creating sticky and engaging experiences. Infinite scroll-debuted by Aza Raskin in 2006-and recommendation engines emerged as key tools to maximize attention .

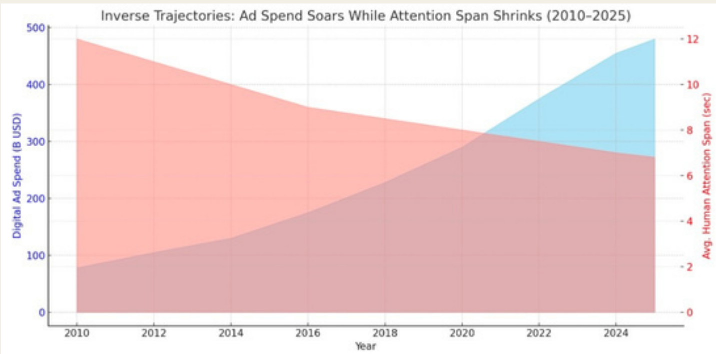
First Wave: Classic Attention Economics

From Simon through the 1990s, attention was primarily framed in economic and cognitive science terms. Scholars treated it as a consumable resource constrained by mental bandwidth. Academic analysis focused on how information systems allocate filtered content efficiently . The era highlighted limitations of multitasking and the need for design that acknowledges attention as a bottleneck .

Second Wave: Digital Attention Engineering

In the 21st century, the Attention Economy evolved into a data-driven enterprise. Platforms not only captured attention-they engineered it. Algorithms learned from user behavior to optimize micro-interaction loops such as likes, notifications, and infinite scroll.

Data became the cornerstone of economic value-referred to by some as “user data as oil.” Each scroll, session, and click scored as an ad impression in real-time bidding systems.



Rise of Awareness and Ethical Backlash

Since 2018, movements like Center for Humane Technology and the “Time Well Spent” initiative have challenged exploitative designs. Tristan Harris and colleagues spotlight how design patterns like infinite scroll and variable rewards contribute to digital addiction and mental health crises . Academic and public critiques argue that platforms leverage cognitive vulnerabilities and FOMO, amplifying polarization and behavioral manipulation.

The Concept of Scarcity and Opportunity Cost

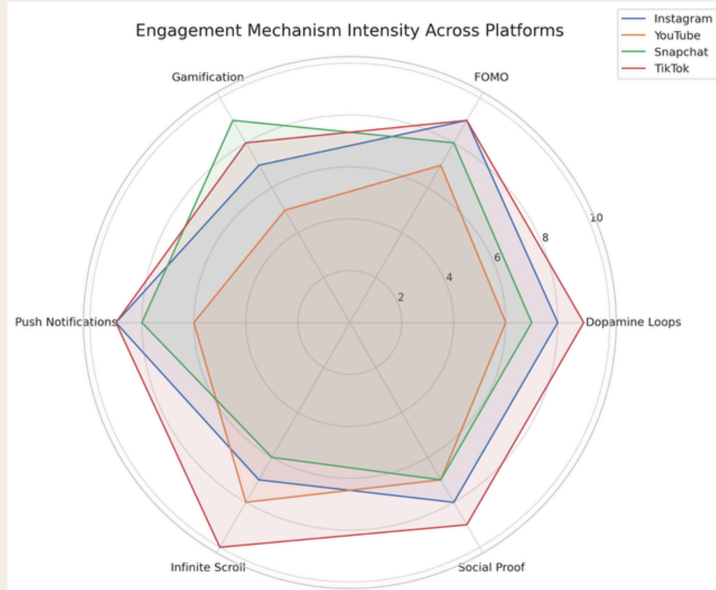
At the core of the Attention Economy lies the economic principle of scarcity. Originating in the works of economists like Lionel Robbins, scarcity implies that limited resources demand allocation choices. In today’s hyper-connected world, human attention represents a finite cognitive resource amid limitless information. Each time users choose where to focus-be it browsing TikTok, scrolling through Instagram, or reading news-they make an implicit opportunity cost decision: that attention could have been allocated elsewhere. Platforms seek to capture and monetize that decision, turning minds into marketplaces of engagement.
This shift underscores the transformation of attention from a passive consumer good to something actively bid upon in digital advertising auctions. Tech companies pay real money per attention unit using metrics like CPM (cost per mille), viewing each millisecond as economic value. As such, attention becomes a strategic asset-both to platforms seeking profit and to consumers aiming for productivity.

Behavioral Economics & Cognitive Biases

Understanding the neurological and psychological drivers that shape user behavior is crucial in the Attention Economy. Techniques from behavioral economics-notably anchoring, loss aversion, and social proof-are baked into app designs:

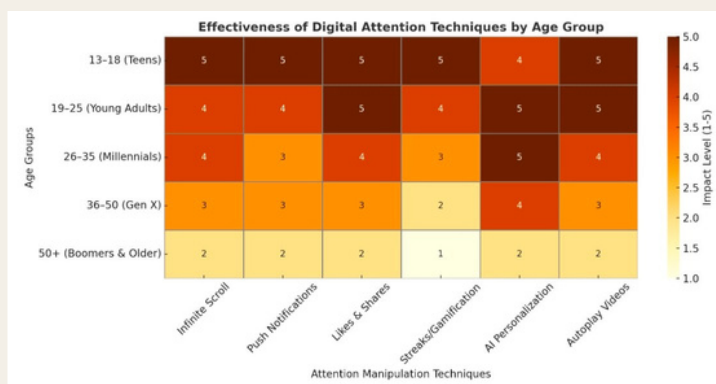
- Anchoring & Framing: Designers set defaults (automatically playing next video) that subtly anchor user behavior toward persistent engagement.
- Loss Aversion & FOMO: Notifications-“Only 2% watched this!” or “Someone commented!”-tap into fear of missing out, boosting return rates.
- Social Proof: Showing likes, comments, view counts, or popularity trends makes content seem more valuable, nudging users to engage more.

Combining these biases with variable reward schedules (randomized notifications, content surprises) leads to powerful dopamine-driven loops. Users are psychologically conditioned to seek the next reward, creating habits that platforms measure and monetize.



Attention as an Economic Good & Data as Currency

In economics, goods are classified as rival or non-rival, excludable or non-excludable. Attention is a rivalrous and scarce good: when one platform attracts your time, others lose it. Recognizing this, platforms compete fiercely in a zero-sum attention marketplace. Emerging from this battle is a transformational concept: user data becomes a currency. Every click, scroll, and hover is collected, analyzed, and sold as a precise mapping of intent. Algorithms ingest this data to build predictive behavioral models, feeding targeted advertising, and enabling real-time bidding (RTB) for ad impressions. Data substitutes money, as platforms increasingly rely on data valuation over traditional subscription revenues.
Advertisers pay for granular targeting-down to demographics, interests, and behaviors-with campaigns optimized through machine learning models that predict click-through-rates (CTR) and conversions.
This model not only increases ROI but also drives a feedback loop: more personalized content = more attention = more data = more precise targeting.



By aggregating this data across demographics and interests, tech giants build massive behavioral profiles, making every user a product of quantified attention. The commodification of attention and data thus becomes dual-track: attention ensures engagement, while data ensures monetization.

Modern platforms employ a sophisticated combination of algorithmic engineering, behavioural triggers, and data-driven personalization to maximize user engagement-and by extension, monetize attention. This section unpacks three critical mechanisms: algorithmic recommendation, gamification & reward loops, and data collection for real-time advertising.

Algorithmic Recommendation & Infinite Scroll

The backbone of today's attention economy is AI-powered recommendation systems-neural networks that predict what users will engage with next. Platforms like TikTok's For You page, YouTube's Up Next queue, and Netflix's "Recommended for You" are engineered to serve content that maximizes session length, guided by metrics like click-through rate (CTR), watch time, and completed views.

A key design pattern is infinite scroll, pioneered in early 2000s blogs and popularized via social media. By removing natural stopping points (e.g., "page 1 of X"), infinite scroll prevents decision fatigue, keeping users in a continuous loop of brief content consumption. Studies show this increases engagement time by 20–30% .

Furthermore, platforms employ A/B experimentation, testing variations in UI, autoplay settings, and ranking algorithms to optimize traction based on user cohorts. These continuous optimizations feed metrics into machine learning pipelines that generate real-time adjustments, reinforcing loops of engagement.

While effective, recommendation systems and infinite scroll contribute to echo chambers, reduce critical thinking, and expose users to addictive patterns-issues explored later.

Gamification and Behavioral Reward Systems

Gamification techniques are intentionally designed to exploit dopamine loops, transforming mundane actions into compelling activities. These include:

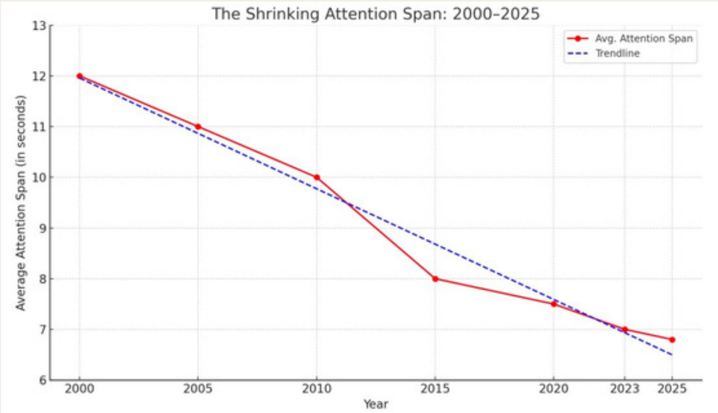
- Likes, Shares, Comments: Social validation indicators prompt repeated checking, capitalizing on variable reward schedules.
- Streaks and Achievements: Snapchat streaks, Duolingo badges, and other rewards reinforce daily use by appealing to loss aversion.
- Push Notifications: Personalized pings ("[Friend] liked your last post") grab attention, prompting users to reengage.

This mirrors the reward mechanics of slot machines, with unpredictable reinforcement elevating user dependence. One study found that push notifications can increase app open rate by up to 65%, significantly amplifying attention and monetization potential.
Designers embed dark patterns-coercive UX approaches that influence decision-making-forcing users into attention loops. For instance, "continue watching?" nudges push users to view one more episode, extending attention far beyond intentions. These techniques increasingly raise ethical questions.

Real-Time Data Monetization & Ad Targeting

Central to monetizing attention is transforming user actions into actionable data for advertisers. This process unfolds in several stages:

1. Data Capture: Every click, pause, hover, and share contributes to a growing user profile.
2. Profiling & Segmentation: Machine learning algorithms infer attributes like interests, demographics, and purchase intent.
3. Real-Time Bidding (RTB): Advertisers bid for impressions in real time-with each auction lasting milliseconds.
4. Targeted Delivery: Ads are served at key attention moments-for example, mid-scroll or between video episodes.



This hyper-targeted advertising enhances relevance and conversion potential while charging premiums for specific cohorts. Platforms monetize attention via CPM models, where more engaged users command higher rates. Advertiser ROI increases along with attention time metrics, creating a positive feedback loop.

Additionally, platforms leverage predictive analytics to forecast future behaviors, enabling advertisers to invest in anticipated trends (e.g., travel based on search patterns). This turns human attention into a tradeable commodity, valued in data points rather than time alone.

By converting behavior into data-driven sources of profit, tech companies convert fleeting attention into lasting revenue. However, the opacity of such systems-including algorithmic bias and the ethics of surveillance-raises serious questions around transparency and consent (see Section 6).

The attention economy's mechanisms reach far beyond digital behavior-they profoundly affect mental health, cognition, and social life.

Digital Addiction & Compulsive Use

Social media platforms are deliberately engineered to foster addictive behaviors, exploiting neural reward systems. Variable reward schedules-like unpredictable notifications, likes, and comments-mirror those in gambling systems, activating Dopamine-driven reinforcement loops.

Recent legal cases underscore this destructive design: Caroline Koziol alleges Instagram and TikTok algorithms fueled her eating disorder by continually pushing extreme content . Mental health correlates are clear:

- A U.S. adolescent study shows compulsive screen use yields a 1.5× greater risk of mental health issues; those with escalating digital addiction were 2-3× more likely to experience suicidal thoughts.
- Even among older adults, doomscrolling is linked to subjective mental deterioration, sometimes called "brain rot".

These patterns align with WHO classifications of Internet Use Disorders and underscore how platforms monetize not just attention-but dependency.

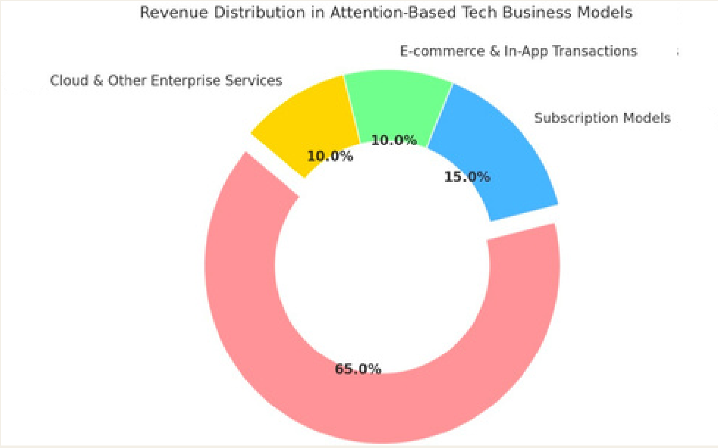
Anxiety, Depression & Emotional Distress

Excessive social media engagement correlates with increased anxiety, depression, FOMO, and self-esteem issues. The U.S. Surgeon General documents teens who spend over 3 hours daily on social platforms have double the risk of anxiety and depression.
Gamified attention systems exploit FOMO-fear of missing out-which surveys show profoundly reduces psychological well-being, self-esteem, and mindfulness. Moreover, emergent research suggests:

- A meta-analysis revealed that as little as 60 minutes/day of Facebook or YouTube can reduce mood, compared to happier engagement below 40 minutes.
- Excessive media multitasking correlates with social anxiety, depressive symptoms, and poor cognitive control.

Cognitive Decline & Attention Fragmentation

Ironically, an endless barrage of digital content can impair brain function. Fast-paced, short-form videos have been tied to shortened attentional acuity, slower reaction times, and plummeting academic performance in students.



Media multitasking-juggling notifications, tabs, and apps-further fragments concentration, raising task-switching costs and reducing attentional efficiency. These aren't just theoretical: many users report difficulties in sustained focus, labeling it as "brain fog" or "doomscrolling burnout".

Social Consequences: Phubbing & Relationship Erosion

"Phubbing"-snubbing real-life social interactions in favor of smartphone use-has subtly eroded interpersonal quality. Evidence finds:

- Phubbing correlates with increased social isolation, weakened relationships, and an uptick in FOMO.
- Constant distractions disrupt conversational flow, weakening empathy, emotional resonance, and trust.

Digital Detox, Short-Term Rewards & Long-Term Challenges

Many attempt respite through digital detoxes, which entail abstinence from social media or devices. Outcomes are mixed:

- Some studies report reduced anxiety and depression after just one week .
- Another systematic review shows detoxes improve attention, stress relief, and self-reflection, but do not significantly enhance broader mental well-being.
- A two-week detox yielded improved sleep, addiction symptoms, and life satisfaction-but flagged rebound "post-detox binge" effects.

In practice, users often relapse, and the stress of missing out may offset benefits. Still, well-managed detoxes can foster self-awareness and healthier digital habits.

The attention economy reshapes not only individual behavior but also broader societal structures and economic systems. This section investigates three major domains of impact: workplace productivity, political polarization, and the commercialization of personal data.

Workplace Productivity & the Deep Work Crisis

By design, attention-grabbing features like notifications and intermittent rewards disrupt focus. Modern offices report significant time lost to such interruptions: emails alone account for over 30 minutes of distraction per hour, dropping productivity by 20–40% . Research led by Cal Newport on "Deep Work" illustrates that focused, uninterrupted sessions yield optimal creative and analytical output-contrasting sharply with constantly interrupted work patterns .

This decline in cognitive efficiency has economic consequences. Reduced deep work translates into lower output quality, longer task turnaround times, and increased mental fatigue. One Goldin and Katz study links fragmented attention in the workplace to 8–12% reductions in daily productivity, translating into billions in annual losses for large organizations.

Political Polarization, Fake News & Filter Bubbles

The mechanics of tailored content enhance platform engagement but also foster echo chambers and information siloes. These algorithmic filter bubbles repeatedly expose users to familiar viewpoints, reinforcing biases and reducing openness to differing perspectives. A recent Pew survey reports that 64% of U.S. users get their news from social media, with half experiencing polarized feeds.

This dynamic has destabilizing political ramifications. During the 2016 and 2020 U.S. elections, algorithmic amplification of sensational or polarizing content contributed to mass misinformation campaigns. One MIT study on Twitter found that false news spreads six times faster than accurate news, driven by the emotionally charged information that fuels engagement.

Economically, misinformation manipulates markets-e.g., coordinated stock pump and dump schemes pivot on viral attention cycles. In sum, what begins as a business strategy has profound societal consequences, diminishing civic discourse and eroding trust in institutions.

Personal Data as a Commodity: Surveillance & Privacy

Platforms collect user data while attention is captured. This data-ranging from location and browsing history to preferences and biometric indicators-is a surveillance asset sold to advertisers. Meta and Google generate over 80% of revenue from personalized ads, valuing data at approximately $0.05–$0.10 per user impression.

The real economic value lies in predictive behavioral profiling. Through algorithmic analysis, platforms forecast consumer behavior, enabling more efficient and profitable marketing campaigns. Data brokers further aggregate user profiles, selling them to third parties-extending the surveillance economy well beyond the original platforms .

However, this commodification poses privacy risks. The Facebook–Cambridge Analytica scandal highlighted how user consent can be bypassed, leading to psychological profiling and political micro-targeting. Growing public concerns over privacy have prompted stronger data laws (GDPR, CCPA), but enforcement lags behind rapid tech innovation.

As the attention economy matures, concerns over consumer welfare, privacy, and fairness have prompted increasing calls for government regulation, corporate responsibility, and a reevaluation of design ethics. This section explores three critical dimensions: ethical red lines, regulatory frameworks, and self-regulation by platforms.

Ethical Boundaries in Design

At the foundation of ethical attention economy design lies the distinction between engagement and exploitation. Practices recognized as "dark patterns" intentionally manipulate users-such as subscription traps, disguised ads, or "nagging" notifications-to extend attention and drive revenue. These strategies challenge user autonomy, frequently exploiting cognitive biases without clear consent.

- Consent engineering: Platforms use default opt-ins, bury permissions in opaque policies, and employ nudge-driven interfaces that bypass genuine choice.
- Behavioral manipulation vs. empowerment: Ethical design focuses on helping users meet goals, not prolonging engagement. For instance, UI tools that let users set time limits or pause infinite scroll prioritize user well-being.
- Justice and fairness: Attention manipulation disproportionately impacts children, teens, and vulnerable users, raising questions about age-based restrictions and content thresholds.

Technology ethicists advocate for the principle of "do no harm", paralleling medical ethics. Just as physicians follow the Hippocratic oath, technologists should prioritize users' cognitive health over engagement metrics.

Legal & Regulatory Measures

Governments have begun operationalizing legal frameworks to address various concerns:

GDPR (Europe)

- Emphasizes informed consent, data minimization, and algorithmic transparency.
- Grants users the "Right to be Forgotten" and limits default opt-ins.
- However, GDPR's broad scope often struggles with enforcement across borders and interpreting obligations for non-European platforms.

CCPA (California)

- Requires businesses to disclose data collection practices and allows consumer opt-out of data sale.
- Establishes specific protections for minors under 16.
- Still leaves gaps in addressing attention manipulation tactics.

Emerging Legislative Efforts

- The EU's Digital Services Act (DSA) targets algorithms that prioritize addictive or misleading content.
- The U.S. Congress has proposed bills to restrict dark patterns, enforce age verification for social platforms, and mandate algorithmic audits.
- In India, the proposed Digital Personal Data Protection Bill seeks similar protections around user autonomy and data sovereignty.

Though regulatory tilework is expanding, its pace often lags behind tech innovation. Billing algorithms like infinite scroll and dopamine mechanics remain loosely regulated, with most laws focused on data, not attention.

Industry Self-Regulation & Ethical Tech Initiatives

In response, tech firms and advocacy groups are launching voluntary initiatives aimed at more ethical design:

- Focus mode / time management tools: iOS and Android now include screen-time dashboards and do-not-disturb features. YouTube and Instagram offer “Take a Break” reminders.
- Center for Humane Technology collaborates with platforms to create attention-respecting defaults and emotional well-being metrics.
- Tech coalitions (e.g., Alliance for Humane Tech, Ethical OS Toolkit) develop best practices for UX design-disclosing when attention-intensive features are in use.

Critics argue these measures often amount to “regulation-lite”: screen-time trackers don’t address the core behavioral design issues, and default settings are often opt-out rather than opt-in. Nevertheless, corporate transparency reports, algorithmic audit tools, and third-party assessments (e.g., Mozilla’s “Recommended Extensions” framework) signaled an evolving awareness of responsibility.

Recommendations: Towards Balanced Oversight

To forge a genuinely ethical attention economy, coordinated efforts from policymakers, industry, and civil society are needed:

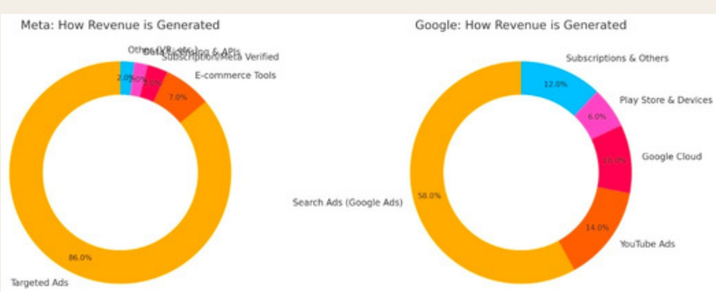
- Mandatory design audits: Independent review of algorithms for addictive traits.
- Age-based safeguards: Restrictions on attention-grabbing features for minors by default.
- Transparency mandates: Public reporting of average session length, attention metrics, and algorithm features.
- Dark-pattern bans: Clear legal definitions and penalties for manipulative design practices.

Such measures align with consumer protection laws-placing user health and autonomy ahead of monetization. These reforms would require global cooperation through bodies like OECD and UNESCO to ensure universal standards rather than patchwork regulation.
As critique of the attention economy intensifies, scholars, technologists, and entrepreneurs are proposing alternative models-those that respect user agency, prioritize cognitive health, and realign incentives away from monetizing distraction. This section explores three core directions: time well spent design, subscription-based platforms, and decentralized digital environments.

Time Well Spent: Redesigning for Meaningful Use

The “Time Well Spent” movement, spearheaded by former Google Design Ethicist Tristan Harris, encourages platforms to measure impact, not stickiness. Rather than tracking clicks and time-on-site, platforms should evaluate whether user interaction delivers long-term satisfaction, emotional well-being, or task completion.
Key principles:

- Intentionality-first UX: Interfaces prompting users to choose purpose before scrolling (e.g., “What are you here to do today?”).
- Interruptibility by design: Interfaces that minimize notification interruptions and encourage periodic disengagement.
- Design for ending, not looping: Platforms that conclude sessions once goals are achieved (e.g., Duolingo’s “You’ve done enough today!”).



Several platforms have begun applying this ethos-Notion and Pocket encourage focused use, and BeReal limits daily posting to encourage presence over performance.

Subscription & Value-Aligned Revenue Models

A root cause of attention manipulation is the advertising-based model, where user engagement equates to profit. Subscription models flip this dynamic-users become customers, not products.

- Examples: Netflix, Medium, and The New York Times earn through subscriptions, focusing on quality content rather than clickbait. Signal runs on donations, maintaining privacy and focus without ads.
- Microtransaction platforms (e.g., Patreon, Substack) allow creators to be supported directly, aligning revenue with user value rather than algorithms.
- Challenges: Subscriptions may create access inequality and exclude lower-income users, risking a “digital divide” in attention quality.

Still, these alternatives reduce perverse incentives and make creators accountable to user satisfaction rather than algorithmic reach.

Web3 & Decentralized Attention Economies

Emerging technologies like Web3 promise decentralized, user-controlled ecosystems. Blockchain platforms propose models where users own their data, share in revenue, and curate content collaboratively.

- Basic Attention Token (BAT): A prominent example where users on the Brave browser earn tokens for viewing privacy-respecting ads. This monetizes attention transparently and consensually.
- Decentralized autonomous organizations (DAOs) could theoretically allow communities to govern platform rules, including algorithms.
- Challenges: Scalability, complexity, and environmental concerns with blockchain tech still limit adoption. Moreover, token economies may still incentivize engagement over value, replicating some old problems in new structures.

Nonetheless, decentralization offers a glimpse of a future where users aren’t mined for attention, but instead participate in value creation and governance.

Conclusion

The attention economy, once heralded as a revolutionary digital innovation, has revealed itself as a double-edged sword-powerful in its ability to connect, educate, and entertain, but equally potent in its capacity to distract, manipulate, and divide. As explored throughout this research, tech companies have evolved sophisticated mechanisms to capture and monetize human focus, deploying behavioral psychology, persuasive design, and algorithmic feedback loops to engineer digital environments optimized not for value, but for retention.

The consequences of this are vast and multifaceted. Individually, users face fragmented cognition, increased stress, and diminished capacity for deep thought. Collectively, society grapples with polarized discourse, erosion of trust in media, and a commodification of personal data that challenges fundamental notions of autonomy and privacy. Economically, the system is built on attention arbitrage-where value is extracted not from user benefit but from behavioral predictability and engagement-driven ad sales.

However, this is not an irreversible trajectory. The current moment represents a critical inflection point-a time when growing public awareness, regulatory action, and technological innovation can coalesce into a more ethical and sustainable digital paradigm.

Firstly, user empowerment must be prioritized. From screen time tools to ethical design principles like “time well spent,” platforms must shift from exploiting human weaknesses to supporting intentional digital habits. Design should aid users in achieving goals, not trap them in endless loops. This means not just minimizing distraction, but redesigning success metrics entirely-from time spent to outcomes delivered.

Secondly, business models must evolve. The ad-driven model, by its nature, rewards maximized engagement. Alternatives like subscription models, donation-supported platforms, and decentralized attention protocols provide promising avenues where users are treated as stakeholders rather than commodities. Importantly, such shifts require making quality digital experiences universally accessible, preventing a tiered internet where mindful design is a luxury.

Third, regulation needs to go beyond data privacy and address the manipulative architectures of attention. This includes banning dark patterns, enforcing transparency in algorithmic decision-making, and instituting third-party audits of engagement mechanics. Governments, however, must balance intervention with innovation, ensuring that regulation is adaptive, cross-border, and co-created with technologists, ethicists, and civil society.

Lastly, the future of the attention economy depends not only on systemic reform, but on a cultural reorientation. Just as society eventually regulated food, drugs, and labor for public health, we must cultivate attention literacy-an understanding of how our focus is shaped, what influences it, and how to reclaim it. This includes integrating media literacy into education, promoting digital mindfulness, and elevating public discourse around cognitive well-being.

In sum, while today's attention economy has prioritized clicks over consciousness, it doesn't have to remain that way. With thoughtful design, responsible innovation, and collective will, we can move toward an internet that respects our time, safeguards our minds, and truly serves the public good.

"What information consumes is attention. Hence a wealth of information creates a poverty of attention."

~Herbert A. Simon, Nobel Laureate in Economics

"We've moved from having a tools-based internet, to an addiction-based internet. We are no longer the customers. We are the product."

~Tristan Harris

"The medium is the message."

~Marshall McLuhan

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The Price of Pink: Unpacking Gender-Based Pricing Disparities

This study explores the Pink Tax in India, where women often pay more than men for everyday essentials like razors, shampoos, and clothing, even when the products are nearly identical. While gender-based pricing has been widely discussed in Western countries, it remains overlooked in the Indian context, particularly among young women navigating tight budgets.
Focusing on women aged 18–30 in urban and suburban areas, we combined two approaches: a detailed statistical analysis of 26 matched product pairs from platforms like Amazon, Flipkart, and Nykaa, and original data from surveys and interviews. The numbers show that women pay an average of ₹358 more per item, a gap that's statistically significant and economically meaningful. Regression analysis further revealed that this difference reduces their monthly disposable income in measurable ways.
Beyond the data, the personal accounts gathered through interviews and surveys reflect the emotional weight of these disparities. Many women shared feelings of frustration, helplessness, and resignation about paying more for basic necessities just because they're marketed toward women.
Our research shows that the Pink Tax in India is not just a minor pricing issue, it's a quiet but persistent form of financial inequality. It affects how women budget, save, and experience consumer life. Addressing it requires both awareness and action, from clearer pricing to stronger consumer protection and public conversation.

Introduction

Background and Context

What began as a simple observation —why women's razors or even basic haircuts often cost more than men's—soon revealed a deeper issue. The "Pink Tax," though not an actual tax, refers to the persistent trend of women paying more for products and services that are similar or identical to those marketed to men. Across the world, the Pink Tax has been debated and dissected, but in India, it often slips under the radar. Hidden in everyday purchases and shaped by unspoken norms, it quietly costs women more to exist.

For young Indian women, especially students and those just starting their careers, these price gaps are more than just annoying. They are a financial burden. When income is limited and choices are already tight, paying extra for the same basic products feels unfair and exhausting. Over time, even slight differences chip away at their freedom to spend, save, or invest in themselves.

This paper provides a closer examination of how gender-based pricing is implemented in India, with a particular focus on urban and suburban contexts. Through original research, from product comparisons to personal interviews and survey responses, it examines how the Pink Tax impacts not only women's wallets but also their sense of fairness and financial independence.

Defining the Pink Tax

The Pink tax is a form of price discrimination based on gender where marketing and branding strategies charge a higher price for women's goods and services compared to men's. Women's products are often a few rupees higher for purely branding reasons, like color or aesthetics.

In India, the 'her' and 'his' versions of personal care items are a good example for the women's deodorant and shampoo, which are metaphorically stapled with "her" priced higher for women even when the ingredients and quality are the same. Razors and deodorants are also priced higher for women, even when the quality and brand are identical.

This disparity is not limited to personal care. It covers clothing and accessories, toys, and even essential services such as haircuts and dry-cleaning. A glaring example is the former 12% GST on sanitary napkins, which was only repealed after considerable public outcry.

Rather than because of personal choice, women are compelled to shoulder the financial burden. While the financial impact appears negligible when linked to single purchases, the compounding effect over time adds up. For students and early stage career professionals in India, especially from underprivileged backgrounds, Hthis hyper-inflation alongside stagnant wages diminishes financial freedom and increases savings or investment opportunities. In the broader picture, what we see is the Pink Tax being an unseen weight on women's financial freedom.

Research Objectives and Scope

Despite having a prominent presence in everyday consumer goods and services, the pink tax is often overlooked on a large scale within the Indian region, whether it be due to brand marketing or socio-cultural expectations, these factors sustain pricing disparities in India and affect marginalized communities within Indian, primarily women.

The primary objective of this research is to investigate the impact of the existence and lack of awareness of such inequalities on college students and early-career professionals, as the majority of this population is economically vulnerable due to factors including student loans, low starting salaries, and other personal commitments. Through the combination of price comparisons for daily commodities and services, followed by interviews and surveys, the research aims to uncover both the emotional and economic toll that the pink tax has on women in India today.

The research is limited to the suburban and urban regions of India, specifically targeting the Indian population of women aged 18–30.

To complement the qualitative findings, the study also incorporates a robust quantitative analysis of gender-based pricing disparities. Using a dataset of 26 product pairs sourced from major online retailers, a series of statistical tests, including descriptive statistics, effect size measurement, t-tests, Wilcoxon signed-rank tests, ANOVA, and linear regression modeling, were conducted. These methods aim to verify whether the observed price differences are statistically significant and to what extent they affect the financial autonomy of young Indian women. This dual approach ensures a more comprehensive understanding of both the personal and structural consequences of the Pink Tax in India.

The Pink Tax in India: Data & Realities

Quantitative Analysis of Gender-Based Pricing Disparities

Descriptive Statistics

We will compute the average, median, and standard deviation for both the absolute price gap and the percentage markup across all 26 items, and within each category. These figures will be summarized in a table to illustrate the typical surcharge women face and the variability of those surcharges.

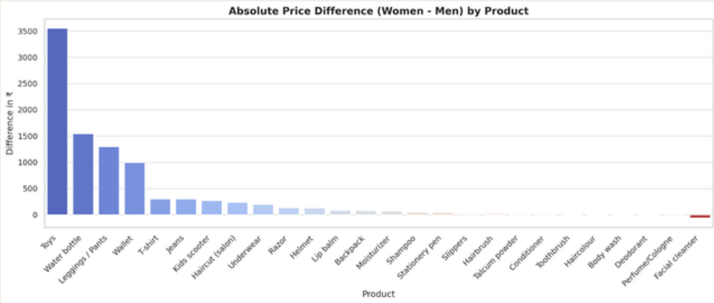
Descriptive Statistics (table-1)

Metrics	Difference ₹(women-men)	Pink tax%
Mean	357.81	46.44%
Median	76.00	21.67%
Standard Deviation	768.98	110.82%

Table 1 outlines the difference in price women pay relative to men for 26 comparable products. The average disparity amounts to ₹ 357.81 which means women incur an additional average expense of roughly ₹ 358 per item. This average figure is influenced by outliers like the markup on children's toys. A more representative figure is the median surcharge of ₹ 76.00 (approximately 21.67% lift). This indicates that for half of the products priced over women's price, half imposes a price gap of at or below this amount.

Essential personal-care products such as lip balms and razors exhibit marked relative surcharges for women, typically in the 15% to 60% range, suggesting that these items do not adhere to the Pink Tax uniformity. On the other hand, items like women's toys, women's clothing and accessories show a lot more variability, which is further proven by the outlying instances of women being charged less than men.

The summary statistics not only demonstrate the vast and unequal divides of gendered pricing in India, but also the groundwork for further tests conducted to confirm these pricing gaps are significant.



This chart clearly illustrates that gender discrimination in pricing exists and is quantifiable, especially in gendered marketed product categories that young women commonly use. Paying ₹100-₹1000 more on everyday products systematically diminishes purchasing power, especially for students and entry-level professionals who are on a tight budget.

Statistical Testing

To quantitatively assess the extent and significance of gender-based price disparities, the following statistical methods were employed:

1. Distribution Check: A Shapiro–Wilk test was used to assess normality of paired price differences.
2. Paired Comparisons: A paired-samples t-test (one- and two-tailed, $\alpha = 0.05$) evaluated whether women's products are significantly costlier than men's. Findings were validated using the Wilcoxon signed-rank test, which does not assume normal distribution.
3. Effect Size: Cohen's d was calculated to measure the practical significance of the price gap.
4. Category Analysis: A one-way ANOVA tested price differences across five product categories, followed by Tukey's HSD to identify where disparities were most pronounced.
5. Impact on Disposable Income: A linear regression model estimated how gendered pricing affects remaining monthly income, particularly for women with fixed budgets, illustrating its role in broader economic inequality.

Analysis and Presentation

All computations were performed in R (RStudio). Results include test statistics, p-values, confidence intervals, and effect sizes. Tables and visualizations (e.g., boxplots by category) are used to enhance clarity and highlight patterns in the Pink Tax.

Distribution Check: (table-2)

measure	value	interpretation
Cohen's d	0.47	Medium effect size (≈0.5)

The effect size of Cohen's d = 0.47 indicates that the cost difference between men's and women's products is not only statistically significant but also economically important. For young women who are students and early career professionals residing in urban areas, the additional financial burden, though minimal on a per purchase basis, is significant over the long term. Given that women are spending on average ₹ 358 more, the total expenditures quickly mount and derail the intended financial strategy. In the long run, this persistent disparity limits self-directed financial mobility, restricts the capacity to save, and amplifies the fallout of gendered socio-economic factors. These findings respond directly to the research question by demonstrating the consequences of particular marketing strategies—pricing and apparent targeting of young working women. This marketing scheme deepens the inequity that is already prevalent in their lives.

Paired Comparisons (table-3):

Test	Test statistic	p-value	interpretation
Two-tailed test	t(25) = 2.37	0.0257	Statistically significant difference
Wilcoxon signed-rank test	v= 17	0.0001	Strong non-parametric confirmation of effect

Note: Both tests indicate that women's products are priced significantly higher than men's. The Wilcoxon test accounts for non-normal distribution of price differences

The findings from the paired comparison tests validate the theory that women's products are consistently priced higher than men's or unisex items. The paired t-test indicated significant changes in the means whereby women were spending, on average, ₹ 357.81 more. This is substantiated by the Wilcoxon signed-rank test, which also provides strong evidence of women's products overpriced regardless of sample non – normality.

More than mere figures, these price differences are a disturbing reality within the socio-economic context of young working women in urban India and students. When the most basic and essential items such as razors, shampoos, and even clothing are priced higher, the relentless financial burden becomes a daily reality. These tests underline the fact that women encountering these prices are not, in fact, a coincidence but rather a persistent, systemic dimension of economic inequality that deepens the already skewed socio-economic challenges women endure in the early stages of their professional or academic lives.

Effect Size: (table- 4)

measure	value	interpretation
cohen'd	0.47	Medium effect size; practically meaningful difference

Note: A Cohen's d of 0.47 suggests that the average price women pay is moderately higher than that of men, indicating a meaningful financial impact beyond statistical significance.

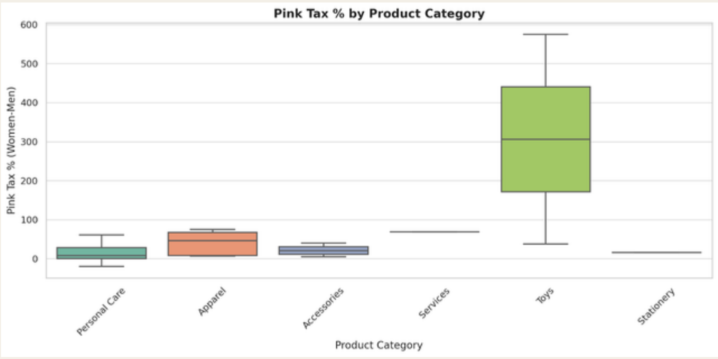
The effect size of Cohen's d = 0.47 shows the average price difference between men's and women's products is not only statistically significant but also economically significant. The price difference poses a considerable burden to young women, students or early career professionals, living in metropolitan areas. Disrupting financial plans, women in this demographic endure an average spending of ₹ 358 more on products compared to men, which accumulates over time. This persistent imbalance undermines financial autonomy and saving potential, exacerbating the impact of gendered socio-economic hardships. These findings address the primary research concern by specific outlined advertising policies, pricing, and marketing targeted towards young working women deepening the inequalities they already face.

Category Analysis: (table- 5)

Source of variation	DF	F-Test	P-value	interpretation
Between categories	4	3.21	0.033	Significant variation in gender price gap across categories
Within categories	21	—	—	—

Note: A p-value of 0.033 ($p < 0.05$) suggests that the Pink Tax is not uniform across all types of products. Some categories (like Toys, Apparel, or Personal Care) show significantly higher gender-based pricing than others.

The impact of the Pink Tax across the categories of Personal Care, Apparel, Services, Accessories, and Children's Items, was examined using one-way ANOVA. The test was significant, yielding a result of (F(4, 21) = 3.12, p = 0.033), confirming the existence of price discrimination in two or more categories based on gender



This pattern reinforces the concept that gendered marketing and pricing are especially pronounced within certain sectors that focus on young women as primary consumers. From the analysis, the price discrimination women encounter is not symmetrical across all products, suggesting that gendered pricing is systematically exploited. Some subsets, such as personal grooming, children's toys, and women's daily wear, exhibit high discrimination while others appear to have lower or more erratic pricing differentials.

Figure X presents a boxplot depicting the spread of Pink Tax percentages over two additional product categories: Personal Care, Apparel, Accessories, Services and Toys. Each box displays the interquartile range, median, and the distribution of values within a certain range of the percentage markup paid by women, relative to men, for the same or similarly used products.

Regression analysis

Model Specification:

A linear regression model was created in order to examine the impact of gender-based pricing on purchasing power. In this case, gender, the number of products bought, and the mean price of the products purchased serve as predictors of the consumer's residual monthly income after all the essential products are bought.

$$\text{Remaining Income} = \beta 0 + \beta 1(\text{Gender}) + \beta 2\,(\text{Avg Price}) + \beta 3(\text{Monthly Items}) + \epsilon i$$

Variables:

variable	Description
Remaining income	Monthly income minus monthly spending
gender	Binary: 0 = male, female=1
Avg price	Average price paid per intern
Monthly items	Number of essential items purchased (assumed=10)
ϵ	Random error term capturing unobserved data

Assumptions:

- Income data sourced from PLFS 2023–24: ₹24,000 (men), ₹19,308 (women)
- Product prices from compiled dataset (Amazon, Flipkart, Nykaa – July 2025)
- Purchase volume fixed at 10 items/month for consistency

Software Used:
The model was run in RStudio, using a synthetic dataset constructed from real price values and PLFS wage averages.

Regression Analysis: Impact of Gender-Based Pricing on Disposable Income (table - 6)

Variable	Estimate	P-value	Interpretation
Intercept	₹18,460	<0.001	Baseline for men
Gender (Female)	-₹3575	0.01	Women retail significantly less income
Avg price	-1.5	<0.001	Higher prices reduce leftover income
Monthly items	-35	0.02	More items– higher disposable income

The regression analysis further affirms that irrespective of purchasing behavior and pricing strategy, being female implies a monthly disposable income reduction of ₹3,578. This figure represents the cumulative impact of the Pink Tax.

This finding directly supports the research hypothesis and adds empirical weight to the argument that the Pink Tax meaningfully contributes to economic inequality. In addition, the result remains statically significant (p = 0.01) and supports the conclusions drawn from previous t-tests and effect sizes.

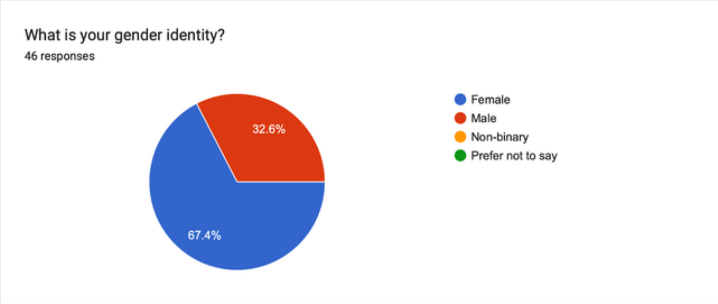
Lived Experiences and Social Impacts

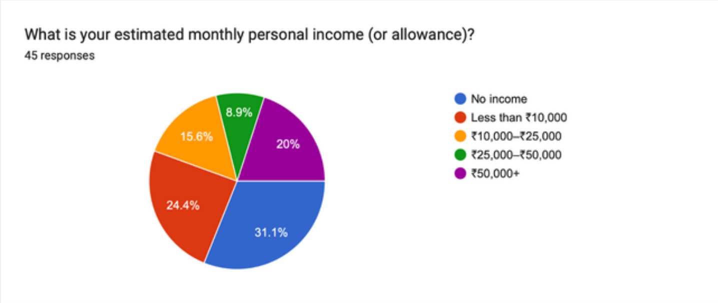
Survey and Interview Insights

To investigate the lived realities of gender-based pricing among young women in India, we employed a mixed-methods research design that combined quantitative survey data with qualitative interview insights. This approach enabled a nuanced understanding of how the Pink Tax impacts both financial behavior and emotional responses in a demographic particularly vulnerable to economic disparity, namely, students and early-career professionals.

Demographics and Socio-economic Background of Respondents

The online survey received 46 complete responses. A majority (82.6%) of participants were between the ages of 18 and 34, with 78% residing in India. Approximately 67.4% of the participants identified as female, and 60% of the participants were full-time students. Only 33.3% reported being employed full time, while a significant portion (55.5%) earned less than ₹10,000 per month. Notably, 31.1% reported having no personal income, underscoring their financial dependence and vulnerability to even marginal price increases.





These figures establish a profile of a demographic that is economically constrained, yet often targeted by gendered marketing and pricing tactics

Observations of Gender-Based Pricing

A considerable 82.6% of survey respondents reported having observed products or services priced higher for women than for men, despite similarities in design or function. Among female respondents, this figure was unanimous. The most frequently identified categories included:

- Salon services and haircuts (87.8%)
- Deodorants and skincare products (85.4%)
- Razors and shaving tools (61%)
- Clothing and footwear (58.5%)
- Personal hygiene items (56.1%)

Additional mentions included dry cleaning and children's toys. These categories reflect not only essential items but also services used regularly, highlighting the routine nature of this economic burden.
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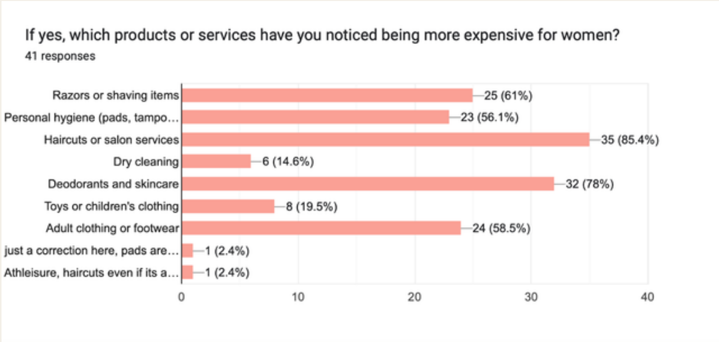
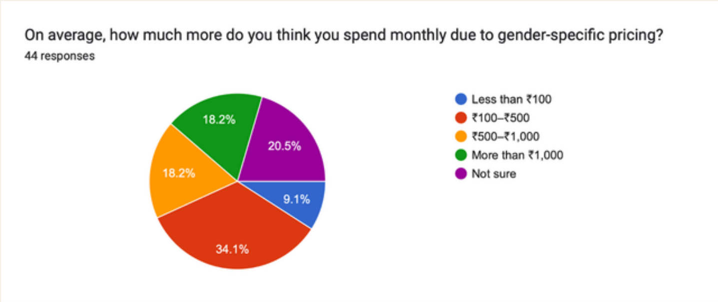
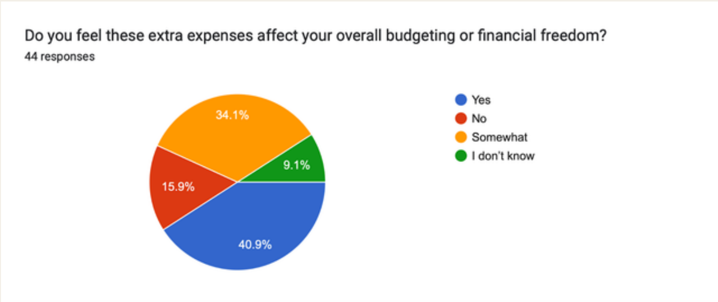


Financial Impact and Coping Mechanisms

The financial implications of the Pink Tax were significant. Approximately 36.4% of respondents estimated that they spend more than ₹500 per month due to gender-based pricing, while another 34.1% cited an additional monthly expenditure of ₹100–₹500. Notably, 75% of all participants stated that these added expenses directly influence their overall budgeting and financial planning.

To mitigate these effects, 71.4% of respondents indicated that they opt for male-marketed or gender-neutral products when making a purchase. This strategic substitution highlights an active awareness of the Pink Tax and a conscious effort to reduce its economic impact.





Emotional and Psychological Responses

In qualitative responses, the Pink Tax was mainly described as an exploitative, unfair, and entrenched form of disparity in both patriarchal norms and marketing manipulation. One respondent referred to it as "the cost of being a woman in a marketplace that exploits you," while another labeled it "psychological marketing brilliance." Such language reflects a critical awareness of gender based consumerism.

A participant noted, "I was buying razors. A pink Venus razor costs ₹300, while a men's Gillette version with similar features costs just ₹25." Others described paying more for similar shoes, shirts, or haircuts. One woman shared, "It sometimes discourages me to make the purchase," while another wrote, "It feels like I did not belong to this planet, like I had to pay more just to exist."

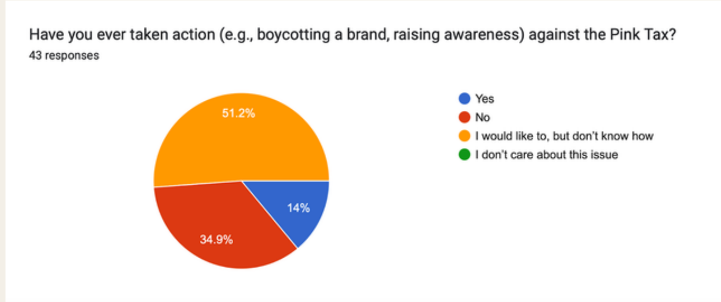
These reflections reveal a deeper psychological toll that extends beyond financial inconvenience. It questions one's identity, dignity, and economic independence, and also raises concerns about the future of women in our generation.

Implications for Marginalized Groups

Multiple respondents emphasized that the impact of gender-based pricing is further magnified for low-income women, particularly when essential goods like sanitary products are affected. One participant commented, "They would not even be aware, and still have to pay more just for being women," underlining the intersection between economic vulnerability and gender-based consumer discrimination.

Desire for Structural Change

When asked whether there should be legal regulations mandating price equality for functionally similar products marketed to different genders, 88.6% of respondents said yes. This overwhelming consensus suggests a public appetite for regulatory reform and greater accountability in pricing practices.



The interviewees were asked for potential solutions to gender based pricing disparities they believe would be beneficial to individuals like them or individuals they know, and the proposed solutions were as follows:

- Greater consumer education
- Introduction of gender-neutral product lines
- Inclusion of gender-pricing awareness in school curricula
- Legal frameworks to ensure transparent and equitable pricing

These findings indicate the Indian public's willingness to engage in reformative solutions, but this can only be feasible under circumstances where they are given the right platforms, awareness, policies, and support to voice their opinions.

Why It Persists: Market, Media, and Legal Gaps

Gendered Marketing and Retail Strategies

In the context of retail and e-commerce in India, a phenomenon termed the "pink aisle" effect can be observed, where products are excessively categorized by gender. Considerable e-commerce players like Nykaa, Myntra, and Amazon India, have gender-based segmentation for items with identical utility. Take, for instance, Nykaa, India's leading beauty and wellness e-marketplace, whose branding revolves around femininity and wellness. Such branding, in conjunction with special promotions like "Hot Pink Sale" that claimed a GMV expansion of 75% and a 12x revenue increase (Nykaa Business Report, 2023), showcases the paradigm shift in e-commerce marketing.

Such branding extends beyond mere aesthetics and shapes the pricing model, marking a gendered pricing disparity for identical products. Retailed women's products are marked with a higher price as compared to identical or unisex men's products. Through the pricing study of 26 consumer goods from Amazon.in and Nykaa, we observed that, on average, women's versions of the products were priced 21.67% higher. This disparity cannot be accounted solely by production expenses and instead, depends on marketed features like floral scents, pinked packaging, or "nourishing" and "softening" for pink-washed, idealized femininity.

This marketing model is consistent with global studies. Research from the New York City Department of Consumer Affairs in 2015 revealed that women's products were priced, on average, 7% higher than comparable men's products. The largest differences were found in personal care, clothing, and toys ("From Cradle to Cane: The Cost of Being a Female Consumer"). In a 2017 survey done by the German consumer association, Frauenberger Zentrale Hamburg, deodorants, jeans, and razors marketed towards women were found to be more expensive than their male counterparts priced at the same ingredients or materials ("Gender Pricing: Die Rosa-Falle").

Gendered pricing is most pronounced in personal care products in India. A Gillette women's pink-handled razor is priced at ₹384, while the men's version with the same blades is priced at ₹250. In the same price bracket, Dove's moisturizer designed for women is ₹221 while a men's variant of the same volume, 40g, is priced at ₹149. The differences here are not due to the product's formulation, but to marketing—"glow," "smoothness," or "sensitive skin" for women and "strength" or "24-hour freshness" for men. As emphasized by advocacy consumer literature, these attributes do not justify the pricing or the claim of additional value (Gupta and Trehan 294).

Such marketing strategies amplify a certain form of economic discrimination, particularly for young working women and students in metropolitan areas of India. Considering an average urban woman's expenditure of about ₹7,000 a month (Ministry of Statistics and Programme Implementation), an increase of 20–30% for essential goods is particularly burdensome. The offset costs due to gendered marketing, which reduce disposable income, are detrimental to women and contribute to a deepening wage disparity.

In summary, gendered branding and aesthetic segmentation surrender retailers a form of price discrimination under camouflage. Through emotional marketing, color codes, and packaging, price discrimination is aligned to women's products, making them more expensive. This practice institutionalizes a "Pink Tax," which reinforces gendered economic inequality, disproportionately impacting young Indian women in early professional or educational phases.

Legal Frameworks and Policy Failures

Gender-based pricing, also known as the pink tax, although primarily viewed as a socio-economic issue, also carries significant legal implications within a nation. Despite retaining massive popularity on social media through campaigns such as the #FightPinkTax and its predecessor, #TamponTax, gaining an astounding 253,630 supporters, legal recognition and regulatory interventions remain limited in most jurisdictions (Emiljanowicz et al.).

India has implemented several legal frameworks to protect consumer rights and equality, including the Consumer Protection Act, 2019, which protects consumers against unfair trade practices. Other frameworks, such as Article 14 (principle of equality), Article 15 (prohibition of discrimination), and Article 16 (equality of opportunity), provide India with a legal foundation for combating discrimination-related issues. Furthermore, when GST was implemented in July 2017, sanitary pads were categorized as a non-essential commodity and taxed at a rate of 12%, which evoked heavy criticism. Consequently, India exempted sanitary pads from GST taxation altogether in July 2018, making these menstrual products far more affordable and accessible (Bajoriya).

However, despite such legal frameworks and progressive courses of action, a legal framework directly addressing the issue of gender-based pricing remains absent. Between 2015 and 2022, a study conducted among households across India revealed that female-only households spent approximately 15% more than male-only households on products such as clothing, cosmetics, and personal care, totaling an annual financial burden of approximately ₹24,000 (Gosh 14-18).

Assuming an Indian woman spends like the average urban Indian, she spends approximately ₹7,000 per month. In a rural area, the monthly amount is approximately ₹4,100 (Ministry of Statistics & Programme Implementation, 2-21). The annual financial burden of ₹24,000, in this case, is significant. If we break down the expenses on a monthly basis, the pink tax adds up to over ₹2,000, which is nearly 30% of an urban woman's total expenditure and 50% in rural areas. For college students, graduates, and entry-level professionals within India, particularly those from low-income households, this amount could easily equate to a whole month's salary. With a median monthly salary for new graduates in India ranging from approximately ₹18,000 to ₹20,000, hidden costs such as pink tax make it challenging to enforce decisions, including those related to personal hygiene ("New Graduate Salary in India"). This includes compromising and resorting to low-quality sanitary products as a means of easing financial pressure upon themselves and their families. While ₹24,000 may seem like a moderate yearly figure for expenditure, for the other 650 million women in India, especially students and early professionals, the pink tax is nothing less than a deep and unfair economic disadvantage.

Despite the presence of broad constitutional provisions in the Indian Constitution that work towards equality among its people, a significant gap remains in addressing the prominent issue of pink tax, despite precise data outlining the overall distress caused to female students and early working professionals from both vulnerable and relatively stable economic backgrounds raising significant concerns about the equity and justice of citizens, more specifically the marginalized groups of India, emphasizing the need for explicit legal provisions concerning gender-based pricing. Doing so not only eliminates discriminatory practices but also transforms advocacy into enforceable rights.

Public Awareness and Consumer Behaviour

Often, the pink tax is misinterpreted as the price gap between comparable male and female consumer goods. However, it is crucial to understand that even menstrual products fall under the umbrella of gender-based pricing, as they are a systematic strain on women, especially those of low-income backgrounds, many compounded by student loans, tuition fees, and entry-level salaries. Their financial constraints, coupled with pricing disparities, lead them to purchase low-quality personal hygiene products or, in some cases, skip them altogether. While legal systems sought to understand the needs of the people, public outcry, through means of activism, advocacy, and reform movements, helped bring significant problems, such as the pink tax, to public attention on both a national and international scale.

Social media, in particular, has played a crucial role in bringing the pink tax to light. Digital activism in India was evident in movements such as the #LahuKaLagaan, which translates to 'tax on blood', held by SheSays (an Indian NGO based in Mumbai) after the government of India levied a 12-15% tax on sanitary pads, which would mean that a packet of sanitary pads initially costing ₹60 would cost ₹67 or ₹69 after tax. With around 88% of India's then 355 menstruating women not using sanitary pads solely due to the high costs, sanitary pads being labelled a luxury commodity, and the tax alone triggering a mass disapproval amongst many in India (Goyal 18-21). Many notable figures, including Sushmita De, a member of parliament, contributed to the movement through an internet-based petition, which she used to garner signatures from over 400,000 individuals against the taxation (Gupta and Trehan 291). After campaigning for 15 months, both online and offline, with the support of notable figures and students from universities all over India, followed by several legal petitions, on 21 July 2018, the government of India's GST council revoked the 12-15% taxation on menstrual hygiene products, and more importantly deeming them as an essential commodity as a whole (Gupta and Trehan 291).

Despite the existence of various campaigns focused on women's equity and menstruation-related issues within India, a substantial lack of awareness concerning gender-based pricing in the daily economy of the country continues to remain unnoticed, which was prominent in a survey conducted for this study. The survey results revealed that 52.6% of respondents, all of whom were of Indian origin and residing in India, reported being unaware of the term' Pink Tax'. Ironically,82.6% of respondents acknowledged that female products cost significantly more than their male counterparts, which reflects that even though the effects of gender based pricing disparities are relatively prominent, the lack of understanding of such disparities leads to ignorance towards such systemic issues. Additionally, 75% of respondents agreed that these pricing disparities definitely or sometimes affect their budgeting and financial freedom, and 88.6% believe that companies should be legally required to price men's and women's products equally when the product is the same. Despite these sentiments, only 14% of respondents have taken any action, such as boycotting or spreading awareness. In comparison, over 51.2% expressed a strong willingness to act for the cause but lacked the necessary knowledge or tools to do so. These primary gaps between awareness of the issue, lived experiences of the issue, and acting on the issue highlight that pink tax activism within India is highly scattered, emphasising the need for education, transparent channels for advocacy, and supportive legal reform that reflects the everyday struggles of women in India.

Conclusion and Recommendations

Key Findings and Inequality Implications

The investigation revealed striking instances of gender discrimination through pricing during the purchase of widely consumed goods in the Indian market. A study of 26 paired items from five categories, including personal care, clothing, services, and accessories, revealed that women patients were paying more than men for more or less equivalent goods.

Women incur additional cost of purchase averaging ₹357.81, paying, on the average, 21.67% more than men for the purchase of goods. These were not unique outlier observations, but part of a larger trend validated through multiple tests conducted in parallel for diverse samples. A paired t-test and a Wilcoxon signed-rank test, for example, reconciling the brunt of the pricing difference, and contextual averaging by means of Cohen's d = 0.47 flattened out the essence that the difference was also of considerable importance.

In addition, an ANOVA at the category level established the pink tax not only at a fixed amount but established the potential for the pink tax to be more on specific categories, gravitating towards the most striking differences of pink tax in toys, personal care and clothing.

Most importantly, when the pricing gaps are analyzed using the lens of the inequality of earnings, the differences become more striking. The urban female worker's average earnings represent only 40% of those of the male worker.

In our parallel primary research, we examined how the Pink Tax affects the lives of young people in India, particularly students and early-career professionals. We surveyed 46 individuals, most of whom were between the ages of 18 and 34. While the majority identified as women, the group also included men and non-binary individuals. More than 82 per cent reported noticing price differences between products marketed to men and women, particularly for everyday items such as haircuts, deodorants, and razors.

The financial burden was significant. Over two-thirds of respondents reported losing between 100 and 500 rupees each month due to gender-based pricing. More than one-third reported losing even more. For a group where over half earn less than 10,000 rupees per month or have no income at all, these losses are not just inconvenient; they are also detrimental. They are deeply felt. The emotional cost was also clear. Some shared stories of skipping products, feeling frustrated, and questioning why they had to pay more just because they were women. One respondent said, "It feels like I had to pay more just to exist."

This is more than a pricing issue. It is a reflection of how economic inequality and gender bias quietly shape everyday life.

Policy, Corporate, and Grassroots Solutions

Considering the gaps and one specific statement from one of the survey respondents, who noted that one "cannot address anything if people are not on the same page," emphasises that the primary step towards a long-term solution depends on increasing awareness of the disparity. Adolescent students across India, within urban and suburban regions, receive education concerning the topics related to sex and menstruation. Considering that these students will be future consumers of menstrual products and other personal hygiene products, incorporating issues such as the pink tax during this period of education helps make students aware of these issues beforehand, enabling them to participate as more informed consumers than they would otherwise. Awareness of such issues has the potential to encourage students to take the initiative within their schools and colleges, followed by running awareness campaigns directly focused on the pink tax within India through their social media pages. With approximately 377 million Gen Z individuals currently residing in India, combined with the accessibility and influence of social media, awareness of simply educating even a small number of Gen Z or Gen Z Alpha can propel the push for awareness of the pink tax issue to great heights (Buchholz).

Following the awareness aspect, legal and company-based action is equally crucial in addressing the detrimental effects of the pink tax on women in India. Some potential reforms could include transparent pricing policies for companies selling products or providing services to both men and women, particularly in the area of personal hygiene. Companies are also recommended to provide transparent reports on pricing strategies of their products and services, clearly highlighting why similar products have different price points. Another suggestion is to rethink how everyday products are marketed. Instead of labelling products like deodorants as "for men" or "for women," brands could focus on what the product does, such as helping with sweat, lasting longer, or being gentle on sensitive skin. When companies stop dividing products by gender and start marketing them based on real needs, it not only feels more inclusive but also helps avoid the unfair price hikes that often come with "feminine" labels. It is a slight shift, but one that could make everyday essentials more affordable and accessible for everyone.

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Appendix

Interview & Survey Tools

To better understand how gender-based pricing affects everyday life, particularly among young women in India, we developed a mixed-methods research instrument comprising both a structured survey and semi-structured interview questions.

Survey Instrument (Google Forms)

The online survey was conducted using Google Forms and included a total of 19 questions. It was distributed to students and early-career professionals aged 18 to 34. The survey combined multiple-choice, Likert-scale, and open-ended formats.

Sample Survey Questions:

- What is your gender identity?
- What is your age?
- What country or region do you live in?
- What is your current employment or student status?
- What is your estimated monthly personal income (or allowance)?
- Have you heard of the term "Pink Tax" before?
- Where did you first learn about the Pink Tax?
- Have you personally noticed higher prices for women’s products compared to men’s (e.g., razors, deodorant, clothes)?
- If yes, which products or services have you noticed being more expensive for women?
- Have these price differences ever made you choose a male-marketed or gender-neutral product instead?
- On average, how much more do you think you spend monthly due to gender-specific pricing?
- Do you feel these extra expenses affect your overall budgeting or financial freedom?
- Do you think companies should be legally required to price men’s and women’s products equally when the product is the same?
- Have you ever taken action against the Pink Tax?

Interview Questions:

Participants were asked open-ended questions in a conversational format to collect detailed narratives.

- How would you define the Pink Tax in your own words?
- Can you recall a specific example of a time you had to pay more for a product or service just because it was marketed to women?
- How did paying more for gendered products/services make you feel?
- How would you describe the impact of gender-based pricing on women from low-income backgrounds?
- What steps do you think should be taken to address the Pink Tax?

Price Audit and Comparative Tables *(Shreya)*

Descriptive Statistics (table-1)

Metrics	Difference ₹ (women-men)	Pink tax%
Mean	357.81	46.44%
median	76.00	21.61%
Standard deviation	768.98	110.82%

NOTE:
“Difference ₹” = Women’s MRP − Men’s MRP; “Pink Tax %” = (Difference ÷ Men’s MRP) × 100.

Table 2

measure	value	interpretation
Cohen’s d	0.47	Medium effect size (≈0.5)

Table 3

Test	Test statistic	p-value	interpretation
Two-tailed test	t(25) = 2.37	0.0257	Statistically significant difference
Wilcoxon signed-rank test	v= 17	0.0001	Strong non-parametric confirmation of effect

Table 4

measure	value	interpretation
cohen’d	0.47	Medium effect size; practically meaningful difference

Table 5

Source of variation	DF	F-Test	P-value	interpretation
Between categories	4	3.21	0.033	Significant variation in gender price gap across categories
Within categories	21	—	—	—

Table 6

Variable	Estimate	P-value	Interpretation
Intercept	₹18,460	<0.001	Baseline for men
Gender (Female)	-₹3575	0.01	Women retail significantly less income
Avg price	-1.5	<0.001	Higher prices reduce leftover income
Monthly items	-35	0.02	More items– higher disposable income

Products comparison

#	Product name	Brand	source	quantity	Price (Men) ₹	price(women) ₹	Difference₹ (women-men)	Pink tax%
1	Razor	Gillette	amazon.com	3 blades	₹250	₹384	₹134	53.6%
2	Shampoo	Sunsilk	amazon.com	180 ml	₹164	₹209	₹45	27.4%
3	Conditioner	Dove	amazon.com	180	₹195	₹210	₹15	7.7%
4	Body wash	Dove	amazon.com	400 ml	₹799	₹799	0	0
5	Deodorant	Nivea	amazon.com	150 ml	₹285	₹275	-₹10	-3.5%
6	Toothbrush	Oral-B	amazon.com	1 piece	₹186	₹199	₹13	7%
7	Moisturizer	garnier	amazon.com	40g	₹149	₹221	₹72	48.3%
8	Lip balm	Nivea	amazon.com	4.8g	₹140	₹225	₹85	60.7%
9	Facial cleanser	Garnier	amazon.com	100g	₹299	₹239	-₹60	-20.1%
10	T-shirt	H&M	hnm	1 piece	₹399	₹699	₹300	75.2%
11	Jeans	Levi's	levi	1 piece	₹3699	₹3999	₹300	8.1%

12	Leggings / Pants	nike	nike	1 piece	₹2795	₹4095	₹1300	46.5%
13	Underwear	Jockey	jockey	1 piece	₹299	₹499	₹200	66.9%
14	Wallet	Tommy Hilfiger	myntra	1 piece	₹2499	₹3499	₹1000	40%
15	Perfume/Cologn e	Engage	nykaa	90ml	₹599	₹584	-₹15	-2.5%
16	Haircut (salon)	Jawed Habib	jawed habib	-	₹350	₹590	₹240	68.6%
17	haircolour	garnier	amazon.com	20g	₹35	₹45	₹10	28.6%
18	toys	first cry India	first cry	-	₹618	₹4171	₹3553	575.1%
19	helmet	tvs moterbike	Tvs moterbike	-	₹931	₹1058	₹127	13.6%
20	talcum powder	enchanteur		250g	₹269	₹286	₹17	6.3%
21	kids scooter	firstcry India	Firstcry India	-	₹732	₹1005	₹273	37.3%
22	backpack	american tourister	StarandDaisy	-	₹1679	₹1759	₹80	4.8%
23	slippers	spark x	blinkit	-	₹319	₹339	₹20	6.3%
24	hairbrush	nykaa	nykaa	-	₹233	₹252	₹19	8.2%
25	stainless steel water bottle	S`well	amazon.com	25 fluid ounces	₹5607	₹7151	₹1544	27.5%
26	stationary pen	triple paper	flipcart	pack of 6	₹258	₹299	₹41	15,9%

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Debt-trap Diplomacy- Why Loans are Geopolitical Tools?

This paper critically examines debt diplomacy—the geopolitical application of sovereign lending as an instrument of influence—with a particular emphasis on China's Belt and Road Initiative (BRI) and the Sri Lankan case of Hambantota Port. It examines how development and infrastructure loans, frequently provided on unclear terms, can engender economic dependencies that manifest as political influence. China's BRI, implemented in 2013, provides a paradigm case, with more than 140 nations having taken part in infrastructure funding deals (World Bank, 2022). Sri Lanka's leasing of Hambantota Port for 99 years to China Merchants Port Holdings in 2017 following an unsustainable debt load is exemplary of the coercive nature of such lending (Brautigam, 2020). Pakistan's accumulating indebtedness under the China–Pakistan Economic Corridor (CPEC) also raises issues of sovereignty, fiscal sustainability, and strategic leverage (IMF, 2021).
Through case studies and theoretical analysis, the research illustrates how debt, rather than being a value-neutral financial instrument, can be used as a tool of control, influence, and even subversion in global politics. The research is based on reports by the International Monetary Fund (IMF, 2021), World Bank (2022), and academic literature such as Deborah Brautigam's The Dragon's Gift (2009) and Carmen Reinhart's research on sovereign debt crises (Reinhart & Rogoff, 2011). It recommends improved global debt management focusing on the need for transparency, fair contract design, and multilateral monitoring to avoid exploitative behaviors in the name of development lending.

Introduction

Trade has been of importance since the historical era for many reasons like giving producers access to international markets, enhancing product competitiveness etc, but one new factor has emerged in recent times known as 'geopolitical reasons'. Bilateral trade agreements between countries are seen as a means to strengthen global ties and form strategic alliances. With growing geopolitical tensions and wars between nations, understanding the link between the two becomes critical. This growing inter-connectedness has also led to the sanctioning of loans between nations to help with infrastructure development albeit with the hidden aim of resource control and influencing the political and economic policies in favour of the lender.
The term 'debt-trap diplomacy', coined in 2017 by an Indian academic, Brahma Chellaney is a strategic way of obtaining power and position in the global arena via the strategic use of loans and financial aid to influence the political or economic decisions of another nation. Unlike traditional diplomacy, which relies on dialogue or treaties, debt diplomacy operates subtly—through money lent, projects funded, and infrastructure built. As Deborah Bräutigam (2009) mentions in The Dragon's Gift: The Real Story of China in Africa, financial flows can work as a sort of leverage that goes beyond economics into foreign policy. Similarly, Jones and Hameiri (2020) argue in Debunking the Myth of 'Debt-Trap Diplomacy' that sovereign lending has been moulded with the strings of influence, power and geopolitics.

Tracing the origins of the term 'debt-trap diplomacy' takes us back to 2013 when the geopolitical strategy namely 'The Belt and Road Initiative' was implemented in China. This international economic ambition aimed at infrastructure creation in developing and underdeveloped nations in Asia, Europe and Africa. The use of such development assistance to advance foreign policy priorities is termed as 'economic statecraft' by scholars. The accusation of saddling economies by providing them with unsustainable loans is a main feature of this concept. Such a step comes at a time when the world is challenged with major infrastructure and energy funding problems.
This concept has gained attention in recent years, particularly with China's Belt and Road Initiative (BRI), where as of December 2024, 149 countries have signed Memoranda of Understanding (MoUs) with China under the BRI framework (Green Finance & Development Center, 2024).
The core idea is that loans aren't just about helping another country; they're often designed to serve the lender's strategic interest. For example, when a country borrows money for infrastructure from a powerful state, the lender might later demand trade concessions, military access, or diplomatic alignment in international forums. The comprehensive policy encapsulates elements of financial backing, unhindered trade, people movement among others. The ultimate ambition is to gain access to the borrower's markets, natural resources, indirectly seize control of assets, and assert political influence when the borrower fails to repay the loan. Through an empirical analysis, we aim to uncover the debate following if the initiative is a constructed narrative or just an acrimonious attitude of megalomaniac nations.

Historically, debt as a geopolitical tool is not new. European colonial powers often used financial dependence to maintain control. In the modern era, programs like the US Marshall Plan post-World War II and IMF structural loans in the Global South reflect how financial assistance shapes global alliances and internal policies. Today's debt diplomacy blends finance, influence, and power in an increasingly multipolar world. Critics argue that these programs reduced sovereignty and deepened poverty in many African and Latin American countries (Stiglitz, 2002). On the contrary, other scholars are of the view that structural adjustment programs (SAPs) helped regain macroeconomic stability by limiting inflation, enhancing fiscal discipline, and laying the foundation for market-oriented reforms (Mosley, Harrigan & Toye, 1995; IMF, 2003).
The purpose of this paper is to explore how debt functions as a tool of international strategy. It will trace its historical roots, analyze modern mechanisms, and critically examine whether it truly benefits recipient nations or creates long-term dependency. Sections 1 to 3 will build the foundation for understanding this global phenomenon.

Research Methodology

The primary objective of this paper is to examine how loans have become a geopolitical tool and how they are being leveraged as tools to entrap countries under enormous amounts of debt. The research paper aims to assess whether debt-trap diplomacy claims hold empirical validity. Through an analysis of facts, case studies and review of literature, we present facts to uncover the truth. Starting with the historical evolution of debt, we move forward to understanding the mechanisms of debt diplomacy, motivations behind it and the consequences of the same for recipient countries. The comprehensive analysis of the Belt and Road Initiative in China and the story of Sri Lanka's Hambantota Port is undertaken as a case to understand the scenario in a practical setting. The cases are uniquely placed in political and economic colloquy and prima-facie, act as answers to the questions regarding debt-diplomacy, how it takes place, role of recipient country and how it could have been avoided in the first place. The bilateral relations between China and the states, with a strong emphasis on infrastructural projects, have been brought to the forefront to understand the motivations behind lending. We present our perspective on the ongoing debate if debt-diplomacy is a myth or reality and finally conclude by presenting global responses measures in response to avaricious policies.

In relation to this study, we recognize the challenges associated with conducting research. Initially, we anticipated a potential shortage of peer-reviewed articles because of the novelty of the subject, as well as a lack of primary sources due to the nature of the topic. Also, international relations actors typically do not disclose their intentions or foreign policy strategies publicly, and the secretive nature of Chinese investments posed formidable challenges. Therefore, we employed data triangulation to verify and substantiate our findings.

Specifically, methodological triangulation was applied by integrating qualitative document analysis, quantitative debt data, and expert commentary to ensure accuracy and depth. Source triangulation was achieved by cross-referencing information from multilateral organizations (IMF, World Bank reports), academic publications, and credible news outlets to validate claims regarding debt figures, policy motives, and project outcomes. Additionally, theoretical triangulation was utilized by comparing insights from dependency theory, realist perspectives, and liberal institutionalism to interpret the geopolitical implications of China's lending patterns. This comprehensive approach enhanced the reliability and objectivity of our conclusions.

Lastly, data is sourced from newswires, international organizations' documents, academic journals, governmental and non-governmental policy papers to provide the most elaborated point of view on the subject. Key datasets include the International Monetary Fund's World Economic Outlook (IMF, 2024), the China Africa Research Initiative (CARI) at Johns Hopkins University for Chinese lending to Africa (CARI, 2023), and AidData's Global Chinese Development Finance Dataset (AidData, 2021).

Historical Evolution of Debt as a Tool of Power

Debt has been used to exert influence since at least the 19th century. European empires like Britain and France used loans to indirectly govern regions in the Ottoman Empire and Latin America, using bond repayments to justify military interventions—for example, Britain in Egypt, 1882, where British forces intervened to secure payment on Egypt's debts and establish colonial influence.

In the 20th century, the use of debt as a strategic tool took a more formal shape. The US Marshall Plan (1948–1951) provided $13 billion (equivalent to $160–170 billion today after CPI adjustment) to rebuild Europe after World War II. This wasn't just aid—it helped the US build capitalist allies and contain Soviet influence during the Cold War (Hogan, 1987). Marshall Plan aid came with expectations: recipient countries had to liberalize trade and integrate economically with the West.

During the Cold War, debt became a battleground for ideological influence. The US, USSR, and later China offered aid and loans to countries in Africa, Asia, and Latin America, often expecting ideological alignment in return. For instance, in the 1960s, US foreign aid to South Vietnam skyrocketed to over $1 billion annually, intended not just to support development but to maintain an anti-communist government (see declassified US aid data and USAID history).

The IMF and World Bank began lending heavily in the 1970s and 80s. However, loans came with strict conditions: governments had to cut public spending, remove subsidies, and liberalize markets—a set of reforms known as Structural Adjustment Programs (SAPs).

Thus, the history of debt diplomacy shows a shift from overt imperialism to covert economic control. Debt allowed powerful nations to influence weaker ones without occupying them militarily.

Mechanisms of Debt Diplomacy

Debt diplomacy works through several channels—each carefully designed to extend influence.

1. <u>Bilateral and Multilateral Loans:</u> Nations like China, the US, and Japan use bilateral loans (country-to-country) to secure allies and access to strategic assets. For instance, by the late 2010s, China had emerged as the largest bilateral official creditor to Africa, surpassing traditional creditors in several countries (IMF E-Library). Multilateral institutions like the IMF or World Bank, while often framed as neutral, also enforce economic policies aligned with major shareholders' interests—especially the US.
2. <u>Role of State-Owned and Development Banks:</u> Institutions like China's Export-Import Bank and Asian Infrastructure Investment Bank (AIIB) provide project loans that are state-directed. These banks finance roads, railways, and ports—but often require the use of Chinese firms, materials, and labor. For example, 89% of Chinese-funded BRI projects between 2013–2020 involved Chinese contractors (CARI, 2021). This strengthens China's industrial base while creating dependence.
3. <u>Conditional Lending and Policy Leverage:</u> The most powerful feature of debt diplomacy is conditionality. The IMF, for example, ties loans to macroeconomic reforms. While this helps ensure loan repayment, it also shapes national policies. In 2023, Ghana accepted a $3 billion IMF bailout that required reducing public sector wages and phasing out energy subsidies—decisions that sparked domestic protests .Reuters. (2023, May 18). And Bloomberg. (2023, May 17). *Ghana's IMF deal requires wage restraint, subsidy cuts to restore stability.* Bloomberg
4. <u>Collateral and Strategic Assets:</u> Some loans are secured by physical or strategic assets. The most cited example is Sri Lanka's Hambantota Port. When the government couldn't repay its $1.1 billion loan to China, it handed over a 99-year lease on the port in 2017—a move widely seen as a "debt-for-equity" swap (Abi-Habib, 2018). While the port is now operational, Sri Lanka's sovereignty concerns remain.

These mechanisms show that lending is rarely neutral. Whether through conditions, collateral, or market dependencies, the lender shapes the borrower's choices—economically and politically.

The Belt and Road Initiative

The One Belt, One Road (OBOR) or The Belt and Road Initiative was rolled out in two components in 2013, the Maritime Silk Road Initiative (MSRI) and the Silk Road Economic Belt (SREB), with each having the ability to transform the geopolitical-economic landscape globally through infrastructure development projects like ports, railways, highways etc. The vision including a population of over 4 billion people with one-third of the world's wealth is certainly a bold move. Multi-branched with projects in areas like railways and ports like the Chinese-built railways across Africa; the Digital Silk Road assistance funding AI capabilities, e-commerce promotion, cloud computing, smart cities etc. aims to bridge the gap between global terrestrial and maritime inter-connectivity. The BRI has committed approximately $843 billion in infrastructure investments in over 112 countries as per 2021 AidData. However, many stakeholders are concerned about the ascendancy it aims to achieve with such development funding. The contemporary projects are a heated topic of discussion among nations, analysts, business people and critics alike as this could lead to change in global power structures, investment methodology, and trade atmosphere. The two initiatives under this policy differ in political, economic and social aspects, target different countries and face distinct political and environmental risks.

Understanding the MSRI

China's coeval MSRI somewhat relates to the ancient Silk Road that stretched from China, Indian Ocean to the Mediterranean Sea and Europe serving the purpose of trade in spices, tea, silk and ceramics. The geographical bounds of the road are expanding to new waters. The Road's connectivity is unlike others in terms of speed, scale and commitment. However, some stakeholders are concerned about the political ascendancy China may gain due to the same. Political security concerns are rising too.

It is lucid that the Road is created to serve China's core interests including the development of its $19.23 thousand billion economy (World Economic Outlook by IMF-April 2025), improving food and energy security and enhancing its international discourse power. The potential to alter the global maritime order lies in the hands of China and participating states. China's investments aren't without substantial risks though as by investing in economically fragile states, it may negatively impact its own economy. The road impacts and is impacted by already existing judicial disputes as well. This affects the receptiveness of some states like Vietnam and the Philippines, who are anxious about Chinese investment.

Understanding the SRBE

The Silk Road Economic Belt connects overland infrastructure corridors with the intent to expand transport networks and markets, extraction of mineral resources, facilitate movement of factors of production and ensure financial integration. The belt extends to 6 planned corridors from China to Eurasia, some of which coincide with the Road. Though lacking formal institutional structure, it is evolving. The belt's economic footprint will help China gain momentum in becoming a global leader in governance. Nevertheless, the scepticism among countries along the SRBE regarding loss of control over assets, financial over-dependence, environmental degradation etc is understandable (NDRC China 2015 BRI action plan; World Bank 2019).

Like the silk threads on a loom, both these initiatives will weave together a fabric of economic development provided the exploitation of vulnerable countries doesn't take place.

Case Study of Hambantota Port (Sri Lanka)

South Asia has become the centrepiece of global attention due to its robust growth potential and unexplored opportunities in the area. From a set of 3000 projects financed by China, the case of Hambantota port is the sole one used as a testimony for debt-diplomacy.
The largest port project in South Asia, initiated in 2008 was a billion-dollar project visualised to deliver commercial benefits and economically feasible transportation of goods. Located at the southern tip of Sri Lanka, it was a rational choice to bolster the economic development. According to CHEC, the Hambantota Port development project spanned about 10 years (2008-2018), cost about US$1.3 billion, and was financed about 96% by loans from the Export-Import Bank of China. The reality check came in when people realised that due to being located at a remote location with no industrial hubs nearby, revenue generation would be a major issue. By the end of 2016, Sri Lanka was struggling to service debt linked to the Hambantota Port, which had accumulated losses of roughly US$300 million (as per Sri Lankan parliamentary estimates). In 2017, the government agreed to lease the port to China Merchants Port Holdings for 99 years, in return for US$1.12 billion. Contrary to popular claims, this was not a debt-to-equity swap or debt write-off; rather, it was an equity arrangement that provided Sri Lanka with much-needed foreign exchange while the debt obligations from Chinese loans remained unchanged. Although, there was never a debt-to-equity swap as the Sri Lankan government is still obliged to

pay 5 loans taken to construct the port from EXIM Bank of China and no adjustments are made in these loans. After the project's completion in 2018, the management of the port is under a Public-Private Partnership (PPP) between the Government of Sri Lanka and China Merchants Port Holdings.

The project is often cited as an emblematic example by critics over concerns of excessive borrowing influence China holds over Sri Lanka. The Island nation when examined closely reveals persistent twin deficits (fiscal and trade deficit). According to a study, in the years 2006-14, the country's growth was heavily reliant on public infrastructure. Owing to lack of in-house finance, they leaned on external sources like China for aid. China topped the list of assistance providers and its over-involvement in the country has garnered attention.

Key findings indicate a lack in revenue generation and internal competitiveness, high fiscal deficit, instability and over-dependence on external borrowings. The growth thinking needs a revamp from infrastructure-led growth, which certainly isn't feasible with high deficits.

Case Study of China-Pakistan Economic Corridor (CPEC):

Pakistan-China's journey of friendship has strengthened ever since they established diplomatic relations on May 21, 1951. Presently, the two nations are on a mission to revive the historic silk road for facilitating trade from Kashgar in China to Gwadar in Pakistan. The under-construction corridor mega-project (2014-2030) is one of the flagship projects under the Belt and Road Initiative aimed at improving communication, transport, energy infrastructure and creating stability in South Asia. The $62 billion plus route (as per 2023 estimates) is a matrix of highways, railways and pipelines for oil and gas transportation. While, an estimated $1 trillion has been spent on such efforts. The initiative is expected to bypass the 12,000 kilometer route which the Middle-eastern oil companies currently need to take to reach Chinese ports in a mere 2,395 km journey (Deloitte/AsiaDialogue + intermodal PDF / transport mapping).

The project, implemented in 2015, will run through most of Pakistan, beginning from Gwadar Port in Balochistan and ending in Kashgar in western China will be implemented in 3 phases. Gwadar Port, the tail of the Silk Belt located near the Strait of Hormuz responsible for approximately 20% of the global petroleum liquids consumption and and around one-fifth of global liquefied natural gas trade transited in 2024 (Institute of Energy Research data). This has a central place in the project. The strategic footing in both Indian Ocean and Arabian Sea makes it one of the best strategically positioned ports, connecting the world's commercial centres- namely the Middle East, Central Asia, and South Asia. Pakistan has acquired one of the highest investments from China, its strategic partner.

Critical Analysis of the BRI

The Belt and Road Initiative is a means of regional economic cooperation. With the growth rate of China moderating when compared to rapid, effective growth observed during the first three years of the economic reform, the policy couldn't have come at a better time. The policy presents new economic opportunities in terms of globally-structured development. Through strategically advanced loans and promises of more inclusive growth, it is argued by critics that China is able to entrap vulnerable nations unable to fulfill the loan terms. With an estimated 55% of its loans to low and middle income countries, Beijing is walking a tightrope at a time when most of its borrowers are illiquid. Overdue repayments are rising by the day and AidData estimates reflect that 80% of China's overseas lending portfolio is currently aiding countries in financial distress.
The inherent nature of development loans is not flawed, but the reasons for which China is lending is certainly to blame. The intent to gain access to natural resources, markets and influence decision-making and policies in the area is why the critics argue the policies are entrapping. The policy China follows is simple- 'higher the debt, higher the influence, higher the leverage'. It all works out in favour of China as money-bleeding projects are forced to sell stakes to Chinese finance companies and firms at a lower cost. As if this alone wasn't enough, China is going out of its way to ensure that countries are unable to escape the debt-trap. For accepting payment rescheduling terms and extending loan tenure, China puts a condition on the countries to give them further infrastructure projects, inevitably digging a deeper hole in the debt situation. It is reported that in October 2016, during a state visit by President Xi Jinping, China forgave 600 million yuan (US$90 million) of Cambodian debt and pledged an additional 100 million yuan (≈ US$15 million) in military aid to Cambodia's defence ministry, as part of efforts to strengthen bilateral relations. China's influence in Cambodia was already considerable but this exemplified it further.

The story when probed deeper reveals a poignant tale. Many developing countries are already regretting their decision to secure a loan from China. Studies and media reports point out that the huge influx of low-cost Chinese goods has put pressure on local manufacturing sectors, with industries in India and Southeast Asia particularly affected. (Lowy Institute; Business Standard; Hindustan Times). Empirical research also reflects negatively influenced employment and wage outcomes in certain regions, such as in India (Springer, *Empirical Economics*), although policymakers in some countries have expressed unease over debt sustainability related to Chinese loans, the evidence linking these loans directly to large-scale joblessness or labour migration to China is more limited and contested.
In retrospect, China's intentions were discernible from the very beginning. The way China stepped up to meet the infrastructural needs of developing countries at a crucial time especially when investors backed down, led to many countries accepting the terms on which loans were provided to them. It was only later that they understood the true motives of commercial penetration and leverage but by then, they were already in a trap with no way out.
Via integrating its foreign, external and political policies, China is aiming at strategic control over nations and extending its dominion of trade, communication and influence. The tales of the countries ensnared by China should serve as a lesson for others and such nations should take steps to avoid the similar debt-trap situation. Recipient countries must negotiate the terms in their favour and undertake the onus for evaluation of the projects.

Debt-Trap Diplomacy: Myth or Reality?

According to the Washington-based Institute of International Finance, the People's Republic of China (PRC) is the world's largest official creditor nation (Y. Karavasilev, via APIR) though most of its debt contracts aren't publicly disclosed and remain off the books indicating that the lending may even be higher. By widening its reach and becoming a rising global power China may just want to employ excess financial resources by investing abroad and consolidate its geostrategic interests. However, the debt-trap account is often sprung out of control due to the secretive nature of Chinese diplomacy. Official data on its international lending remains volume, terms and condition, negotiation procedure remains omitted. China's argument labels the accusation of debt-diplomacy as a propaganda exaggerated by the west and India amidst concern over China becoming a rising power. They question whether the IMF, World Bank (US dominated institutions) who are lending more to states are involved in US promoted debt-diplomacy activities.

The question that still remains unanswered is if debt-trap diplomacy actually exists. China's increased sphere of influence is incontrovertible. China does not hesitate in utilizing its seemingly infinite number of financial resources to create relationships with nations. Despite being aware of the country's financial health, its ability to service debt or other requirements usually considered by lenders, some analysts argue that China prioritizes strategic leverage over credit risk. Senior U.S. government officials have argued that Beijing "encourages dependency using opaque contracts that mire nations in debt and undercut their sovereignty" (Tillerson 2018). A saying by John Maynard Keynes fits the situation perfectly- "If you owe your bank a hundred pounds, you have a problem. But if you owe a million, it has". Whatever the Chinese storyline may be, it is safe to assume that it has seized presented opportunities to exert influence, if not done so with malicious intentions. The understanding of underpinning motivations, methods and impacts involves a continuous examination in a non-biased context.

Debt Consequences for Recipient Countries

Debt has long-term repercussions for the recipient countries, particularly in the Global South. These issues range from financial strain, to loss of sovereignty, ultimately impacting the social community and long-term development. This can be supported by the following points:

1. Loss of Sovereignty and Policy Autonomy

IMF's policies, which are imposed as conditions for financing loans, are often seen as a form of 'structural violence'- a term coined by Galtung (1969) to describe systemic harm. Stiglitz (2002) further argues that such conditionalities deepen dependency by weakening local economies, as they often involve increasing the dependency of the recipient countries by perpetuating the local economies. These conditions lead to the privatisation of state property, commodification of public goods (like education and healthcare), eradication of government deficit financing, and liberalisation in terms of removal of trade barriers.
All of this is responsible for trapping countries in a vicious cycle of dependency, forcing them to prioritize debt repayment over sovereign development and rely on raw material exports, which is largely the cause of low rate of development, impacting the vulnerable local communities the most.

Institutions like the IMF, possess power which is misused in the way explained above. It is often deemed as an extension of historical imperial economic governance, continuing to control the weaker states through economic policies instead of military occupation.

Countries heavily reliant on sovereign debt, particularly in lower-income and emerging or developing market economies, are exposed to increased risk of sovereign-related bank distress, further deteriorating fiscal situations. Countries stressed under the weight of rising sovereign debt, are not in a position to allocate resources to high priority sectors like health and education, which are the major drivers of development. This results in lack of preparedness in emergencies. This has been proven by the high fatality rate in European countries with high debt levels. However, it is important to note that COVID-19 fatality rates were primarily influenced by demographic structures (e.g., older populations in Europe) and the baseline strength of healthcare systems, rather than debt ratios alone (World Bank, 2022; IMF, 2021).

2. Long-term Economic Strain or Dependency

High sovereign debt is the root cause of major economic downturns, making economies less immune to shocks and potentially resulting in greater output loss during crises. It can also crowd out private debt and limit the scope for counter-cyclical fiscal policy.
Debt servicing often takes precedence over local development, healthcare, or education investments, perpetuating colonial dynamics in former colonies. This is evidenced by the COVID-19 pandemic, the war in Ukraine, and the climate change crisis, which have drastically increased debt servicing costs for most governments, deteriorating the conditions of poverty and acting as a barrier in the progress towards Sustainable Development Goals or SDGs.
The opportunity cost of sovereign debt can be highlighted by the following instance. In the low-income and middle-income countries (LMICs), a small percentage of what was spent on external public debt servicing in 2022 could have lifted millions out of poverty.

3. Social Backlash, Protests, and Political Instability

Austerity measures imposed by IFIs have historically triggered waves of anti-globalization protests. High debt servicing costs are responsible for poverty and fragility in emerging economies, leading to political instability and making countries more vulnerable to violence and extremism.
Fragile states,i.e., states with reduced capacity to meet the requirements of the society in terms of health and education, tend to see disintegration of political stability and a rise in violent challenges. Countries already in a debt crisis have a higher number of active militant groups.
As the number of unresolved debt issues rise, political grievances aggravate on an equal footing, leading to increase in the number of fragile states, further worsening the societal challenges.

4. Default and Restructuring Crisis

In situations when countries are unable to repay their debt, they fall into the trap of unsustainable debt, due to which there is a large possibility of default. This mandates negotiations with the creditors, potentially involving 'haircuts', which means either reducing the amount owed, or extending the maturity date.
Defaulting countries, particularly the import- reliant nations, would face exclusion from the international markets, ultimately leading to economic decline and inflation.

Global Responses and Countermeasures

International organisations and countries are recognising the need for addressing the challenges associated with increased public debt, looking for sustainable debt practices.

Points in favour of this statement are as follows:

<u>Role of G7, G20, Paris Club, and OECD</u>
Post COVID-19, G20 and Paris Club approved initiatives like the Debt Service Suspension Initiative (DSSI) and the Common Framework for Debt Treatments beyond the DSSI (CFDT).

The CFDT is a major milestone as the first mechanism to permanently bring together and provide a combined platform to both Paris Club members and non-members, established by the G20 rather than the G7, showcasing reforms in the public debt arena. (G20, 2021).

These initiatives are aimed at providing fiscal relief and addressing solvency issues in low-income countries through debt restructuring.

Push for Transparent Lending Standards (e.g., Debt Transparency Initiative)
Debt opacity is a consequential aspect, intensifying vulnerabilities due to lack of transparency resulting from incomplete reporting, hidden confidentiality clauses, and divergent definitions in databases.

To facilitate high-quality investment, eradicate corruption, and increase accountability, greater debt transparency is pivotal. Revisions of contingent liabilities have in certain cases increased reported public debt by more than 30 percentage points of GDP; for example, Mozambique's external public and publicly-guaranteed debt rose from 61% of GDP in 2016 to 104% in 2018 after previously undisclosed liabilities came to light. (World Bank, 2022; Horn, Mihalyi & Nickol, 2024).

Suggestions for reform involve publicising loan terms and payment schedules, fully disclosing public and publicly traded debt (inclusive of state-owned enterprises' liabilities), sparing borrowers from exorbitant confidentiality clauses, and devising strong sovereign debt management structures.

Legal reforms are a significant part of resolving hidden debt challenges, though often difficult and time-consuming.

Global financial institutions, creditors and credit rating agencies play an important role to foster International cooperation for developing an effective surveillance system to manage sovereign debt related problems.

Ethical and Legal Dimensions

The ethical and legal debates encircling debt diplomacy involve concepts of neo-colonialism, the boundaries of international law, and the controversial doctrine of "odious debt." Is Debt Diplomacy a Form of Neo-Colonialism?

Critics are of the view that IMF loan conditions disproportionately target countries in Africa, Asia, and Latin America, by enforcing reforms that promote colonial dynamics through economic policies instead of military annexation.

It is observed that countries which were former colonies are being trapped in sovereign debt, as a result of well structured and thought political, diplomatic and economic strategies to reinforce colonial exploitation. China's non-conditional finance, disguised as support for fast growth, can trap emerging economies with unsustainable debt cycles, serving Beijing's foreign policy objective and potentially eroding sustainable sovereign development.

Role of International Law in Protecting Sovereign Interests
International financial law does not include stances for external sovereign debt as, in situations of disputes, there is no law in support of external public debt. The concept of 'odious debt' further adds to this.

Debate on Debt Forgiveness and Odious Debt
'Odious debt' is a financial obligation or liability incurred by an autocratic power, not to fulfil the needs or interests of its people but to suppress the subjects. This loan is availed with the creditors' knowledge.

The international law obligation to repay debt is not absolute and has been limited by equitable considerations, including odiousness.

The Soviet Union was successful in rejecting Tsarist-era debt on these grounds. This provides a moral ground for slicing off the debt which was taken by an odious regime, it often becomes difficult to prove the lack of benefit.

The debate also involves deciding if the illegitimate infrastructures through which such loans are obtained, are to be emphasized, or the illegitimacy of the governments who do so.

Conclusion

John Adam, the second President of America once said, 'There are two ways to conquer and enslave a nation. One is by the sword. The other is by debt.' In the arena of international strategies, debt, in particular, has evolved as a tool which has its presence beyond economics, influencing diplomacy and control. Through the analysis of case studies like that of China's Belt and Road initiative and Sri Lanka's Hambantota, this paper highlighted that lack of transparency and disproportionate power dynamics in lending can lead to dependency instead of development. There is a growing trend proving that economies burdened with unsustainable debt are often motivated by geopolitical ideas.
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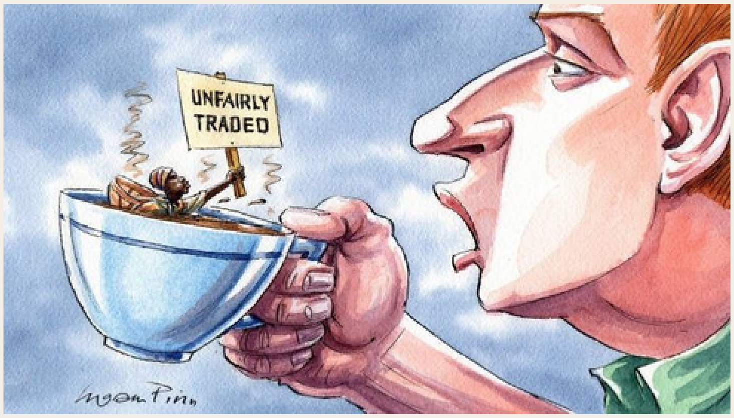
Although development Finance is indispensable for funding international infrastructure loopholes, the purpose behind such financing is not to be ignored. It is significant to understand the line of difference between coercive statecraft and development assistance. This can be achieved through robust international frameworks. The debate over debt-trap diplomacy, on whether it is a constructed narrative or a legitimate concern, requires evidence based investigation and nuanced understanding.

Furthermore, recipient economies must aim to enhance their institutional capacity by conducting in-depth project evaluations, thereby, asserting more autonomy in negotiations. Simultaneously, creditor economies and multilateral international institutions must uphold principles of fairness, transparency and mutual benefit.
It is only via collective duties and supervision, that the international community can ensure that loans play their true role as instruments of development, not dominance



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The Rise of Non-Metro D2C Startups in India: How Tier 2 and 3 Cities Are Reshaping the Consumer Economy

India's startup ecosystem is witnessing a shift from its traditionally metro-centric stronghold of Direct-to-Consumer (D2C) startups to a rapid rise in D2C ventures emerging from—and strategically targeting—non-metro regions, particularly Tier 2 and Tier 3 cities. The structural forces enabling this shift include increased digital penetration, evolving consumer preferences, the strategic expansion of Q-commerce in non-metro areas, supportive government policies, and a new generation of aspirational consumers in smaller cities.

Tier 2 cities, with their strong talent pools and industrial bases, are becoming hotbeds for D2C innovation, as reflected in recent data on funding and new registrations in the sector. Tier 3 cities, though at an earlier stage, are beginning to show a similar trajectory. These trends are also shaping the strategic direction of larger consumer goods firms, especially within the FMCG sector. This paper examines recent FMCG acquisition patterns of D2C startups to derive insights into the long-term implications of these shifts.

While metro-originated D2C brands have dominated acquisitions so far, they owe much of their growth to markets in Tier 2 and Tier 3 cities. Notably, the recent acquisition of Minimalist—a Tier 2-based startup—by HUL suggests a future where non-metro D2C startups may play a central role in defining consumer preferences, growth strategies, and competitive dynamics in India's consumer economy.
This research combines trend forecasting, market data, and strategic analysis to present a forward-looking perspective on India's decentralizing startup landscape and its implications for the future of retail and entrepreneurship.

Introduction

1.1 Background and Context

The Direct-to-Consumer (D2C) sector in India has witnessed unprecedented growth in recent years. A 2022 KPMG report projected the Indian D2C market to exceed $60 billion by 2027. However, a 2025 report by Mordor Intelligence estimated the D2C e-commerce market had already reached USD 87.5 billion, indicative of exponential growth that surpassed earlier projections.This explosive expansion marks a new wave in India's D2C landscape, one that extends beyond metro-based startups and affluent urban consumers.

Increased digital adoption, rising disposable incomes, and expanding Q-commerce platforms like Blinkit and Zepto have unlocked new customer segments in Tier 2/3 regions. At the same time, Tier 2/3 emerging D2C startups have leveraged regional manufacturing hubs, local talent, and lean operations to address unmet needs in the FMCG space, especially in categories like personal care and wellness.

These startups catalysed a broader premiumisation trend and forced legacy FMCG players to shift strategy, leading to high-value acquisitions (e.g., HUL's acquisition of Jaipur-based Minimalist). This paper explores how these shifts signal a decentralising D2C ecosystem, assesses structural enablers, and outlines competitive challenges and future policy imperatives.

1.2 Research Objectives
This research investigates the decentralised growth of India's Direct-to-Consumer (D2C) sector, with a focus on the emergence of Tier 2 and Tier 3 cities as startup hubs shaping the next phase of market evolution.

The core objectives of the research include:
- Analyse funding patterns and startup registrations to establish non-metros as D2C growth hubs
- Analyse the strategic expansion of Q-Commerce in Tier 2/3 regions as a key logistical enabler
- Evaluate the role of digital payments infrastructure,vernacular content, and aspirational demand in driving adoption
- Assess shifting consumer preferences and the rise of premiumisation beyond Tier 1 markets.
- Examine strategic FMCG acquisitions of D2C brands and their market implications
- Identify structural challenges and proposing targeted policy solutions for enabling non-metro D2C growth

Literature Review

The Direct-to-Consumer (D2C) segment in India has drawn significant attention for its disruptive impact on traditional retail and FMCG models. While reports from KPMG, Deloitte, and Mordor Intelligence chart the exponential growth of the D2C e-commerce market, they often lack insights into the role of Tier 2/3-origin D2C startups. Department for Promotion of Industry and Internal Trade's (DPIIT) 9 Year Factbook(2024) supports the rise of startups in non-metro cities but does not provide sector-specific data for D2C.

A 2024 **Deloitte and FICCI** report on India's e-commerce, FMCG, and retail sectors has highlighted evolving consumer preferences, premiumisation trends, and the "acquire and grow" strategies of FMCGs. It also notes Tier 2/3 consumer segments as growth drivers but does not explore the strategic significance of D2C startups from these cities in acquisition trends or category dominance. The post-acquisition dynamics between D2C and legacy players remain underexamined. Additionally, while Q-commerce has emerged as a crucial scaling enabler in non-metro regions is acknowledged but rarely analysed in depth. Funding trends for Tier 2/3 D2C startups appear in media and industry reports (e.g., YourStory, Protium) but lack a consolidated sectoral view. Regional hubs like Jaipur, Coimbatore, and Surat are emerging as D2C ecosystems, yet remain underrepresented in academic literature.

This paper aims to bridge these gaps through a layered, evidence-driven analysis of how Tier 2 and Tier 3 cities are evolving as strategic engines for D2C growth in India

Methodology

The paper provides a descriptive analysis with secondary data, real market case studies, and emerging trends to contribute to the discourse on decentralised startup growth in India and what it signals for the future of consumer markets and **decentralised innovation of Indian entrepreneurship.**

3.1 Data Sources
The analysis relies on a wide range of credible secondary sources:

- Government reports such as the *DPIIT 9-Year Startup India Factbook (2024)* and *Invest India* datasets for startup registrations.
- Industry research papers by KPMG, BCG, Deloitte & FICCI, Mordor Intelligence, Mitsui & Co, NielsenIQ, Kearney and CTFE to extract data on market size, consumer trends, premiumisation and Q-commerce expansion.
- Media coverage by YourStory, Economic Times, Financial Express, Fortune India, and CNBC TV18 for updates on funding patterns, acquisitions, and founder perspectives.
- Academic literature including the paper "*Impact of digital payment infrastructure on accelerating Quick commerce growth*" by Prajapati (2025)
- Case studies of brands like Minimalist, Juicy Chemistry, Bold Care, My Muse etc, selected for their prominence in funding, acquisition, or category innovation.

Visual data like graphs sourced directly from cited reports; screenshots were used where original datasets were unavailable. Tables compiled by the author use triangulated data and are duly credited.

3.2 Analytical Framework
The research uses a qualitative trend analysis approach to:

- Map emerging regional hubs based on startup origin, funding and category focus.
- Evaluate the role of Q-commerce, digital payments, and shifting consumer behavior in enabling non-metro D2C growth.
- Analyse acquisition patterns to understand strategic motivations for FMCG players
- Examine policy implications and propose future-focused recommendations based on observed trends and bottlenecks.

While the study does not employ primary surveys or quantitative modeling, it ensures robustness through triangulation of diverse secondary sources.

3.3 Limitations

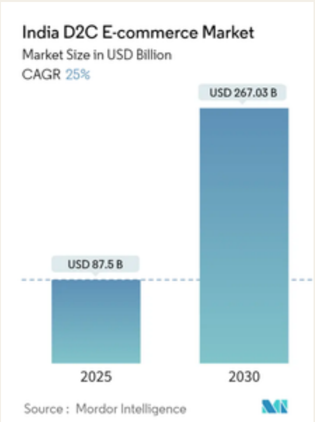
As a secondary-data-based study, findings are constrained by the availability, granularity, and recency of existing datasets. City-level data for D2C startups is often limited or inconsistently reported, restricting deeper comparisons. Nonetheless, the multi-source approach offers a comprehensive view of decentralisation trends in India's evolving D2C landscape, an area still nascent in academic inquiry.

Rise of D2C Startups in Tier 2 and Tier 3 Cities

Direct-to-Consumer (D2C) is a business model where brands sell directly to consumers, often through their own digital platforms. As per Invest India's reports by their Strategic Research Unit, India has seen a rapid D2C boom driven by digitisation and the Startup India campaign.

While initial growth was led by metro-based startups targeting affluent Tier 1 consumers, there's a shift with Tier 2 and Tier 3 cities emerging as key growth drivers, with rising online shopping from these regions, as per Deloitte and FICCI's e-commerce report.

Further, a report by Mordor Intelligence highlights the rise of D2C brands to be driven by their attention to Tier 2 and Tier 3 cities for sourcing materials and serving their underserved markets. The report forecasts a compound annual growth rate (CAGR) of 25% for the sector by 2030, indicating sustained momentum.



Source: Mordor Intelligence Research & Advisory. (2025 , January). India Direct To Consumer Ecommerce Market Size & Share Analysis - Growth Trends & Forecasts (2025 - 2030). Mordor Intelligence. Retrieved June 22, 2025, from https://www.mordorintelligence.com/industry-reports/india-d2c-ecommerce-market

4.1 Funding Patterns and Startup Registrations

DPIIT's 9-Year Startup India Factbook (2024) reveals that 48% of all recognised startups are now from Tier 2 and 3 cities. Over 17,900 startup certificates were issued in IT Services to Tier 2/3 regions alone.

Protium's report reveals Tier 2 and Tier 3 cities have been raising funds at larger valuations in segments like D2C, as of February, 2023. Interestingly, a YourStory report further showed that Tier 2/3 cities experienced an 11% increase in funding while metro regions experienced a funding decline. This is indicative of a pattern of non-metro emerging D2C startups gaining investor confidence and securing more funding, which is followed by more D2C startups registering and setting up in these regions.

While total D2C funding fell by 18% in 2024 (Financial Express), early-stage D2C startups saw 25% YoY funding growth, suggesting strong investor interest in leaner, high-potential Tier 2/3 startups.

This marks a major shift in the Indian D2C startup landscape, where growth is now being driven by startups emerging from Tier 2/3 cities.

4.2 Drivers of Growth: Digital Penetration, Disposable Income, and Local Talent

- **Rapid Digitisation and Expanding Internet Penetration:**

According to IBEF (2025), internet access in India rose from 4% in 2007 to 45% in 2021, with 895 million connections by June 2023. An Economic Times report cited RBI data revealing that by the end of 2024, UPI drove digital transaction volume to **20,787 crore** by end-2024, by contributing 17,221 crore of it. Affordable data and smartphones have fuelled e-commerce, with D2C being the fastest-growing segment.

- **Rising Non-Metro Disposable Incomes:**

According to the Economic Times, India's personal disposable income is projected to reach Rs 313 trillion by 2025. The average monthly income in Tier 2/ 3 cities is now Rs 32,000, close to Rs 35,000 in metros, enabling similar or even higher discretionary spending. According to a report by BCG, 54% of online shoppers in India will hail from rural areas by 2030, and they will account for 24% of online retail spending. The e-commerce expansion and the D2C boom has thus been led by Tier 2/3 consumers.

- **Local Talent**

A Financial Times article citing Primus Partners notes that Tier 2/3 cities attract investment due to their ability to tap into skilled local talent at lower costs**.** Reverse migration during COVID also brought back professionals to hometowns, strengthening local talent pools.

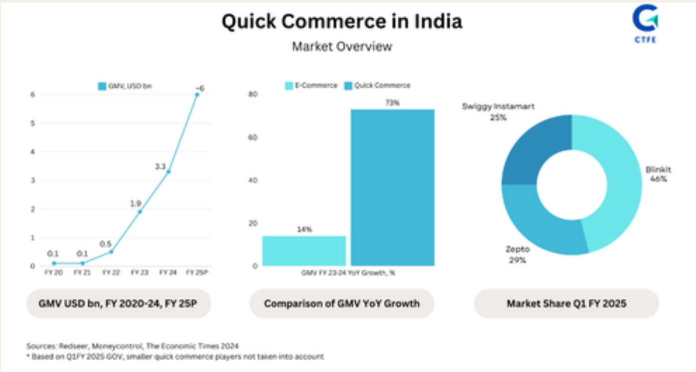
These enablers are catalyzing the emergence of new D2C hubs in non-metro India.

4.3 Emerging Hubs and Regional Industrial Advantages

While India's Tier 2 and Tier 3 cities are collectively seeing a rise in D2C startup activity, certain cities are distinguishing themselves as *regional hubs* due to a combination of industrial capacity, skilled local talent, cost advantages, and consumer demand. A summarized tabular analysis is presented below: (in the next page)

The Enabler: Expansion of Q-Commerce and E-Commerce

Q-Commerce(Quick-Commerce) is a category of e-commerce that prioritises super fast delivery of goods, typically between 10 to 30 minutes. Q-Commerce has reshaped consumer expectations around convenience. A CTFE report highlights that while India's overall e-commerce sector grew at 14% in FY 2023–24, Q-commerce expanded at an impressive 73%. Blinkit led the market in Q1 FY 2025 with 46% share, followed by Zepto (29%) and Swiggy Instamart (25%). Given below is a graphical representation of market overview of Quick-Commerce in India, as presented by CTFE in the report:



City	Tier	Key Sectors	Strengths
Indore	2	Food & Bev, SaaS	Manufacturing base
Surat	2	Textiles, D2C Fashion	Global textile hub
Coimbatore	2	Engineering, Manufacturing	Strong tech talent
Jaipur	2	Handicrafts, Jewelry	Traditional crafts ecosystem
Kochi	2	Maritime, IT	Port logistics & IT corridor
Bhubaneswar	2	HealthTech, IT	Planned city, government support
Chandigarh	2	EdTech, SaaS	High living standards
Vadodara	2	Manufacturing	Engineering base
Udaipur	3	Tourism, Handicrafts	Cultural tourism
Patna	2	AgriTech	Agricultural innovation
Nashik	2	Wine, AgriTech	Wine capital, agro hub
Gwalior	2	Defense Tech, Industry	Defense cluster
Guwahati	2	AgriTech, E-com	North-East gateway
Dehradun	2	Tourism, Organic D2C	Scenic & edu hub
Lucknow	2	GovTech, EdTech	State capital incentives

Sources: Compiled by author using information from Government data from DPIIT, Economic Survey 2024, Nasscom-Redseer Report 2024 and media reports from Inc42 Media and YourStory.

5.1 Q-Commerce Penetration in Non-Metro Cities

The expansion of Q-commerce into Tier 2 and Tier 3 cities has been driven by platforms like Blinkit, Zepto, and Instamart. Outlook Business notes Blinkit's presence in Kochi and Bathinda, while Zepto entered Jaipur, Ahmedabad, and Chandigarh. Instamart was the first to expand into these smaller cities.
According to Bernstein (via Economic Times), D2C brands now make up over 30% of the brand mix on Q-commerce platforms, with growth particularly strong in Tier 2+ cities.

The growth of D2C brands on Q-Commerce platforms is driven by multiple factors at play:

Quick commerce platforms have a built-in demand, greater visibility, and reduced acquisition costs, making them attractive to emerging D2C brands. Their speed and convenience also improve retention and repeat purchases.
This paper has already established rising disposable incomes in non-metro areas. When coupled with Q-commerce's reach, this creates a powerful distribution channel for regional D2C brands, enabling precise hyperlocal targeting and reduced logistical complexity.

5.2 Impact on Consumer Access and Buying Behavior

- **New audience creation:**

A Bain & Company report found that three in five new online shoppers since 2020 are from Tier 3 cities, indicating that these regions are now the primary source of new e-commerce users. Business World notes average Q-commerce growth of 300% across all tiers in 2022, with Tier 2 cities like Patna and Jaipur showing growth rates above 270%. While q-commerce is most mature in metros, Tier 2 cities are advancing rapidly, with an 8.51% CAGR in Q-Commerce market share as of 2024, as highlighted by Mordor Intelligence.

- **Social Media Influence:**

A Business Today report cited Meta revealing 68% of internet users in Tier 2/3 cities discovered products via social media, with over half using WhatsApp for purchases. Q-Commerce platforms tap into these impulse-driven behaviors, amplifying reach and conversion.

- **Category Expansion:**

Initially focused on essentials, Q-commerce now includes mid-range electronics such as earbuds and power banks. Mordor Intelligence forecasts a 9.21% CAGR for electronics on Q-commerce, reflecting how rising disposable incomes are driving discretionary spending in non-metro cities, an opportunity D2C brands are seizing.

5.3 Role of Online Payments and Government Policies

A 2024 Kearney and Amazon Pay report introduces "DDPU" (Degree of Digital Payment Usage), which measures a city's digital transaction frequency, category diversity, and openness to new payment tech. Cities like Lucknow, Indore, Jaipur, and Bhubaneswar (highlighted in this paper as D2C hubs) score high on DDPU, indicating high digital readiness despite lower retail penetration.

Digital payments, accelerated by UPI and the Digital India push, have laid the groundwork for Q-commerce's success. As Prajapati (2025) notes, the synergy between instant payments and fast delivery has driven adoption across Tier 2/3 cities. The comfort with digital transactions reduces friction, enabling broader access for both consumers and D2C brands.

The Enabler: Expansion of Q-Commerce and E-Commerce

6.1 Shifts in Product Preferences

Rising disposable incomes in Tier 2 and 3 cities have led to aspirational consumption, with consumers seeking quality products and premium experiences. A Deloitte and FICCI report notes that these cities are emerging as key growth drivers, with increased online shopping for diverse product categories.

D2C brands offer differentiated products and enhanced experiences through direct customer engagement and content-driven trust building. In the fashion segment, Tier 2+ adoption has surged as D2C brands offer exclusive collections and AI-driven personalization to meet rising aspirations.

Affordable smartphones and localised vernacular content on social media have increased digital accessibility. Regional influencers now play a critical role in consumer choices. D2C brands leveraging tutorials and influencer-led content have seen over a 10% sales increase, per Deloitte and FICCI.

According to *Economic Times*, brands like My Muse and Bold Care generate 30–40% of their revenue from non-metros, especially Tier 3 youth, showing high receptivity to new categories fulfilling previously unmet needs, further accelerated by Q-commerce convenience.

6.2 Rise of Premiumisation Beyond Metro Cities

Premiumisation, a key strategy post-2023, involves offering high-quality, eco-conscious products in categories like skincare and home care to attract aspirational consumers. NielsenIQ reports that this trend is expanding rapidly in Tier 2 cities, with emerging brands often outpacing established ones due to their niche positioning and superior personalization.

A Deloitte-FICCI report highlights that 80% of new beauty customers for a major e-commerce firm came from Tier 2+ towns. This reflects how non-metro markets are now driving premium category growth, an opportunity well-aligned with the strengths of D2C startups.

6.3 Case Studies of Notable D2C Brands

Here is a summarized tabular representation of some prominent case studies of Tier 2/3 emergent D2C startups;compiled using information from media reports from Inc42, YourStory, government data from Startup India Success Data Report 2024, Startup India government portal and Tracxn Company Profiles for further descriptive analysis:

Startup	City (Tier)	Sector	Notable Details
Minimalist	Jaipur (Tier 2)	Skincare	Known for ingredient transparency and clean formulations, founded in October 2020 by siblings Mohit and Rahul Yadav. Built INR 100 Cr business within eight months and raised INR 110 Cr in Series A.
Juicy Chemistry	Coimbatore (Tier 2)	Organic Personal Care	ECOCERT-certified organic personal care brand founded in 2014. Founded by husband-wife duo from Coimbatore. Now a global brand with a wide retail presence.
DeHaat	Patna (Tier 2/3)	AgriTech	AI-driven solutions for farmers.
Menhood	Jaipur (Tier 2)	Men's Grooming	D2C men's personal care, leveraging digital channels for customer acquisition.

Source: Compiled by author using Inc42, YourStory, Startup India Success Report 2024, Tracxn

These startups illustrate key patterns:

- Many focus on premium categories like skincare and wellness, reflecting broader consumer shifts.
- Brands like Menhood leverage digital-first strategies to target young, aspirational men in Tier 2–3 cities, aligning with the growing male grooming market (projected at $2.1B by 2025 as per Euromonitor).
- Juicy Chemistry's offline presence and organic focus show how non-metro brands can scale with multi-channel models and niche positioning.
- DeHaat demonstrates that Tier 2/3 cities house tech-savvy talent capable of innovating with AI-led solutions.

Overall, Tier 2 startups now rival Tier 1 in D2C emergence, while Tier 3 startups, though still growing, reflect rising potential.

FMCG Strategic Response and Acquisitions

FMCG giants have recently shifted their strategies to remain competitive by embracing premiumisation and acquiring D2C startups in high-growth categories. A Deloitte and FICCI (2024) report highlights that FMCGs, particularly in the personal care space, are repositioning portfolios through such acquisitions to stay relevant and capture emerging consumer segments.

7.1 Analysis of Recent Acquisition Patterns

Provided below is a summarized tabular representation of recent acquisitions of D2C startups by FMCGs, with information on origin city of the D2C startup acquired and its classification by Tier, details on acquisition deal and the year of acquisition for analysis. It is to be noted that the following table highlights select examples and is not intended to be an exhaustive list of all acquisitions.

Categories targeted include **beauty, personal care, wellness, nutrition**, and **baby care** — all premium segments with strong niche appeal.

- Marico leads in acquisition activity, but HUL's Minimalist acquisition stands out in value and significance.
- The Mitsui & Co report on premiumisation notes that FMCGs not only acquire but also fund and partner with D2C brands (e.g., Marico Family Office funding Kapiva; HUL investing in Wellbeing Nutrition).
- While some FMCGs launch digital-first sub-brands, acquisitions remain the dominant strategy for scaling quickly.
- As retail consultant Devangshu Dutta notes (via Fortune India), D2C brands can target niches and launch faster, an advantage traditional FMCGs struggle to replicate.
- FMCGs also gain real-time consumer insights, which accelerate product development and marketing strategy.
- D2C founders often cite scaling limitations in digital-only models. Offline distribution, enabled by FMCGs, offers better margins and scale. (YourStory notes platforms like Zepto can charge 35% commission vs. 5–10% offline.)
- Metro-origin D2C startups still dominate M&A activity. However, Minimalist and Mother Sparsh, both Tier 2-origin brands, signal that non-metro D2C startups are emerging in premium niches with high growth potential.

This next subsection explores why Tier 2 and 3-origin brands bring unique strategic value for FMCGs in India's evolving consumer economy.

FMCG Company	D2C Startup	Category	Founded Location	City Tier	Acquisition Details	Year
Hindustan Unilever (HUL)	Minimalist	Skincare/Beauty	Jaipur, Rajasthan	Tier 2	90.5% stake for ₹2,955 crore.	2025
Hindustan Unilever (HUL)	OZiva	Nutrition/Wellness	Mumbai, Maharashtra	Tier 1	Acquired (stake % not disclosed)	2024
Marico	Beardo	Men's Grooming	Ahmedabad, Gujarat	Tier 1	Majority stake acquired	2017
Marico	Just Herbs	Ayurvedic Beauty	New Delhi	Tier 1	Acquired	2022
Marico	Plix	Nutrition/Wellness	Mumbai, Maharashtra	Tier 1	Acquired	2023
Marico	True Elements	Healthy Snacking	Mumbai, Maharashtra	Tier 1	Acquired	2021
ITC	Mother Sparsh	Ayurvedic Baby Care	Panchkula, Haryana	Tier 2	16% stake acquired	2022
Emami	Tru Nativ	Nutritional Food	Mumbai, Maharashtra	Tier 1	22% stake acquired	2022

Sources: Compiled by Author using ET Retail, Economic Times, Mint, Business Today, Financial Express, Inc42, YourStory, HUL & Marico investor reports.

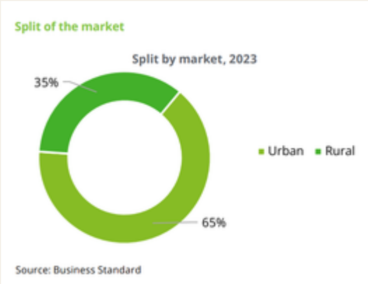
7.2 Strategic Value of Tier 2/3-Focused D2C Brands

- **Local Cost Advantage:**

Operating in Tier 2/3 cities means lower real estate and salary costs. For instance, GVFL reports prime office space in Surat costs ₹30–50/sq. ft vs. ₹100–150/sq. ft in Mumbai. Lower attrition and government incentives (e.g., SEZs, incubators) further reduce operating costs.

- **Hyperlocal Reach:**

D2C startups have a deep understanding of aspirational yet underserved non-metro consumers. FMCGs gain instant access to these segments upon acquisition. A Deloitte and FICCI report highlighted that urban markets contribute around 65% of overall FMCG revenue, indicating a gap created by untapped potential in rural regions. Increasing disposable incomes and improved distribution channels could drive high-value purchases, as per the report.



Source: Deloitte & FICCI. "SPURring Growth in FMCG, Retail and E-Commerce Sectors in India". FICCI: https://ficci.in/public/storage/SPDocument/24030/96dnNn2uqeYtundPb3PZoa8MZy8b8Y4g1Pjj8Knl.pdf, October 2024.

- **Category Fit:**

A unique advantage for FMCGs acquiring Tier 2 origin D2C startups in premium segments is their ability to unlock multiple customer segments. Tier 2 emergent startups have a hyperlocal targeting advantage in non-metro consumer segments, but their ability to scale at lower costs is a unique competitive advantage in driving growth from affluent sections in Tier 1 markets targeted for premiumisation trend as well.
Together, these factors position Tier 2 and 3-origin D2C startups as pivotal assets for FMCGs aiming to secure future growth.

7.3 Case Example: HUL's Acquisition of Minimalist

In January 2025, HUL acquired a 90.5% stake in Minimalist (Jaipur-based D2C skincare brand) for ₹2,955 crore. This marked a strategic shift to dominate premium personal care. As noted by HUL's then-CEO Rohit Jawa (*CNBCTV18*), Minimalist filled a clear market gap with transparent, ingredient-first skincare and robust R&D. The brand crossed ₹500 crore ARR in just four years.

Founded in 2020, Minimalist differentiated itself with:

- In-house manufacturing
- A direct-to-consumer model
- Low-cost digital marketing (e.g., the Instagram #KnowYourIngredients campaign)
- Organic growth via influencer partnerships

Its success among Gen Z and millennial shoppers — including a wave of Tier 2/3 aspirational consumers — shows how affordable, science-backed skincare resonates across segments.
Its growth via its own website, marketplaces, and Q-commerce platforms — without massive offline infra — made it an attractive acquisition for HUL. The brand can now scale offline using HUL's distribution, combining Tier 2-origin agility with FMCG reach.
Minimalist's case signals the beginning of high-value non-metro D2C brands becoming central to FMCG growth strategies in India.

Future Outlook and Implications

This paper has demonstrated that non-metro emergent D2C brands have not only filled market gaps neglected by traditional FMCGs but have also forced legacy players to reorient their strategies, from acquisitions to premiumisation pivots. Looking ahead, the unique strengths of non-metro D2C startups present clear *growth opportunities*, as well as challenges that policy and ecosystem players must address.

8.1 Opportunities for Startups and Local Economies

The growth of Tier 2/3 emergent D2C startups, especially in premium segments, suggests huge scope for new categories that combine *hyperlocal insights* with digital-first reach.

A Deloitte and FICCI report highlights growth potential for D2C meal prep companies, especially targeting an unmet need driven by greater exposure to different cultures through social media, consumers are exploring global flavours in non-metros. The report further illustrates an example: Korean cuisine accounted for 5 percent of total searches in Tier 2 regions. This trend is particularly driven by younger generations, who are more experimental and influenced by social media. Rising discretionary spending and openness to experiment could be capitalised correctly by D2C meal prep companies with subscription-based food delivery models to increase retention. Tier 2 startups can drive further growth by hyperlocal and niche-targeting.

A Deloitte and FICCI report brought forward an interesting example: an Indian e-commerce platform for reselling products saw tier 2+ cities significantly outpace tier 1 cities in orders for electronic accessories, with more than double the number of purchases. Mordor Intelligence also forecasts a 9.21% CAGR for electronics on Q-commerce platforms. This signals a clear white space for regional D2C brands to build trusted product lines in mid-range electronics, leveraging Q-commerce for speed and hyperlocal delivery.

Healthcare is another sector with untapped potential. A report on e-commerce by Deloitte and FICCI highlights more non-metro consumers buying medicines online due to the wider availability and authenticity. In fact, Tier 2 consumers prefer buying from them even if they have to wait longer. E-pharmacies are already making investments to reduce delivery times, leading to many consumers coming from tier 2,3 cities for players. The report cites 48% Tier 2 consumers show preference for herbal medicines. Thus, D2C health brands can combine Ayurveda and modern convenience, delivered with digital trust and quality control.

Beyond products, the supply chain ecosystem itself is emerging as a startup frontier.
A DPIIT report revealed 45% certificates issued from Tier 2/3 Cities in logistics sector startups as of 31st December, 2024. This reflects how D2C growth fuels supporting infrastructure: warehousing, fulfilment, hyperlocal delivery. To fully realise this momentum, the government could design targeted policy tools inspired by the success of Production Linked Incentive (PLI) schemes, but adapted for MSMEs and startups. Such initiatives could directly support entrepreneurs in emerging regional hubs, strengthen local supply chains, and accelerate the growth of logistics and fulfilment startups that enable D2C brands to scale efficiently.

Hence, these opportunities illustrate how Tier 2 and Tier 3 D2C growth is more than a startup story; it is an engine for local job creation, SME development, and broader urbanisation of India's next economic hubs.

8.2 Challenges and Competitive Dynamics

The potential of Tier 2/3 emergent D2C startups cannot be realised without resolving the structural and competitive challenges they face.

A report by Entrepreneur India highlighted hurdles that make initial growth difficult for D2C startups based in Tier 2 and Tier 3 cities: high logistics costs, lack of warehousing facilities, power shortages etc. However, underdeveloped local supply chains remain a major bottleneck; though, as discussed in the previous subsection, targeted policymaking could help address this constraint.

D2C startups are also plagued by complex compliance requirements, with various laws related to data protection, consumer rights, and e-commerce regulations. This can be time consuming and raise initial costs that restrict scaling in the early stages. While local talent and post-pandemic reverse migration have strengthened Tier 2 workforces, significant talent gaps remain. A CNBCTV18 media report does highlight how Global Capability Centres(GCCs) are planning to establish in Tier 2 and Tier 3 cities, with government policy efforts pushing this growth. This suggests future employment for highly skilled professionals will likely grow beyond metros, gradually expanding the talent pool in these emerging hubs.

Funding challenges can still arise due to fewer local angel networks and the venture capital ecosystem still concentrated in big metro cities, indicating an underdeveloped infrastructure for financing. The D2C ecosystem will also face new competitive dynamics in the future that can pose new challenges. The FMCG sector through strategic repositioning has not only started shifting to digital channels, creating their own to strengthen position for in-house brands and even transitioning to q-commerce platforms; but the D2C brands acquired will now get aggressive online and offline scaling with in-house capabilities of FMCGs. The competitive landscape D2C startups face will be fundamentally reshaped: forcing them to continually adapt, innovate, and defend their niches against bigger legacy players.

Conclusion

India's Direct-to-Consumer (D2C) ecosystem is undergoing a fundamental transformation, led by startups emerging from Tier 2 and Tier 3 cities. These non-metro brands are no longer peripheral, but are defining the next wave of D2C growth. The decentralisation of startup hubs, driven by factors like leaner cost models, increasing digital adoption, the rise of aspirational consumer segments, and the rapid expansion of Q-commerce, is reorienting India's consumer economy.

These startups are not only filling critical market gaps in high-potential categories like beauty, wellness, and health-tech, but are also reshaping traditional FMCG strategies. High-value acquisitions, such as HUL's purchase of Minimalist, underscore the strategic edge of Tier 2 origin startups in capturing the premiumisation trend and building brand trust through digital-first models.

Yet, realising the full potential of this decentralised D2C wave will require targeted policy support, including:infrastructure development, startup-friendly compliance frameworks, and funding access beyond metros. The future of India's consumer economy will depend on how fast these emerging hubs scale and how well stakeholders align to support them.

For policymakers, investors, and founders, the question is no longer *if* India's next major consumer brands will come from outside metros , but *how soon* they will define the country's economic landscape.

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Gender-Based Harassment in DU: Educational Disruption and Economic Strain

Gender based harassment remains a persistent systemic issue in the National Capital Territory and public universities like the prestigious Delhi University are no exception to this ongoing struggle. Educational spaces that are meant to stimulate intellectual discussions and foster academic and social freedom are compromised by incidents of harassment and fear among female students.

This paper aims to examine how both the personal incidents of harassment and the constant fear of potential abuse act as significant factors leading to educational disruptions of female undergraduate students and contribute to increased economic burden. Using primary data collected through structured surveys, this study analyses the extent to which harassment shapes female students' academic choices, financial costs, and overall well-being.

This paper highlights the pervasive gender inequality in higher education settings and emphasizes the urgent need for policy intervention to create safer educational environments.

Introduction

While higher education is often considered a critical step towards achieving gender equality and women empowerment through greater career prospects, intellectual freedom, and socio-economic mobility, the experiences of many female students reveal a starkly different picture. Across state and central universities of India, female students routinely face gender- based harassment. This harassment takes the form of verbal abuse, uncomfortable stares, stalking, and sometimes non-consensual physical contact.

Despite its status as a premier public educational institution, such incidents in University of Delhi are not new or sporadic. The institution not only falls short in providing a safe and inclusive academic environment for its female students but also places the burden of vigilance, adjustment and safety onto them. This burden manifests into course timing, preferred modes of transport, costlier accommodation, consumption of safety tools and reduced participation in campus life. This results in a gender-specific disruption of educational decision making and carries significant economic costs borne solely by female students.

Although campus safety has received attention in existing literature, the specific link between gendered harassment and the economic and academic trade-offs made by female undergraduate students remains underexplored. This paper explores how both the lived experience of harassment and the fear of potential abuse in Delhi University affect the educational and economic consequences faced by female undergraduate students. The study utilizes quantitative survey data and qualitative insights to analyze how both harassment and the perceived threat of harassment influence the lives of female students in academic settings.

Literature Review

Defining Gender-Based Harassment

Gender-based harassment refers to any unwanted physical, verbal, or nonverbal behavior used to target someone based on their gender, which usually leads to physical harm, mental fear, or limited involvement in public or private life. The UN Declaration on the Elimination of Violence Against Women (1993) defines such violence as any act of gender-based violence "that results in, or is likely to result in, physical, sexual or psychological harm or suffering to women, including threats, coercion or arbitrary deprivation of liberty, whether occurring in public or in private life" (UN, 1993).

Delhi: A High-Risk City for Female Students

Despite being perceived as a developed and cosmopolitan city, Delhi has an alarmingly increased crime rate, especially against women. Over the years, it has gained a reputation for being unsafe for women.

A 2011 survey by Jagori, an NGO focused on women's safety, found that most harassment incidents occurred in broad daylight, especially on roads and public transport. Many young women chose not to report these incidents for fear that it would affect their education (Jagori, 2011). A household survey conducted by UN Women and the International Center for Research on Women in 2012 revealed that only 5 per cent of women and girls ranked public spaces in Delhi as 'safe' from sexual violence and harassment. In addition, a report from the Delhi Police presented to the Supreme Court of India found that complaints of public harassment surged fivefold between 2012 and 2013, rising from 154 to 793 cases (Mahapatra, 2013). As per NCRB data, Delhi residents reported over 14,000 crimes against women in 2022, making up almost 29% of all such crimes in major Indian metropolitan cities, and the average being around 39 cases every day (Hindustan Times, 2023).

Currently, Delhi's crime rate against women stands at a shocking 144.4 per 100,000 females, making it the highest in the country (Indian Express, 2025). These statistics highlight the terrors women encounter during daily activities such as walking to class, boarding a bus, or selecting a hostel, especially around college areas.

"Women's Safety Tax" and its impact on the educational choices of female students

The term "safety tax" refers to the extra financial, emotional, and time-related costs that women incur to protect themselves from the threat of gender-based harassment or violence. This is particularly relevant in public areas such as streets, public transport, and educational institutions. This "tax" is not an official government-imposed tax, but rather an invisible, systemic penalty that impacts women due to the unsafe conditions prevailing in many public spaces. For example, Plan International UK reports that girls in the UK spend over £528 per year avoiding unsafe transport or nighttime walking. In India, women opt for costlier cabs over public buses, prefer safer but expensive PG accommodations, and invest in tools like pepper sprays or tracking apps (Plan International UK, 2018; Feminism in India, n.d.).

Additionally, a study by the Mumbai Metropolitan Region Development Authority (MMRDA) revealed that women spend 21% more on transportation than men, primarily due to the need for multi-leg journeys focused on safety (MMRDA, 2016).

The consistent threat of gender-based harassment has led to measurable economic consequences for female students in Delhi. A study published on perceived risk and educational choices found that women often forgo significant academic opportunities in exchange for safer commutes and locations: they are ready to enroll in colleges that are 13.04 percentage points lower in quality for just one standard deviation (SD) improvement in safety, almost 8.5 ranks lower than what they are qualified for. In contrast to this, men show a much smaller sacrifice: 1.37 percentage points or 0.9 ranks (Data2X, n.d.).

Regarding financial costs, women are willing to spend ₹20,000 ($310) more annually on safer travel routes, while men would only spend ₹1,200 ($19). This difference, which is nearly 16 times higher, signifies double the average annual tuition at the University of Delhi, evidently making safety a barrier to affordable education. Women are also willing to travel 40 minutes more daily, compared to just 4 minutes for men, for a safer commute (Data2X, n.d.).

The existing literature gives little attention to how these burdens – both economic and educational, specifically affect undergraduate students at the University of Delhi. This gap is particularly significant given that the University attracts a large female student body from across the country many of whom face heightened risks of safety.

Methodology

The study uses mixed methods embedded research design, combining quantitative data with qualitative insights to present a more comprehensive and nuanced understanding of gender-based harassment in academic settings. The research is both descriptive and comparative in nature.

Primary data was collected through an online questionnaire sent via Google Forms over a period of two weeks in July 2025. The survey began with questions on student profile followed by specific sections on:

1. Educational & Career Disruption
2. Economic Burden
3. Experience of harassment.

The survey was conducted through peer networks over a period of two weeks. Convenience sampling approach was used targeting undergraduate students of Delhi University.

A total of 79 responses were received, comprising 52 females and 27 male undergraduate students. Although our major focus was on the experiences of female undergraduate students, the inclusion of male respondents allowed for valuable gender-based comparisons on educational disruption and financial burden.

Building upon this, the study integrates secondary sources including personal accounts, media reports and documented student movements within Delhi University.

For analysis, descriptive statistics (frequencies, percentages, and averages) were used to identify key trends in the survey data. Comparative analysis was also undertaken to examine differentiated, gendered impacts. Qualitative inputs from personal accounts and secondary sources (using media reports) were analyzed to complement the survey findings and provide contextual depth and nuanced understanding.

The findings of this survey dataset, although insightful, are based on a smaller sample size of 79 respondents due to time and logistical constraints. This may limit generalizability of the findings. Further research on this issue can benefit largely from enhanced sample size.

Results and Discussions

1. Educational Disruption

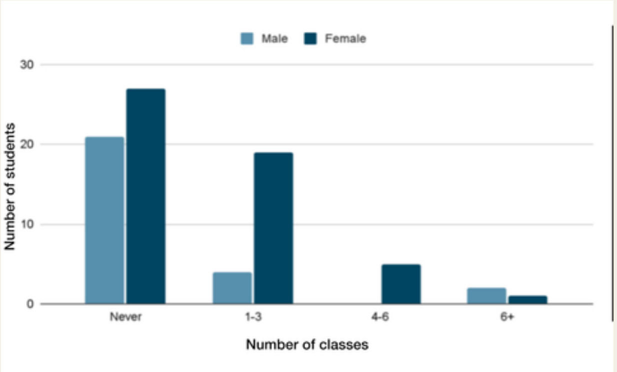
Questions asked in the survey (involving Yes/No)	Women (n=52)		Men (n=27)	
	No. of Respondents	Percent (%)	No. of Respondents	Percent (%)
Are there any spaces in or around your college that you avoid due to the behaviour or presence of certain males?	27	52%	6	22%
Do you avoid evening lectures due to safety concerns?	20	38.50%	3	11%
Have you ever avoided joining or attending student societies/events held after college hours due to discomfort with male members or safety concerns around the college?	20	38.50%	5	18.50%
Would you prefer remote/work from home internships over on-site internships due to safety concerns?	39	75%	8	29.60%

1.1) The survey included a Likert Scale question to explore the extent to which safety concerns affected students' academic experiences. While the majority of male respondents (59%) believed that travel safety concerns were not a major barrier (score 1) in their academic participation, the responses by female students were more spread out. Notably, the largest group of female respondents (32.7%) also marked score 1. From a surface view, this finding may challenge the idea of significant academic disruption. However, on a closer look, we find that of the 17 female respondents, 82.5% of them belonged to all women's colleges, where gender segregated environments may reduce exposure to certain forms of direct harassment. Additionally, of the 13 female students who selected scores 4 and 5, 61.5% were from co-ed colleges.

1.2) With our next question, we aimed to identify patterns related to a critical issue in academia: missed lectures and non-attendance due to safety concerns at colleges. We surveyed students about the number of classes they miss each month because of fear for their safety, providing a frequency scale for their responses. Of the total male respondents, 21 (77.8%) indicated that they never miss classes due to safety concerns. Meanwhile, 27 (51.9%) of the total female respondents reported the same.

1.3) The results reveal a more troubling trend among female students; 19 (36.5%) female respondents miss 1-3 classes per month due to concerns about safety, while 5 (9.6%) report missing 4-5 classes for the same reason. In comparison, only 4 (14.8%) male respondents miss 1-3 classes per month, and none of the male respondents reported missing more than 3 classes. Finally, one female respondent stated that she missed more than 6 classes due to safety fears.

Figure 1: Weekly classes missed by students in University of Delhi due to safety concerns



Source: Authors' survey data

1.4) In relation to the discussion about missed lectures, we inquired whether our respondents avoid evening classes due to safety concerns. The results were concerning: 20 female respondents (38.4% of the total) indicated that they steer clear of evening lectures for this reason, whereas only 3 male respondents (11.1%) reported similar avoidance. This highlights a significant pattern in which women often modify their behavior out of fear for their safety, sometimes even due to societal pressures or parental expectations to return home early or before dark.

1.5) A major insight from our survey highlights the reduced participation of female students in extra-curricular student events. 38.4% of female respondents admitted that they have avoided joining or attending student societies and events held after college hours, citing discomfort with male members or safety concerns around college. Conversely, only a few male respondents indicated similar apprehension. This stark contrast indicates how female students in Delhi University face higher restrictions in access to campus participation. The fear of potential harassment or a previous incident lingers on and continues to shape broader academic decision-making.

1.6) The internal environment of institutions, as well as the college peripheries, significantly influences students' perceptions of safety. When we asked students if there were any spaces they avoided in or around the college due to the behavior or presence of certain males, we received a concerning yet unsurprising response. Out of the female respondents, 27 (51.9%) reported feeling afraid to enter certain spaces because of unsettling stares or actions of specific males. In contrast, only 6 (22.2%) of the male respondents indicated they had similar fears. This highlights that while some men may also fear certain male behaviors, women experience this fear on a much larger scale every day.

1.6.1) Faculty misconduct and its impact

Repeated instances of sexual harassment by male professors across Delhi University colleges have led to a climate of fear and mistrust among female students. In Daulat Ram College, a student bypassed the college's Internal Complaints Committee (ICC) and approached the police directly, stating a lack of institutional trust after a professor allegedly sent inappropriate messages and threatened her with leaving her papers unchecked. At Bharati College, despite the ICC recommending suspension of a faculty member for creepy behaviour and sending lewd messages, administrative delays stalled action. Ramjas College also witnessed multiple allegations against a professor, with earlier complaints reportedly withdrawn, raising problems of systemic silence. Such incidents often lead to non-attendance of female students in lectures, limit classroom interactions, and disengage them from academic opportunities out of fear of discomfort, leading to long-term disruption in their educational journeys.

1.7) When asked about awareness and perception of harassment reporting mechanisms in their respective colleges, the responses were diverse and revealed critical gaps in both awareness and institutional trust. 42.7% of all respondents stated that they were aware of such mechanisms and found them to be safe and supportive. Of this 68% female students belonged to women's colleges, and only 4 out of 25 women were from co-ed institutions.
In addition to this, an alarming 41.5% of all respondents accepted that they were unaware of any reporting mechanism. This highlights how institutions fail to create a system of awareness and communication for students to reach out to. This section included 20 female respondents, of whom 75% were women college students. Another critical thing to mention is that 13.4% of respondents expressed awareness of the set reporting mechanism but did not find it safe or supportive. This finding is a clear indication of the institutions' failure to build a strong, responsive system. This group included 5 males and 6 females.

2. Economic Burden

In the literature review, we explore the concept of "women's safety tax"- an intangible tax that women pay through psychological distress due to the fear of harassment. Whereas in this section, we aim to analyse the direct expenses incurred by undergraduate students due to actual harassment or fear of potential abuse. Our analysis is structured around three key aspects which are closely linked to the students' perception of safety: Transport, Safety tools, and student accommodation. By examining these three areas, we aim to uncover an emerging trend regarding the costs incurred due to safety by male and female undergraduate students in Delhi University.

2.1) Transport

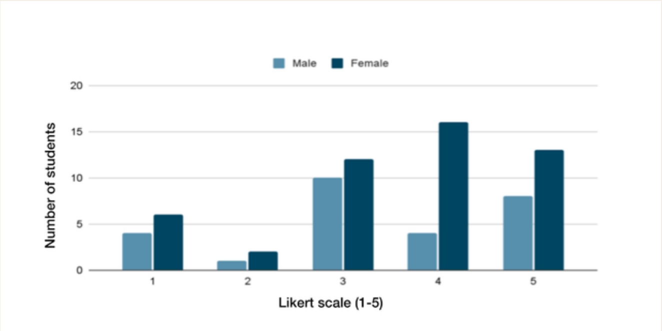
METRIC	FEMALE (n=52)	MALE (n=27)
Average Monthly Transport Cost	₹1,799.04	₹1,190.74
Shift to an expensive mode of transport	31 (59.6%)	4(14.8%)
Use an expensive mode of transport “Daily” or “A Few times a week”	19 (36.5%)	6 (22.2%)

Findings from our survey indicate that female undergraduate students face considerably higher transport-related costs compared to their male peers, primarily due to personal safety concerns.

Female students report an average monthly cost of ₹1799.04, which is nearly ₹600 higher than what male students spend. This disparity stems not merely from a personal preference but from a forced burden imposed by safety concerns. By examining the safety-driven shifts in modes of transport, we find that 59.6% of female respondents have shifted to a more expensive mode of transit where harassment is less likely to occur, whereas only 14.85% of male students reported the same. Moreover, 36.5% of female students reported using these expensive modes daily or several times a week, highlighting how their concerns relating to harassment are not occasional, but a daily lived reality of vigilance and caution.

The impact of these concerns is not limited to transportation expenditure but in fact extends to lost or altered academic opportunities as well. While 75% female respondents prefer to intern from home rather than on-site internships due to safety-related concerns, this was true for only 29.6% of the total male respondents. Further, when asked how significantly travel safety concerns had affected their academic mobility, 16 out of 27 male students reported never avoiding such opportunities, whereas only 17 out of 52 female respondents shared the same. Notably, 13 female respondents (25%) marked “very and extremely significant” (score 4 and 5) compared to only 2 male respondents, underlining how the constant fear of harassment or actual experience translates into self-imposed constraints.

Figure 2: Number of students unable to opt for expensive mode of transport to ensure safety due to financial constraints



Source: Authors’ survey data

2.2) Safety tools

The data reveals a clear gendered burden borne by female students in the purchase of personal safety tools such as pepper sprays and self-defense alarms. 54% of female students reported having purchased such tools, whereas only 2 out of 27 male students did the same. Moreover, among the female students who reported purchasing safety tools, the most common spending range was ₹150–₹300, with 13 respondents falling into this category. A smaller but notable number spent ₹300–₹500 or above. By contrast, only two male respondents reported any spending at all, both in the ₹500+ category.

To understand whether affordability or financial constraints were a limiting factor, the respondents with no purchases were asked if financial factors prevented them from doing so, rated on a 1–5 Likert scale.

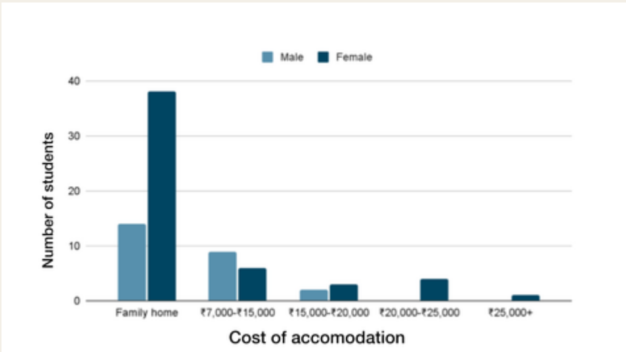
Interestingly, among female respondents who hadn’t made such purchases, only one marked a score of 5 (extremely significant), and two others marked 2 or 3, while 14 marked 1 (not a constraint at all). For male respondents, the pattern was similar — 15 marked 1, indicating no perceived financial barrier, while only one marked 5. At first glance, this may seem a rather contradictory finding, however, when analysed in terms of monthly family income, we see that among female participants, only one reported a monthly household income below ₹25,000, and four fell within the ₹25,000–₹50,000 range, with the majority (90.3%) residing in the higher income brackets bracket. This limits the generalizability of the finding on whether income is a major factor in purchasing safety tools, especially regarding female students from economically weaker backgrounds who may face more pronounced constraints but are underrepresented in the sample. Moreover, the existing literature on Women Safety Tax highlights the disproportionate emotional, temporal, and financial burden faced by women in navigating unsafe educational environments.

The gendered pattern of purchase of safety tools is an out-of-pocket gender specific cost. Female students are more likely to invest in these tools due to fear and daily anticipation of harassment.

2.3) Student Accommodation

To further explore our third key aspect concerning economic burden, we initially inquired about the current monthly expenses that students incur for their housing. To facilitate this inquiry, we employed a frequency scale for their responses. While most of our respondents (65.8%) live with their families in Delhi, we discovered that only 6 (11.53%) female respondents were paying less than ₹15,000 for their accommodation, whereas 9 (33.33%) of male respondents were paying the same amount. It is important to note that 7 (13.4%) of female respondents and only 2 (7.4%) of male respondents are paying between ₹15,000 and ₹20,000 for their current accommodation, while 1 female respondent is paying more than ₹25,000 for the same. To thoroughly investigate the economic repercussions, we inquired of our respondents whether they are presently incurring higher accommodation costs due to safety concerns. This encompasses factors such as residing in safer neighborhoods, accessing all-women facilities, and utilizing enhanced security features. We will now proceed to analyze these findings in detail. 6 (22.22%) of the male respondents and 11 (21.15%) of female respondents claimed that they are definitely paying more for their accommodation due to safety concerns, while only 1 male respondent and 14 (26.9%) of female respondents are not sure yet feel like they are experiencing the same burden. This underscores an important trend indicating that, while some male respondents may face additional living costs related to safety, it is often the case that women are more frequently affected by these increased expenditures.

Figure 3: Cost of accommodation for undergraduate students of University of Delhi



Source: Authors' survey data

3) Incidents of Harassment

An open-ended question in our online survey unravelled disturbing incidents shared by undergraduate students of Delhi University, highlighting the horrifying state of safety in and around their college surroundings. Even if each experience is personally lived, they form a combined pattern of fear, missed opportunities, and unresolved trauma that affects their daily lives and academic participation.

One of the respondents talked about how "the area tends to have many people whose behavior feels uncomfortable or unsettling", especially during commuting hours. Another respondent shared a terrifying and sinister incident - "van drivers standing on the road were masturbating in public, looking at all the women going to college... I was traumatized and ran for my life." A frightening reality of such incidents is that they often occur in broad daylight, sometimes even in the presence of supposed law enforcement figures-"There is a police car often right there... it was there that day too."

The psychological toll is reflected in how students adapt to fear and reshape their lives, from taking longer routes to opting for more expensive forms of travel. One student wrote about how "a creepy guy beat me on my face and gave a creepy smile" at a railway station while going to her hometown, eventually making her avoid train travel entirely, despite the financial burden of opting for flights every time. Another said she was terrified of walking on the lanes near her hostel simply "due to their creepy stares". The simple act of walking in public has become an emotionally onerous experience, with another student stating they are regularly met with the unwanted and unsettling stares of creeps around their college peripheries
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Even within college spaces during events or fests, incidents like groping and verbal abuse were commonly mentioned. The normalization of apparent general groping and verbal abuse is disturbing, as they are casually recorded, almost as if expected.

These responses are silent cries for help. The emerging pattern is a reality where female students must constantly assess their safety, modify their behavior, and bear invisible emotional costs, all while pursuing their education. The psychological distress, financial burden, and routine disruption caused by these incidents demand not only recognition but an urgent systemic response.

Conclusion

This study explores the lived experiences of many female undergraduate students in Delhi University, for whom education is not merely a pathway to a vibrant career but in fact a reality that entails significant economic and academic opportunity costs. Their education in a prestigious public university comes with disproportionate economic burden, educational disruption and missed campus opportunities.

Our data, coupled with qualitative analysis, show how gender-based harassment is not limited to episodic incidents but is deeply entrenched in institutional structures, campus life and daily travel. Institutions meant to serve as spaces of vibrant learning and growth often become sites of fear. Female students bear a disproportionate burden. They not only pay more for transport, housing, and safety tools but also miss classes, avoid events, and limit academic mobility. These constraints are not by choice, but as a necessity to manage constant threats of harassment – factors that their male peers rarely consider.

Addressing these challenges requires institutional accountability, gender –sensitive policies and transparent redressal mechanisms to reduce economic burdens, enhance productivity, and promote gender equity within the university

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