



लपवेर

**THE ANNUAL MAGAZINE
VOLUME : VI**

THE COMMERCE SOCIETY

SHRI RAM COLLEGE OF COMMERCE



ACKNOWLEDGEMENT

As we commemorate the successful completion of another year, the Commerce Society of Shri Ram College of Commerce takes great pride and joy in celebrating our 54 years of establishment. The unveiling of the sixth edition of our annual magazine, Mudra, reaffirms our unwavering dedication to upholding the legacy of excellence and growth that defines our esteemed institution. The journey of crafting this magazine has been an enriching experience, one that has deepened our knowledge, honed our skills, and imparted invaluable lessons on teamwork and perseverance. We extend our heartfelt gratitude to all those who have supported us throughout this remarkable journey.

First and foremost, we express our sincere appreciation to the writers and researchers whose dedication and effort have significantly contributed to the success of this publication. Their insightful articles, thought-provoking essays, and creative ideas have brought to life a magazine that authentically reflects the ethos of our institution.

Furthermore, we extend our gratitude to the corporations that participated in our interview section, or participated in our surveys conducted for the research reports, providing invaluable insights and experiences that have enriched the magazine and offered a diverse perspective on various topics.

We also recognize the invaluable contributions of our dedicated team, whose tireless efforts have been instrumental in bringing this magazine to fruition. Their hard work, passion, and commitment have ensured the production of a publication that we are proud to present to our readers.

Lastly, we express our deepest appreciation to our teacher-in-charge, Prof. Asha Rani whose guidance and mentorship have been indispensable throughout this journey. Her unwavering support and nurturing guidance have served as a constant source of inspiration for us, and we are profoundly grateful for his invaluable contribution.

We extend our sincere appreciation to everyone who has supported us in our endeavor to produce a magazine that authentically captures the spirit of our institution. We hope that Mudra will inform, engage, and inspire our readers, serving as a testament to our commitment to excellence and growth.

ABOUT THE SOCIETY

The Commerce Society at Shri Ram College of Commerce stands as a beacon of excellence, deeply rooted in a legacy of providing unparalleled opportunities for growth and development. With a steadfast commitment to nurturing intellectual curiosity and fostering a culture of continuous learning, we strive to empower our members to excel in every aspect of their lives.

Driven by a passionate theme of young and dynamic individuals, we endeavor to offer a diverse array of learning experiences and platform for our Members to showcase their talents. Supported wholeheartedly by college authorities, we proudly organize prestigious commerce festivals such as Bizstreet, serving as a catalyst for industry engagement and networking. Ranging across different arenas of the wide commerce stream: from finance to geopolitics, corporate affairs to economics, and marketing to public relations, at our core, we believe in marrying tradition with a relentless pursuit of excellence. By cultivating an environment that champions creativity, innovation, and a thirst of achievement, we aim to empower each member to realize the fullest potential and become the best version of themselves.

The Commerce Society at Shri Ram College of Commerce is a vibrant and dynamic community committed to excellence in all endeavors. We take immense pride in our tradition to providing unparalleled opportunities for skill enhancement and personal growth, and we remain steadfast in our dedication to upholding their esteemed legacy.



PRINCIPAL'S NOTE

Since its inception, the Commerce Society of Shri Ram College of Commerce has been a hub for discussion, debate, and innovative ideas in commerce. Through its initiatives, it hones students' intellect, leadership, and professional skills. MUDRA Magazine embodies these efforts, showcasing thought, research, and innovation across commerce, economics, public policy, and beyond.



Over the years, MUDRA has grown to become a cornerstone of the Society's publication efforts, alongside its bi-weekly newsletter, "The ComSoc Gazette". Now in its sixth edition, this year's magazine has been a true delight to read. It reflects not only the editorial rigour and research depth of the student contributors but also their ability to present pressing contemporary issues in an engaging and insightful manner.

The thematic range of this edition is both timely and thought-provoking, from Artificial Intelligence and Geopolitics to Behavioural Economics, Sustainability, and Wellness. These topics resonate deeply with the ever-evolving global landscape and highlight the forward-looking vision of the Society. I extend my warm compliments to the student team and the contributors whose collective effort has shaped this edition into a work of both relevance and reflection.

I would especially like to acknowledge Dr. Asha Rani, the Faculty Advisor, for her unwavering guidance and support. Her mentorship has been instrumental in translating the Society's values into this remarkable publication. Under her stewardship, the Society continues to expand its academic and creative frontiers. Lastly, I offer my heartfelt appreciation to the entire Editorial Board for their commendable commitment and tireless work. I am confident that this edition of MUDRA will provide readers with a rich, engaging, and intellectually rewarding experience.

Wishing the Commerce Society continued success in all their future pursuits.

Prof. Simrit Kaur
Principal

TIC's NOTE

It is with great pride that I extend my sincere congratulations to the dedicated team behind the sixth edition of MUDRA, the esteemed annual commerce magazine of SRCC. This publication continues to serve as a remarkable testament to the intellectual depth, creativity, and multifaceted perspectives of our student community. It offers thoughtful and relevant discourse on a wide array of subjects encompassing business, finance, and economics.



The students' initiative in engaging with founders, entrepreneurs, and thought leaders, and in articulating their insights with clarity and purpose, is truly commendable. Their ability to translate these experiences into meaningful narratives reflects a high degree of diligence, passion, and commitment to academic and professional excellence.

I extend my best wishes to The Commerce Society for continued success in all future endeavours. May their efforts continue to leave a lasting impact and inspire successive cohorts to contribute meaningfully to the evolving landscape of commerce and scholarship.

Dr. Asha Rani
Teacher-in-Charge

EDITOR IN CHIEF'S NOTE

"In a world that's constantly reinventing itself, writing remains our most timeless innovation."

It is with immense pride and heartfelt excitement that I welcome you to the sixth edition of Mudra — a magazine that has grown not just in its reach, but also in its relevance.

Building on the rich legacy of our past editions, Mudra 6.0 ventures into bold, current, and forward-thinking territory. This year, we bring you a compelling blend of insightful articles, sharp commentary, and thought-provoking narratives that reflect the dynamic landscape of commerce and society. Our focus has expanded to capture the pulse of today's most urgent conversations — from the growing imperative of environmental sustainability in corporate strategies, to the rise and resonance of celebrity-led brands, and the fascinating innovation clashes between industry giants that are shaping markets across the globe.

This edition also features exclusive interviews with visionary co-founders and trailblazing startup leaders, offering readers a rare glimpse into the minds behind today's most disruptive ideas and impactful ventures. Their journeys are a testament to the power of resilience, ingenuity, and purpose-driven leadership.

Each page of this magazine is a result of tireless effort, creativity, and collaboration. From curating timely content to ensuring visual finesse, the editorial team has poured its heart into crafting an edition that is not only informative but inspiring. Mudra continues to be a platform where young minds engage with contemporary thought, challenge conventions, and build a bridge between academia and industry.

As we turn this new chapter, I invite you to read with curiosity and reflect with intent. Whether you're a first-time reader or a returning one, may Mudra 6.0 spark new ideas, deepen your understanding, and ignite your intellectual journey.

Warm regards,
Mansi Mishra
Editor-in-Chief

EDITOR IN CHIEF'S NOTE

“The truest ideas don’t shout, they unfold in silence, between the lines of thoughtful writing.”

It brings me immense pride and genuine anticipation to unveil the sixth edition of Mudra. With every passing volume, the magazine has grown not just in scope but in spirit as Mudra 6.0 marks a definitive leap forward. This edition isn't merely a publication, it is a curated exploration of the shifting landscapes of commerce, culture, and critical thought, a mirror to the questions that define our times.

Drawing on the rich heritage of our previous editions, Mudra 6.0 enters new territory of bold, contemporary, and visionary thinking. This edition presents to you a stimulating mix of perceptive articles, biting commentary, and thought-provoking storytelling that mirrors the vibrant landscape of commerce and society. Our horizon has broadened to capture the pulse of the most pressing dialogues, from the growing importance of ESG in investment strategy and sustainability, to the evolving landscape of digital advertising and brand storytelling. We further explore the rise of celebrity-led enterprises that are reshaping consumer culture, and dive into the fierce innovation battles that define today's most competitive industries.

This edition also brings you closer to the changemakers, visionaries and disruptors through exclusive interviews with entrepreneurs who didn’t just dream differently, but dared to act. Their journeys are layered with resilience, purpose, and lessons far beyond balance sheets.

Mudra is, and always has been, a space for student-led thought leadership. The editorial board poured their minds and hearts into crafting this issue, ensuring that it not only informs, but also inspires. Their commitment, creativity, and insight shine through every detail, from concept to content to design.

To every reader whether old or new, we welcome you to immerse yourself in Mudra 6.0. Let it challenge your assumptions, ignite your imagination, and maybe, spark the beginning of your own idea worth sharing.

Manya Mahajan
Editor-in-Chief



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Dive into the pulse of the past year with our Timeline section, highlighting the significant global events that shaped our collective narrative.

02

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Delve into how ESG factors shape responsible investing, driving long-term value while aligning profits with planetary and social goals.

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THE DIGITAL PULSE

Track the rhythm of the digital age as we decode the strategies behind impactful campaigns and online engagement.

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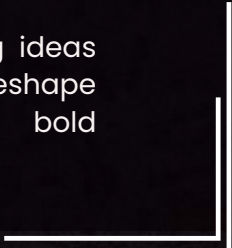
FAME TO FORTUNE

Discover how celebrities turn star power into brand empires, shaping trends and transforming the landscape of consumer culture.

05

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Reclaiming the narratives of women whose intellect and artistry redefined fields but remained in the shadows for too long.

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LONG OFF!



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OCTOBER

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AMID GEOPOLITICAL
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NOVEMBER

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TRUMP SWORN IN AS 47TH U.S. PRESIDENT FOR SECOND TERM

Trump defeated Kamala Harris by 2.5 million votes, helping Republicans regain Senate control. His dramatic win followed an assassination attempt, fiery speeches, and intense media attention. Despite a narrow margin, global leaders prepared for a transactional Trump presidency focused on bold, business-driven "America First" policies and a revived MAGA agenda. The election marked a significant shift in U.S. politics, reflecting changing priorities and reshaping global expectations of American leadership.



JAN



DELHI ELECTION RESULT

On 8 February 2025, the BJP, the world's largest political party, secured power in Delhi by winning 48 of 70 assembly seats, while AAP dropped to 22 and others won none. The election saw intense ideological clashes and a race of freebies. Following party directives, first-time MLA Rekha Gupta became Chief Minister, with Pravesh Sahib Singh as her deputy. BJP vowed to clean the Yamuna and improve Delhi's air quality, aiming to shed the city's polluted image.



FEB



MAHAKUMBH 2025

The Mahakumbh, held every 144 years after 12 Kumbh Mela cycles, took place in Prayagraj from 13 January to 26 February 2025. Over 65 crore devotees gathered at the sacred Triveni Sangam to take a holy dip. Authorities ensured a smooth experience with new bridges, AI-powered cameras to track missing persons, and enhanced sanitation. This spiritual mega-event not only showcased the power of faith but also highlighted exceptional planning, making it a landmark moment in Bharat's cultural history.



JAN



PM MODI'S VISIT TO USA

On 12 February 2025, Indian PM Narendra Modi visited the USA at President Donald Trump's invitation. Welcomed warmly, both leaders launched initiatives to boost Indo-US ties, including "Mission 500" to double trade to \$500 billion by 2030. Modi met Elon Musk to discuss AI, technology, and space exploration. Their talks emphasized innovation, development, and enhanced bilateral cooperation. A major highlight was their joint pledge to combat terrorism, signaling stronger collaboration against global terrorist threats and networks.



FEB



EARTHQUAKE IN MYANMAR

A powerful 7.7 magnitude earthquake struck Myanmar, claiming over 3,000 lives and injuring 4,000, with many still missing. Tremors were felt in China, Bangladesh, and Thailand. Over 70 aftershocks in 24 hours heightened panic, while rescue efforts were hindered by bad weather. Bharat launched Operation Brahma, sending 15,000 kg of relief supplies—sleeping bags, ready-to-eat meals, and water purifiers—to aid rescue operations. The disaster highlighted regional vulnerability and the importance of swift humanitarian assistance and cooperation.



MAR

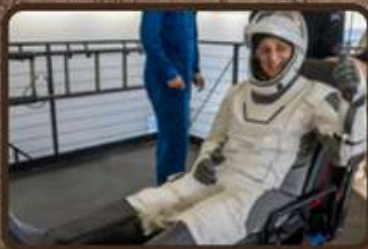


SOME HEAT IN MIDDLE EAST

Rising Middle East tensions led Israel to strike the Iranian consulate in Damascus, killing key officials. Iran retaliated with drones and missiles targeting Israel. In response, Israel hit an Iranian air defense site near Natanz. Though casualties were downplayed, satellite images confirmed damage. Despite escalation, both sides showed restraint to avoid full-scale war. The exchanges revealed the region's fragile stability and deep-rooted volatility, highlighting the ever-present risk of conflict in a geopolitically sensitive and already tense environment.



APR



SUNITA WILLIAMS RETURNS TO EARTH

NASA astronaut Sunita Williams and Butch Wilmore returned to Earth on 19 March 2025 after a nine-month delay caused by faults in the Starliner spacecraft. Originally planned as an eight-day mission, they were finally brought back by SpaceX Dragon in a 17-hour journey closely monitored by NASA and SpaceX. Rehabilitation has begun to address the physical toll of extended space travel. PM Modi congratulated Sunita Williams, hailing her as India's daughter and praising her safe return and resilience.



MAR



THE COAL COUNTDOWN

At the G7 Climate, Energy, and Environment Ministers' Meeting in Turin, members agreed to end unabated coal use by 2035. This marks a key step ahead of the COP29 climate summit. However, experts warn coal must be phased out by 2030 to meet the 1.5°C global warming target. The decision increases pressure on major coal users like China and India to shift more rapidly toward cleaner energy, underscoring the urgency of global cooperation for a sustainable future.



APR



THE IRANIAN TRAGEDY

On May 19, Iranian President Ebrahim Raisi and seven others, including Foreign Minister Hossein Amir-Abdollahian, died in a helicopter crash amid heavy fog near the Iran-Azerbaijan border. A five-day national mourning period was declared, and a vice president assumed interim leadership. Weeks later, reformist Masoud Pezeshkian was elected president. While Russia and China offered condolences, Western leaders condemned Raisi as a key figure in Iran's repression, calling him a "brutal participant" with "blood on his hands."

MAY



ONE-TWO-THREE.....

The Lok Sabha election results on June 4 defied expectations, as BJP fell short of the 272-seat majority, winning only 240 seats. Contrary to exit polls, the party had to rely on the NDA alliance, which secured 292 seats. Meanwhile, the INDIA bloc, led by the Congress, made a strong comeback with 235 seats, signaling a revived opposition. Despite the setback, the results marked the beginning of PM Modi's third term in office.

JUN



MAY

THE GOLDEN COMEBACK

Dipa Karmakar made history by becoming the first Indian to win gold at the Asian Gymnastics Championships. She triumphed in the women's vault final in Tashkent with a score of 13.566. This win was especially meaningful, marking her comeback after four years sidelined by injuries and a doping suspension. Karmakar's remarkable achievement is set to inspire a new generation of Indian gymnasts to dream big, persevere through challenges, and aim for excellence on the global stage.



JUN

LONG OFF! LONG OFF! LONG OFF!

On June 29, India ended an 11-year title drought by winning the T20 World Cup, defeating South Africa by 7 runs in a thrilling final. Led by Rohit Sharma, the team remained unbeaten throughout the tournament. The emotional victory brought tears to players and fans alike. The triumph also marked a perfect farewell for legends Virat Kohli and Rohit Sharma, who announced their retirement from T20Is, making the win even more memorable for Indian cricket.





ONE WHO SURVIVES, THRIVES ABOVE ALL

On July 13, 2024, former U.S. President and then-presidential candidate Donald Trump survived an assassination attempt during a rally in Butler, Pennsylvania. He was shot in the upper right ear by 20-year-old Thomas Matthew Crooks, who was killed shortly after. The motive remains unknown. A viral photo showed Trump raising his arm and shouting "fight," boosting public support. The incident led President Joe Biden to withdraw from the race, endorsing Kamala Harris as his successor.



JUL



STUDENTS TOPPLE HASINA, YUNUS TAKES CHARGE

On August 5, 2024, Bangladesh PM Sheikh Hasina resigned and fled the country after 15 years in power, amid massive student-led protests. The unrest, triggered by quotas in government jobs for descendants of 1971 war freedom fighters, evolved into a national uprising dubbed the July Revolution. A temporary government was formed under Nobel laureate Muhammad Yunus. Hasina has remained in hiding since, with speculation suggesting she may be residing in India.

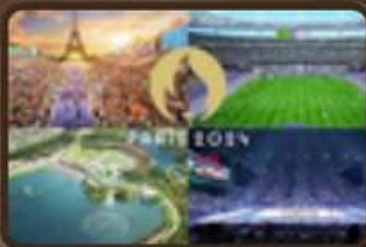


AUG



CITY OF LOVE LIGHTS THE FLAME: PARIS WELCOMES THE WORLD TO THE OLYMPICS

The 2024 Summer Olympics began on July 26 in France, with Paris as the host and events held across 16 other cities, including Marseille. For the first time in modern history, the opening ceremony took place outside a stadium, featuring athletes parading by boat along the Seine. Paris 2024 marked a milestone with full gender parity among athletes. Despite political and logistical challenges, the Games were hailed a success, selling a record-breaking 9.5 million tickets.

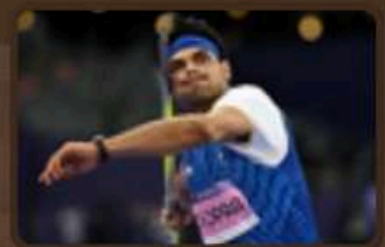


JUL



INDIAN STARS SHINE IN PARIS, UNFURL TRICOLOUR

Indian athletes shone at the Paris Olympics, securing a total of five medals, including a silver. Manu Bhakar emerged as a standout, becoming the first Indian individual to win two medals in a single Olympics. Neeraj Chopra added a silver to his Tokyo gold, while the men's hockey team claimed bronze—marking consecutive Olympic medals for the first time since 1972. Strong efforts by Lakshya Sen, Vinesh Phogat, and Mirabai Chanu also earned national admiration.



AUG

M HITS CM, STEPS MID BACKLASH

ment, Arvind Kejriwal resigned
r amid mounting pressure over
liquor policy money laundering
st sitting CM to be arrested.
on, Deputy CM Atishi officially
g as the de-facto leader during
y AAP leaders Manish Sisodia
ere also arrested in the same
sis within the party.



HYUNDAI EYES GLOBAL EV PUSH FROM INDIA

Hyundai Motor India plans to export EVs to emerging markets like Africa and Latin America, aligning with India's growing global EV role. Four models, including the Creta EV, will launch by Q4 FY25. While focused on Indian buyers, Hyundai sees overseas potential due to similar infrastructure needs. The company aims to make India a global EV hub, investing in localization of battery packs and components to offer cost-effective, competitive models and boost clean energy exports.



TRUMP ELECTED PLEDGES ECONOMIC

In a historic political coronation, Donald Trump won the November 2024 U.S. election, becoming the first since 1980 to serve non-consecutive terms. President, Trump campaigned on economic revival through tax cuts, protectionism, and energy expansion. His return sparked global markets over foreign policy, climate change, defense and fossil fuel production, immigration, tech, and U.S.



OCT



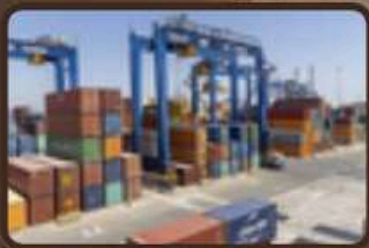
NOV



SEP

J&K ELECTION, RACE DEMOCRACY

4, Jammu and Kashmir held its
abrogation of Article 370 and
n territory. With a strong 63%
marked a return to democratic
of delay due to insurgency. The
C's Omar Abdullah, secured 49
majority mark—and formed the
h praised the Election
re for ensuring peaceful, fair



INDIA'S EXPORTS RISE 19% YOY AMID GEOPOLITICAL VOLATILITY

Amid global uncertainty, India's exports rose 19.08% year-on-year in October 2024, reaching \$73.21 billion, up from \$61.48 billion in October 2023. Merchandise exports grew 17.3% to \$39.2 billion, while services exports hit \$34.02 billion. Key sectors driving growth included engineering, electronics, chemicals, textiles, and rice. The surge highlights India's resilient and diversified export base. The government hailed it as a sign of strong trade diplomacy, though global economic challenges may affect future momentum.

OCT



COP29: RICH \$300B ANNUAL

The 29th UN Climate Conference of the Parties (COP29) in Baku marked a major breakthrough. Developed nations pledged \$300 billion annually by 2035 to support developing countries. It also saw a long-pending carbon market regulated global carbon price, boost clean energy and climate finance to the Global South. Though enforcement of accountability remains a challenge, the summit was hailed as a historic step.





TRUMP ELECTED U.S. PRESIDENT, PLEDGES ECONOMIC OVERHAUL

In a historic political comeback, Donald Trump won the November 2024 U.S. election, defeating Joe Biden and becoming the first since Grover Cleveland to serve non-consecutive terms. With JD Vance as Vice President, Trump campaigned on economic revival through tax cuts, protectionism, and deregulation. His return sparked global market shifts, raising concerns over foreign policy, climate goals, and trade. While defense and fossil fuel sectors surged, debates over immigration, tech, and U.S.-China ties intensified.



NOV



COLLAPSE OF GERMAN CABINET; FEBRUARY 2025 SNAP ELECTIONS

Germany faced a historic political collapse in December 2024 when Chancellor Olaf Scholz lost a confidence vote in the Bundestag. Deep divisions within the SPD-FDP-Greens coalition, especially over fiscal policy, culminated in Scholz dismissing Finance Minister Christian Lindner, effectively breaking the alliance. President Frank-Walter Steinmeier dissolved parliament on February 23, 2025, calling snap elections. The crisis plunged Europe's largest economy into uncertainty amid broader EU challenges like energy transition, economic slowdown, and rising geopolitical tensions.



DEC

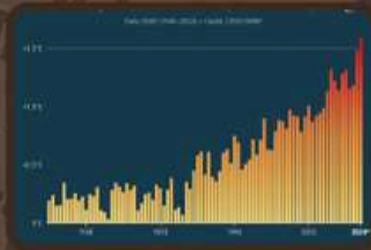


COP29: RICH NATIONS PLEDGE \$300B ANNUALLY FOR CLIMATE AID

The 29th UN Climate Change Conference (COP29) in Baku marked a major breakthrough in climate finance. Developed nations pledged \$300 billion annually by 2035 to support developing countries, tripling the previous \$100 billion goal. The summit also finalized long-pending carbon credit trading rules, creating a regulated global carbon market. These moves aim to boost clean energy and green infrastructure in the Global South. Though hailed as a diplomatic success, enforcing accountability remains a key challenge.



NOV

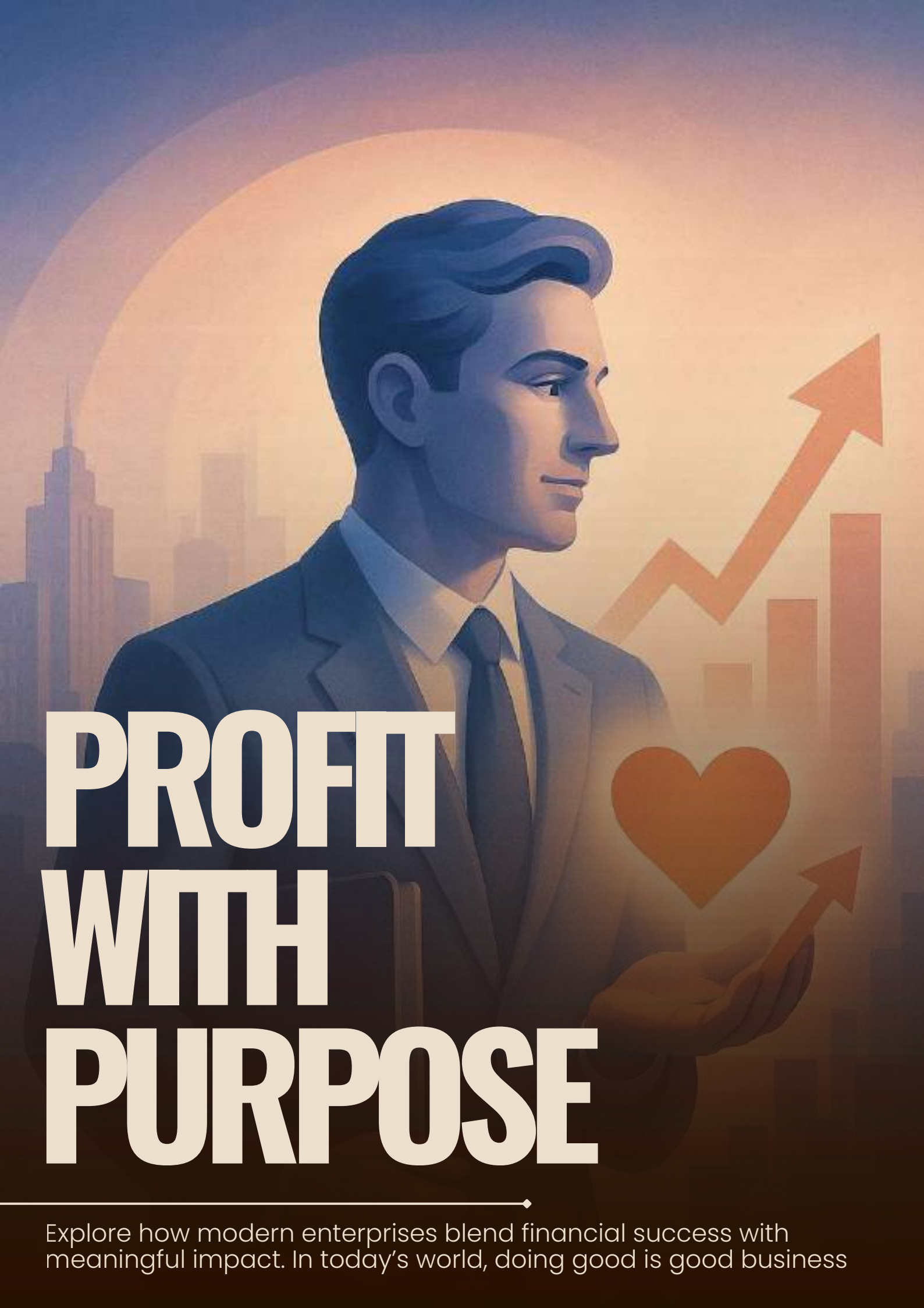


NOAA DECLARES 2024 HOTTEST YEAR ON RECORD

At the end of 2024, NOAA reported it as likely the hottest year ever recorded. Fueled by climate change and El Niño, extreme heat waves hit Europe and Asia, while floods and wildfires surged globally. These events underscore that climate change is a current crisis, not a distant threat. Experts and world leaders are urging stronger emission limits and green infrastructure investment. The alarming trend signals a critical tipping point for the planet's environmental future.



DEC



PROFIT WITH PURPOSE

Explore how modern enterprises blend financial success with meaningful impact. In today's world, doing good is good business



BEYOND GREEN: TESLA AND ESG - SUSTAINABLE INVESTING PARADOX OF FUTURE

BY ANMOL

ESG criteria as non-negotiable points to measure corporate performance are now pervasive in the modern 21st century, a seismic transformation that the investment landscape has undergone, which is dominated by reason and experience rather than the old-school ways. Framed against an increasingly widely shared expectation for corporations, governments, and markets, they equally must provide answers regarding transparency and accountability as to social causes; sustainability gives a meaning of life and growth, i.e., equity. This shift is underpinned by the understanding that long-term financial success is inextricably tied to a firm's capacity to manage climate risks, promote social equity, and enact transparent governance.

Tesla Inc., the electric vehicle leader spearheaded by Elon Musk, stands as such an instructive example. Whilst celebrated for its green tech revolution, the ESG characteristics of Tesla are polarising — combining exceptional decarbonisation moves with longstanding labour disputes and governance squabbles. In this article, using Tesla as an example and breaking down its ESG performance highlights the cornerstones

of ESG integration, the difficulty of aligning profit with purpose, and further benefits to investors looking to map capital with planetary/regional health.

ENVIRONMENTAL PILLAR - DUAL LEGACY OF INNOVATION, VISIBILITY FOR TESLA

Tesla is indisputably a game changer when it comes to the environment. The company has pushed electric vehicles into mass adoption, significantly increasing global-scale fossil fuel phase-out this month by an estimated ~5.4 million metric tonnes of CO₂-equivalent annually. Gigafactories, run more and more on renewables, are crystallisations of the circular economy, featuring battery recycling programmes pursuing 92% material recovery. Following this line of thinking, these innovations are directly in line with the Paris Agreement promise to keep global warming under 1.5°C, and as such, with Tesla pulling on one of the major threads for a dramatic decarbonisation of the transportation sector that accounts for 24% of global emissions.

But the highfalutin' green side of Tesla is undercut by ethical issues. The lithium-ion batteries key to its products contain cobalt, a mineral linked to child labour in the Democratic Republic of Congo. Tesla touts "conflict-free" cobalt, but sources say opaque supply chains and an explosion in EV demand risk allowing human rights abuses to continue. Moreover, the fact that lithium mining has heavy environmental footprints (water depletion in deserts, like Chile's Atacama Desert) reveals the paradox of following an eco-friendly technology.

GOVERNANCE AND MARKET FORCES

This adds another level of complexity for Tesla in its ESG narrative because much of its success relies on regulatory credits. From 2023: Tesla earned \$3.3 billion from selling to competitors in the EV/electric powertrain space zero emission credits—a model critics say will not be sustainable as rivals move towards fully electric fleets. This suggests the fundamental lesson in ESG: we cannot do product innovation without systems resilience — for it is environmental leadership.

THE SOCIAL PILLAR: WORKFORCE AND COMMUNITY HEALTH AND SAFETY

Tesla exposed a different dichotomy in its social performance. At least on one side, its "accelerating the advent of a sustainable energy era" mission has enlisted a staff of approximately 140K employees who are motivated by environmental idealism. Beyond its investment in workforce development, the company partners with community colleges to

train technicians for EV technician roles - essential in achieving the green skills gap.

However, Tesla has a chequered labour history with claims of workplace safety infringements, union-busting, and racial discrimination. In 2021, Tesla illegally suppressed unionisation efforts at its Fremont factory, and the National Labour Relations Board (NLRB) and OSHA documented injury rates at this factory 30 % greater than their respective industry averages. These controversies undermine the "S" in ESG, as laid out by ECCLES ET AL. 2014, which says fair labour practices and employee welfare are key aspects of social sustainability.

THE DIVIDE: EQUITY AND ACCESSIBILITY IN EVS

The price of Tesla's premium pricing - \$88490 for the base Model S - is a marker for the technology too, as to what extent clean technology remains equitable. Tax incentives and structured budget models are intended to make EVs more affordable for all, but the EV market is priced for high-wealth people, and this makes the "climate income gap" between socioeconomic groups worse. This prompts Tesla to navigate the rough waters of luxury branding and the ESG value of inclusive growth.

MUSK'S FACTOR: CENTRALISATION AND STABILITY

Tesla governance is the most divisive ESG component of all. The fact that Elon Musk has both the CEO and board chairmanship roles combined and where he wields such disproportionate influence through a 13%

ownership stake is disturbing for the independence of board and shareholder powers. Musk has filed a number of public statements, from reports of wanting to take Tesla private again to insults towards regulators — which have flagged investigations by the SEC and fluctuations in Tesla stock, eroding investor confidence.

These lapses in governance do not align with governance frameworks like the Sustainability Accounting Standards Board (SASB), which promotes board gender diversity, risk oversight measures, and ethical leadership. Although Tesla has made modest strides (such as hiring two more independent directors in 2023), many critics believe a Musk-style personality cult is a far cry from real systemic governance.

Tesla's ESG metrics are only partially reported, making Tesla a complex company scoring even lower on governance. Tesla: absent the nitty-gritties on Scope 3 emissions (that still need to be reported), for example, Tesla lacks a giant external gap compared to its peers like Ford and GM, which are all disclosing detailed data regarding their supply chains' carbon footprint (CDP) in full. This lack of transparency is against the TCFD principles; investors are increasingly asking for.

TESLA: THE FINANCIAL RAMIFICATIONS FOR AN ESG BADASS

While Tesla's environmental rhetoric has certainly helped—in spite of governance. Over a 2019–2023 period, its market cap surpassed \$800bn, more than the next nine automakers combined—investor sentiment on EVs had become very bullish indeed. And studies show that firms with the highest ESG performance

trade-offs have lower costs of capital and higher valuations. Despite this, however, Tesla's story is going at least partly because of the green halo surrounding environmental strength.

Even the governance mistakes at Tesla can be costly. Its exclusion from the S&P 500 ESG Index in 2022 led to a massive 6% stock drop for the automotive manufacturer, equivalent to USD \$50 billion in lost shareholder value. The event highlights the rising importance of ESG ratings agencies and the market's reaction to governance weaknesses.

INVESTMENT LESSONS THAT TESLA TEACHES US

First, ESG factors are interdependent. Climate leadership is no stand-alone solution for bad governance and social injustice. Second, it is non-negotiable to be transparent: Stakeholders need an ESG narrative broken down granularly into auditable data points. Third, understanding that regulatory tailwinds bring change: Jurisdictions such as the EU through its ESG-mandated disclosures are mandating companies to embed sustainability into the DNA and not as a checkbox exercise for PR.

Ultimately, ESG is not a mitigation tool for risk—but a means of navigating new territory in the Anthropocene. And as Tesla's course illustrates, the companies that will succeed will be those that appreciate sustainability to be complementary—environmental innovation, social justice, and ethical governance all coalesce for resilience in an uncertain world.

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BLACKROCK'S ESG VISION: INVESTING IN A SUSTAINABLE FUTURE

BY RACHIT ARORA

INTRODUCTION

BlackRock is one of the few names that resonate in the ever-evolving world of finance. As the world's largest asset manager, with over \$9 trillion in assets under management as of 2023, BlackRock has emerged as a global leader in integrating Environmental, Social, and Governance (ESG) factors into its investment strategies. Under the leadership of CEO Larry Fink, the company has been repeatedly emphasizing that sustainability is a financial imperative, not just a moral one. Indeed, Fink famously wrote in his 2023 letter to CEOs that "climate risk is investment risk," a mantra that sums up BlackRock's commitment to ESG principles. This section will look at the increasing relevance of ESG factors in investing to date, more particularly, how BlackRock is setting the conversation and pushing boundaries.

ABOUT ESG INVESTING

ESG investing marks a new paradigm for businesses and investors as far as long-term value creation is concerned. From then on, financial performance shall no longer be the

sole yardstick of success. Today, companies face the imperative task to resolve urgent global challenges that include climate change, social inequality, and failures in corporate governance. BlackRock has led this change by using its power to demand more transparency, accountability, and sustainability from companies across industries. According to BlackRock's 2023 Global Sustainability Report, now more than 80 percent of investors consider ESG factors in making investment decisions, from a mere 50 percent a decade ago. This shift reflects the broader recognition that companies cannot succeed in isolation from the world around them.

FINANCIAL IMPACT

ESG factors are gaining prominence in part because of their role in risk mitigation. Companies that neglect environmental risks—including carbon emissions or resource scarcity—face regulatory penalties, reputational damage, and operational disruptions. For instance, a 2022 MSCI study revealed that companies with low ESG ratings were twice as likely to suffer severe financial losses due to environmental incidents. BlackRock has been

vocal about the need for businesses to address these risks, using its platform to advocate for stronger climate policies and greater corporate accountability.

CONSUMER DEMAND FOR SUSTAINABLE DEVELOPMENT

Consumer and stakeholder demand is another driving force behind the ESG movement. Today's consumer and employee is increasingly aligning himself or herself with companies that are seen as sustainable and socially responsible. According to a report by Nielsen, 66% of global consumers are willing to pay more for products from brands that are responsible to the environment. BlackRock has also identified this shift in its ESG analysis by considering social factors like diversity and inclusion. A McKinsey study found that companies in the top quartile for gender diversity on executive teams were 25% more likely to have above-average profitability than those in the bottom quartile. BlackRock is thereby not only meeting stakeholder expectations but also identifying companies with promising growth potential.

REGULATORY PRESSURE

A further motivator of ESG investing is regulatory pressure. Governments worldwide are introducing stricter ESG-related regulations, such as the European Union's Sustainable Finance Disclosure Regulation (SFDR) and the U.S. Securities and Exchange Commission's proposed climate disclosure rules. These regulations are pushing companies to adopt more sustainable practices and provide greater transparency. While that landscape is constantly evolving, BlackRock has been forward-thinking and has offered its clients sustainable investment products. Among them is the iShares ESG

Aware MSCI USA ETF, which has attracted more than \$25 billion since it was launched.

While the common misconception associated with an outdated belief about ESG investing is that it sacrifices returns, many studies have shown that companies with strong ESG performance outperform their peers. This evidence, according to BlackRock research, shows sustainable funds outperforming traditional funds by an average of 4.8% in 2022. So, it stands to reason why ESG is financially material-advanced analytics and AI allows it to be fully integrated into all investment decisions.

BLACKROCK'S LANDMARK INITIATIVES

For instance, BlackRock's Aladdin provides investors with ESG performance metrics for companies at the moment the investor is doing his analysis in real time to make more-informed decisions.

Investing heavily in Solar, wind and green projects via BlackRock real assets serves as an open testimony to BlackRock's commitment to sustainable development and environmental protection. The company passionately undertakes the otherwise painstaking task of conducting detailed diversity audits, an action that serves as an indication of the company's belief in equity promotion and providing historically backward communities a better chance to make it big in life and enhance their standard of living. The company is cognizant of the affects its actions have on the socio-economic and political landscape, especially those affecting large sections of the underprivileged, which serves as a large vote bank for politicians. It is imperative that whilst pondering about the betterment of the national and its

environment, society and government infrastructure, BlackRock is vigilant about changes in the political landscape throughout the geographical territories it operates in to ensure that no political resolutions prove detrimental to the company's interests.

Additionally, its commitment to labour safety and a high regard for human rights enable it to communicate the same values throughout its organisational hierarchy, penultimately directly benefiting those at the lowest level. Apart from benefiting them, it also creates a splendid image of the organisation in the minds of the public, leading to great organic PR, which has the potential to ultimately translate into profits, hence serving as another example of how upright ethical social interaction leads to a stronger bottom line, facilitating sustainable economic growth.

Cybersecurity serves as a major area of concern for all internet users today. Be it an octogenarian or a teenager, everyone tries not to fall prey to the multitude of scamsters. BlackRock actively engages with specialist companies to work towards attaining a safe cyber space, in which productivity and efficiency rule large, whilst the threat of data breach, breach of privacy and financial loss shall cease to exist. This safe cyberspace shall lead to further socio economic benefits for corporates and the masses alike.

BlackRock goes beyond data and analytics in its pursuit of ESG. The firm directly engages with companies to promote better ESG practices, leveraging its influence as a significant shareholder to bring about change. In 2022 alone, BlackRock voted against management at 319 companies based on their failure to meet ESG standards. Hence, the approach is a testament to BlackRock's view that sustainable investing has more to do with creating opportunities for long-term growth than merely shunning risks.

CONCLUSION

The bottom line is that ESG factors in investment cannot be ignored. With unprecedented environmental and social challenges, the world is experiencing its most unprecedented challenges ever, and companies which emphasize sustainability and responsibility are poised to succeed better. Leadership in BlackRock shows the firm's conviction that ESG is not just a fad but rather a fundamental shift in how one thinks about value creation. In fact, by incorporating the ESGs into its investing strategies, BlackRock is shaping the finance of the future and creating a more sustainable world.

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THE IMPORTANCE OF ESG FACTORS IN INVESTING & SUSTAINABILITY: AN ANALYSIS OF NYKAA

BY RASHI AGGARWAL

In today's evolving investment era, ESG (environmental, social and governance) factors are no longer a mere peripheral but instead a fundamental part of how companies are evaluated by investors, regulators and consumers. From curbing carbon emissions to upholding ethical leadership, ESG analysis unveils a company's sustainability, resilience, and long-term value. One revelatory ESG case could be found in the Indian market - Nykaa, a trailblazer in beauty and lifestyle e-commerce, and a brand that's redefining female-led entrepreneurship in this digital age.

WHY ESG MATTERS IN INVESTING

On a global scale, ESG-focused investing is on a sharp and steady rise. According to a report by Morningstar, global sustainable fund assets reached \$2.5 trillion by Q2 2023, and institutional investors are progressively factoring ESG criteria into their valuation processes as ESG factors help mitigate non-financial vulnerabilities while improving financial returns, especially in usually volatile markets.

ESG narrative is gaining momentum in countries like India, where the regulatory bodies such as SEBI have made Business Responsibility and Sustainability Reporting (BRSR) mandatory for the top 1000 listed companies.

NYKAA AT A GLANCE

In 2012, a former investment banker, Falguni Nayar, founded India's first women-led enterprise—Nykaa (FSN E-Commerce Ventures Ltd.), which disrupted India's beauty and lifestyle market. In a revolutionary idea, it created a specifically curated omni-channel platform accommodating the average Indian consumer. Listed on the Indian stock exchange in November 2021, Nykaa became the first woman-led unicorn startup.

ENVIRONMENTAL: SMALL STEPS TOWARD A GREENER BRAND

Nykaa's approach to environmental responsibility is unfolding, but it has taken some conscious steps to reduce its ecological footprint.

The company has begun transitioning away from single-use plastics to recyclable paper-based packaging and biodegradable mailers, while also minimizing the use of bubble wrap in favor of eco-friendly alternatives such as honeycomb wrap. Under its 'Conscious at Nykaa' category, the platform features a handpicked range of products that meet certain sustainability standards—like being cruelty-free, vegan, paraben-free, and made from organic ingredients—thereby promoting mindful consumption and supporting responsible brands. Although Nykaa has not yet published a formal carbon footprint report, it has implemented process enhancements in its warehousing and logistics, such as route optimization for delivery vehicles and streamlined inventory systems, to reduce both wastage and energy usage.

SOCIAL: INCLUSIVITY, EMPOWERMENT, AND CONSUMER TRUST

Out of the three pillars, social responsibility remains Nykaa's most defining one. As one of the few Indian unicorn startups led and founded by women, it has written history in the domains of gender inclusion, brand identity, and community outreach. Over 35% of its workforce comprises women, with many occupying senior leadership positions—reinforcing a culture of empowerment from the top. Nykaa didn't stop there; its advertising too breaks away from traditional norms. With campaigns like Beauty for All featuring models of diverse skin tones, body types, and gender identities, it signals to investors a strong commitment to inclusivity and positivity.

Beyond brand image, Nykaa actively uplifts local, women-owned, and small-scale beauty labels—offering them a platform and audience, while also echoing the government's

Vocal for Local initiative.

It has gained the trust of millions of users on its platform by maintaining stringent cybersecurity and privacy standards such as secure payment gateways and ethical data handling policies to safeguard consumer information. That said, greater public transparency around its data governance frameworks could further solidify consumer confidence and elevate its standing in India's digital economy.

GOVERNANCE: TRANSITIONING INTO A PUBLIC COMPANY

Ever since its listing, Nykaa has made steady progress in refining its governance and correspondence with investors.

Nykaa has a board that includes independent directors with backgrounds in various fields such as law, finance, and technology. Having these experienced, non-executive members helps keep things objective when making big decisions by bringing in much-needed and valuable outside perspectives. This mix of experience avoids echo chambers by a system of checks and balances being implemented and understands the mass number of vulnerabilities that can come with rapid growth, especially in areas like regulation, financial planning, and digital innovation.

The company has also set up formal committees for auditing, risk oversight, and remuneration, all of which are in line with SEBI's governance rules while also maintaining transparency through regular quarterly reports, investor presentations, and corporate filings. This infers that they're trying to implement good governance practices within the organization.

They promote public disclosure and financial transparency by regularly putting out quarterly earnings, investor presentations, and corporate filings under the rules and regulations of Business Responsibility and Sustainability Reporting (BRSR), which has been made mandatory for top-listed firms.

On the flip side, back in late 2022, Nykaa was criticised for announcing a bonus share issue just before the end of the lock-in period for pre-IPO investors. While it was legal, it got some backlash for seeming to favour early investors at the cost of retail sentiment due to its proximity to the lock-in expiry sparked criticism. This situation highlights how important it is to be seen as having good governance ethics, not just following the rules and dotting the i's.

CHALLENGES AND THE ROAD AHEAD

While Nykaa has shown good will towards their commitment to ESG goals, some areas are in need of improvement. Unlike its global beauty giants counterparts such as L'Oréal and Unilever, Nykaa has yet to publish a standalone sustainability report. Along with this, the lack of third party ESG certification and rating further shadows how Nykaa measures up against global standards with its beauty giants counterparts.

If you were to scrutinise its operational segment, it would be revealed that Nykaa's supply chain and logistics has a glaring absence of carbon accounting and life cycle analysis. These two are essential components for understanding environmental cost. But this is not the only part that is obscure, Nykaa also has minimal public correspondence on its vendor compliance or labour rights within its private label manufacturing network.

To maintain and raise its franks in a market that is increasingly ESG conscious, Nykaa must comply with globally recognized frameworks such as GRI and SASB as well as rectify its absence of frequent and transparent reporting with independent auditors to validate the progress.

CONCLUSION: A BRAND WITH ESG POTENTIAL

Nykaa stands at a unique confluence, representing a distinctive blend of business innovation, social empowerment, and aspirational consumerism in India.

With a niche of a digitally native and women-led enterprise, it has carved out a strong consumer base in the country's beauty and lifestyle sector. From its support for responsible sourcing to its inspiring brand campaigns and women leadership, Nykaa proves that for it ESG values are deeply imbedded and are at the roots of its foundation- at least in spirit. However as the company undergoes the transition from a high-growth startup to a publicly traded entity, stakeholders expectations are also adapting. In this era, ESG is no longer a mere "good to have" for investors, regulators, consumers, and civil society but instead a strategic component of their investment and decision making process.

Today's investors place increasing importance on long-term value creation and seek to understand how companies mollify environmental risks, promote social equity, and demonstrate ethical governance. To truly establish itself as a leader in sustainability and progress, Nykaa must proceed with a formal ESG roadmap with time-bound goals and measurable KPIs.

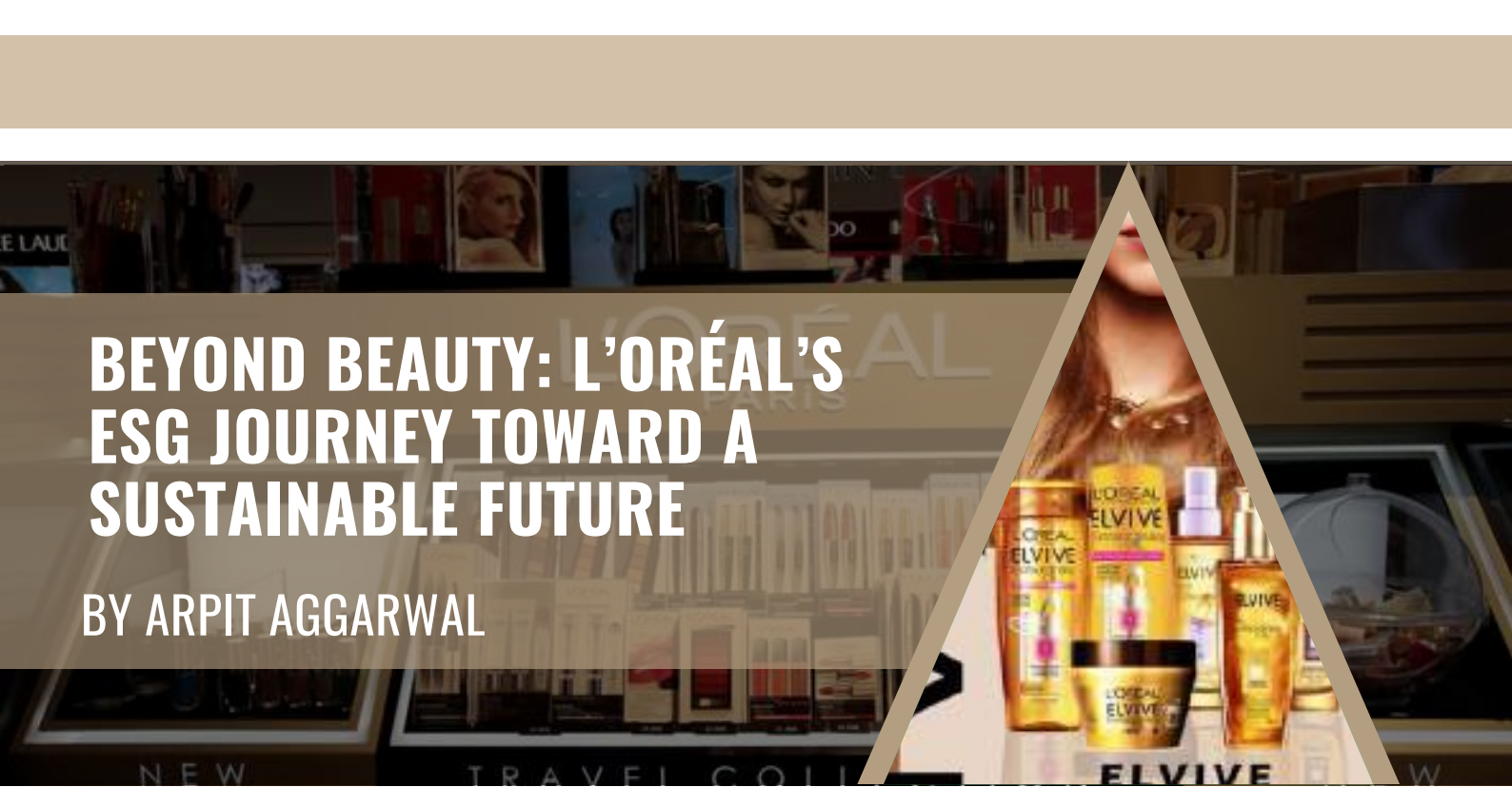
This roadmap should be preceded by standalone sustainability reports to increased transparency, independent audits, and globally benchmarked ESG ratings.

Furthermore, collaborating with key stakeholders, including suppliers, customers, and investors—will enable Nykaa to build sustainable value throughout its entire value chain. With a forward-looking strategy and a

genuine commitment to ESG principles, Nykaa has the potential to evolve beyond being just a successful digital-first brand. It can emerge as a pioneering force for ESG-aligned entrepreneurship in India. Its journey could serve as a blueprint and a stepping stone for other startups and e-commerce platforms aiming to align their purpose with profit in the evolving investment landscape of the 21st-century economy.

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BEYOND BEAUTY: L'ORÉAL'S ESG JOURNEY TOWARD A SUSTAINABLE FUTURE

BY ARPIT AGGARWAL

BACKGROUND

With the advent of the 21st century, it is said that it has become harder to sustain a successful business than to create one and that's because you only have to win over the consumers to create a business but to sustain a business, you must win over the environmental, social and governance factors. These ESG factors are no longer confined to niche venture capitalist's offices but have broken through their way into the sleeps of every founder and entrepreneur on the planet.

It is a mainstream strategy for investors seeking long-term value while promoting sustainable and ethical business practices. Companies that prioritize ESG factors tend to demonstrate resilience, better risk management, and stronger financial performance. In essence a business can't breach new heights without keeping these new found principles into consideration. This paradigm shift can be construed to the fast changing dynamics of today's market that envision fostering long term goals and ambitions for which they pay unheeded attention to the external business climate.

ESG investing involves evaluating companies based on their environmental impact, social responsibility, and governance practices. Here the environment refers to a company's carbon footprint, resource usage, waste management, and efforts to combat climate change while social responsibility refers to a company's focus on labor practices, community engagement, diversity and inclusion, and customer relations and governance involves corporate ethics, transparency, board structure, and regulatory compliance. This article delves deep into the significance of ESG investing and analyzes how L'Oréal, a global leader in the beauty and cosmetics industry, has integrated ESG principles into its operations.

ENVIRONMENTAL CONCERN

L'oreal takes the matter of environmental care and sustainable development quite earnestly and that has been displayed in their relentless efforts and cautious initiatives. Like most companies, it has vowed to make their carbon footprint neutral by the end of this year but the actual results in that arena still remains to be seen. Moreover, packaging is a great source of non recyclable waste for any fast moving

consumer good especially in the cosmetic industry and thus they have promised to make all their packaging materials 100% sustainable by 2030 for which they aim to use only recycled materials or different forms of bio-based plastic that don't cause any problems for waste management in the long term. They also aim to support sustainable sourcing of raw materials such as palm oil and other naturally extracted resources so as to not exhaust environmental sources and have affirmed to venture reforestation projects in the near future to compensate any damages they may have caused. Lastly, the company has developed water loop technology which is being employed in all their factories. It is a system that reuses water as much as possible and does not disintegrate chemicals into our water bodies. Hence, minimising water wastage and creating zero waste to landfill production facilities.

VALUING HUMAN RESOURCE

A company that deals directly with consumers and that too through so many platforms must curate a specialised plan for social responsibility to safekeep their consumers and to contribute to the society in a relevant manner. Firstly, the company ensures fair wages and a balanced work life for all their employees to uphold human right standards and to minimise employee turnover. They have devised multiple forms of employee recognition and empowerment programmes that keep their staff motivated and help them bond with the goals of both the individuals and the company as a whole. Furthermore, a large portion of their consumer base are females and thus they do their best to promote gender diversity with women representing nearly 70% of its workforce and 55% of board members. Lastly, there has been a sudden need for all beauty and cosmetic giants to be more inclusive and to curate products that work on

all types of skin so as to create a more inclusive and self accepting society. L'oreal has achieved this through initiatives like "L'Oréal Foundation" and "Beauty for All," which to date has empowered more than 12,000 women from disadvantaged backgrounds to train and acquire certified skills, opening access to work opportunities in hairdressing salons and beauty retail outlets.

CORPORATE GOVERNANCE

Coming to the last of the ESG Analysis-Governance, L'Oréal maintains high standards of corporate governance, transparency, and ethical business conduct that allow them to sustain their success and to build a sense of brand loyalty within their consumer. They rely on a strong corporate structure with their board of directors consisting of 7 independent directors as of 2023 who, according to the company, make decisions based on merits and facts instead of crumbling under any sought of pressure, thus ensuring that decision making remains impartial and for the long term good of the business. L'Oréal also enforces a strict code of ethics for business operations, emphasizing anti-corruption measures, responsible marketing, and withstanding consumer trust. The company believes transparency to be of the highest relevance and to justify that L'Oréal publishes detailed sustainability reports, aligning with international frameworks like the Global Reporting Initiative (GRI) and the Task Force on Climate-related Financial Disclosures (TCFD). All their financials and ESG related reports can be easily found on their very own website which further elucidates their principles of trust, inclusivity and transparency.

S&P Global, a leading reporter of ESG Analysis have also flowered them with an ESG rating of 85/100 and have professed that they are one of the few cosmetic businesses to

have low risk investing available in the market. They further stated that “L'Oréal has demonstrated its commitment to advancing the sector's environmental standards through its practices in sustainable packaging. It has also pioneered efforts in relation to green chemistry principles to improve the environmental credentials of product formulas.”

CONCLUSION

A few schools of thought advocate to the ESG Analysis being a sham that is being given unrealistic attention and that it doesn't actually showcase the true essence of any business but most studies conducted provide proof to quite the opposite as they display that investors across the globe are paying more and more attention to this analysis due to the following benefits:

- **Risk Mitigation:** Companies with robust ESG policies are less exposed to regulatory penalties, environmental liabilities, and reputational damage.
- **Financial Performance:** Studies indicate

that firms with strong ESG profiles outperform their peers in the long run.

- **Stakeholder Trust:** ESG transparency fosters trust among consumers, employees, and investors, enhancing brand value and loyalty.
- **Regulatory Compliance:** Governments and international bodies are tightening ESG regulations, making compliance a crucial factor for businesses.

In a nutshell, the integration of ESG factors into investing is no longer optional as affirmed by the huge investments and policy changes the companies are making for it, in fact it is essential for sustainable growth and long-term profitability. L'Oréal serves as an exemplary case of how a company can successfully embed ESG principles into its business strategy, ensuring resilience, innovation, and societal impact. As the investment landscape continues to evolve, ESG-focused companies like L'Oréal will remain attractive to investors seeking both financial returns and positive global impact.

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CORE VALUES - ANALYSING APPLE'S SOCIAL IMPACT THROUGH THE ESG FRAMEWORK

BY RACHIT ARORA

Apple reinvents the phone



INTRODUCTION

With the advent of the 21st century, public scrutiny of corporate social and environmental responsibility began to steadily increase. This increase was brought about by ubiquitous visible symptoms of imbalance, socio-economic in nature, that also entangled the realm of governance in its intricate web.

Right from the days of the industrial revolution, the world saw a massive shift in the way human interaction with its natural surroundings was fathomed. The relationship of co-existence metamorphosed into one of exploitation, which led to slow and steady disruption of the ecological balance. This led to mounting pressure on corporations to function in harmony with the environmental and social fabric of the world, a force that institutions, willingly or unwillingly, had to succumb to. Apple Inc, one of the most influential technology companies in the world, is also a flag bearer for ESG initiatives, as shall be illustrated shortly.

ENVIRONMENTAL ANALYSIS

Renewable energy – Committed to reducing its carbon footprint, Apple achieved the use

of 100% renewable energy for its corporate operations in 2018. A feather in a cap for any organisation, the impact of such an achievement can be gauged by glancing at the gigantic scale of Apple's corporate operations. Their initiative does not culminate here. Apple seeks to achieve the use of 100% renewable energy throughout its value chain by 2030.

Product Sustainability – Apple strives to use recycled, upcycled and renewable materials for its products. These materials range from batteries, circuit boards and aluminium enclosures. Apple uses 100% recycled aluminium for its iPhone 15 Pro, Pro Max and MacBook Pro. It used 100% recycled tin in the solder of multiple printed circuit boards. It used 100% recycled gold in the wire of cameras of iPhone 15 pro series. Apple also envisages the use of 100% recycled cobalt in its batteries soon. An arguable instance where Apple strived for sustainability was when it removed chargers from phone packs. Though critics labelled it a decision made solely to cut costs, the case of environment friendliness guiding this move does appeal to the reasonable mind. Several users already have fully functional chargers, carried on from

previous devices. As they do not need new chargers, the production of wires and chargers reduces, leading to reduced resource exploitation. A global leader in the transition to a sustainable way of production, the iPhone maker aims to eventually remove plastics from its packaging and reduce transportation emissions.

Apple's trade-in program : An effort to reduce e-waste and carbon footprint-

The trade-in program allows Apple to refurbish its devices, reducing the need for fresh production, whilst concomitantly benefitting users with a low budget, who prefer to buy refurbished devices. Additionally, the company recycles products that are not fit for refurbishment. Users who trade in their old devices for new ones are given an equitable exchange value for the old ones, this is what makes the program both environmentally beneficial and economically feasible.

SOCIAL RESPONSIBILITY

Labour Practices and Human Resource Ethics

Even though Apple has committed to respecting internationally recognized human rights and raising working conditions of workers, the company needs to work more on this front. Multiple independent reports accuse Apple's suppliers in developing countries of providing adverse working conditions to ground level workers. On the other hand, Apple's business policy lays down explicitly that their employer does not restrict their ability to discuss wages, work hours and working conditions.

Customer Privacy and Data Security

Apple is well-known for championing the cause that upholds privacy as a fundamental human right, concomitantly imbibing it into its own corporate functioning.

Apple is infamous for its attempts to minimize user data collection and to process user data on devices wherever feasible. On its App Store, it requires application developers to disclose what type of data is collected and to what extent, allowing users to gauge whether the app infringes on their privacy or steals their data. Also, the company is known for being selective in allowing developers to host their applications on its flagship App store. While, for critics, it serves as a matter of convenience to comment upon, its underlying motive must be understood by readers.

Even though Apple and the FBI have had disagreements over the encryption of iPhones in the past, whereby the FBI asked Apple to create a custom operating system to disable security features on iPhones. Apple opposed this order for they believed that such a step would undermine data security and set a dangerous precedent.

Reports also suggested that Apple refused to unlock Arvind Kejriwal's iPhone on an informal request by the ED. By citing such reports, I do not mean to ignite political debate but only to highlight the MacBook developer's fierce and undying commitment to user privacy, always attempting to keep customer interest paramount.

Apple and DEI (Diversity, Equity and Inclusion)

Apple has always maintained a strong commitment to representing people from all sections of society, including all genders and diverse races, as part of its workforce. Whilst some reports point out that the majority of Apple's workforce comprises Whites and Asians, we must take due reconnaissance of the fact that the company does strive towards making it a more diverse organisation. This is evident even by Apple's advertising campaign-

ns, whereby it makes a point to include African Americans and people of colour as models.

Apple and Governance

Apple's top members and board of directors, headed by the CEO, maintain a strong focus on ethical corporate governance which looks into the interest of all stakeholders in the organisation, big or small, in an upright manner. The company's comprehensive Business Conduct Policy serves as an instrumental guide, educating its employees on how to deal with investors, customers, third parties and also guides interactions amongst employees. The policy emphasizes on honesty, business ethics and moral conduct whilst adhering to all rules, regulations and procedures that may be applicable.

To reinforce these principles, Apple has an Anti Corruption Policy, that ensures that all business dealings are carried out fairly, transparently and in an unquestionable manner.

To reinforce these principles, Apple has an Anti Corruption Policy, that ensures that all b-

usiness dealings are carried out fairly, transparently and in an unquestionable manner.

It also fosters and nurtures a reassuring whistleblower policy, with dedicated and safe channels for insiders and third parties to report instances of unethical behavior that contravene applicable rules.

To reinforce these principles, Apple has an Anti Corruption Policy, that ensures that all business dealings are carried out fairly, transparently and in an unquestionable manner.

CONCLUSION

Apple must be commended for its unwavering commitment to Environmental, Social and Governance ethics and practices. As mentioned above, the company has maintained initiatives to contribute the most it can to society in an optimally feasible way. However, challenges like supplier ethics concerns remain, and Apple must continually strive to achieve perfection in the aforementioned and related arenas.

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NVIDIA: FROM GRAPHICS PIONEER TO AI ARCHITECT

BY PRADEEP ARVIN CHOLAGAR

INTRODUCTION

Founded on April 5, 1993, by Jensen Huang, Chris Malachowsky, and Curtis Priem, with a mission to bring 3D graphics into the gaming and multimedia markets, NVIDIA revolutionized computing with the introduction of the GeForce 256 GPU. This shifted the rendering of complex graphics away from the CPU and onto specialized hardware. Wildly popular with gamers initially, no one thought that these fancy graphics technology would launch a larger tech revolution. NVIDIA's chips are now ubiquitous. Doctors can craft cancer drugs in record time, processing climate data to forecast next year's fire season, and instructing cars to drive themselves without face-planting into traffic cones.

In 2020, they dropped \$40 billion to snag Arm—a move that basically lets them plant their flag in every gadget from smart toasters to iPhones. They've got this thing called Omniverse, a Metaverse-meets-Minecraft playground where engineers and artists can build virtual worlds together. NVIDIA isn't just powering AI—they're stitching the real and digital worlds together like a tech-crazed

Dr. Frankenstein.

This aspiration was established in the conviction that GPUs had the potential to revolutionize not as it were the gaming scene but moreover a wide range of other spaces, enveloping plan, logical inquire about, and excitement. The company's to begin with critical breakthrough arrived with the presentation of the RIVA 128 design card in 1997, which advertised a considerable execution jump compared to its competitors. This victory was taken after by an arrangement of groundbreaking items, most outstandingly the GeForce arrangement of GPUs, which cemented NVIDIA's position as an overwhelming drive in the design card advertisement. These early victories set up NVIDIA's notoriety for specialized brilliance and laid the foundation for its future raids into more complex computational ideal models.

FROM PIXELS TO PARALLELISM

While NVIDIA's starting triumphs were established in its ability in illustration handling, the company's long-term vision expanded

significantly past the limits of the gaming field. Recognizing the inactive potential of GPUs for general-purpose computing, NVIDIA set out on a vital realignment in the early 2000s, contributing intensely in the advancement of innovations that would empower its GPUs to be utilized for a more extensive cluster of computationally serious applications.

This vital turn was driven by the adroit perception that the parallel handling engineering inalienable in GPUs, in a perfect world suited for dealing with the complex numerical computations required for rendering illustrations, might too be utilized for other computationally serious errands. This understanding led to the advancement of CUDA (Compute Bound together Gadget Engineering), a parallel computing stage that engaged engineers to saddle the colossal preparing control of NVIDIA GPUs for an assortment of applications, enveloping logical computing, money related modeling, and, most altogether, fake insights. This essential move in the center from simply graphical applications to general-purpose computing spoke to a significant turning point in NVIDIA's direction, setting the stage for its future dominance in the AI scene.

THE AI INSURGENCY

The rise of profound learning, a subfield of fake insights that depends on manufactured neural systems with numerous layers to extricate higher-level highlights from information, checked a watershed minute in the history of computing. Profound learning calculations, which require tremendous sums of computational control for preparation, found a normal partner in NVIDIA's GPUs.

NVIDIA's CUDA stage, with its capacity to essentially quicken the preparation of profound learning models, quickly became the de facto

standard for AI analysts and engineers. The company's GPUs, with their unparalleled preparation control and optimized design, encouraged the improvement of progressively complex and advanced AI models, moving breakthroughs in regions such as picture acknowledgment, normal dialect handling, and discourse acknowledgment. This advantageous relationship between profound learning and GPU computing set NVIDIA's position as a key driver of the AI insurgency, changing it from an illustration card producer into an AI powerhouse.

REALITIES PRODUCED

NVIDIA's change from an illustration card producer to an AI colossus has had a significant and unavoidable effect on the world, penetrating essentially each viewpoint of present day life. The company's advances are presently at the center of a wide run of applications that are reshaping businesses and changing the way we are associated with innovation.

In the healthcare division, NVIDIA's GPUs are being utilized to quicken sedate disclosure, create novel therapeutic imaging strategies, and make AI-powered symptomatic devices, driving to more proficient and compelling healthcare arrangements. In the car industry, NVIDIA's self-driving car stage is clearing the way for the improvement of independent vehicles that guarantee to revolutionize transportation, possibly driving to more secure and more productive roadways.

THE FUTURE OF COMPUTING

As NVIDIA proceeds to thrust the boundaries of what's achievable, the company's vision for the future of computing is getting to be progressively well-defined. NVIDIA accepts

that the future of computing will be molded by the joining of AI, illustrations, and high-performance computing, making a bound together stage competent of tending to the complex computational requests of the future.

The company is contributing intensely in the improvement of modern innovations that will empower this merging, counting novel GPU structures, progressed AI calculations, and high-speed interconnect innovations. NVIDIA's objective is to make a bound together computing stage that can consistently handle the requests of a wide run of applications, from immersive gaming and excitement encounters to cutting-edge logical inquiry about and progressively advanced counterfeit insights applications. This vision envelops not as it were equipment progressions but moreover the advancement of strong computer program devices and stages that make it less demanding for designers to use the colossal control of NVIDIA's innovations.

CHALLENGES AND CONTEMPLATIONS

While NVIDIA's victory is verifiable, the company too faces a complex and advancing scene of challenges. Strong competition from other chip producers, the moral contemplations encompassing the

improvement and sending of progressively effective AI frameworks, and the consistent weight to improve and keep up a mechanical edge are a few of the challenges that NVIDIA must explore. Moreover, guaranteeing availability to its advances and tending to concerns approximately the potential societal effect of AI, counting issues related to work uprooting and algorithmic predisposition, are pivotal for the company's long-term supportability and dependable growth.

CONCLUSION

NVIDIA's journey from a design card producer to an AI titan is a confirmation to the control of vision, development, and unflinching tirelessness. The company's tireless interest in brilliance has not changed the world of computing but too significantly reshaped the way we are associated with innovation and the world around us.

As NVIDIA proceeds to thrust the boundaries of what's conceivable, its commitments to the innovative scene are balanced to end up indeed more significant. The dreams that fueled NVIDIA's introductory rising are presently forming the substances of nowadays, and the company's vision for the future guarantees to usher in a modern time of computing that will change our world in ways we can as it were to start to imagine.

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An illustration of a man in a dark suit, seen from the side, pointing his finger at a large digital screen. The screen displays a line graph with an upward arrow and the word 'ADS' in a red box. Other screens in the background show various data visualizations, including bar charts and a play button icon. The overall color scheme is dominated by deep purples and magentas.

THE DIGITAL PULSE

Feel the rhythm of a world driven by data, code, and connection.
'The Digital Pulse' captures the heartbeat of our tech-powered age.

FIZZY BUSINESS: PEPSI VERSUS COCA-COLA

BY RASHI



INTRODUCTION

The iconic “Cola wars” transcends Pepsi and Coca-Cola, it is a lesson on branding and advertising itself. For over a century, these companies have competed against each other, weaponizing creativity, psychology, and cultural trends to dominate shelves, screens, and minds. Still being taught in top business schools, this pseudo-warfare between the two cola giants has hugely shaped marketing over the years.

COCA-COLA: THE EARLY BIRD

In 1886, John Pemberton unsuspectingly created what would soon turn into the very heart and soul of the American way of living. Starting out as a medicinal tonic, the fizzy Coca-Cola refreshment drink was arguably America's most recognized brand of the era. The success is rightfully attributed to coke being their first. But while that did help with their early success, the real genius came out during the second world war. In a masterful strategic move, Robert Woodruff, the company's president, declared that every American soldier would get a Coca-Cola for five cents, wherever they were

stationed. This wasn't just patriotic, though it did end up costing the company more than 90 million USD in today's dollars. The move provided coke with unprecedented international exposure, having built 64 bottling plants around the world during the war itself. Soldiers returned home with not just victory medals, but an ingrained loyalty to Coca-Cola. Interestingly, this wartime connection ran so deep that one veteran led to the establishment of the World of Coca-Cola museum in Atlanta. This wasn't just a collection of memorabilia—it was a shrine to how deeply Coca-Cola had woven itself into American culture.

PEPSI: THE AMBITIOUS UNDERDOG

When Pepsi entered the market, it faced what seemed like an impossible challenge. Coca-Cola had already become synonymous with soft drinks, leaving Pepsi with minimal market share. In the 1930s, Pepsi's market share was so low that most industry experts didn't consider it a serious competitor. Meanwhile, the company's early struggles, including bankruptcy during the Great Depression, forced it to think differently.

Soon, Pepsi began positioning itself as the value alternative with a disruptive strategy: selling 12-ounce bottles for 5 cents; double the volume of Coca-Cola's 6-ounce nickel bottle. This "twice as much" campaign accelerated Pepsi's sales by 160% by 1934, carving it a niche as the affordable choice for struggling families who wanted to be part of the "American Dream", and eventually helping Pepsi survive. Despite all this, they remained firmly in Coca-Cola's shadow for decades.

Now, the soft drink industry is dominated by these two entities with a combined market value of roughly \$500 billion. With their renowned brands, extensive product lines, and strategic acquisitions, it's safe to say that Coca-Cola and Pepsi have established a global duopoly. Notably, as of 2024, Coca-Cola commands approximately 50% of the global market while Pepsi controls around 20%. But Coca-Cola's journey to domination has not been free from challenges, Pepsi has time and again proven to be a worthy opponent.

DUEL 1: THE BATTLE FOR GENERATIONS

Perhaps the most fascinating aspect of the cola wars was how each company targeted different generations. Coca-Cola rather arrogantly continued to market to the World War II generation and their children, emphasizing tradition, family values, and nostalgia. Their iconic "I'd Like to Buy the World a Coca-Cola" commercial in 1971 epitomized this approach. Though advertisements steadily depicted youth, the consumers they were made to resonate with got older.

At the same time, Pepsi made a brilliant strategic decision to target younger consumers.

Their "Choice of a New Generation" campaign, featuring Michael Jackson, Madonna, and later Britney Spears, spoke directly to current youth culture. The strategy worked even better than expected because younger consumers saw Coca-Cola as their parents' drink—old-fashioned and establishment-based. Thus, when these young consumers reached the drinking-and-partying age, they chose Pepsi because it represented their generation's lifestyle.

This generational divide had long-term implications. As Coca-Cola's target consumers aged, their consumption naturally decreased. Meanwhile, Pepsi's younger audience was entering their prime consumption years. As a result, by the mid-1980s, Pepsi's market share in supermarket sales exceeded Coca-Cola's for the first time in history.

DUEL 2: HUBRIS BECAME THE HARBINGER OF DEFEAT

In 1975, Pepsi truly changed the landscape with the Pepsi Challenge. The premise was simple but revolutionary: a blind taste test between Pepsi and Coca-Cola. They sneaked in hidden cameras and filmed consumers trying both of these iconic colas. Surprisingly, most of them preferred Pepsi's sweeter sip.

The advertisements were brutal—real people, real reactions, real humiliation for Coca-Cola. The impact was seismic. Pepsi's market share began to skyrocket as consumers questioned their loyalty to Coca-Cola. Notably, the campaign's success wasn't just in the results, rather it was in how it changed the conversation. Suddenly, taste mattered more than tradition. The consumers had evolved past the "American way of living" tinted glasses.

Coca-Cola's response was, somewhat understandably, knee-jerk denial. Advertisement mocked the tests as "sip tests," stating that Coca-Cola's less-sweet formula was more suited for full bottles. By now it was evident that Coca-Cola's biggest mistake was its resistance to adaptation. The company hadn't significantly changed its formula since its creation, viewing this consistency as a strength. However, as consumer tastes evolved and Pepsi gained ground, this rigidity became a liability. This realisation inevitably brought about a change in the top management of Coca-Cola.

But the damage was done. Soon an internally panicked Coca-Cola had reformulated its 99-year-old recipe in 1985, launching New Coke. The backlash was unprecedented. Fans hoarded "old" Coca-Cola, protesters burned New Coca-Cola cases. Consumers didn't want a different Coca-Cola; they wanted their Coca-Cola. The company quickly reintroduced the original formula as "Coca-Cola Classic," while Pepsi declared victory in newspaper advertisements: "After 87 years of going at it eyeball to eyeball, the other guy just blinked."

THE CHANGING BATTLEFIELD

The evolution of the Coca-Cola versus Pepsi rivalry reflects fundamental changes in both consumer behavior and marketing dynamics in the digital age. While their historical competition was characterized by mass-market television advertisements and clear demographic targeting, today's battlefield is far more nuanced and fragmented.

How did Coca-Cola change to adapt?

Historically, Coca-Cola built its empire on universal emotional appeal, positioning itself

as a bridge across generations and cultures, as "the real thing". Their iconic red cans and heartwarming advertisements offering "The Us Feeling" tapped into one of the strongest human desires, the need for connection and shared experiences. This strategy proved to be particularly effective in establishing Coca-Cola as a global cultural touchstone, transcending national boundaries with universal messages like "Open Happiness."

However, recognizing the shifting landscape of consumer engagement, Coca-Cola demonstrated remarkable adaptability with their iconic "Share a Coke" campaign. This initiative brilliantly merged their traditional emphasis with modern consumers' desire for personalization and individual expression. By placing individual names on bottles, they created a viral, social media-friendly phenomenon that drove significant engagement both online and in stores. The resulting 2% boost in U.S. sales thus gloriously validated their ability to innovate while maintaining their core brand identity.

How did Pepsi change to adapt?

Pepsi's evolution trajectory tells a different but equally compelling story of brand evolution. Their historical positioning as the choice of a younger generation has evolved into a more sophisticated targeting of what can be called "The For Me Generation" comprising primarily Gen Z and millennials who are FOMO-driven. This demographic resonated with digital nativity, desire for individual expression, and strong interest in social causes, which has hence shaped Pepsi's modern marketing approach. The brand's unique taste profile and bold, neon-influenced aesthetic align naturally with their target market's drive for immediate gratification and attention-grabbing experiences.

However, Pepsi's most interesting strategic shift has been their increasing willingness to engage with social and cultural issues, even at the risk of controversy. The Kendall Jenner advertisement serves as a particularly revealing case study on both the opportunities and pitfalls involved in this seemingly innocuous approach. While the advertisement's attempt to adapt protest imagery for commercial purposes sparked significant backlash, it demonstrated Pepsi's commitment to maintaining their cool, edgy, risk-taking image. Thus the controversy reinforced Pepsi's position as a brand willing to push boundaries and engage with contemporary cultural discussions, despite resulting in short term losses.

Way Forward

It is easier to start a war than to end it
~ Gabriel Garcia Marquez

Both companies now understand that they're not just selling beverages, they're selling experiences, identities, and cultural connection.

The rivalry is unconventional, and they are writing the playbook. But the advertising wars between these beverage giants are far from over. Though it is no longer just about taste preferences or generational divides. With the changed landscape, it is more about which brand can better connect with consumers in an increasingly complex and digital world.

These brand wars extend far beyond the beverage aisle, as evident in the strategic alliances between Domino's and Pepsi versus Pizza Hut and Coca-Cola. This creates a proxy war scenario where consumers implicitly choose sides in the cola battle simply by ordering pizza. Every pizza order becomes an indirect endorsement of one cola giant over the other, illustrating how deeply these brand wars have penetrated consumer culture. In this expanded arena, every purchase becomes a statement, every partnership a strategic move, and every consumer interaction a potential victory in the ongoing war for brand supremacy. So as we look to the future, one thing remains clear: the cola wars have just evolved for a new era.

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THE METEORIC RISE OF ZOMATO AND BLINKIT: POWERED BY WITTY NOTIFICATIONS

BY RACHIT



INTRODUCTION

Gone are the days when roads used to be crowded by bikes painted, yellow, red and blue, each one with the logo of the restaurant it belonged to. Patrons of restaurants used to call them to place an order, which was then delivered by its own delivery person, on a vehicle owned by the restaurant. In a lightning-fast manner, this familiar sight vanished due to the advent of food delivery platforms like Zomato, which stripped these joints of their fleet of vehicles and army of delivery boys.

Founded in 2008 by Deepinder Goyal and Pankaj Chaddah and named Foodiebay, it served as an online restaurant discovery and review platform. Rebranded in 2010 as Zomato, the company expanded internationally, acquiring several food tech companies in UAE, UK and New Zealand, among other markets. It turned to food delivery 2015, which led to the disruption of the well-established modus operandi of food home delivery by restaurants themselves. As Zomato and its competitors like Swiggy encouraged joints to outsource this non-core activity of theirs, the joints' dependence on these food tech platforms increased manifold.

Among many firsts, the company also became the first Indian food tech company to go public, raising \$1.3 billion through its IPO in 2021, post which it acquired Blinkit in 2022, marking its majestic entry in the quick-commerce segment.



Under the able guidance of Deepinder Goyal, of Shark Tank fame, the company is currently expanding into cloud kitchens, while concomitantly focusing on sustainability initiatives. When asked about the factor that

contributes the most to Zomato's recall rate, connoisseurs pointed to its witty notifications, which remind them of their beloved platform at different meal times, often prompting them to indulge in their favourite cheat meal. From "If you're reading this, your diet has already failed. Might as well enjoy it!", to "Even Batman doesn't fight crime on an empty stomach. Order now!" and "Your stomach just sent us a friend request. Accept?", such notifications captivate readers' minds. This wit and humour, when coupled with a strategic notification time, guides users to their favourite food delivery application. Zomato's marketing and outreach team must be applauded for creating relatable content, based on trending topics and occasions, that brings the platform and its users closer, increasing customer engagement and loyalty.

Zomato's ability to tap into popular culture, whilst maintaining a friendly conversational tone reinforces the brand's presence in customers' daily lives. By casually playing on customers' likes and dislikes, their notifications seem more like messages from a friend rather than promotional notifications.

NOTIFICATIONS AND THE CUSTOMER FUNNEL

The typical customer funnel consists of four stages, awareness, consideration, conversion and loyalty. Through these four stages, the customer journey has multiple touchpoints, which, in the absence of engaging organisational strategy, convert into pain points.

It is imperative to understand the significance of customer engagement through Zomato's well liked notifications. Zomato starts this remarkable journey of customer interactions, right at the awareness stage. By igniting

customer interest whilst advertising its capabilities, it pushes customers to the next stage, that is Consideration. As readers tap on the notification icon, they are led to Zomato's application.

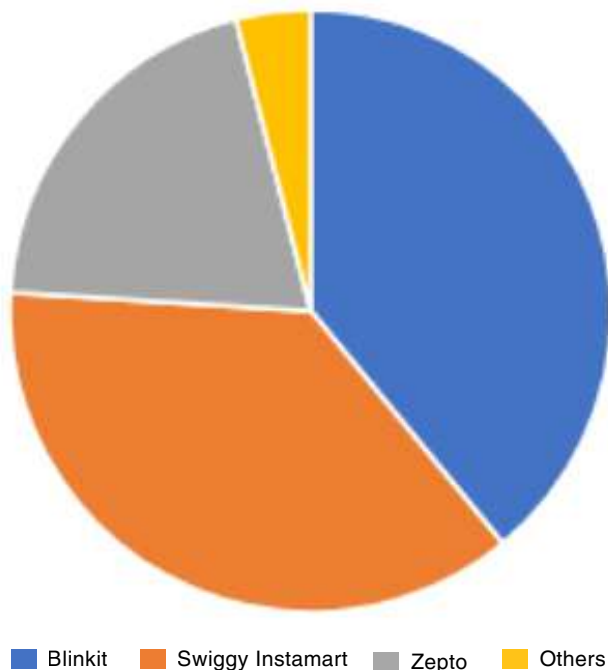
While scrolling, Zomato's algorithm leads them to mouth watering dishes, offered by their favourite restaurants. As a natural response, people crave what they see. This leads them to the next stage of the customer funnel, conversion. At this stage, prospective customers metamorphose into actual customers. As these notifications act as a catalyst for order placements, they are said to play an integral role in the same. After order fulfilment, the next uphill task for any organisation is harbouring customer loyalty, for which, again, Zomato turns to its witty notifications. By engaging in camaraderie with customers, Zomato always keeps its customers mentally close to it.

THE PACKAGING GENIUS OF BLINKIT

In 2022, Zomato acquired Blinkit, announcing its arrival in the quick commerce industry. The quick commerce segment is now characterized by cut throat competition, low margins and logistical struggles, evidenced by the fact that neither Blinkit nor its close competitors Zepto and Swiggy Instamart are profitable. This segment is characterized by excessive customer expectations, from instant delivery to quality assurance, which is exceedingly difficult in case of non-branded products like fruits and vegetables. Another area of concern is the potentially sour relationship with regulatory agencies and delivery workers, who are often forced to rush to meet delivery expectations. Although the platform does not ask them to drive rash in order to achieve these ends, delivery

personnel, who get paid a paltry sum, aim to maximise their deliveries to earn the maximum they can.

Market Share



Throughout this challenging journey, Blinkit aims to command a special place in the hearts of its customers by enchanting them with its unique and thoughtful packaging. Blinkit uses eco-friendly packaging material, made of recycled and upcycled material, embellished by quirky captions like “Handle with care, contains future cravings”. Its relatable messaging includes using one liners such as “This bag contains smiles” and “Instant groceries, instant smiles.”

Blinkit personalizes its bags by designing them with occasion-specific, festive themes and greetings. This makes customers feel an emotional bond with the brand, spreading smiles ubiquitously. As these bags are reusable, they contribute significantly in increasing the brand’s recall value. Each time the bag is passed on or used, it reminds all those holding or looking at the bag of Blinkit and reminds them of the convenience it offers.

It is often observed that people tend to develop an emotional connection with brands whose merchandise or products they touch regularly. This approach has also been used by Apple in the past, whereby they displayed their phones on an awkward angle due to which prospective customers had to lift the phone up to have a proper look at its display. It was later revealed that touching products leads to developing a sense of belonging with it, often resulting in sales. The Blinkit bag works on a similar principle.

The dual approach to packaging, sustainability and emotional connect, appeal to all. Additionally, the bags flaunt a fairly good quality, making them reusable for quotidian activities. As people reuse the bag and often take it to public places like markets, it also serves as an organic way of advertisement for Blinkit as the bag ignites onlookers’ curiosity.

THE FUTURE OUTLOOK

Characterized by an exceedingly hectic lifestyle, people find it difficult to spare time for buying groceries, as homemakers did a couple of decades earlier. Similarly, the urban lifestyle encourages convenient home delivery of food, as the urban lifestyle leaves little time for cooking. With increasing participation of women in the workforce, platforms like Zomato help modern families dine without trouble. As is evident, current trends indicate that the demand for these platforms is only likely to rise in the future. A key challenge for quick commerce platforms will be to focus on profitability and avoid cash burn in the long run. Even though it appears that the market is saturated, with new competitors constantly entering the market, profitability may be made possible by achieving operational efficiency, dark store operations streamlining, collaborating with delivery executives and their

unions whilst simultaneously maintaining warm relations with regulatory authorities. For food delivery platform Zomato and quick commerce

giant Blinkit, the future outlook is positive, with abundant opportunities coupled with threats that can be mitigated.

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SPOTIFY WRAPPED: A DISCOVERY OF MUSIC, DATA, AND DIGITAL CULTURE

BY RAGHAVI



INTRODUCTION: IT'S ABOUT SOMETHING BEYOND A YEAR-END OVERVIEW

Spotify Wrapped has developed from a simple year-end review to a world-wide phenomenon awaiting millions. From an amusing way to look back at one's listening past to becoming a phenomenon in culture that incorporates nostalgia, data, and digital storytelling. Year by year, Wrapped offers a personalized analysis of users' most streamed songs, top artists, and listening time in total, turning information into something interactive.

Transcending beyond a summary, it demonstrates the possibility of personalization and data-based interaction in today's digital culture.

THE EVOLUTION OF SPOTIFY WRAPPED

Spotify Wrapped has evolved significantly since its debut in 2016, becoming a highly anticipated annual feature that provides users with personalized insights into their music habits. Initially a simple year-in-review playlist, Wrapped has expanded to include detailed

statistics, such as top artists, songs, genres, and minutes streamed, presented through engaging, story-like visuals.

Over the years, Spotify has introduced interactive elements like shareable graphics, personality-based listening categories, and even AI-generated DJ commentary. The feature has also incorporated cultural trends, with Wrapped reflecting global listening patterns and featuring special artist messages.

WHY WE LOVE IT: THE PSYCHOLOGY OF WRAPPED

Wrapped leveraged core human sentiments: self-awareness, reflection, and social approval. Music is synonymous with memory, and Wrapped offers an opportunity to re-experience one's year in terms of the music that was important to them. It is a digital time capsule that affirms one's identity and gives their self-impression of control over what makes them stand out the most.

The shareability factor is a large part of it too. People love to brag about their musical tastes and compare their scores with friends,

celebrities, and influencers. Wrapped turns listening to music into a social experience, with vibrant visuals and bite-sized facts that are easy to share.

And the second crucial ingredient? Surprise. Enclosed often reveals unsuspected listening habits—an embarrassed guilty pleasure or a taste one hadn't realized they had. This aspect of surprise keeps users engaged, inducing the feeling of novelty annually.

Thirdly, the “gamification” feature of Wrapped motivates listeners to stream throughout the year in order to try and hit different milestones. Most listeners tend to know that they have an active consumption of music and deliberately try to manipulate their Wrapped summaries in some way.

The captivating, vividly highlighted image of their yearly activities guarantees Wrapped will not be an annual one-holiday wonder.

HOW WRAPPED AFFECTS THE MUSIC INDUSTRY

Aside from users, Wrapped is an important event for artists and labels as well. Being prominently featured in Wrapped tends to bring more exposure to artists, which directly translates to more streams, new followers, and overall engagement. A lot of artists thank their listeners during Wrapped, which helps to sustain their fan base.

Wrapped changes listening behaviour as well. Artists and songs that are most played on Wrapped will experience another spike in their popularity when users play their hits or try to look for new artists with similar results. Businesspeople employ Wrapped to collect rich data about current music trends, shaping

marketing and production strategies.

Record companies use Wrapped analytics to sense genre shifts, listener demographics, and viral trends. The data-informed approach enables them to maximize promotional strategies, identify breakout acts in the pipeline before they explode, and tailor music production in response to shifting listener tastes. Apart from that, Wrapped includes geographic listening trends that help local up-and-coming artists understand optimal points for local monetization and prospects for global marketing at the same time.

Other than Spotify, other streaming services have copied Wrapped to launch their own individualized recap iterations. The rivalry has born new innovation in terms of how streaming services utilize data for enhanced user engagement and discovery of music.

THE TECHNOLOGY BEHIND WRAPPED: DATA AND AI

Essentially, Wrapped is based on advanced data analysis and artificial intelligence. Spotify continues to collect and analyse vast sums of listening data, dissecting it in terms of genres, moods, and number of plays. Wrapped is more than simple statistics—Wrapped tells a story, sometimes incorporating light-hearted flourishes like "Audio Aura" or "Listening Personality" to make the experience enjoyable and interactive.

The same data-driven approach fuels Spotify's recommendation algorithms, which makes features like Discover Weekly and Release Radar more accurate. What listeners discover through Wrapped not only pleases them but also allows Spotify and the music industry as a whole to better know and predict listeners' tastes.

Spotify's machine learning doesn't just tailor Wrapped but also applies to the broader music landscape. By recognizing emerging listening habits, AI suggests songs that appeal to individual tastes while encouraging exploration of lesser-known artists. The balance between hitmakers and specialty acts keeps the site vibrant and dynamic.

Moreover, Wrapped presents an opportunity for Spotify to experiment with AI-created music trends. From the analysis of Wrapped data, Spotify can track the way that users interact with AI-generated tracks and apply this data to enhance its AI music tools. This could lead to an era when AI musicians are a mainstay in the pop music landscape.

WRAPPED'S VIRAL SUCCESS ON SOCIAL MEDIA

Influencers and brands hopped onto the Wrapped train as well, capitalizing on its format to do their own year-in summaries. Because of Wrapped's virality, even non-Streamers experience FOMO, further strengthening the platform's position in comparison to Apple Music and YouTube Music.

The sheer magnitude of Wrapped's online popularity led other brands to adopt this framework regardless of whether they are from the music industry or not. From fitness apps to meal kit delivery companies, everyone has designed their own "Wrapped" style summaries, showing the effectiveness of shareable year in review content. This trend serves as an example of a growing desire for data-rich, highly shareable content that boosts engagement with customers and just the brand in general.

WHAT'S NEXT FOR WRAPPED?

With Spotify spreading its reach beyond music and into podcasts and audiobooks, Wrapped can similarly be adapted. Future versions may include podcast and audiobook wraps, or even features that allow Wrapped to be compared in real-time with friends. Additional game and social components could enhance the experience further.

The relationship between music and technology will become increasingly complex and fascinating. With the increase of AI music generation, future Wrapped releases are likely to reflect how users interact with such songs.

One such potential innovation could be more widespread use of augmented and virtual reality. Picture a fully realized Wrapped world that allows users to better interact with their favourite artists or genres through full 3D. The introduction of shared Wrapped playlists could allow users to blend their records of songs listened to with friends for unique retrospectives.

THE PRIVACY QUESTION: HOW MUCH DATA IS TOO MUCH

While Wrapped is welcomed across the world, it also raises questions of data privacy. Spotify tracks enormous amounts of listening behaviours—each skip, play, and repeat of a track. While the company assures consumers that Wrapped is built from anonymous information, fears of digital surveillance and data ethics dominate. As public discourse around privacy grows, transparency and user control over data settings will be essential to establishing trust.

Users are increasingly sensitive to how their data is being utilized, and future Wrapped iterations may need to offer greater control over data sharing. Providing opt-in choices for Wrapped insights and enabling users to opt out of including specific listening habits in public statistics could increase trust and privacy without diminishing engagement.

CONCLUSION: WRAPPED'S ENDURING APPEAL

Spotify Wrapped has evolved from an annual

recap feature to a major breaking point in a music obsesser's life. This shift has been painstakingly detailed and documented to fundamentally change how we engage with a piece of art and digital content.

Sheer nostalgia combined with advanced instinctive marketing allows Wrapped to retain subscribers year after year. As long as music remains a deeply personal experience, Wrapped will flourish and dutifully reveal that providing digital satisfaction lies in catering to the world's desire for less customization.

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BEYOND MERELY BEING A CHOCOLATE: MARKETING BRILLIANCE OF CADBURY

BY PRAHARSH THAPLIYAL



INTRODUCTION

What's the first thing that comes to your mind when you hear the word 'chocolate'? Isn't it Cadbury? But have you ever wondered why? What has Cadbury done that's so special to create such a strong image in our minds? How do they tap into our psychology and play with our perceptions?

JOURNEY OF AGES

Before unveiling its marketing prowess, let us see how Cadbury transformed from a grocery store to the number-one chocolate brand over the past two centuries.

The journey began in 1824 on Bull's Street, Birmingham, where John Cadbury opened a grocery store selling cocoa and drinking chocolate. When John retired in 1861 his sons, Richard and George took over the business. What marked a turning point in the journey was when they invested in a new cocoa press which removed most of the cocoa butter, thereby enabling the brothers to sell a cent percent pure cocoa giving them an edge over their competitors. In 1905, Cadbury

released their game-changer product - dairy milk- a chocolate that was creamier than any other chocolate in the market at that time. Owned by Mondelez International since 2010, Cadbury is currently present in over fifty countries.

Cadbury entered the Indian market in 1948 and that marked the inception of their legacy.

PEOPLE'S CHOICE

Through its creativity, Cadbury has revolutionized the way brands connect with their customers. Almost every brand tries to capture a particular market segment, be it based on age, gender, likes, dislikes, etc. Cadbury wanted to break this prism of the niche target market. Especially in a country where chocolate is largely seen as a treat for children, Cadbury aims to break that stereotype. They wanted Cadbury to be the go-to sweet for children as well as grown-ups. What marked the breakthrough was something that was termed by many as the 'advertisement of the century' - Asli Swad

Zindagi Ka. Launched in 1994, this advertisement became a timeless classic. It featured a cricket match where a girl was on cloud nine when her friend hit the winning runs for his team. Her pure and authentic emotion of joy, combined with the nation's vogue for cricket, created a long-lasting effect on people's minds. It made Cadbury a means to share joy and happiness on every occasion.

Today Cadbury's market is quite extensive and inclusive, appealing to customers of every age group.

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AN UNBREACHABLE FORTRESS

After capturing the chocolate market, Cadbury's vision was to expand in the sweets market. India, known as the land of festivals, allowed Cadbury to make it possible. Festivals generally involve people giving boxes of sweets to their friends and family. They launched the "Shubh Aarambh" campaign to capitalize on this opportunity. The idea behind it was to have something sweet before any auspicious occasion as it is said to bring good fortune according to Indian traditions. Cadbury started competing in the sweets market during the festive season of Diwali and Raksha Bandhan. Soon Cadbury started replacing boxes of sweets with their

gift hampers and boxes of celebration.

However, they didn't just stop at festivals but continued to document other joyous events. They launched special edition chocolates for Valentine's Day, Mother's Day, Cricket World Cup, New Year, etc. Another popular campaign run by Cadbury was "Meethe me kuch meetha ho jaye", where a sweet little girl was hesitant to share her dairy milk. This advertisement resonated with the common household's concern of having something sweet after dinner. With years passing by "Kuch meetha ho jaye" became the slogan of Cadbury. With the success of this campaign, the brand effectively replaced the word 'meetha' with Cadbury in everyday vocabulary. It wasn't just a marketing triumph—it became a cultural phenomenon, with Cadbury now being a go-to choice for satisfying sweet cravings.

HITTING THE RIGHT NOTE

All the campaigns run by Cadbury had an emotional touch in them that connected directly with the hearts of the consumers. These advertisements demonstrated the tale of every Indian household. The storyline plays with the psychology of the customers building a strong relationship with them. Cadbury's focus was never on marketing the product but rather on selling the emotion. "Pappu pass hogaya", "Man me laddoo phoota", and "How far will you go for love" are some of the campaigns that have entrenched their place in people's minds forever and will go down in history among the best marketing campaigns ever. The object of these advertisements was to have a Cadbury even on the smallest occasion.

Cadbury knew very well about their Indian consumers, who considered actors and sports

stars as their idols. In March 2024, when cricket fervor was at its pinnacle with the IPL and T20 World Cup around the corner, Cadbury subtly launched an advertisement featuring T20 sensations Suryakumar Yadav and KL Rahul, where they presented a Dairy Milk to their childhood coach to thank them for their efforts. This advertisement captured the hearts of cricket fans all across the country. It also instilled in youngsters the feeling to thank not only their cricket coach but also all those who guide them in their day-to-day life. Through this successful campaign, Cadbury positioned itself as a thank-you present. Notably, by endorsing and collaborating with other superstars like Big B Amitabh Bachchan, the king of Bollywood Shah Rukh Khan, and Kartik Aaryan, Cadbury solidified its presence in the Indian market by leveraging their mass appeal and sheer charm to its benefit.

THE MIND GAMES

In a price-sensitive market like India, Cadbury had to formulate their pricing strategy vigilantly to retain their position at the top of the ladder. They aimed to enter every home in India. They wanted to become a brand for everyone for which they launched products ranging from Rs.1 eclairs to gift hampers and celebration boxes worth thousands of rupees.

The art of playing with human psychology is a lesson that every brand can undoubtedly learn from Cadbury. They have purposely chosen the colour purple (a colour which symbolizes royalty) for wrapping their products which gives the consumers a feeling of elegance and luxury. First launched in 1914 as a homage to Queen Victoria, Cadbury later wanted to trademark the purple shade to protect its distinctive identity. Fighting a legal battle against their fellow competitor Nestle since 2004 regarding the

trademark, it was only in the year 2012 that the court rejected Nestle's appeal and granted Cadbury the sole right to use the colour Pantone 2865c for their products. Such attention to detail shows how seriously Cadbury undertook its marketing and brand value, which is the key reason for its success.

THE POWER OF MANIFESTATION



George Cadbury once said, “If the business ever makes a profit of a thousand pounds a year, I’d retire a happy man”. Little did he know that a small grocery store in 1824 would

become a brand worth billions in two centuries. In India, Cadbury is miles ahead of its competitors, as if in a league of its own. It holds seventy percent share of the total chocolate market in India with dairy milk alone holding forty percent.

Such is the legacy that Cadbury has created with its innovative campaigns. Over the years, through these campaigns, Cadbury has become the definition of chocolate and has proved that it is here to stay.

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BURGER KING

THE FAST-FOOD GIANT WITH DIFFERENT MARKETING STRATEGY

BY ARYAN



INTRODUCTION

Originally founded as Insta-Burger King in 1953, Burger King is one of the most popular fast-food businesses worldwide. The flame-grilled hamburgers are its forte and they dominate the fast-food markets. Its headquarters are located in Miami, Florida, USA. Burger King boasts over 19,300 outlets worldwide and is earning close to \$40 billion annually, hence solidifying itself in the fast-food arena. It, however, competes directly with the likes of McDonald's and Wendy's.

Apart from having a strong offline presence, Burger King has efficiently built a loyal community on social media. It has about 1.9 million followers on X (formerly Twitter) as well as Instagram, thus making communication with consumers far more direct. However, its closest rival, McDonald's, has ascended in social media reach with a whopping count of roughly 5 million followers on both Instagram and X.com.

Burger King is known for its ingenious marketing strategies and often unconventional approach to marketing. Over the years, it has

launched many campaigns that have not only increased customer engagement but also defined brand identity. This article will take a deep dive into the company's marketing strategies, together with its most successful and viral campaigns, competition with McDonald's, and how it continues to innovate in the fast food industry.

THE RISE OF BURGER KING

Insta-Burger King started in 1953 in Jacksonville, Florida. The initial concept was to use a machine called the Insta-Broiler to maintain a distinct grilled flavor to their burgers. However, financial difficulties delayed its launching under a new name, the Burgers King, in 1954, after its takeover by James McLamore and David Edgerton.

Over the subsequent decades, Burger King expanded rapidly, introducing the Whopper in 1957, a product that remains its signature offering to this day. Throughout the 1970s and 1980s, Burger King aggressively competed with McDonald's by promoting itself as the

bigger and better burger product. With slogans such as "Have it Your Way," the brand sparked customization that resonated with its customer base.

Today, with over 100 countries hosting its operations, Burger King has key markets in North America, Europe, and Asia. The business prides itself on offering flame-grilled burgers, chicken sandwiches, and numerous innovative and limited-time offerings to spark customer interest.

UNIQUE MARKETING CAMPAIGNS OF BURGER KING:

Burger King is universally acknowledged for its bold and extroverted marketing. The company is not shy about taking playful digs at competitors, using humor and digital engagement to attract more attention in the marketplace. Here are some of the noteworthy campaigns:

1. Subservient Chicken Campaign (2004)

In 2004, Burger King launched the Subservient Chicken Campaign to promote the TenderCrisp Chicken Sandwich. Featuring an entire dedicated website, a person in a chicken suit would act based on commands given by users.

The tagline "Chicken the way you like it" emphasized customization and interactivity. The campaign went viral almost immediately, generating millions of visits and establishing itself as one of the first widely successful viral marketing endeavors in fast-food history.

2. Whopper Detour Campaign (2018)

One of its most unique transformation campaigns that promoted digital innovation was the Whopper Detour in 2018, a ground-

breaking application of geo-targeting to draw customers away from McDonald's.

It allowed customers to purchase a Whopper for just a penny, but on the condition that they ordered it from the Burger King mobile app while situated within 600 meters of a McDonald's outlet!

This strategic initiative led to 1.5 million downloads of the app within just a few days and a 37.5% rise in users of Burger King's mobile application. Such an exponential increase in engagement and widespread media attention made it one of the most discussed campaigns of the year

3. A Day Without Whopper (2017 & 2018)

Burger King showcased its commitment to corporate social responsibility through the "A Day Without Whopper" campaign in 2017 and 2018. On McDonald's McHappy Day—an event that raises funds for children battling cancer—Burger King ceased selling the Whopper in Argentina, thereby encouraging customers to purchase burgers from McDonald's.

This surprising decision fostered goodwill towards Burger King, highlighted the brand's dedication to social issues, secured favorable media coverage, and garnered customer appreciation. The campaign illustrated how prioritizing altruism over competition can positively impact a brand's reputation.

4. The Moldy Whopper (2020)

In 2020, Burger King made headlines with its Moldy Whopper Campaign aimed at illustrating its transition to preservative-free food options. This initiative included a time-lapse video capturing a Whopper as it decomposed over a period of 34 days, showcasing that Burger King had eliminated artificial preservatives

from their ingredients list.

Although some viewers found the imagery disturbing, this campaign communicated several important messages. Burger King's dedication to using natural ingredients was evident.

It served as a counterpoint to McDonald's, which faced rumors suggesting their burgers never decompose due to added preservatives. It effectively positioned Burger King as a more health-conscious alternative among fast-food chains.

5. The Stevenage Challenge (2020)

In 2020, Burger King capitalized on the burgeoning eSports scene by launching the Stevenage Challenge. With Stevenage FC being featured in FIFA—a popular video game—Burger King chose to sponsor the team's jerseys.

The concept was straightforward: gamers playing FIFA would see Burger King's logo prominently displayed on Stevenage FC's uniforms, thus providing substantial online visibility at minimal sponsorship costs.

The campaign turned out to be an extraordinary success, drawing massive attention, with highlights such as:

- Over 25,000 goals scored with Stevenage FC in FIFA.
- A tremendous surge in Burger King's online mentions.

- A brilliant guerrilla marketing strategy executed at a fraction of the cost of traditional sponsorship deals.

BURGER KING VS. MCDONALD'S: THE GREAT RIVALRY

Burger King has always been a major competitor to McDonald's. While McDonald's may have the edge in revenue, reach, and social media numbers—an area where Burger King's efforts have been less impactful—it continues to challenge the status quo with innovative and daring marketing campaigns.

Even though McDonald's is a more prominent brand, Burger King manages to hold its own with controversial and viral marketing working in its favor with young audiences.

By giving sharp marketing strategies a chance to propel customer engagement and brand loyalty, Burger King has proven that guerrilla marketing tactics like Whopper Detour and corporate social responsibility campaigns like "A Day Without a Whopper" always find a standout way to shine in the competitive fast-food industry.

Currently, McDonald's still remains the world leader, and Burger King has successfully positioned itself as a fearless, unconventional, and socially conscious challenger brand that embraces digital innovation and viral marketing for retaining competitiveness in the fast-food market.

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MAYBELLINE: MAYBE IT'S MAYBELLINE OR MAYBE IT'S GENIUS MARKETING BY JAPGUN



INTRODUCTION

"Our mission is to provide beauty products that make everyone feel confident and beautiful, regardless of their background or appearance. We believe that beauty knows no boundaries, and our commitment to inclusivity is at the heart of everything we do." -

Ever wondered why Maybelline dominates the beauty world, making it the first name that pops into your mind when shopping for makeup?

It all started in 1915 in New York, USA, when a woman named Mabel accidentally burned her eyelashes off and mixed coal dust and Vaseline to enhance her lashes. Her brother saw potential in this and went ahead with this idea, which became the first-ever product of Maybelline. The product became so popular through mail orders, with the company assuring customers that it was harmless and safe to use—an especially attractive claim in the 1920s. Maybelline ran an advertisement with Betty Gamble showing a three-step application process which was featured in multiple magazines. It also ran several advertisements during the 1980's featuring Lynda Carter.

Fast forward to the 1990s, and Maybelline made history with its legendary slogan- "Maybe she's born with it. Maybe it's Maybelline." The catchy jingle became iconic, cementing the brand's place in pop culture. Fast forward to the 1990s, and Maybelline made history with its legendary slogan- "Maybe she's born with it. Maybe it's Maybelline." The catchy jingle became iconic, cementing the brand's place in pop culture.

GLAMOUR MEETS INFLUENCE: MAYBELLINE'S STAR-POWERED COLLABORATIONS

Maybelline has mastered the art of establishing itself at the forefront of the industry through celebrity and influencer collaborations.

Maybelline X Ryan Vita

Maybelline's collaboration with Ryan Vita, challenged traditional makeup norms and was a good strategy to build on the fact that Maybelline aims at inclusion and self-expression. Though it also sparked some controversy in the media, Maybelline responded to this backlash by supporting Ryan Vita and delivering the

message that the brand does not tolerate any hate and believes in spreading love.

Maybelline X Gigi Hadid

Releasing a full collection in collaboration with Gigi Hadid was a marketing masterpiece, sparking genuine excitement among the people. The teaser for this collection was released in parts on the Gigi Hadid social media pages with fans eagerly waiting for her new project. Fans were excited to learn that their fashion idol created this collection, sparking a buzz on the social media pages of both Maybelline and Gigi Hadid, making it the most talked-about campaign.

Maybelline X Nikki Tutorials

Maybelline collaborated with Nikki Tutorials to create series such as 'Makeups like this' where the guest and Nikki were challenged to recreate the given makeup looks using Maybelline products. It also featured some bridal looks ranging from elegant to bold and encouraged the audience to do their bridal makeup using the Maybelline products and then posting it online.

A LEGACY OF ICONIC ADS

"Maybe she's born with it, maybe it's Maybelline"

The first "Maybe it's Maybelline" ad from 1991 holds a special place in the brand's history, marking the beginning of a memorable campaign that would leave a lasting impact.

This iconic advertisement made it to every household with a television or a radio. It was the most televised ad at that time. The reason it resonated so deeply with the public was the very reason beauty brands at that time weren't as popular. From the very beginning, Maybelline didn't target only a specific type of person. Instead, it built its company on a mission of inclusivity, creating products for all

skin types and tones. Undeniably, it took some time to establish a wide range of products, but it mattered that inclusivity was their plan from the start.

This campaign has remained timeless and it continues to resonate with the consumers promoting confidence and self-expression.

"Fit Me" – India

This campaign delivered a powerful message fostering inclusivity and empowerment. It featured models with diverse Indian skin tones, promoting Maybelline's range of foundation shades catering to various consumer needs.

CGI

"We wanted to create a campaign that would make people stop and take notice. By blurring the lines between reality and creativity, we were able to capture the imagination of our audience and create a buzz around our brand." - Maybelline creative director.



This campaign turned many heads and created a buzz worldwide. It featured a computer-generated image of a mascara that seemed real and was displayed in several prominent locations in London, drawing the

attention of onlookers and leaving a strong impression on the audience.

The CGI campaign didn't stop there. Maybelline found a brilliant way to make heads turn in the market. Next, they unveiled a hologram of a giant Barbie emerging from an equally giant box, which certainly grabbed attention as people wondered whether it was real or not. The campaign didn't end there either; the next stunt involved a mascara tube-shaped bus roaming the streets of New York. The scale of the audience through augmented reality is larger since many may not watch advertisements, but it's hard to miss something as huge as that on the road.

AFFORDABLE LUXURY THE MAYBELLINE WAY

Maybelline has created a balance between affordability and quality, making it accessible to a wide range of audience. It offers its products at various price levels, catering to both budget conscious as well as premium consumers. It frequently promotes its products through strategic partnerships, ensuring that its products remain within reach while not compromising on quality.

It portrays itself as a luxury brand but at affordable prices which has worked exceedingly well for them. Consumers get the full premium experience, from its sleek and elegant packaging to limited edition products. Maybelline adjusts its pricing strategy to cater to local consumer expectations.

BUILDING LOYALTY BEYOND BEAUTY

What truly sets Maybelline apart is its strategy to maintain loyalty within its existing customer base while expanding to new customers. Amidst the constantly evolving and

competitive industry, Maybelline's dedication to remaining at the top greatly contributes to its success.. It stays true to its brand and builds a community online that fosters long term loyalty. By constantly innovating and collaborating with influencers and models, it creates its own trends and ensures that Maybelline remains the most trusted brand among the consumers.

Maybelline portrays itself more than just a brand, it is a symbol of confidence, inclusivity, and loyalty.

THE LATEST MARKETING STUNT

Recently, Maybelline launched a new product called Teddy Tint, in the form of a scavenger hunt on valentine's day. This included a mix of social media, outdoor advertising, influencer engagement, and real-world participation. Each morning, clues were released on Instagram through the influencers they partnered with, guiding fashion enthusiasts to the secret location of the product. This five-day scavenger hunt featured eye-catching sidewalk decals, Teddy posters, Massive LED truck billboards, a dedicated team that interacted with the audience and encouraged them.

This campaign created a media frenzy with the fans going crazy in solving the clues and claiming the ultimate Teddy Tints. Maybelline once again delivered in making the latest release of a product popular with creative marketing and its ability to connect with the consumers.

CRACKING THE CODE

Maybelline's success is based on its innovative marketing techniques, digital supremacy, and the ability to balance affordability with luxury appeal. Through the

use of influencer partnerships, viral social media campaigns, emotional branding, and trend-led product launches, the brand has stayed relevant and coveted across generations. Its smart application of limited-edition collections, sustainability efforts, and interactive digital experiences further reinforces its hold in the

competitive beauty market. Whether by means of TikTok or Instagram trends, high-performance offerings, or value prices, Maybelline continues to redefine beauty advertising. With its constantly changing strategy, the company makes sure that it is a household name, showing that perhaps it truly is Maybelline.

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FAIR AND LOVELY? MAY OR MAYBE NOT !

BY ARPIT

Fair & Lovely
IS NOW
Glow & Lovely

BACKGROUND

Fair and Lovely, two words adjoined for life by one of India's biggest conglomerates-Hindustan Unilever, two words that over time became increasingly synonymous with each other, two words that became the reason for depression and self doubt for lakhs of Indian woman and two words that created a society that quite easily ignored the strength of one's character and instead layed focus on the shade of their skin. In the early 1970s, Hindustan Unilever researchers discovered that Vitamin B3, when applied to the skin, could potentially lighten skin tone, and hence, in 1975, a brand — 'Fair and Lovely' — was born. They sought out to target Indian women between the ages of 21-35 who aspired to look attractive and who wanted their skin to appear radiant. Our society had already established a clear correlation between the colour of one's skin and the perceived level of attractiveness, and the brand took this approach forward by advertising itself as a cream that, when applied, could lighten the colour of human skin in a matter of 4–6 weeks. You might think that HUL's approach and their beliefs were disastrous even to

begin with but the jarring truth is that five decades back, this approach abided by the norms of our society and almost no one batted an eye. Which is why, the brand swiftly climbed to the top of the cosmetics industry by gathering 80% market share and soon became a household name all across the country. It is only in 2025, on the 50th anniversary of this controversial brand, that we appear to be repulsed by its digital advertisements and study it as a classic case of marketing gone wrong.

The success of this brand can be attributed to several factors, primarily the fact that it is owned by Hindustan Unilever, which has one of the best distribution networks in the nation and a vast global footprint. With an established market presence in more than 44 countries, this allowed the brand to achieve extensive reach and be present on every shelf in the subcontinent. However, it was their advertising campaigns that made the real difference. They roped in famous film stars such as Yami Gautam, Aishwarya Rai, Juhi Chawla, and Padmini Kolhapure, who were widely known for their beauty and ever-glowing skin. Their advertisements ran on

television sets across the country and became a roaring phenomenon. They faced severe backlash for promoting stereotypes and glamorising racism through their marketing campaigns.

In 2007, they even had to withdraw an advertisement which depicted a dark skinned woman searching for a job and a boyfriend who suddenly became the talk of the town after she started using Fair and Lovely. Their depictions were discriminatory, demeaning and marginalised dark skinned women as vocalised by numerous experts. Their brand name itself was demoralising as it equated being fair to being lovely, elucidating that only those women could be pretty who had a fair complexion. The same was depicted in their advertisements as they showcased how only those women could find a good job or a life partner who were fair. This created a wave of inadequacy and insecurity among dark-skinned women, who were led into a sphere of self-doubt and widespread feelings of inferiority.

SEVERE BACKLASH

Even though most of their advertisements were criticized for promoting the categorization of women and unhealthy beauty standards, their sales remained more or less steady, as they were catering to the aspirational middle-class woman who wanted to appear attractive and remained largely unaffected by the backlash faced by the company. The educated class were highly against such depictions and would call them out on a regular basis but the fact remained that in India, the colour of one's skin has always been and still is one of the key determinants of one's life outcome. Parents post matrimonial ads which highlight the "wheat-ish complexion" of their children. From birth, fairer kids are given more attention

compared to dusky kids by their parents, relatives, friends and the whole society at large. Constant media advertising of skin lightening creams normalizes this mentality, gives false hopes to the consumers, fosters irrelevant needs, and even goes ahead to shame them in the process. The mental health impacts of such media portrayals can't be ignored, especially in a country with a population of over a billion people whose predominant skin tone is in fact dark. The rise and evolution of social media platforms further worsened the situation, as the new generation opted to boycott the once-famed brand. They came under the scanner of cancel culture, with their advertisements, preposterous claims, and negligent attitude becoming a topic of discussion on Twitter. Brands like Nivea and Ponds took advantage of this situation by promoting products that radiated inclusivity and were suitable to be used by all. This led to the Hindustan Unilever brand losing significant market share and forced them to rethink their digital advertisements and other campaigns.

THE INEVITABLE REBRAND

The impending doom arises when the "Black Lives Matter" started in the USA in 2020 that gained the brand negative publicity on a global scale. Fair and Lovely trended high on twitter with thousands demanding a ban on its advertisement and sale. Hashtags such as #unfairandlovely also gained publicity. The bollywood stars who endorsed these products were also questioned on their mindsets and their upcoming ventures were asked to be boycotted. Moreover, at least three petitions came up globally demanding Unilever to discontinue the brand and to banish the cream in Asia and all Asian stores in the West. A few said that this brand was "built upon, perpetuated and benefited from internalised racism, promoting anti-black sentiments am

amongst its consumers". Finally, the long awaited rebrand arrived, the brand changed its name from "Fair and Lovely" to "Glow and Lovely" and promised to make their product lines more inclusive and diversified. Chandana Hiran, who authored one of the petitions, told the BBC the Unilever announcement was "a path-breaking decision" but was only "a first step towards inclusivity". The rebrand did calm a few voices, but in a country with people as backward-minded and uneducated as ours, who have internalized racism and inferiority into their blood, it will be very burdensome to recover from the long-lasting scars left by these demeaning advertisements. Even now, five years after the rebrand, most people still apply such creams in hope for a fairer complexion and a superior life. It can be said with utmost certainty that a rebrand of mindset is the cure to this disease, and changing a mere word in the

brand name is merely a public relations move at best.

CONCLUSION

The 50 year long journey of this brand imparts a few crucial lessons for any aspiring entrepreneur and startup that wants to make it big in the world of business. Firstly, it is important to understand that people are the real owners of the business and their perception of your brand is what ultimately matters because no matter your scale or reach, if the public despises your brand, you are doomed. Secondly, your marketing strategies have to be dynamic. The advertisements that brought success in the past may now be a source of cancel culture in the present; hence, it's important to keep studying the market you operate in.

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FAME TO FORTUNE

Journey through the lives where spotlight met success, and recognition turned into riches. Discover how fame became the first step toward lasting fortune.

RARE BEAUTY VS RHODES

AN UNEXPECTED HOLLYWOOD FACEOFF



BY: ARPIT
AGGARWAL



What is it about a celebrity that makes us all go crazy? What is it that entices us to run to stores or stick out our phones as we now do to purchase any and everything they endorse? Is it their “aura” as the youth says or is it simply our undying love for them? Well this is as good a time as any to figure that out! Selena Gomez and Hailey Bieber, arguably two of the biggest female celebrities of the 21st century have recently ventured on their own commercial journeys, the former introducing “Rare Beauty” in 2020 and the latter with “Rhodes” in 2022. They both entered the beauty industry when it was almost stagnant till 2020 and has now grown from 550 bn to 646 bn in only the past 5 years. Selena Gomez, an American actress and singer started her makeup brand with a vision to make beauty products more inclusive and to guarantee a sense of authenticity to the industry, while Hailey Bieber, an American model and socialite ventured into her skincare brand with a vision to create products that inculcate simplicity, affordability and luxury.

Rare Beauty entered the market with a full lineup of color cosmetics, offering an inclusive range of foundation shades, blushes, and

highlighters. The brand stands for diversity and representation, ensuring its products cater to all skin tones. Its branding focuses on self-expression, confidence, and the idea that beauty is more than skin deep. Rhode, in contrast, debuted as a skincare-first brand, launching with just a few core products: the Peptide Glazing Fluid, Barrier Restore Cream, and Peptide Lip Treatment. This strategic, highly curated approach creates a sense of exclusivity and demand, with products often selling out upon release. The brand’s minimalist packaging and focus on hydration and skin barrier health position it within the ‘clean beauty’ and ‘luxury skincare’ space, reinforcing Bieber’s personal branding as effortlessly chic and aspirational.

BRAND PHILOSOPHIES

It is often seen that celebrity led brands enter the market by storm hoping to disrupt all competitor’s plans and to leverage the celebrity presence to gather attention but it is also very common for such brands to get lost in the herd once the dust settles. The key cause for this is that they enter the market with only one key differentiator that is the

celebrity leverage they possess and also because often the values of the brand do not align with the portrayal of the celebrity and this creates a customer perception of distance between the brand and the celebrity that does no good to the market image. Although, both these brands have done a particularly fascinating job to overcome these set of difficulties. When Hailey Bieber founded “Rhodes”, she laid immense importance on the values of simplicity, affordability, authenticity, quality and transparency all of which have been clearly portrayed by her as a supermodel. She believed in the “less is more” philosophy, advocated for the need of efficacy in the beauty industry and embodied the clean girl aesthetic that aligned with her own style as well. Thus, making it easy for her fans to relate to her venture and to become dedicated customers. Similarly, Selene Gomez ensured that her brand image resonated with her relatable persona and her humble character. Her openness about her kidney transplant and bipolar disorder coupled with her extensive charity work further built fan loyalty which she was able to use to create “Rare Beauty”, a brand that celebrates imperfections and promotes self acceptance, of course it helped that the owner is herself a Latina American who understands firsthand what it is to be outcasted. She started the “Rare Impact Fund” which raised over \$100 million to enhance access to mental health service and the “Mental Health 101” campaign, an educational and advocacy campaign focused on bringing more mental health services and financial support to schools. It encouraged mental health education and aimed to reduce stigma by providing resources and support within educational settings.

MARKETING JOURNIES

The marketing initiatives have in fact played a crucial role in building successful brands. Both these brands placed emphasis on engaging

into influencer marketing, that too with a twist. While most brands customize posts and product placements, they instead focused on creating 7-10 second videos on TikTok and Instagram that showcased the influencer doing a “Get Ready With Me” video or a tutorial on how to use the products or even simply expressing their opinion on the given product. Hashtags like #rhodeglowup were also used by consumers to display their beauty journey and to build social proof to attract new customers. The same has been depicted in this graph on types of posts by Rare Beauty’s official instagram handle.



As it worked out, they were able to cash in on the rise of short form videos and were able to draw the attention of the masses towards their brand. This form of marketing becomes even easier for celebrity-led brands because they already have enough eyeballs on them to garner big influencers but are also able to harness enough contacts to either make the promotion a barter deal or to save the brand a few thousand bucks on influencer marketing. Moreover, Selena Gomez and Hailey Bieber are both stars on social media and have enough outreach to curate cultural movements by a few posts. They took full advantage of this reach and why wouldn't they, to make the brand values a part of the society they aspire to live in one fine day. While Gomez focuses on inclusivity and diversity by recognising imperfections in beauty, Hailey aims to reduce the use of harmful skincare that not only burns the skin but also the pockets of the buyer. Rhode also played a major role in promoting the “Skinimalism” movement that professed for using only a few beauty products

but those that have superior property, thus reducing the pressure on young women to always appear attractive and well dressed.

CONCLUSION

It's rather apparent how the augmentation of these two modernistic brands has shaped consumer culture worldwide, both brands tap into the Gen Z and millennial consumers who prioritize authenticity, self worth, and value for money in their beauty purchases. Rare Beauty's emphasis on mental health advocacy aligns with the growing demand for brands to be socially responsible, while Rhode's minimalist skincare approach reflects the rising trend of skin-first beauty over heavy makeup. Rare Beauty has influenced consumer behavior by shifting the conversation around beauty to one of self-acceptance rather than perfection. Through its mental health initiatives, it has created a loyal community that values transparency and emotional well-being as much as product quality. Consumers are now seeking brands that offer a deeper connection and align with their personal values, reinforcing the trend of purpose-driven purchasing. Rhode's impact, on the other hand, highlights the power of aesthetic branding and exclusivity in modern consumer culture. By creating a highly unique selection of skincare

essentials and leveraging Hailey Bieber's effortless, aspirational style, Rhode has driven the popularity of the 'clean girl' beauty trend.

This has encouraged consumers to invest in fewer but higher-quality skincare products, signaling a broader industry shift towards minimalist, functional beauty routines.

In essence, Rare Beauty by Selene Gomez and Rhode by Hailey Bieber exemplify how celebrities can leverage their influence to build successful brands and impact consumer culture in a significant way. However, these brands can only emerge victorious if they have enough going for it apart from the celebrity affiliation. By analysing these two cases, we understand that firstly, the product should be good enough to breakthrough the market on its own potential and that the star influence should only be a driving influence and not one that is essential to sustain the company. Secondly, the consumers will only correlate the brand to the star if the values of the brand actually complement those demonstrated by the personality in real life because in today's social environment, the customer is invested into the narrative displayed by the brand instead of just wanting an adequate product.



JORDAN LEGACY: THE ONE MAN EXTENSION OF BRAND POWER

BY: ANMOL

Celebrity, business and culture have melded into an all-purpose sign of consumerism in the present day. Celebrities, as most charismatic and talented public figures with a high level of public exposure, do have considerable force on consumer behaviour as a result of their power to set trends, shape buying behaviour and even affect values for society. This article treats the thorny dynamics of star brand building, taking up cases of the biggest brands in the world and how megastars leverage their stature to create value with their brands with consequences that reach the culture of consumerism. By looking at the long and storied relationship between Michael Jordan and Nike, we can begin to ponder the tactical wizardry, cultural streams and economic imperatives driving this powerful marketing machine.

THE CELEBRITY MYSTIQUE: A PARAGON OF INFLUENCE

Celebrities are interesting entities that will always have some level of appeal because there's a weave of admiration, aspiration and identification wrapped up in them. Celebs are seen by consumers as living allegories of

success. The established relation makes customers trust brands and the products offered under their favourite. This is the cornerstone of celebrity endorsement, where brands take the image and popularity of a certain celebrity to gain trust and boost their brand equity.

A prime example, celebrity endorsement no longer just means endorser. What is happening today, however, is that celebrities are becoming even more central to forging their own brands; they have even obtained some kind of god-given right to direct an entire product line from lipstick to leggings and brand themselves as business tycoons. This transition from endorser to brand owner equips celebrities with a more powerful position to curate and control their image, the products they are linked with and the narrative they want to give whilst also further melding their public persona with that of the brand.

MICHAEL JORDAN & NIKE: HOW TRUE CELEBRITY BRANDING SHOULD LOOK

The Michael Jordan relationship with Nike is a

textbook example of successful celebrity branding. Jordan — the ultimate athlete, competitor, and cool cultural force all rolled into one giant package — made Jordan well beyond basketball, reaching him globally as an achievement/aiming/cultural icon. After the monumental success of Air Jordan, it became apparent that Nike strategically aligned itself with Jordan through the creation of the "Air Jordan" brand, redefining the sneaker industry and helping Nike ascend to global sportswear major leagues — by marketability.

Particularly the mass appeal of the Air Jordan brand could be tied to several prevailing factors. First, it perfectly captured the competitive soul of Jordan with an image campaign of being the definition itself of what could be achieved in sport—a motto produced by unwavering and never-ceasing desire for victory that only Nike could encapsulate. Secondly, the Air Jordan sneakers themselves were one of the first shoes to push technical fitting as well as design — combining with innovations in technology and functionality to better meet the needs (and aesthetic proclivities) of athletes seeking an edge while also tailoring style offerings towards more style-savvy consumers. Third, smart use of scarcity marketing with limited edition drops and exclusive collaborations made it very hard to stop talking about the brand and built a sense of scarcity and exclusivity that helped keep the brand top-of-mind and a high-end seller in the consumer's mind.

Jordan-Nike — Jordan is a clear example of institutionalising the values, image and aspiration of the target audience into a brand partner. His singular desire for great performance, his unswerving dedication to competition and the flourish of his personality fit seamlessly with Nike as it broadcasted its brand message about athletic achievement, technological innovation, and aspirational

lifestyle. The celebrity-brand synergy created a unique consumer relationship that cemented the Air Jordan brand in consumer culture forever, regardless of sport and fashion divisions.

CONSUMER CULTURE CONSEQUENCES: SHAPING ASPIRATIONS/ DRIVING TRENDS

Consumer culture has been significantly affected by the rise of celebrity branding. Celebrities endorse and own brands and are investors in companies across sectors, influencing consumer aspirations with purchases based on trend sets set by these public figures. Having a celebrity endorsement can raise the perceived value of a product, typical luxury item eaten, special status and desirability, as well as social status. Celebrity branding, which in many ways helps construct cultural reference points and identities. For example, the Air Jordan line was more than just a collection of sneakers; it became a surrogate for athletic superiority, racial identity and social mobility. The powerful story that was synonymous with Michael Jordan all the way through his career arc helped the brand become an actual cultural touchstone and aspirational symbol.

Celebrity branding may also enhance the process of new trends and product adoption. Whenever a celebrity endorses a product, style or lifestyle, it becomes popular in no time and induces purchasing behaviour along with fashion behaviour. This has a large influence beyond that of fashion, and the areas where it sinks its feet include music and entertainment all the way to tech and social causes.

ECOLOGICAL CONSEQUENCES: A MULTI- BILLION DOLLAR ECOSYSTEM

Celebrity branding has literally become a multi-billion dollar industry; the stars get massive bucks to endorse and associate with brands and even for their own ventures. Beyond the brands themselves, the economic consequences of celebrity branding are profound for an economy including manufacturing, retail advertising and media. Celebrity endorsements and technology - the increased sales, market share, top of all brand equity that the bigger sales numbers drive lead to increased cash flow and profits for the company. For example, Air Jordan was synonymous with Nike striding the globe as an industrial and retail giant in sportswear as strong brands entered new markets with new athletic releases. Those downstream economic forces are as large, and these are hard to quantify in any true reflection of the industry/industries exposed.

But with those economic incentives comes a massive downside as well for celebrity branding. The reputation of celebrities is generally fragile, and any negative media coverage, incident or fall in popularity can have a severe detrimental impact on the associated brand. In addition, the impact of celebrity endorsements can decrease over time as consumers are less blinded to commercialised rhetoric.

ETHICAL ISSUES: AUTHENTICITY VS SOCIAL RESPONSIBILITY & TRANSPARENCY

Celebrity branding is also leading to new moral issues of the same sort as well. Consumers are looking for authenticity in brands they like, and if a celebrity cannot deliver it — whether by omission or commission — it can break brand auth and cause trust erosion. As such, celebrities must tread carefully in partnering

with brands, making sure that their values are in line with the ethos of the brand, alongside its aesthetic they wish to project, whilst also meeting alignment regarding ethical practice. Celebs: as public figures and influencers, they have to wield some real power in the world and for good. They must not endorse products or brands with harmful, misleading or exploitative content and should keep in check their endorsements' impact on vulnerable consumer groups.

More and more consumers demand that celebrities do their part and act as socially responsible beings who represent what they want through their platform, both for good causes and to support good practices.

THE DIGITAL FUTURE OF CELEBRITY BRANDING

Celebrity branding is intimately connected to the future. What will it mean if one other must evolve into that developing digital space? Whether it be fandom or their personal relationships, fans can engage in celebrity culture through social media platforms which have made it more personal and interactive for the masses. The more connected we get, the richer this connection promise has been for celebrities as well; they still reign as the richest brand ambassadors and content creators.

Another iteration of celebrity branding is influencer marketing, which might best be defined as using people of high reach on social media to promote products and brands but like celebrities themselves. One of the most trusted sneaky brand advocates exists in influencers (with their authentic link to niche audiences) to be quite powerful, especially with younger generations of people already distrustful of traditional advertising.

CONCLUSION: A SIGNIFICANT PLAYER IN CONSUMER CULTURE

Celebrity branding has morphed into a robust and ubiquitous phenomenon of modern consumer culture, turbulently shaping aspiration, triggering trends, directing purchases and driving how we engage with brands. The Michael Jordan-Nike connection is a great example of some of the changeable powers that a celebrity brand can have, showing how a performance trajectory in alignment with brand and cultural trends creates a cultural juggernaut with long-legs appeal.

The industry and celebrity branding is only going to get more prominent as the digital marketplace changes, and consumer expectations change with it. Nevertheless, celebrities and brands should definitely acknowledge the ethical dilemmas of carrying this level of power along with those social responsibilities and authenticity. Maintaining a focus on true consumer authenticity, good business practices and social responsibility represents an opportunity for celebrities as well as brands to influence cultural forces in a manner that positively impacts consumers and their world.

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"INFLUENCE TO INCOME: THE SOCIAL MEDIA FORMULA AND ITS IMPACT BEHIND KYLIE COSMETICS & FENTY BEAUTY"

BY SIDDHANT

In today's digital age, social media has become one of the most essential tools for marketing products globally. It fosters creativity and raises awareness at a very low cost. Individuals with minimal budgets have successfully increased their sales and profits by effectively utilizing this platform. The days of needing large amounts of money to publish advertisements in newspapers or broadcast them on television are long gone. Now, with just a smartphone, a creative mindset, and quality products, the return on investment from social media marketing far exceeds that of traditional advertising methods.

These trend shifts have also changed the way build their own brands, as now they have direct access to millions of fans who are waiting for their next piece of content. This gives them an already set platform and a guarantee on an initial sell-out known as a 'Celebrity Sell-out' or 'hype-driven sellout' where there is already a huge following and anticipation for that product, simply because the particular celebrity is associated with it.

The term celebrity ranges from but not limited to singers, actors, sports icons, YouTubers,

reality stars, politicians, bloggers and vloggers. The influence of these public figures is becoming more relevant in the marketing and advertising of products and services of the plethora of brands we have in the twenty-first century.

The TEARS Model represents the five discreet attributes of celebrity endorsement: trustworthiness, expertise, physical attractiveness, respect and similarity. In an advertising concept, trustworthiness is the degree of confidence portrayed by consumers towards a company or brand's attempt to convey a message. Relating expertise with celebrity endorsers, celebrity endorsers' expertise refers to the know-how of celebrities in a particular sector which would then impact the brand or company from the celebrity's representation. Attractiveness is the pleasantness and appealing features or qualities that would pique interest. Respect is the quality of the product being estimated thanks to the celebrity's personal accomplishments. Similarity can be referred to as resemblance and correspondence, the state of being almost the same or exactly the same.

For the purpose of this article, we are going to focus on two major brand with huge celebrities backing them. Kylie Cosmetics, backed by the famous model, Kylie Jenner and Fenty Beauty, backed by the famous singer Rihanna.

KYLIE JENNER WITH KYLIE COSMETICS

The Kardashian family is one of the most talked about in American media circles, and Kylie Jenner is the youngest and the person with the most assets in the family. She has amassed a personal wealth of \$900 million, and over 390 million followers on the social media platform, Instagram at the time of writing. . In 2015, when she graduated from high school, Kylie launched a lip gloss set, which was unexpectedly sold out soon. She soon launched other cosmetic products and formally established "Kylie Cosmetics" in 2016. With her influence on social media and various limited edition products, the sales and development speed of "Kylie Cosmetics" is staggering. Not only did she personally endorse the brand, but she also used her huge fan base on social media to promote and market the brand. Therefore, in less than two years after the establishment of this cosmetic brand, she has generated \$420 million in revenue.

The success of Kylie Jenner's cosmetic company is inseparable from her character setting, her company's brand marketing, and consumer acceptance of her products. Kylie's cleverness lies in her understanding of consumer psychology. Based on Kylie's personal and her company's marketing efforts, consumers' perceived value and satisfaction with the brand are relatively high, and the effect of e-WOM(Electronic Word-Of-Mouth) communication is also ideal. They have used popular hashtags like #kyliecosmetics which has over 4 million posts showing active consumer

engagement, and #kylielipkit capitalising on Kylie's earlier lip insecurity and slight inferiority. They released their first cosmetic product with a similar name when she was most controversial, which also did wonders. The audience engagement under the hashtags mentioned above has been largely positive as well. The negative comments of a small group of users have not greatly affected the effect of e-WOM communication. Since the general consumers' awareness of this brand is more positive, the products of this brand will naturally have higher sales. In the long term, Kylie Cosmetics will form a virtuous circle, and this cosmetic company will be relatively successful.



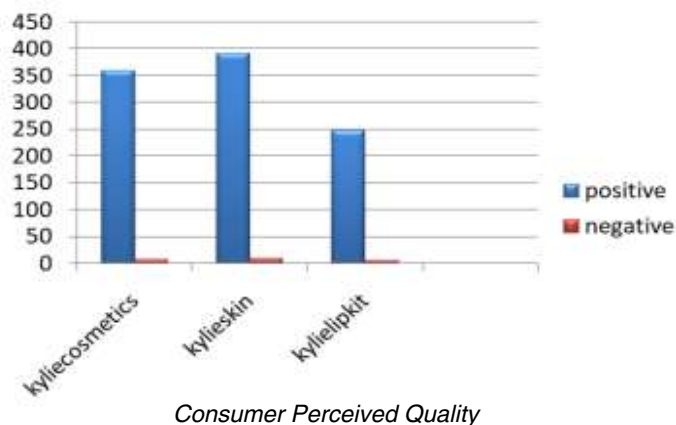
Electronic WOM diagram of the three most popular hashtags

RIHANNA AND FENTY BEAUTY

Rihanna is a world-famous Barbadian singer. She is noted as the best-selling female recording artist of the 21st century by Guinness World Records and the highest-certified female digital single artist by the Recording Industry Association of America (RIAA). She has 14 no.1 hits in the Billboard Top 100 and as of 2024 is the third wealthiest musician in the world. Moreover she also has 150 million followers on Instagram at the time of writing.

In September 2017, Fenty Beauty by Rihanna was born amidst the chaos of New York

fashion Week. It was launched with 40 shades of foundation as compared to the usual 20 or at the most 30, to become a market leader in diverse foundation ranges. Rihanna decided to launch with 40 shades of foundation which was deemed a political move with the motto, “Women everywhere should be included.”



Another thing which set Fenty Beauty apart from the crowd was it was cruelty-free and suitable for vegans, which is of increasing importance to people, as they turn to animal-friendly and vegan products. Fenty Beauty’s social media team ensures that the brand’s social media account stays active by posting several times a day and almost every day of the week and as of June 2019 they have over 9.3 million followers combined across four social media platforms.

The follower’s reactions to Fenty Beauty’s social media posts were mostly identified as task-oriented responses. Positive socioemotional responses displayed by the brand’s followers mostly showed solidarity. This is the case because followers are more likely to reply with positive socioemotional responses than negative socioemotional responses as they are interested in enhancing their self-presentation on social media as a whole. According to Tajfel’s explanation of the social identity theory, it is stated that a group’s social identity is derived from their knowledge of their social group membership “together with the emotional

significance attached to that membership”. Instagram has the significantly highest social media engagement with followers. The finding is justified as the brand’s official Instagram account has the highest number of followers and number of posts posted .

Hanan and Putit (2013) state that the platform is successful because it is deemed as one of the best most used picture-based social media applications globally. It was observed that all Instagram posts had hashtags based on the product promoted on each post. The use of hashtags help people search for the content they want, and in turn, guarantees a successful relationship between businesses and Instagram. Based on the findings, Instagram is the most effective platform for accommodating and encouraging interaction between Fenty Beauty and its followers. For Instagram, Twitter and Facebook, followers mostly demonstrated positive socioemotional responses. YouTube showed results of higher negative socioemotional responses. The followers of the brand are classified as in-group. In brief, Fenty Beauty is a great brand to set as a benchmark for social media engagement.

EPA Coding Scheme	Number of followers reaction	Percentage (%)	Total	Percentage (%)
1 - Ask for information	43	17.84	235	70.15
2 - Ask for opinion	11	5.28		
3 - Ask for suggestion	3	0.90		
4 - Give information	24	10.15		
5 - Give opinion	125	37.31	90	26.87
6 - Give suggestion	10	5.67		
7 - Agree	12	5.88		
8 - Show emotion release	23	6.87		
9 - Show solidarity	34	16.12	10	2.99
10 - Disagrees	4	1.19		
11 - Show tension	2	0.60		
12 - Show antagonism	4	1.19		

Followers reaction to Fenty Beauty's post

Social Media	Instagram	Twitter	Facebook	YouTube
Engagement				
Likes	5,550,402	352,567	12,154	217,651
Views	9,395,781			7,200
Retweets		59,714		
Shares			960	
Comments	60,994	6,955	1,296	114
Total	15,007,267	419,236	14,410	225,165

Data showing public's engagement with Fenty beauty's social media across various platforms

CONCLUSION

To conclude, in the modern generation, social media is one of the most important tools of marketing and growth. The global reach that can be achieved through social media is simply unachievable through traditional media. Moreover when a celebrity collaborates with partners to release a product, especially in the fashion industry, it is a guaranteed instant hit. The business gets a boost due to the celebrity's social media presence and the celebrity increases their wealth by opening a new business as well. The consumers already have a deep built trust on the celebrity and buy the products just to be ever so slightly associated with the celebrity. In my opinion, the new-age genre of social media will keep growing as phones and the internet become

even more widespread. Most youngsters are currently spending over an hour each day on social media, and some days the time may even extend up to 4-5 hours. I feel like Kylie Jenner with Kylie Cosmetics and Rihanna with Fenty Beauty, more and more celebrities are going to build their own brands and give it a reach through social media. However, sometimes when the celebrity has a controversy, the brand also has to face the flak. They will face complaints and their sales will drop. Moreover, there will be a great deal of social media negativity that the brand has to face. There are both pros and cons for the brand as well as the celebrity. However, like in the case of Rihanna and Kylie Jenner, if we can leverage our controversy into positive brand marketing, then there is no stopping it from reaching the skies.

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RED CHILLIES

E N T E R T A I N M E N T

BY: ARYAN

Shah Rukh Khan, known as the "King of Bollywood," has ruled the Indian film industry for decades and created an empire that goes beyond the purview of acting. His production house, Red Chillies Entertainment (RCE), stands as a testimony of his business astuteness, foresight, and capacity to exploit his celebrity might. From film production to visual effects to sports ownership, RCE has now metamorphosed into a multifaceted brand that shapes the entertainment industry, consumer culture, and myriad landscapes therein. This article highlights the journey of Red Chillies Entertainment and how sometimes being in Bollywood allowed Shah Rukh to utilize his star power to build an empire larger than cinema.

THE GENESIS OF RED CHILLIES ENTERTAINMENT

Founded in 2003 by Shah Rukh Khan and Gauri Khan, Red Chillies Entertainment was born out of the struggles of their earlier production house, Dreamz Unlimited, which was arguably a disaster on the artistic front and did not yield commercial success. The

inception of RCE marked a full-blown paradigm shift in Khan's career when, instead of just acting in films, he also aimed to handle the production, marketing, and distribution of films. The blockbuster movie *Main Hoon Na*, directed by Farah Khan, was RCE's first big success. It was a runaway hit and gave consumers a glimpse of the kind of films that RCE would be producing in the future.

Over the years, RCE has developed a near-monopoly, producing some of the most acclaimed and commercially successful films, ranging from *Om Shanti Om* (2007), *Chennai Express* (2013), *Raees* (2017), to *Jawan* (2023). The venture also includes distributing co-produced films with international studios and expanding operations beyond India.

DANGERS OF IGNORANCE: THE EXPANDING WORLD OF VISUAL EFFECTS AND TECHNOLOGY

One of the milestone steps taken by RCE was the acquisition of Red Chillies VFX, a company dedicated to world-class visual effects. Established in 2005, it revolutionized

CGI and VFX in Indian cinema. It was the pioneering visual effects showcased in *Ra.One* (2011), a sci-fi superhero film, that demonstrated how VFX could be brought to life on Bollywood screens. While the movie generated mixed reviews, its visual effects were appreciated, thereby positioning Red Chillies VFX as a frontrunner in the industry.

Red Chillies VFX has since worked on several high-profile projects, not just for RCE productions but for other Bollywood blockbusters as well such as *Krrish 3* (2013) and *Zero* (2018). Its innovations have established an entire new benchmark for Indian cinema, proving that indigenous technologies could compete with Hollywood.

Shah Rukh Khan's venture did not stop at film production. In 2008, he co-purchased the franchise of Kolkata Knight Riders (KKR) in IPL's inaugural year. It proved to be a wise move, and ever since then, KKR has gone on to become one of the most successful and profitable franchises in the history of IPL.

All his global stardom worked in tandem to ensure that KKR became a household name, with a strong brand identity that extended far beyond cricket. From marketing campaigns to merchandise and brand collaborations, KKR emerged as a standout example of sports marketing in India. The team has gone on to win multiple IPL titles and continues to be one of the strongest in the league.

BRAND EMPIRE: MARKETING AND CONSUMER IMPACT

The brand equity of Shah Rukh Khan has made a significant contribution to the immense success of Red Chillies Entertainment. Unlike several production houses that rely entirely on

traditional marketing, RCE leverages Khan's personal brand to attract widespread media attention. It benefits from extended publicity due to Khan's massive social media presence—he has 44 million followers on Twitter and 36 million on Instagram—ensuring that every production garners a substantial amount of organic publicity.

Additionally, Red Chillies Entertainment has collaborated with major platforms like Netflix, Amazon Prime, and Disney+ Hotstar to stream exclusive content. As a result, it has successfully tapped into the digital streaming revolution, ensuring that Red Chillies reaches a wider audience beyond theaters.

BOLLYWOOD AND THE GLOBAL SCENE

Red Chillies Entertainment has acted as a catalyst for modernizing the way Bollywood approaches production and marketing. Influenced by RCE's Hollywood-style promotional techniques, online platform exposure, and substantial VFX budgets, Indian films are now being conceived and created anew.

One outstanding contribution was that the films produced by RCE embraced international appeal, accelerating the globalization of Bollywood. With blockbusters like *Pathaan* (2023) and *Jawan* (2023) taking the box office by storm and generating huge dividends from foreign markets, this expansion was not contrary to, but consistent with, Shah Rukh Khan's vision of transforming Mumbai films into a global market.

CHALLENGES AND FUTURE PROSPECTS

Notwithstanding Red Chillies Entertainment's triumphs, the company has faced challenges. Movies like Dilwale and Zero did not perform as well as initially expected at the box office, raising questions about content selection and audience preferences. Nevertheless, Khan's assertiveness and adaptability have always allowed RCE to continue growing.

Red Chillies Entertainment now plans to venture into web series production and international collaborations. The rise of OTT platforms provides a significant opportunity, and RCE is well-positioned to leverage this. Additionally, with the growing demand for high-end storytelling executed through VFX, Red Chillies VFX is likely to play a tremendous role in shaping the future of Indian cinema.

The journey of Shah Rukh Khan with Red Chillies Entertainment showcases how an actor can transition from modeling to becoming a successful businessman. Khan has blended his stardom with business development, strategically diversified his enterprise, and created an empire beyond films, penetrating various domains.

In this process, Red Chillies Entertainment has redefined the Bollywood business model, set new benchmarks in film production, and successfully internationalized Indian cinema. The legacy of RCE, as it continues to innovate, will consistently serve as an inspiration for future filmmakers and entrepreneurs who aspire to make an impact in these fields.

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BY: PRAHARSH
THAPLIYAL

Consider an item worth five thousand. Will you be willing to purchase it for a lakh? Definitely not. But what if the item in negotiation was nothing but a ticket to the Coldplay and Diljit Dosanjh concert? Will your answer still be a NO? I don't think so. Why? Because people went on to pay an amount as hefty as ten lakhs for just a ticket. Were they all die-hard fans of this band of Diljit? Was it for living in the moment or for just posting it on your Instagram?

BEYOND MUSIC

In today's world of social media, celebrities are not just entertainers but rather brands in themselves. They are cultural icons who have the power to guide consumer culture. The global tours organized by them for the album promotion, in a way, pave a path for them to endorse their brands at a global stage. In the past few months, we have all witnessed the frenzied wave of concerts of Diljit Dosanjh and Coldplay. Concerts give them a platform for brand engagement and business opportunities. The connections they build with their fans through moshpits and interactions help them build the foundation of their influence.

Their millions of followers who go crazy just to catch a glimpse of their favourites sometimes blindly follow whatever these superstars promote. Such is their influence on the GenZs of today, which makes them much more than musicians and singers.

PUNJABI POP GOES GLOBAL

An actor, singer, and producer, Diljit with his hardwork and passion, has become a global sensation. With over 20 million monthly streams on Spotify, he is currently among the top 350 artists in the world. Connected to his roots, he has taken Punjabi music to its zenith which has won him love and appreciation at the global level, especially in the UK. His latest 'Dil-luminati' tour witnessed jam-packed streets toward the venue demonstrating the surreal craze he has among the audience.

What could be a better place for brand promotion than a packed stadium? Through these gatherings, Diljit, besides music, promotes fashion, brands, and traditions. Diljit's collaborations with fashion brands like Gucci, Balenciaga, and Adidas have played a great role in the marketing and success of the giants.

Not only does Diljit endorse these brands but carries them in his outfit with such elegance and panache that it resonates with his audience. By adding a Punjabi touch to the Western outfits he has removed the barrier between the traditional and contemporary.

Mokobara, a luggage brand for which Diljit is the brand ambassador, made its way to the stage giving it direct traction to the audience. He started giving away the strollers to the audience in the fan pits which instantly became a talk on social media. These small acts by artists have a great impact on the product's image in the market. Levi's as a part of their campaign collaborated with the Punjabi superstar to launch exclusive merchandise to celebrate the tour. Giving the buyers an option to customize their merch gave a stimulus that created a bond between the brand and the loyal audience. Jumping on the bandwagon, brands like Zomato, Jeevansathi, OYO, and many more capitalized on the opportunity to market themselves with cheeky and quirky taglines.

COLDPLAY- MUSIC WITH A MISSION

Coldplay, formed in 1997, the band led by Chris Martin has established itself as one of the most popular performers in the world. Comprising Chris Martin, Jonny Buckland, Guy Berryman, and Will Champion, it is currently ranked 7th in the global Spotify charts. With hits like 'Something Just Like This', 'Yellow', and 'Viva La Vida', they have never failed to leave their fans awestruck. The World Tour of their most popular album 'Music of the Spheres' has paved a path for promotion which is much more than just music promotion.

Coldplay set themselves apart from other artists by aligning their brands towards sustainability. They revealed a few statistics of their recent tours, not about the number of tickets sold or number of streams but about a fifty-nine percent

reduction in carbon emission as compared with their tour of 2016/17.

A step towards sustainability also influences their listeners to make sustainable choices and bring about positive change. Introducing kinetic dancefloors that convert the ground-shaking foot-taps into actual power. Initiatives like planting a tree for every ticket sold display their environmental consciousness.

One of the most essential elements of their branding includes their merchandise. Ensuring sustainability, Coldplay launched exclusive limited edition vinyl merchandise, which in no time created a buzz around. The fans are always eager to purchase this aesthetic and exclusive merch at the earliest and add it to their collection.

Attending the concert by embracing such merchandise always makes them special and will surely take them down the memory lane when they see it years later in their wardrobe. These merchandise develop a heart-to-heart connection between the artists and their fans. Again hitting the right note at the right time, Swiggy, Tinder, Blinkit, Google, and other brands took the social media with their witty and chucklesome comments and posts. By making references to popular song titles in their jingles these brands were very quick in leveraging themselves and making the best out of the golden opportunity.



REEL-ISTIC

Two hours and twenty-three minutes. This is the average time a person spends daily scrolling through social media. In order to promote a brand the artists have to promote themselves. With millions and millions of followers and a post

Oreaching thousands of likes within seconds, we can only fathom the reach and influence these artists have on their loyal audience. With the growth of the internet and social media in recent years, branding through social platforms has become the primary method of promotion, replacing the traditional ways. It allows them to engage with their fans, creating a stronger bond. We all must have come across at least one time the reel where Diljit is enjoying cooking in his kitchen while listening to his songs. Such raw and unfiltered emotions when displayed makes an artist more relatable and genuine to the viewers. His humorous content and funny vlogs are one of the main reasons for his popularity and his global reach. As far as Coldplay is concerned, they regularly engage with their audience through Instagram polls and Twitter getting to know more about their preferences and simultaneously promoting sustainable initiatives. Social media today has sort of merged entertainment and entrepreneurship and soon we can see it as the biggest platform for advertisement.

THE CONCERT ECONOMY

The announcement of the album tour by these renowned artist not only brought zeal to their fans but also an opportunity for the economy. The economic impact of a concert is not limited to just large ticket sales but goes beyond it. The hospitality industry saw a major boom, with hotels reaching near-full occupancy and food delivery partners witnessing a commendable surge in orders.

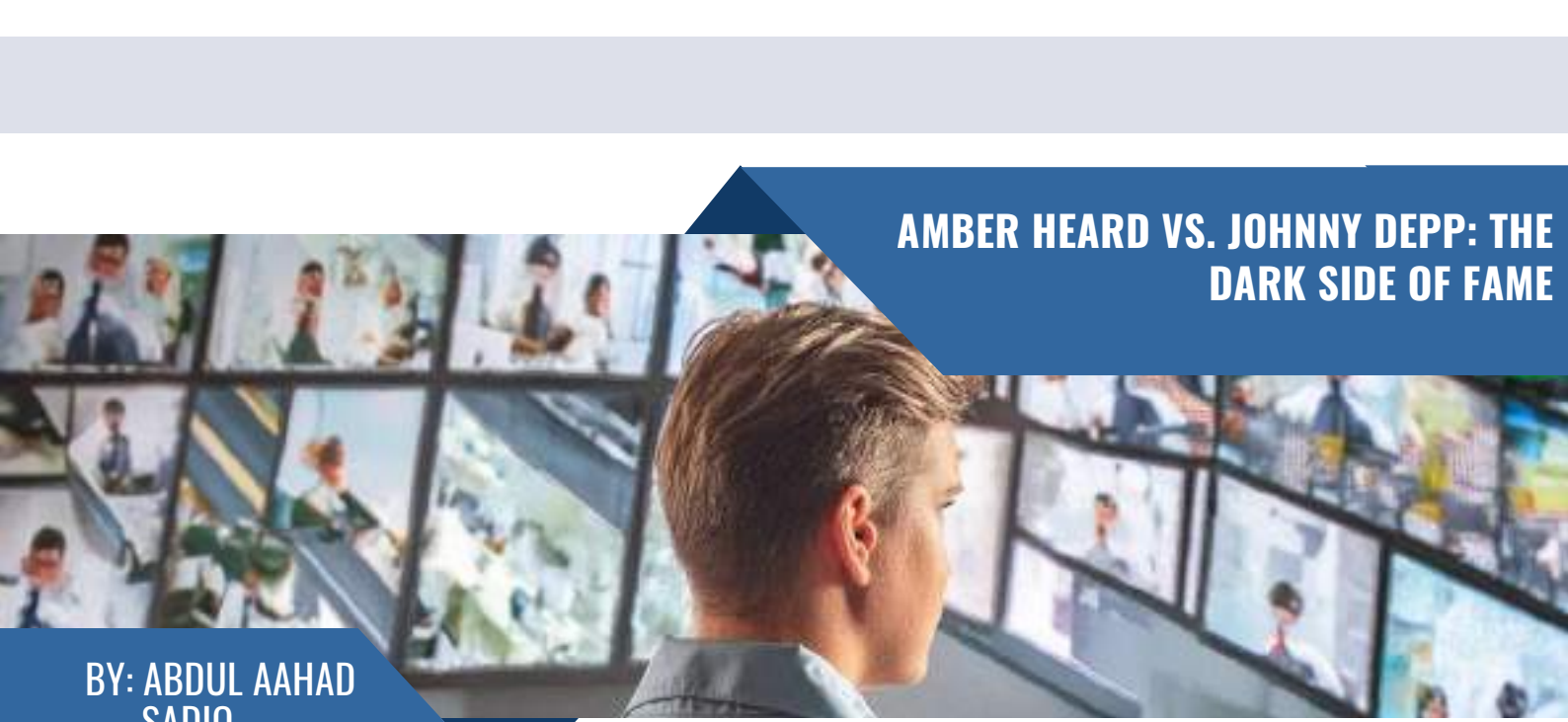
The transport sector recorded a growth in flight booking of over 300%. Beyond hospitality and transport, these concerts also provided employment opportunities to hundreds of people. As the data unveiled that Diljit's tour made a gross economic impact of 112 million dollars, one can only fathom the growth of what our prime minister calls the 'concert economy' in the coming years.

To wrap up, concerts which were once only a stage for performing and enjoying music have today become a dream place for brands to market themselves. Entertainment and branding are just like the two sides of the same coin that complement each other. Artists like Diljit and Coldplay have evolved from being mere musicians to global brands. They have the power to disrupt social media and influence consumer behaviour with just a post. In this era of social media, this can be seen as just the start of how celebrities leverage their influence to build successful brands and impact consumer culture.



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AMBER HEARD VS. JOHNNY DEPP: THE DARK SIDE OF FAME

BY: ABDUL AAHAD
SADIQ

PRE-TRIAL: BACKGROUND INTO THE SCANDAL

“It was like watching a scripted Netflix drama, except it was real people, real trauma.” – The Guardian Editorial, June 2022

Fame, once the beacon of prestige, has now mixed its glittering spotlight with merciless scrutiny. The 2022 defamation trial between Johnny Depp and Amber Heard offered a raw glimpse into this reality, turning a personal legal dispute into a global discussion on truth, power, and perception.

John C. Depp, II v. Amber Laura Heard was a case contested in Fairfax County, Virginia between previously married actors, Johnny Depp and Amber Heard. Depp, the plaintiff, filed a defamation suit against Heard claiming 50 million dollars in damages for an op-ed she wrote for the Washington Post where she described herself as a victim of violence and abuse which he claimed damaged his reputation and career. Heard, sued in return for 100 million dollars claiming Depp's lawyer had defamed her in the media. The two had been married for two years— from 2015 to 2017.

Their relationship was marked by allegations of abuse from both sides. Depp had previously lost a similar case in the UK during 2020. The common opinion was that Depp's chances of winning in America were even slimmer than in the UK. Depp, against all odds, ended up winning the suit against Heard, primarily due to the case being decided by a jury, which is why some believe that his council sought for a suit in Virginia.

The case attracted an audience from all around the world gathering an audience of millions, making it one of the most sensationalised televised cases of history.

CAREER FALLOUT: THE PRICE OF PUBLIC EXPOSURE

The consequences of the courtroom battles between Amber Heard and Johnny Depp extended far beyond the courtroom. The 2020 UK libel trial, where Depp had sued The Sun for describing him as a "wife beater," was a turning point. The judge decided that the accusation was "substantially true," and the trial brought deeply intimate facets of Depp's life into the public domain—texts of violent tantrums, drug use, and wild behavior. As entertainment industry analyst Kathryn Arnold

noted in the U.S. trial, the industry watched closely, and Disney and other studios began to distance themselves from the actor as scandal mounted. Despite Depp's claims that Amber Heard's 2018 Washington Post op-ed article caused him to be let go from working on *Pirates of the Caribbean 6*, Arnold said it was not supported by evidence.

She said that discussions regarding Depp not returning to the role in the franchise began much before when the op-ed was published, and Disney's own internal documents for the trial did not mention it. The op-ed itself was not widely seen until the lawsuit and made little contribution to industry choices, she added. While both actresses experienced professional setbacks—Heard reportedly lost screen time and branding space, while Depp lost top billing—the public impact of litigation went further than the actors' individual careers. The trial sparked a studio-wide rethinking of how studios handle stars with reputation and legal issues. The tawdry publicity about Depp's private life, repeatedly rekindled with each new grievance, made him a financial and PR liability in the eyes of corporate stockholders.

But, with his Virginia courtroom victory, glimmers of a career revival have emerged for Depp, such as festival sightings and European shoots. Heard, on the other hand, has remained grounded, relocated and worked selectively. The trial showed how fame, when entangled with scandal, can both amplify a career's rise and accelerate its collapse—especially when the public is jury, judge, and witness rolled into one.

MEDIA CIRCUS: THE TRIAL THAT BROKE THE INTERNET

What occurs when a courtroom becomes a stage and a defamation suit becomes the world's most widely watched reality TV show? The reply is in the 2022 case of Johnny Depp v

Amber Heard, but beneath the viral videos, trending hashtags, and nightly YouTube montage was something sinister: a case study on how today's media turn legal wars into public spectacle—and citizens into cartoons.

The spectacle shift began with one decision: live-streaming the trial. Meantime to transparency, this opened up a global window, with networks airing each second, and millions watching through YouTube and Twitch like a soap opera. Every second of court drama—testimonies, objections, facial expressions—was clicked in an instant, re-packaged, and aired. Breakdowns were mocked, smirks meme-ified, and even supporting actors like security officers and lawyers became pop stars by default. What otherwise would have been genuine, often traumatic, moments were made into going-viral moments, where TikTok cutaways and reaction clips treated real pain like joke punchlines.

Social media did not simply amplify the trial—it weaponized it. The #JusticeForJohnnyDepp hashtag alone has been viewed over 19 billion times on TikTok, eclipsing #IStandWithAmberHeard, which was relentlessly overwhelmed with hostility. Content creators descended upon the trial en masse, like moths to a flame, with influencers live-streaming their breakdowns, YouTubers monetizing their deconstructions of cross-examinations, and TikTok users reenacting Heard's testimony for entertainment.

Public opinion had already reached its verdict long before the official one, far too frequently blinding itself to nuance, legal reality, or emotional complexity. Depp was declared the misunderstood icon; Heard, the manipulative, cold villain. Even the mainstream media was trying to remain neutral. Headlines on mainstream entertainment sites focused on Depp's face in court rather than his testimony, and other headlines focused on

Heard's style. Mainstream publications were also discovered copying viral discourse, sometimes sacrificing criticism for virality. Observers pointed out that the trial had become a theater of performance—who could perform more likable, relatable, gif-able. In this kind of justice, appearances took precedence over facts.

Amid all this, the broader implications were particularly dire. Supporters of survivors of domestic abuse worried that the backlash against Heard would deter others from reporting similar abuse, fearing they would be similarly torn apart and shamed online. How easily clips could be taken out of context, misrepresented, or manipulated only made matters worse.

Public opinion was being determined not by due process, but by algorithms and trending hashtags. The trial was a reflection of a society becoming increasingly at ease with taking private trauma and reducing it to mass entertainment. In doing so, it set a precedent for how the justice system could be manipulated—or hijacked—by virality. What started out as a defamation action became a chilling glimpse of a future where the distinction between justice and show business continues to erode.

THE BIGGER PICTURE: WHEN FAME TURNS INTO A VERDICT

A spectacle that affronted any courtroom could rise to the level of a cultural litmus test. Anything could be a test: the idolization of celebrities, cancel culture, trials by social media, or trauma monetization—all possible manifestations of the 21st century. Hence, the trial in Virginia was really more than a trial about relationships gone wrong; it was a contestation of some ugly truths starting back

at the society that was witness to it. From this moment, the spectacle of celebrity-watching had been busted open and crossed into social media, throwing the two into immediate controversy, complete with hashtags, memes mocking the evidence, and streaming for monetization. For them, it was just a grand digital theater wherein not just the audience's opinion but also their verdicts were held accountable. It affirmed the role of invisible power: media and fame in a society too often occupied with clout rather than context. As the actor-witnesses continued contesting their position through public alignment with a celebrity's persona, evidence became secondary to charisma and soundbites. This slim line between entertainment and justice raises an even larger question: Do we even care anymore to distinguish between real and trend?

The further implications are far graver. For many survivors and witnesses of abuse, the trial conditioned a fear of coming forward and raising their voice, fearing their privacy and credibility being eroded under the lens of social media scrutiny and justice. According to the *South Eastern European Journal of Public Health*, such public trials can dissuade survivors from coming forward, fearing ridicule or disbelief.

As the trend of media trials continues to dominate the status quo, it is important to underscore the importance of ethical journalism and stronger privacy and protection regulations within the justice system. The trial of Depp and Heard will be inscribed in histories, but the question it has raised will remain loud: Has social media become more powerful than the legal system in shaping public opinion?



DISRUPTOR'S ARENA

Step into the arena where bold minds challenge the status quo and innovation takes center stage. This is where ideas collide, industries shift, and the future is rewritten.



THE ULTIMATE BATTLE: WHO'S THE REIGNING VOICE ASSISTANT?

-BY JAPGUN KAUR

“Virtual Assistants are the secret weapons of successful people.” – Tim Ferriss.

GAME CHANGER

Have you ever imagined a world where your voice alone could control your devices, organize your schedule and solve any problem at hand? A few decades back, this would have been impossible to imagine.

AI (Artificial Intelligence) has changed the way we interact with technology and has paved a way for us to make our lives easier. The AI-powered virtual assistants allow us to delegate the repetitive and administrative tasks like setting up reminders, scheduling appointments and freeing our time to work on more complex issues and maintain a personal life as well.

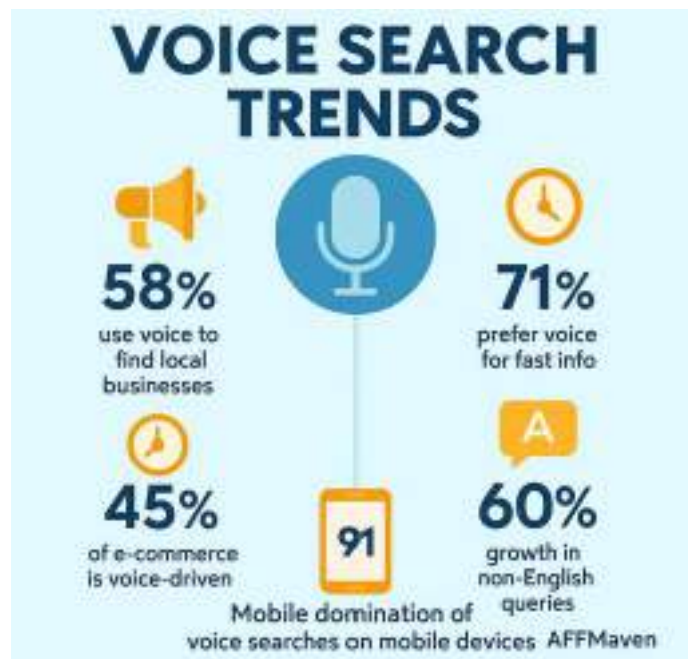
In 1962, IBM developed the first-ever voice recognition software for computers, marking the rise of a revolutionary new technology. Later in 2011, Apple introduced Siri as a virtual assistant for the Apple iPhone. With its introduction voice recognition technology became prevalent.

This was followed by the introduction of Amazon Alexa in 2014 and Google Assistant in 2016. Today, Google Assistant leads with a global market share of 39% followed by Amazon Alexa with 36% and Apple's Siri with 29%.

While all three virtual assistants—Siri, Alexa, and Google Assistant—offer similar features, their market shares vary significantly due to ecosystem limitations. Siri is exclusive to Apple devices, which primarily targets the premium market, whereas Google Assistant and Alexa are accessible across a wider range of devices, including budget-friendly options. As Apple users consist of approximately 30% of the users, opposed to the 70% non users, it gives a wider customer base to Alexa and Google Assistant.

Let's be honest- we all look for ways to ease our tasks from setting reminders or switching off the lights without lifting a finger to asking trivial questions in the middle of the night, voice assistants have become our helpers. The age-old battle between Apple and Android users isn't limited to just phones anymore,

it is a full-blown innovation showdown between AI Assistants as well. Ever found yourself wondering which voice assistant is truly the smartest, most innovative, and best at making life easier? Let's settle this debate once and for all.

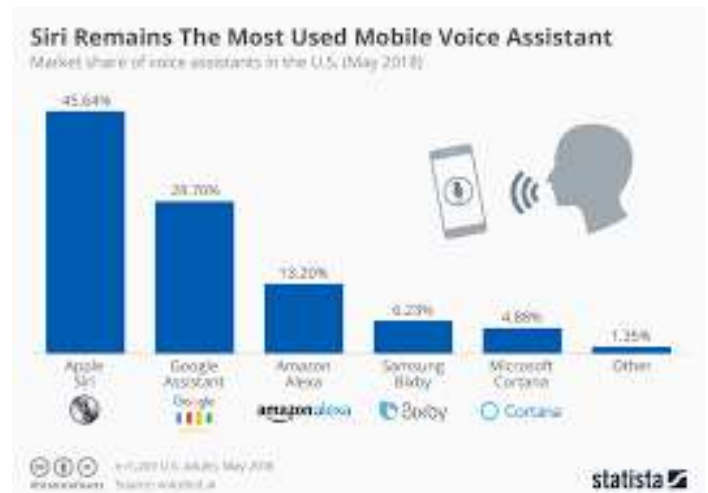


WHO HAS THE BEST AI FEATURES?

Google Assistant is the most widely accessible voice assistant, available in over 90 countries and compatible with the largest number of platforms. In contrast, Siri is exclusive to Apple devices, while Amazon Alexa, though primarily designed for Amazon Echo, also functions on Windows, iOS, Linux, and Fire OS.

Currently, Amazon Alexa has the largest number of skills, standing at 1,00,000, which is several times more than Google Assistant and Siri. It integrates with the widest range of home devices and offers seamless smart home functionality. However, Google Assistant is the most well equipped in answering based on general knowledge questions thanks to its vast search engine.

It also has the ability to recognise upto 6 voices on a device and deliver personalised responses based on the user.



WHO'S THE REAL MASTER OF SMART HOMES?

Hue, TP-Link smart lights, Honeywell and Tado smart heating thermostats, and some of the best security cameras. Google Assistant might lag behind in terms of the number of devices it is compatible with, but it is regularly updated with more devices to be paired with. Alexa has an additional advantage in offering greater freedom in customization in comparison to Google Assistant, because of the need for third party permission requirements in the latter.

Siri can be accessed on Apple's HomeKit enabled devices like HomePod & HomePod Mini, Apple TV (4th gen & later), iPhone, iPad, Mac, Apple Watch and many more.

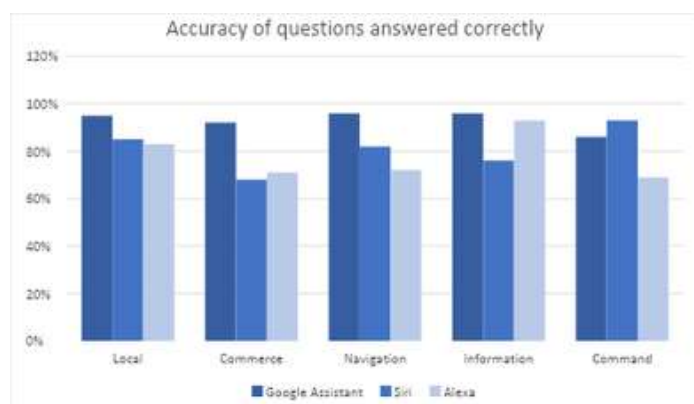
WHICH VOICE ASSISTANT HEARS LOUD AND CLEAR?

Siri performs well within Apple's ecosystem but it faces difficulties in understanding complex problems and differing accents. It is known to respond with the most accuracy in an environment with minimal noise and disturbance.

Alexa works best in smart home controls but may not perform that well in conversational queries.

It is not up for debate that Google Assistant is the most skilled at providing the most correct answers due to its larger information database and extensive search algorithms. This can be further proved by understanding the following:

According to the International Journal for Research in Applied Science and Engineering Technology, Google Assistant comes first in answering the questions asked from 5 domains- Local, Commerce, Navigation, Information and Command with the most accuracy followed by Siri and Alexa.



Often times, voice assistants are unable to give correct responses due to different accents and multiple languages persisting around the globe. Currently, Google Assistant can understand over 30 languages, Alexa supports over 100 dialects and Siri supports 21 languages. These are still less compared to a wide variety of languages spoken around the world.

WHO'S THE REAL COMMUNICATION CHAMPION?

Amazon Alexa provides hands free calling and messaging features to Alexa contacts. It can also make calls through platforms like zoom, skype and chime.

Siri provides the best communication features such as sending and replying with text messages, making phone calls, reading out incoming messages and even dictating emails. It also allows users to call upon emergency services in times of crisis.

Google Assistant allows users to make calls and send audio or text messages through voice commands. The only issue is that it may require integration with a third-party app automation tool that connects different apps and services to trigger specific actions.

WHERE DO YOU GO TO ACCESS THE BEST MUSIC?

Generation Z is all about listening to the best music and with a greater ease. Amazon Alexa can play music on Amazon Music along with Apple Music, Deezer, Spotify, Pandora, Tidal, and Vevo. On the other hand, Google Assistant supports Apple Music, Spotify, Pandora, Vevo and YouTube Music. It can also play songs from the personal library uploaded on the cloud which sets it apart from others.

Regardless, Alexa offers a DJ-like experience with better multi-room audio for Echo devices.

Siri can only play music through Apple Music which, although, has a collection of over 70 million songs, this massive library of songs remains locked behind the paywall of an Apple Music subscription.

WHICH VOICE ASSISTANT CAN YOU TRUST?

The most important question, how much of the information you search is really private?

WHICH VOICE ASSISTANT CAN YOU TRUST?

At a time where AI is largely being misused in sanctioning frauds, privacy has become a major concern. Even more so, when you have a voice assistant that listens to every word you say.

According to a report from Northeastern University, smart speakers accidentally activate as many as 19 times a day, recording as much as 43 seconds of audio each time, which implies it may even hear things you might not want it to hear. Amazon and Google both record the things you ask them. Amazon allows its users to listen to or delete the recordings via 'Review Voice History', however, it may still retain the transcript of the recordings.

Siri records the queries but with the advantage that it does not tag them along with the account of the user but with a random identifier.

Siri triumphs in the area of privacy because the terms and conditions state that virtual assistant queries aren't sold to third parties and aren't used to build marketing profiles on users compared to Alexa that retains the data when it serves a business purpose and Google states that it uses the data it collects to maintain, improve or develop services and to provide personalised services including content and advertisements

WHAT'S NEXT IN VOICE AI?

The future of voice assistant is more intuitive and bright with the constantly evolving technologies that offer more natural and personalised experiences.

Newer technologies like OpenAI's ChatGPT-4o and Google's Gemini has introduced the voice searching feature, similar to the voice assistants. They are giving tough competition to these voice assistants with their voice feature integrated with their tools and paired with their deep search across all platforms.

As technology evolves, voice assistants will become more accessible, proactive and multilingual, bridging communication gaps and cater to the user needs better.

CONCLUSION

The battle between Siri, Alexa and Google Assistant is one of technological advancement, adaptability, and user preference. Every AI assistant has its own strengths and weaknesses and it is important to note that no AI assistant is truly perfect. From improving the security, to expanding accessibility and updating it to understand complex problems, there is still a long way to go.

The winner of this showdown boils down to user preference, if the user places more value on the accuracy of voice recognition and results, Google Assistant stands out. Whereas, if the user prioritises security and privacy, Siri emerges as the most reliable assistant with its strict privacy policy of data protection.

As AI continues to progress, voice assistants will become more intelligent, more advanced and more personalised and reshape the way we interact with technology in our daily lives.

The competition between these giants will serve as a motivation to further improve and ensure that the future of AI assistants remains dynamic, bright and ever-improving.

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FOOD DELIVERY STARTUPS VS. HOME-COOKED MEAL PLATFORMS

-BY ARYAN SHARMA

UNCONVENTIONAL MARKETING STRATEGIES THAT DISRUPT THE MARKET

The meteoric rise of the food transport sector has changed means and manners of how people access and consume food. With the likes of Swiggy and Zomato leading the industry in India, this sector has not only stirred up huge conveniences, but competition with new platforms serving home-cooked meals. This tussle is between large food delivery companies and platforms that offer home-cooked meals, such as HomeChef, and much more represents the innovation showdown of technology-centric efficiency against personalized home-cooked experiences. As choices widen among consumers, the dynamics of their competing models showcase the critical innovations, challenges, and a glimpse into the future of the food delivery ecosystem.

RISE OF FOOD DELIVERY START-UPS: SWIGGY AND ZOMATO

Food delivery is synonymous with Swiggy and Zomato in India. Their rise can be attributed to a cocktail of technological innovations, logistical excellence, and aggressive market strategies. Using complex algorithms, both firms provide order optimization, route efficiency, and personalized marketing. According to RedSeer Consulting, the online food delivery market in India is expected to reach a whopping \$13 billion by the year 2025, with over 80% share controlled by Swiggy and Zomato (RedSeer Consulting).

Key innovations at the core of the food delivery giants:

- AI and machine learning: Swiggy and Zomato use AI to optimize customer experience through personalized recommendations, dynamic pricing, and delivery time predictions (TechSci Research, 2022).
- Cloud kitchens: Both companies invested their resources into cloud kitchens, allowing better quality control and quicker service (Economic Times, 2022).

- Subscription models: Services like Swiggy One and Zomato Gold provide exclusive offers and free delivery, increasing customer adherence (Business Today, 2023).
- Sustainable initiatives: Both companies are exploring green packaging and carbon-neutral delivery (Livemint, 2023).

In spite of these challenges, food delivery start-ups have been roped into issues of customer loyalty, spiraling operational costs, and regulatory scrutiny over labor practices (Reuters, 2023).

RISE OF HOMECOOKED MEAL PLATFORMS: HOMECHEF AND OTHERS

Home-chef platforms, on the other hand, aim at serving wholesome, home-cooked food by local chefs and home-based kitchens. Services like HomeChef cater to a growing consumer base seeking healthier, authentic options. The model concentrates on entrepreneurship from the community and generates an additional means of income for home cooks.

Key Innovations Working in Favor of Home-Cooked Meal Platforms:

- Hyper-Local Supply Chains: The platforms facilitate the connection between local chefs and customers living nearby to reduce food miles as well as delivery time (Forbes India, 2023).
- Customization: Personalized meal plans catering to dietary restrictiveness and authenticity are major accolades for home-cooked platforms against mass-market delivery players (Inc42, 2023).

3. Transparency and Trust: Direct interaction between customers and chefs enhances greater food sourcing and preparation trust, as well as transparency (Entrepreneur India, 2022). Social Impact: Home-cooked platforms empower micro-entrepreneurs, particularly women, infusing economic inclusion (YourStory, 2023).

However, these platforms have challenges of compliance with food safety regulations, scaling up, and competition against bigger players that benefit from the convenience they offer (Mint, 2023).

THE CONSUMERS' PREFERENCE: CONVENIENCE VS. AUTHENTICITY

A major point in distinguishing between these two models is consumer preferences. Swiggy and Zomato are meant to provide to an urban consumer who values convenience, whilst home-cooked platforms market to a more authentic and health-conscious consumer. A survey by LocalCircles (2023) cites that 62% of respondents preferred home-cooked meals for health reasons, while 70% of respondents valued the speed and variety offered by mainstream food delivery services (LocalCircles, 2023).

COMPETITIVE STRATEGIES AND MARKET CHARACTERISTICS

1. Pricing Models: In most cases, Swiggy and Zomato rely on dynamic pricing mechanisms and generous discounts to attract new customers. This is in direct opposition to home-cooked platforms that emphasize the quality and personalization-driven value proposition (Economic Times, 2023).

- **Customer Engagement:** Food delivery giants invest heavily in digital marketing and loyalty programs, while home-cooked meal platforms rely on word-of-mouth and local community networks (Inc42, 2023).
- **Operational Efficiency:** Larger platforms benefit from economies of scale, while home-cooked platforms adopt a leaner, decentralized model (Forbes India, 2023).

REGULATORY AND ETHICAL CONSIDERATIONS

Both sectors face regulatory scrutiny. Swiggy and Zomato navigate complex food safety laws and gig-worker welfare regulations (Reuters, 2023). Meanwhile, home-cooked platforms must adhere to FSSAI guidelines and ensure hygienic preparation environments (FSSAI, 2023).

FUTURE OUTLOOK: COLLABORATION OR COMPETITION?

The future of the food delivery landscape may witness increased collaboration between these models. Hybrid approaches where large platforms incorporate home chefs could create new revenue streams and enhance consumer choice. Additionally, innovations like drone delivery and AI-driven logistics will further redefine the market (McKinsey, 2023).

In conclusion, the innovation clash between food delivery startups and home-cooked meal platforms underscores a pivotal transformation in how we consume food. While Swiggy and Zomato prioritize speed and scale, home-cooked platforms emphasize authenticity and community engagement. As consumer preferences evolve, both models will continue to innovate, ultimately reshaping the culinary ecosystem.

This dynamic competition fosters greater choice, value, affordability, and quality for consumers. In the long run, a hybrid model may emerge, blending digital convenience with a personalized, human touch.

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E-COMMERCE STARTUPS VS. RETAIL STORES: MYNTRA VS. VISHAL MEGA MART

-BY ABDUL AAHAD SADIQ

The 21st century, with all its numerous innovations and advances towards modernisation, witnessed one very specific milestone that revolutionised the global arena of business transactions. The growth of e-commerce brought about a drastic shift in the retail scene. Today, in the modern world, sites such as Myntra are rewriting the rules of buying, providing convenience, diversity, and online personalisation at the mere click of a button.

At the other side of the status quo are stores such as Vishal Mega Mart, who remain successful with economical and physical personalisation on their side, offering a tangible shopping experience.

THE DIGITAL REVOLUTION: MYNTRA'S RISE AS AN E- COMMERCE GIANT

Myntra, India's largest lifestyle and fashion shopping destination, was the first to take the advantage when online shopping was just taking off in the nation.

Though Myntra started with personalized fashion in 2007, it later evolved into a marketplace model. It uses technology as a means to stand out from the crowd, including Artificial intelligence and machine learning in the detection of fashion trends and customer suggestion. It has recently launched an Augmented Reality (AR) feature known as the 'Looks Virtual Try-On' aimed at improving the shopper's experience. Its use of augmented and virtual reality technologies to improve the shopping experience is one of its greatest innovations. Its recently introduced 'My Stylist' feature utilizes AI algorithms and convolutional neural networks expanding the database beyond Myntra's inventory and recommends their style-oriented users complete shoppable outfits.

Additionally, Myntra's AI chatbot assists customers in decision-making, simulating in-store availability of a personal shopping assistant. Another major driver of Myntra's overnight success is its supply chain. With the help of outsourcing and using third-party delivery locations and maintaining stores in strategic locations, the business facilitates express shipping in a variety of locations.

Furthermore, respondents to a survey of U.S. consumer attitudes on sustainable shopping by First Insight and the Baker Retailing Center at the Wharton School of the University of Pennsylvania revealed that consumers from all generations are willing to spend more on sustainable products now than they were two years ago. Interestingly, 28% of respondents claimed they had stopped purchasing from brands with poor ethical or sustainable values.

THE CASE OF PATAGONIA

Approximately, 85% of clothing ends up in landfills or incinerated each year. According to the United Nations Environment Programme, the fashion industry is responsible for the production of up to 10% of the global carbon dioxide output and accounts for one-fifth of the 300 million tons of plastic produced globally each year.

Despite all odds, Patagonia, an outdoor apparel company has set an unprecedented benchmark for the entire world in sustainability and eco-friendly products. Patagonia sought to not only drastically reduce its emissions but to shift the paradigm and transform the mentality of its business, employees and customers towards a more sustainable way of living.

It was founded by Yvon Chouinard in 1973 and is operating in 50 countries with 3,000 employees, with an estimated value of about 3 billion dollars. Furthermore, it brings in a commendable \$100 million in revenue annually and its sales have quadrupled in the past decade.

It was observed that during the Great Recession and its aftermath, customers were becoming more frugal and were less inclined to purchase on impulse and tended to lean

towards products that lasted long.

Patagonia's noteworthy marketing strategy led the company advertising during the 2011 Thanksgiving season, "Don't Buy This Jacket." The advertisement explicitly and unabashedly stated detrimental costs to the environment of one of the company's best-selling fleece jackets. It appealed to customers to reconsider before purchasing this product, and instead, opt for a used Patagonia product. Despite this, or perhaps because of this, the company saw its revenue increase about 30% to \$543 million in 2012, followed by another 5% growth in 2013. By 2017, the company reached an incredible \$1 billion in sales.

In a turn of events, it became the first "benefit corporation" in 2012, prioritizing environmental and social needs over turnover. In 2022, the company announced "going purpose" instead of "going public". The owners ensured that every earning that is not reinvested into Patagonia would be paid in the form of dividends to a fund committed to financing environmental projects. The company accomplished this by transferring all assets to two legal entities. This momentous strategy is expected to pay out a whopping \$100 million in annual dividends to sustainable projects.

In 2017, the company stated that certain Patagonia merchandise that is in good condition could be returned in exchange for credits. The used merchandise is then cleaned, repaired, and sold on Patagonia's "Worn Wear" website. This acts as an incentive to share responsibility by extending the lifespan of clothes. This initiative endeavors not only to transform consumer's mindsets but offers support for the conscientious product upkeep, repair, reuse, resale, and rational end of life disposal.

Notably, in 2018, Patagonia donated \$10 million that it received from President Trump's 2017 tax cuts to groups devoted to preserving the climate and mitigating the climate crisis. As a result of its exceptional marketing, Patagonia has almost 40 stores in the United States and close to 70 outside North America. Patagonia has also engaged in unconventional yet extraordinary initiatives such as sending out an environmentally friendly truck on a trip across the country, in an effort to assist consumers repair their outdoor gear and sell used Patagonia wares to them.

FOSTERING SUSTAINABILITY WITHIN

In a refreshing attempt to foster a sustainability mindset within its people, Patagonia runs an Environmental Internship Program which enables employees to take up to 2 months off work in order to enroll in a fully paid internship for an environmental organization. Astonishingly, more than 1,000 employees have taken part in the Environmental Internship Program, thereby enabling the company to acquire valuable insights and foster dynamic relationships with sustainable organizations. Remarkably, the employee turnover is less than 4% which is significantly lower than the industry average.

In 1988, when Patagonia's Boston store opened, employees began to experience headaches due to a buildup of formaldehyde fumes on account of non-organic cotton products. As a result, the company commissioned an independent report investigating the environmental impact of cotton production. By 1994, the revolutionary leader Yvon Chouinard decided that the entire product line would be produced exclusively from organic cotton.

Undoubtedly, this process was arduous and time-consuming. Nina Hajikhanian, DTC director for EMEA revealed, "It meant cutting the product line back from 166 items to 60, and meant that 30 per cent of the range could not be produced until we found a solution. That is what real transparency goes back to: taking hard decisions and committing to them while being transparent about it."

CONCLUSION

Patagonia's efforts were not in vain and reaped laudable fruits! Their circularity and consumer awareness strategy enabled Patagonia to extend the life of its clothing by nine months, thereby reducing its carbon, waste and water footprints by approximately 20-30% each! The company successfully resold more than 120,000 repurposed items, thereby setting an immaculate precedent for cutting down on waste and emissions.

Therefore, it is not surprising that the company earned 151.4 on the B Corp Impact Assessment, while the median score for all B Corp companies is a mere 50.9.

Undeniably, Patagonia's actions irrevocably prove that the relationship between sustainable business operations, consumer expectations and turnover can be complementary. The company's hard stance on sustainability and its transparent communication style is encouraging trust among consumers as opposed to the widely used corporate tactic of greenwashing.

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AIRBNB VS TRADITIONAL HOTELS

-BY SIDDHANT RADHAKRISHNAN

In the modern age, there has been a major shift in the hospitality sector. The shift in preferences to solitude and apartments makes tourists feel at home. This trend is especially noticeable in the post-COVID era, which has completely transformed the hospitality industry. Hotel visits have dropped considerably with many shifting to rental apartments, especially if the stay is extended. And when we talk of rental apartments, there is one major leader in the market: Airbnb.

Airbnb is an American tourist and hospitality company operating a marketplace for short and long-term homestays. It was founded in 2008 by Brian Chesky, Nathan Blecharczyk, and Joe Gebbia and over time has become the best-known marketplace for short-term housing rentals.

DEFICIENCIES IN TRADITIONAL HOTELS

As a wise man said, there can never be a solution without a problem. Therefore there must have been problems in the traditional hotel spectrum, for Airbnb to have taken such a large market share of an industry without which once tourism couldn't have been thought of.

And upon finding out there were many. One of the biggest issues was the extremely high cost of hotels especially as compared to Airbnb. Airbnb offer a highly better experience as compared to hotels of a similar price range. So people with a mid-range budget to adhere to would choose an Airbnb over a hotel to maximize their experience especially when visiting a new city. While budget hotels still are preferred by people who have an extremely strict budget, people with mid-range budgets can get a luxurious experience through an Airbnb which may only be possible through 5-star hotels, which may be out of their budget. And upon finding out there were many. One of the biggest issues was the extremely high cost of hotels especially as compared to Airbnb.



Airbnb offer a highly better experience as compared to hotels of a similar price range. So people with a mid-range budget to adhere to would choose an Airbnb over a hotel to maximize their experience especially when visiting a new city. While budget hotels still are preferred by people who have an extremely strict budget, people with mid-range budgets can get a luxurious experience through an Airbnb which may only be possible through 5-star hotels, which may be out of their budget.

THE BUSINESS MODEL OF AIRBNB

Airbnb follows a Peer-to-peer business model. The Peer-to-peer business model means a matchmaker in the middle of two sides: one who has something to offer (a product or service) and others who can benefit from this offer. Usually, the peer-to-peer business model involves a kind of platform that provides contact between both sides, while establishes rules and regulations, payment systems, and any kind of process that may be necessary for the transaction to work out.

This third party reduces the risk of the seller to fail on delivery as well as the buyer to fail on payment. Besides, it reduces production costs and investments, allowing lower prices for the consumer. Some other businesses that run on a similar business model are cab companies like Uber and Lyft, platform connecting sellers and buyers like Olx, Cashify, CarDekho, Amazon etc. There are many advantages to this business model like low cost, specialization and risk reduction.

Airbnb and other peer-to-peer accommodation network facilitators operate a business model configuration referred to as a multi-sided platform model.

The term multi-sided originates from the economics literature and relates to parties connecting as different sides of a market. Hosts (first side) are offering unused or underutilised space. Guests (second side) are looking for a place to stay for a short period. Supplementary service providers (third side) may provide photography services to hosts, thus enabling them to present their space more attractively on the trading platform; or concierge services that augment guest experiences and open up opportunities for entrepreneurship.

For the hosts, Airbnb identifies suitable guests, mitigates risk by letting the hosts see the reviews of the guests and the fact that guests have to verify their identity before every booking, handles monetary transactions through cashless methods of payment and that hosts receive the money within 24 hours of the guests checking-in to the apartment and the opportunity to connect with other like-minded hosts

For guests, Airbnb provides them suitable accommodation, mitigates risk by providing them hosting reviews and augments their experience by not only providing them a roof over their head while sleeping but also providing guests with insider tips about the destination, making their experience more memorable.

HOW CAN HOTELS COUNTER THIS TREND?

While people are indeed shifting to Airbnb there are still factors that remain in favour of hotels, like security, hygiene and fluctuating quality. Consumers familiar with the sharing economy are 34% more likely to trust a leading hotel brand than Airbnb.

A leading hotel brand provides you with a standardised experience with regards to bedding, food and other amenities. Moreover, business travellers prefer the luxury of a 5-star hotel, especially when expenses are borne by the company. This provides a major opportunity for hotels to counter the Airbnb wave. Several strategies can be implemented by hotels to counter this emerging trend. Some of them are mentioned below:

1. Unique Services and Accommodations:

Hotels already have a distinct advantage over Airbnb when it comes to providing services and accommodations like 24/7 reception, complimentary breakfast, housekeeping etc. are highly valued by business people. Focusing on these services and amenities may set them apart from the distinct model of Airbnb.

2. Trust and Reliability: Business travellers prioritize trust and reliability whenever deciding on their accommodation. Hotels, especially those with a known reputation are more trustworthy than trusting on an Airbnb, which is still a relatively new concept and may not be preferred by business travellers who want a safe and pleasant stay.

3. Convenience and Efficiency: These are key metrics on which a business traveller decides his accommodation. Having facilities like free parking, luggage drop from your car to your room, room service for food and beverage, streamlining the process of checking-in or checking out, make the travel smooth, comfortable and efficient for the traveller, who may give positive reviews on the hotel. This brings me to my last strategy which is-

4. Enhance Online Presence: This is one of the most important things that need to be done, especially by a new hotel.

Yes, online platforms may eat into some of the hotel's revenue, but it is essential to get more customers. The hotels need to invest in digital marketing and search engine optimization (SEO) tools to ensure visibility in online searches. This helps hotels to showcase strengths and increase credibility to the business travellers.

CONCLUSION

To conclude, there is a shift in demand especially among the family travellers to the apartments provided by Airbnb over the traditional accommodation offered by hotels. Many people, especially of the upper Middle class and rich category prefer the privacy and peace of the AirBnb. At the same time, the hosts even sometimes offer personalised service like smooth entry, chauffeur service etc. compensating for the opportunity cost of residing in a hotel. The business runs on a peer-to-peer business model and like quite a few major businesses mainly do the job of connecting the dots, rather than producing something of their own accord. Regardless of this, due to the smooth professional service offered especially by the luxury hotels, it is largely preferred by business travellers on a day travel. Hotels in touristy locations charging high prices for a mid-tier service should be the most concerned with the rise of Airbnb as they are the most hit. Moreover all hotels need to comparatively increase their services and make the cost more affordable so as to survive in the modern era, otherwise they will end as we know them.

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SMART PHONES APPLE VS SAMSUNG

- RAGHAV

INTRODUCTION

One of the most significant and longest-running rivalries in contemporary technology is the one between Apple and Samsung in the smartphone market. In the pursuit of overtaking each other in terms of design, functionality, and user experience, both businesses have really stretched the limits of innovation. The two firms have, in the past, been differentiated through innovative display technology, an expansive range of products, and high-end hardware in Samsung and by superior quality, smooth software integration, and brand loyalty in Apple.

THE IPHONE AWAKENING: APPLE'S GAME-CHANGING MOMENT

Apple revolutionized the smartphone industry in 2007 with the introduction of the first iPhone. With iOS, an operating system that prioritized fluidity and ease of use, Apple debuted a sleek, full-touch interface at a time when mobile phones were reliant on resistive touchscreens and physical keyboards. By providing a forum for independent developers, the App Store further revolutionized the market and gave rise

to the enormous application ecosystem that exists today.

SAMSUNG STRIKES BACK: THE CHALLENGER RISES

When Samsung joined the smartphone market, it was already a well-known electronics behemoth. Before turning its attention to Android in the late 2000s, it first dabbled with Windows Mobile and Symbian OS. A serious challenge to Apple began in 2010 with the release of the Samsung Galaxy S. In order to provide customers more options than Apple's yearly iPhone release, Samsung decided to offer a number of models at varying price points.

SCREENS OF THE FUTURE: AMOLEDs, EDGES, AND OLED WARS

With its Super AMOLED technology in particular, Samsung has led the way in innovative displays. It debuted curved-edge screens in 2014 with the Galaxy Note Edge, which ultimately became the Galaxy S6 Edge. When it comes to its advancements in displays, Apple has been more cautious. Although

Samsung has been using OLED technology for years, Apple didn't introduce it until 2017 with the iPhone X. Rather than being the first to market, Apple's strength is in improving and perfecting already-existing technologies. For instance, the iPhone 13 Pro's ProMotion feature dynamically optimized refresh rates, increasing energy efficiency, even though it introduced high-refresh-rate displays later than Samsung.

ADVANCEMENTS IN MOBILE PHOTOGRAPHY

Both companies have managed to advance pretty significantly in the mobile photography domain. Samsung had one of the leaders in terms of Galaxy S20 Ultra and periscope-style zoom lenses, as well as 100x Space Zoom. Apple focused on computational photography, which led to the development of improved images through advanced portrait modes, Deep Fusion, and Smart HDR. The iPhone contains fewer megapixels but yields images with a higher color accuracy and natural aspect compared to what Samsung's photographs sometimes over-processed can show.

IOS VS. ONE UI: TWO WORLDS, TWO VISIONS

Apple's iOS and Samsung's One UI (founded on Android) embody two different philosophies in smartphone operating systems.

iOS is simplicity, consistency, and security personified.

Apple's closed system ensures tight integration between its devices, e.g., iPhones, iPads, Macs, Apple Watches, and AirPods. AirDrop, Handoff, and iMessage make cross-device functionality easier.

Samsung's One UI provides more flexibility and customization. Samsung has adopted features such as multi-window multitasking years ahead of Apple implementing them in iPadOS.

Samsung DeX allows users to turn their smartphones into desktop-like experiences, something Apple has yet to replicate on iPhones.

DIGITAL FORTRESSES: SECURITY, PRIVACY, AND TRUST

Apple has been firm on user privacy, with capabilities such as App Tracking Transparency, on-device processing for Face ID, and end-to-end encryption for iMessage. This emphasis has helped to reinforce Apple's reputation for security.

Samsung, while similarly prioritizing security with its Knox platform, has had to do things differently due to its dependence on Google's Android ecosystem. While security on Android has improved dramatically, it still has issues with delayed software updates by different manufacturers and more vulnerability to malware than iOS.

SPEED WARS: RACING INTO THE 5G FUTURE

Samsung was quick to adopt 5G, releasing 5G-capable devices as early as 2019. Apple, however, waited until the iPhone 12 series in 2020 to add 5G, waiting for a more mature and widely deployed network before committing to the technology. Samsung's head start in adopting 5G enabled it to test mmWave and sub-6 GHz 5G technologies before Apple.

GREEN GOALS: THE ECO BATTLE BEYOND DEVICES

Both companies have adequately dealt with sustainability issues. By 2020, Apple had removed the charging adapters from iPhone boxes to prevent e-waste and thus being the first to do so. The move was initially criticized

but later followed by Samsung. Besides that, Apple also incorporates recycled materials in its products and is committed to be carbon neutral in its supply chain by 2030.

Similarly, Samsung has also put in place environmentally friendly measures such as recycling plastics and employing energy-efficient production methods. Nevertheless, the overall sustainability plan of Apple, such as the Fair Labor Practices and carbon neutrality aspirations, have been the company's benchmark in this sector. Thus, Apple is the leader in this sphere.

THE FUTURE: FOLDABLES, AR, AND AI

In the past few years, Samsung provided the industry with foldable smartphones in the Galaxy Z Fold and Z Flip series, which were innovative. It should also be noted that Apple has yet to introduce a foldable smartphone to the market while others indicate they are working on foldable technology for future iPhones and/or iPads.

They are also betting on augmented reality (AR)

and artificial intelligence (AI), alongside foldables. While Apple's ARKit and the LiDAR scanner are a testament to AR becoming a greater part of the daily functions in the long run, Samsung has been developing AI-based camera features and smart assistants for its phones.

CONCLUSION

Apple and Samsung represent two innovative industries with distinct approaches. Apple focuses on ecosystem unification, hardware-software integration, and elegant user experiences, unlike Samsung which centers on cutting-edge hardware, diverse product lines, and early technology adoption.

Apple's constant perfection ensures the creation of only premium and high-quality products, while Samsung's imaginative endeavors result in groundbreaking inventions. In the final analysis, the smartphone market is dramatically enlivened by the cutting edge competition between the two firms, which forces both of them to be creative and revise technological advancements to the next level, making the best ones available for consumers.



BREAKING DOWN THE FARRAGO OF FINANCIAL ADVISORIES

- RASHI

The financial advisory landscape in India is undergoing a massive shift, driven by fintech innovation and changing investor preferences. On one side, Zerodha, a tech-first discount brokerage, has revolutionized investing with its app-driven, low-cost model. On the other hand, HDFC Securities, a stalwart of traditional advisory services, leverages its offline expertise and trusted brand. Through their unique approaches and innovations, each of them caters to distinct investor needs in an increasingly digital world.

ENTRY OF THE DISRUPTORS

When Nithin Kamath launched India's first discount brokerage in 2010, he became the fintech disruptor known as Zerodha. The company was the first to introduce a zero-commission pricing model for equity trades and also launched Do-It-Yourself (DIY) platforms like Kite for trading and Coin for mutual funds. Zerodha has earned over 10 million clients, out of which 70% are millennials, for offering low-cost, self-directed investment options using innovations like algorithmic trading tools (Streak), free educational resources (Varsity, webinars) and paperless onboarding, entirely

available 24/7 on the app.

On the other hand, HDFC Securities was founded in 2000 as part of the Indian conglomerate HDFC Bank, and it operates from a more conventional brokerage framework. As a full-service broker, the firm offers personalized suggestions, in-depth research reports and assistance in branches. Its strengths lie in its trusted brand, vast network of over 270 branches, tailored portfolio management for high-net-worth individuals (HNIs), and seamless integration with HDFC banking services. The user base consists mainly of established investors, retirees, and HNIs seeking active guidance, and personalized financial planning and investment strategies.

RUSH FOR BETTER USER EXPERIENCE & TECHNOLOGY

Zerodha's Kite App's user experience and technology are a class apart, thanks to its clean interface, real-time data access, advanced charting capabilities (including TradingView integration), and instant order

execution. The company Console acts as a single source of truth to track investments, generate tax reports, and do detailed analytics. With its emphasis on DIY trading, Zerodha allows users to trade on their own, but unlike financial institutions, it does not provide personalized financial advice, meaning investors must rely on their own decisions and analyses using the information and tools that Zerodha provides.

HDFC Securities has a mobile app but it is not as functional as Zerodha and Groww's and it feels clunkier in comparison and mostly facilitates integration with HDFC Bank accounts for a seamless banking-investing experience. Nonetheless HDFC Securities excels in its offline services, providing in-branch consultations, responsive phone-based support, and dedicated relationship managers who build lasting connections with clients. This traditional approach appeals to traditional investors who value human interaction and personalized guidance over technological sophistication.

THE DEBATE ON ALGORITHMS VS. HUMAN EXPERTISE

Zerodha is also well-versed in technological innovation as far as opportunity is concerned. Its platform Coin provides algorithm-based mutual fund recommendations that may be suitable for an investor based on their profile and goals as part of its robo-advisory services. With focus on education, the company spends heavily on educational tools, offering free investment courses and conducting regular webinars by Varsity for users to be able to build self-learning capability. Beyond that, advanced traders can utilize algorithmic trading on Streak, notably with no coding expertise necessary, by designing and backtesting, as well as automating their algorithms.

HDFC Securities adopts a completely different mindset, emphasizing human know-how as its core advisory prowess. The company has dedicated advisors that assist with custom portfolio personalization according to financial goals, risk tolerances and timeframes. Its research department produces comprehensive daily market analyses, specific stock recommendations, and detailed sectoral insights that help investors make informed decisions. This human-centric approach creates trust and reassurance for less tech-savvy investors or those with complex financial situations requiring nuanced advice.

HOW EASY ON THE POCKET THOUGH?

One of the most revolutionary contributions of Zerodha to the Indian brokerage industry has been the cost structure. For intraday and F&O transactions, the company charges a flat fee of ₹20 per trade, while it offers zero fees for equity delivery trades. This low-cost model has drawn a large cohort of cost-conscious traders, as well as long term investors who would rather minimize costs to get the most out of their investment. These market disruptors like the transparent pricing as a direct answer to traditional brokerages charging absolute arm and leg fees have caused them to rethink their fee structure.

HDFC Securities continues to follow the classic model, with higher brokerages of 0.5% to 0.75% for delivery trades, as per account types and trading volumes. The company also charges premium fees for its advisory services and research reports, positioning these as value-added services that justify the higher costs. This pricing model highlights its positioning as a premium service provider offering comprehensive support and expertise.

PICKING SIDES? DIGITAL NATIVES VS. TRADITIONAL INVESTORS

Thanks to app-first convenience that appeals to the digitally native generations, Zerodha has positioned its services to cater to DIY investors. Partly due to this focus, the platform has gained traction among young professionals, tech employees and passive investors who prefer to manage their own portfolios from their smartphones or computers. The company has benefited from this cohort's appetite for digital solutions that reduce paperwork and the need to visit in-person offices.

In contrast, HDFC Securities serves a more elderly, risk-averse clientele that depends on building handshakes and face-to-face meetings. HNIs looking for wealth preservation strategies and personalized attention prefer its services.

HOW DO THEY ALIGN WITH YOUR NEEDS?

Zerodha shines at providing low fees that optimize investor returns and at giving investors innovative tools that provide for sophisticated analytical capabilities. Of course, it is limited. You have such little communication with a human, so not really personal and you don't get those reassuring conversations that you get with an advisor. And its round-the-clock app access adds immense value, giving investors the ability to track and adjust their portfolios at will.

HDFC Securities offer bespoke advice that is applicable to your financial scenario and future goals, which makes a lot of sense if you have a complicated portfolio. But its expensive advisory commissions can erode returns, and its relatively slow adoption of technology means it is always behind in getting leading-edge tools.

On the one hand, its focus on branch visits means that clients are ensured personal attention, but on the other, it can be inconvenient to visit branches especially for people with hectic schedules who prefer on-demand service.

IT'S STILL NOT QUITE OVER: FUTURE TRENDS

The financial advisory landscape expects to see emerging hybrid models that will combine the best of both worlds as traditional firms also adopt robo-advisory capabilities and fintech platforms add human touchpoints to those seeking personalization. Hence AI integration could open doors for both companies: Zerodha could use AI-driven insights to increase the level of personalization offered to customers, and HDFC Securities could use AI to scale up services without compromising on the human touch.

Changes in regulations, especially from the Securities and Exchange Board of India (SEBI), may lead to the convergence by forcing HDFC Securities to lower charges to stay competitive, and mandating Zerodha to up its advisory compliance and service offering. This may result in a compromise combining the best of both worlds.

PARTING NOTE

Zerodha and HDFC Securities are two different philosophies in financial advisory, innovation versus tradition. While Zerodha leads in terms of cost-efficiency and tech-led tools, HDFC Securities wins over in nurturing trusted, personalized relations. The option between these companies comes down to an investor's age, how much risk they're willing to take, if they're comfortable with technology and if they want more independence or hands on help.

That said, given the industry is still rather new, there may well end up being a hybrid model where apps are used to improve the rapidity of getting solutions, but human beings are still used to bring in legal expertise

and experience in a given field. For now, investors will have to navigate these tradeoffs carefully. The best provider isn't one or the other, it's whichever is the best fit for the needs and wants of each individual investor.



FAST FASHION VS. SUSTAINABLE BRANDS: WHAT IS THE FUTURE

- PRADEEP

INTRODUCTION

The fashion business is a changing and powerful industry, shaping popular culture and identities globally. Fast fashion, during the past few decades, transformed the way consumers interact with clothes, providing affordable and trendy garments at record speed. Yet, this rapid manufacturing system has posed extreme environmental and ethical issues.

By contrast, sustainable brands such as Patagonia promote environmentally and ethically manufactured fashion. The article compares fast fashion with sustainable brands using such giants as Zara, H&M, and Patagonia, looking into their effects on people and the planet .

WHAT IS FAST FASHION?

Fast fashion is the rapid design, production, and distribution of clothes capturing the latest fashion trends at low prices. The model allows consumers to have the latest fashions affordably and speedily, and thus turnover rates are high.

The implications of the business model are

shocking. Fast fashion contributes 10% of carbon emissions globally and 20% of global wastewater generation . The use of synthetic materials such as polyester generates more fossil fuels for the industry, furthering environmental degradation. The business model of the industry promotes mass manufacturing, which tends to take away massive volumes of unsold garments to landfill and incinerators.

In addition, fast fashion relies on cheap labor, which outsources manufacturing to developing countries where labor is cheap, and working conditions are dubious . There have been reports of exploitative working conditions, such as child labor and dangerous working conditions, further tarnishing the reputation of the industry. The consumers might not be aware of the human cost of their affordable clothes .

THE CASE OF ZARA AND H&M

Spanish fast-fashion chain Zara is renowned for its ability to translate catwalk designs to store floors in weeks. This rapid turnaround is made possible through a vertically integrated supply chain, which allows the company to exercise

close control over manufacturing and distribution.

Similarly, Swedish multinational retailer H&M sells an astonishing number of affordable fashion goods, replenishing its shelves with the latest fashions. Both retailers have capitalized on consumers' appetite for dressing fashionably at affordable prices, making them global and popular.

However, the environmental impact of these retailers is still huge. Three out of five pieces of clothing purchased today are in landfills within a year. Additionally, the fashion industry is responsible for up to 35% of oceanic microplastic pollution.

Fast fashion is also a key contributor to excessive water consumption. It takes approximately 2,700 liters of water to produce a single cotton shirt, enough water to sustain a person for 2.5 years. Such facts attest to the industry's unsustainable consumption of resources, raising questions about its long-term effects on global water security.

UNDERSTANDING SUSTAINABLE FASHION

Sustainable fashion concentrates on reducing environmental harm by using sustainable supply, ethical labor standards, and long-lasting product designs. Sustainable fashion encourages quality over quantity, and therefore consumers invest in fewer, but long-lasting products.

Sustainable fashion business firms that are dedicated to sustainability concentrate on transparency, where their production is made to minimize the ecological impact. Sustainable fashion business firms increasingly use circular economy business models, such as upcycling

and biodegradable products.

Sustainable fashion also works to slow down the consumption of fast fashion through the encouragement of slow fashion. Slow fashion encourages consumers to be conscious of what they purchase and invest in garments that will last longer. Slowing down, the industry can cut significantly on waste and its overall carbon footprint.

Sustainable brands also use ethical working conditions, where the workers are remunerated with a just wage and healthy working conditions. This focus on human rights and fair trade is an added layer of value in sustainable clothing, which makes it a preferable option for ethically aware customers.

THE CASE OF PATAGONIA

One of the most famous advocates of sustainable fashion is Patagonia. The company is dedicated to environmental protection and has practices like :

- Using 100% recycled materials in most of its products
- Providing safe working conditions and fair wages in its supply chain
- Promoting repair and reuse programs to extend the life of the product

Patagonia's "Worn Wear" program encourages customers to repair and resell their worn-out garments rather than discard them. Patagonia's strategy has inspired many other companies to do the same.

The company's mission statement, "We're in business to save our home planet," shows its dedication to sustainability at all levels of operation.

IMPACT AND CONSUMER CONSIDERATIONS

Although fast fashion makes clothes affordable, the actual costs of fast fashion are astronomical. The industry :

Consumes 79 trillion liters of water annually, a worrying factor because most of the world's regions experience extreme water shortages and drought.

Emits 8-10% of global carbon emissions, making it one of the most environmentally destructive industries on the planet. The production and transportation of synthetic materials like polyester emit greenhouse gases, further contributing to global warming.

Exploits workers in developing countries, and workers are typically paid less than a living wage and work in dangerous conditions. Many garment workers work long hours with little or no job security, and some factories have been accused of child labor and forced labor, further showing the human rights abuses in the industry

Generates millions of tons of textile waste annually, as the rapid production cycle results in overconsumption and regular discarding of apparel. Most of the discarded apparel goes to landfills, where they take years to decompose, further degrading ecosystems .

The fashion world has also been blamed for leading to deforestation due to the high use of cotton and viscose materials, which are mostly produced using unsustainable forestry practices. The deforestation for clothing manufacturing results in the loss of habitat and loss of biodiversity, further escalating the environmental cost of fast fashion .

WHY SUSTAINABLE BRANDS ARE BETTER FOR CONSUMERS AND THE ENVIRONMENT

Sustainable brands concentrate on ethical supply, durability, and sustainable production. While their products are more expensive in the beginning, they last longer, saving consumers money in the long run. Consumers are also getting more concerned with where and how their apparel is made, putting pressure on brands to be transparent in supply chains and ethical sourcing.

Sustainable fashion brands have a 30% reduced carbon footprint compared to their fast fashion peers, significantly reducing emissions linked to apparel manufacturing. Sustainable brands also incorporate innovative materials such as organic cotton, recycled polyester, and plant-based dyes, which cause less harm to the environment.

Further, most sustainable brands have repair, resale, and recycling schemes, which maximize the lifespan of apparel and reduce overall waste. Patagonia, for example, promotes its "Worn Wear" scheme, which prompts customers to return old apparel and exchange it for store credit and purchase second-hand apparel at a discounted price. The scheme has been able to reduce the need for new manufacturing and foster a culture of responsible consumption.

Furthermore, sustainable brands remunerate their employees with good wages and labor under safe working conditions, providing an ethical counterpoint to the exploitative nature of fast fashion. Labor protection legislation and fair trade principles enshrine the idea that sustainability must be joined with social justice as well as environmental responsibility .

CONCLUSION: THE FUTURE OF FASHION

Fashion is at a turning point. The desire for cheap, quick clothes continues, but sustainability is no longer optional. Businesses such as Patagonia have demonstrated that ethical business can be successful and profitable.

To provide a sustainable future:

- Consumers must make informed choices—

- Brands must embrace circular fashion—upcycling, recycling, waste elimination
- Governments must regulate industry practice—imposing tougher environmental legislation

The future of the fashion industry rests on a concerted move away from wasteful, exploitative systems. As understanding grows, consumer demand will force the industry to adopt more ethical and sustainable systems.

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DREAMS OF YESTERDAY, REALITY OF TODAY

What once lived in imagination now shapes our world — from whispered hopes to groundbreaking realities. Witness the evolution of dreams as they take form in today's achievements



FROM FICTION TO REALITY

From Iron Man to Mr. India, we have always imagined technology that could allow us to sit at home and connect with people from anywhere in the world in a matter of seconds. Long back, we saw effortless video conferencing made possible in movies, not knowing how this would become a reality in our daily lives. Films often showed people communicating through big screens, which seemed like a distant dream, but gradually became a possibility through advancement in technology. The biggest revolution in the world of video conferencing came with the outbreak of COVID-19 which led to lockdowns in almost every corner of the world. The existence of this technology proved invaluable as it helped people stay connected with one another from any part of the world. For a country like India that favours in-person interactions, the pandemic era also marked the beginning of a work-from-home/remote working culture. This also provided for better work-life balance. Zoom became so famous not just for school students and teachers, but also for working individuals, “Let’s meet on Zoom” became a common catchphrase.

However, COVID-19 is not the only reason why Zoom grew so rapidly. It would have been as successful as it became regardless of the pandemic’s occurrence but it might have just taken longer.

WHY ZOOM? WHAT GIVES IT THE EDGE OVER COMPETITORS?

Eric Yuan, built Zoom with the vision of making communication frictionless. In addition to this, zoom focused on bridging the gap between the pre-existing video conferencing platforms and their users. Rather than focusing on introducing more unique features, it focused on developing the basics better. It thoroughly analysed the market and came to the decision of delivering on reliability, simplicity and scalability. Yuan ensured smooth video and audio quality even in low-bandwidth environments, which set Zoom apart from its competitors which struggled with inferior video quality under such circumstances. It developed a “one-click” feature which made joining a meeting very simple. Its success is marked by how it

catered to different demands of different sectors. Be it classrooms or corporates, Zoom developed customized plans with flexible prices for everyone.

ZOOM'S WINNING EDGE

Eric Yuan developed ZOOM with the sole motive of being the best and focusing on innovation and minimal complexities.

1. ACCESSIBLE INTERFACE: Zoom is available on various platforms such as Windows, iOS, MAC, Android, Linux and many more. This makes it accessible to a wide range of users.

2. SECURITY AND PRIVACY: ZOOM has endeavoured at providing high security and privacy by offering features like end-to-end encryption, secure meeting controls, adherence to industry policies.

3. REGULAR UPDATES: ZOOM keeps close track of any customer complaints and regularly updates its platform to deliver the best results.

4. INTEGRATION WITH THIRD-PARTY APPS: ZOOM can easily integrate with third-party apps to streamline workflows.

It was able to outperform all of its competitors-Google, Microsoft, Cisco because it made the platform easy to use, minimized user effort and eliminated complexity.

TRANSFORMATION OF CORPORATE WORK

During the COVID era, video conferencing was the only thing keeping businesses and their employees connected. Zoom meetings became second nature to everyone at work.

It opened doors to a lot of opportunities that didn't exist before. An employee of a Bangalore office still works for that office, except now he does so from the comfort of his

hometown. He can still work and contribute as much as he was doing before, but thanks to platforms like Zoom, he gets to be close to his family again. Come to think of Zoom as a cultural transformation that gave way to a much-needed hybrid form of work, the benefits of which although may have been discovered during the pandemic, continue to be realized to this day.

Zoom meetings gave employees a safety net to be more open about their ideas and fears as being behind a screen instead of being face-to-face in an office meeting gave them the courage to come forward.

For Small businesses, start-ups and ventures that are just starting out, Zoom Workplace provides a great opportunity for them to hold meetings and conduct business despite budget constraints. It has helped people conduct their businesses from their homes without adding to the burden of renting out an office. It also comes with a feature of an AI companion, so that as you juggle through multiple meetings, you can get this companion to answer any question that comes to your mind while it takes notes of the meetings for you simultaneously. Though, online meetings have its downside as well. The reactions of the people are not as natural as it would have been in an offline meeting. A lot of essence to the conversation comes from the other person's body language, eye contact and tone of the voice which may get lost over online meetings and it isn't as personal.

DIGITAL CLASSROOM TRANSFORMATION

The Educational landscape saw a paradigm shift, as it went from learning in classrooms to learning over virtual Zoom meetings. The Pandemic forced schools to hold online classes and thus video conferencing platform

once again gained traction. Due to its free-of-cost availability and ease of access, Zoom became the most popular platform for schools and colleges. From classes to tests, everything went online and with this shift, Zoom also provided the added advantage of recording the lectures for future reference. The facility to record sessions helped students attain greater flexibility and allowed them to learn at their own pace.

This time period opened new doors for online education and distance learning. From taking up online courses at international universities to teaching in them, video conferencing has expanded our horizons beyond what we could imagine.

With this shift, Zoom also became the reason why students lagged behind in their classwork and sometimes turned to unfair means of clearing their exams as virtual classes could not replicate the level of attention and monitoring in-person learning could offer.

REDEFINING CONNECTIONS IN DIGITAL WORLD

The most unexpected things that happened over Zoom were weddings. When there were restrictions on the number of people that could be invited to a wedding, zoom became emerged as a knight in shining armour and provided a platform for large families to join in on the celebrations from their homes. Another bright side of using of Zoom for weddings was the low amounts of waste generated by way of decorations and food, thus saving a lot of expenses incurred in waste management. This was not just limited to weddings but also proved substantial in parties and other festival related celebrations. After this pandemic era, people who weren't able to make it to weddings, parties or festivals still could join in on the celebrations through Zoom.

THE TOLL OF VIRTUAL MEETINGS

The switch from offline meetings to a world of virtual conferencing has made our work easier, But, is it entirely for the best?

Studies show that there is a significant impact of video conferencing on our mental state. Lack of human interaction may lead to low self-awareness. Excess of anything is bad, and in the same way, excessive usage of online meetings has adverse effects on our health.

Video conferencing isolates people which leads to increased loneliness. Long hours of sitting in front of screens in order to attend meetings leads to exhaustion, burnouts and fatigue along with weakened eyesight. It can also adversely impact our posture due to sitting in the same position for extended periods of time. This might not seem to create many health impacts in the short run , but its long-term implications could extend to future generations.

WHAT'S IN THE FUTURE?

“Companies that know how to effectively utilize video conferencing by staying ahead of the trends and tailoring their brands to the consumer will be poised for success.”

Video conferencing is becoming more advanced with the integration of AI with simplify scheduling meetings and arranging post-meeting follow ups. There is a lot of things that can be developed further, as the world of video conferencing has just started being developed. There is many things which still remain a distant dream but it is being actively looked to be developed. With increase of cybersecurity and AI frauds, there is a demand of increased security and privacy

along with transparency of operations. There is a need of greater privacy settings to avoid any such frauds.

The future can see incorporating virtual reality in meetings which will allow users to access a replica of the conference room. Zoom is yet to develop this feature, which it might since it aims to make customers experience the

simplest and easiest. We have come a long way, but there is still more to achieve. The world of video conferencing will continue to evolve, but the question remains—will Zoom be able to retain its competitive edge and stay ahead of its rivals, or will a new technology emerge to surpass it?

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SPACEX

-AAHAD

GENESIS: FROM VISION TO REALITY

A few decades ago, the idea of space travel, reusability in aerospace and interplanetary travel was limited to a few Star Wars movies and the volatile relationship between NASA and the moon. It was when a 31-year-old Elon Musk was ousted from PayPal and was driven by ambition that these ideas started to shape into something material. The spark of interest, according to Musk, came when he was browsing through NASA's website and found out that they had no definite plans for a manned mission to Mars.

This led to Musk deciding to launch his own company for space exploration, The company was named "Space Exploration Technologies Corporation", but it was quickly changed to be "SpaceX". The first rocket of SpaceX was named Falcon 1, inspired from none other than the Millennium Falcon from Star Wars, had the core tenet of low launch cost, with an advertised price of \$6 million per launch. After several failed attempts, Falcon 1 was successfully launched in 2008, becoming the first privately funded liquid-propellant rocket to reach orbit.

Falcon 1 proved that private companies could compete with government space agencies, ushering in a new era of commercial space exploration characterized by innovation, competition, and reduced costs. This was the initial stages of a company with dreams more far-reaching than any till yet: Mars.

REUSABILITY: REDEFINING SPACE TRAVEL

"If one can figure out how to effectively reuse rockets just like airplanes, the cost of access to space will be reduced by as much as a factor of a hundred," Musk said in 2011 as he announced a new SpaceX R&D initiative. With the new technology and innovations, SpaceX has revolutionised space travel with the vision of affordability and accessibility. With the billions in private funding by CEO Elon serving as the backbone of the company, SpaceX knew that reusability of the most expensive components of the rockets was the key to affordable space exploration and would serve as the foundation to the magnum opus, Mars. Fittingly, Musk got to work with trying to harvest Falcon 9's booster after launch and

was successful after initial failures. After that same booster was used to launch a satellite, the doubters were turned to believers. Till date SpaceX has reduced launch costs by 30%, SpaceX can launch Falcon 9 for around \$50 million, compared to a \$150 million launch cost for expendable competitor rocket launches. This advantage of resubility is used by both government and commercial space agencies. NASA relies on reused Falcon 9s as cost-effective ISS cargo resupply machines, launching over 20 successful missions so far. This reusability was once deemed impossible, but to the dismay of speculators, SpaceX has used certain Falcon 9 rockets over 10 times.

MILESTONES IN SPACE EXPLORATION

Other than reusability, SpaceX has various other achievements at its mantle. It was the first private company to send a rocket to the International Space Station and its Dragon Spacecraft became the first commercial vessel to dock with the International Space Station in 2012. With Transporter 1, it broke the record for the most spacecraft launched in a single mission with 143 satellites, continuously pushing the boundaries of the aerospace industry. Moreover, keeping in line with its ambition to develop human presence on Mars, it became the first private company to send a human-rated spacecraft to orbit as well as the first private company to send humans into orbit and to the International Space station with its Crewdragon demo 1 and Crewdragon demo 2 spacecraft. It was also named as the first private company to successfully complete a spacewalk with its Polaris Dawn.

Despite all these achievements, SpaceX never faltered from and is still consistent towards its ultimate goal of Mars Colonisation.

STARSHIP AND MARS: THE NEXT FRONTIER

Starship, a multi-billion dollar spacecraft, is a project with great financial and symbolic importance to Elon Musk, the founder of SpaceX. Called the “Holy Grail” of space exploration by Musk, it is believed to be the vessel that will one day take humans to Mars and will make them an interplanetary species and its success would expand SpaceX’s dominance in the global spaceflight industry. Starship is stated to be the world’s most powerful launch vehicle to date. It is capable of carrying up to 150 metric tonnes fully reusable and 250 metric tonnes expendable payload. As the most powerful launch system ever developed, Starship will be capable of carrying up to 100 people on long, interplanetary flights. In addition, it will also help enable satellite delivery, the development of a moon base and will also be capable of point-to-point transport on earth.

According to the company, the test missions of Starship will begin in just 2 years, and if all goes well the first manned mission to Mars could be in just 4 years. “Flight rate will grow exponentially from there, with the goal of building a self-sustaining city in about 20 years. Being multiplanetary will vastly increase the probable lifespan of consciousness, as we will no longer have all our eggs, literally and metabolically, on one planet.” said Elon Musk on social media.

Starship isn't fully developed yet. It has flown four test missions to date, in April and November of 2023 and March and June of 2024. The giant vehicle has performed successively better with every flight, achieving all its major objectives in the most recent test run. What will be interesting to see is if the company is able to fulfill its lofty deadlines and goals and if it would be able to make us truly an interplanetary species.

CHALLENGES AND CRITICISMS

Ambition comes with drawbacks, so is the case with SpaceX, even with the growing success and rapid development, it still has points for criticism.

While glamorous and beautiful to look at, getting a rocket to launch requires fuel, fuel which when combusted releases pollutants into the environment. The fuel SpaceX burns releases black carbon, soot and various other pollutants into the environment that threaten our ozone layer and cause global warming.

The proposed plans and objectives of SpaceX will result in the release of soot equivalent into 7 million diesel dump trucks orbiting the globe into the atmosphere each year. Moreover, when satellites are decommissioned they leave orbit and burn up in the atmosphere and turn into gas, smoke and debris, this adds up to a lot of material. SpaceX has attempted to address environmental concerns by claiming a commitment to minimizing their impact, engaging in local beach cleanups, partnering with wildlife organizations like Sea Turtle Inc., and participating in environmental education initiatives at their launch site in South Texas. Moreover, the Mars Mission has been under investigation by the Federal Aviation Administration (FAA), saying that dozens of correcting measures are to be implemented by the company and cited causes of the Starship

launch failure in April 2023. In response, the Musk-led company openly criticised the current regulatory framework of the FAA claiming that it is overly bureaucratic and hinders innovation. It has also threatened legal action, arguing that these investigations and regulations are hindering progress and could harm the leadership of America in space exploration.

THE FUTURE OF SPACEX

The 400-foot-tall starship is the biggest and most powerful rocket system ever built and is believed to be the key for humanity to achieve a variety of space feats, including the long term vision of CEO Elon Musk of colonising Mars. This vision may become more material in the coming months as Starship is expected to make a big leap in 2025.

With Musk officially serving under President Donald Trump and having a top security clearance and receiving considerable government funding, it will be a matter of interest to see how his ambitions turn out. With the risky stunt of what some assumed as the Nazi Salute during the 2nd Trump inauguration by Musk, he has become a controversial figure in the eyes of the public. Will he fly high or become the epitome of Icarus? Only the passage of time will tell but one thing is for certain- The coming years will serve as a defining chapter in humanity's path to space exploration.

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HOW IT ALL STARTED?

The Netflix we enjoy today on our television and mobile screen was just a dream three decades ago seen by Reed Hastings and Marc Randolph. In the late 1990s when people used to rent movies for a certain period, if there was a slight delay in returning, the customers were charged an exorbitant late fee. Reed being one such customer who was once charged a late fee saw an opportunity to start a DVD rental service through the mail in 1997. With this people could enjoy movies at home and do away with late fees. Netflix revolutionized the entertainment industry forever. They employed a recommendation system that analyzed the viewing patterns of the viewers and recommended tailored movies. Such an unconventional strategy challenging the business of traditional stores created havoc in the industry. In 1998, Netflix launched its website for renting and sale of DVDs. A year later, they started their subscription model allowing members to rent as many DVDs as they liked, and that too without any late fees. Further in the year 2002, Netflix launched its IPO under NASDAQ.

FA breakthrough in their journey came in 2007. When all the other companies in the entertainment industry were still using the mail services, Netflix set out the streaming services. With its introduction, movies and series were just a click away from its users. Netflix proved that they had always been a step ahead of everyone. With the internet making a mark in the world, Netflix saw it as an opportunity to capitalize. It marked a shift from customers searching for DVDs on the shelves of stores or waiting for their mail to arrive to allow them to scroll through thousands of movies to choose their favorite. The availability of such a streaming platform was no less than a dream that had become a reality. It provided the users with an option to watch whatever they wanted at any time as per their desire. It refashioned the way people consume content.

ONE STEP AT A TIME

For the initial few years, Netflix was available only in the United States but they had a bigger picture in mind, which was to become a global giant. They didn't expand their operations all of a sudden. But rather in a very subtle and careful way. In 2010 they first entered Canada

to test its potential and capability to sustain in the global market. Since then there has been no looking back and Netflix has continued to expand its business to the extent that they are currently operating in over 190 countries.

SHIFT TO ORIGINALITY

Netflix's business model was to license content from studios and make it available on their platform. As their customer base expanded, the next step ahead was 'originality'. 2013 marked the release of 'House of Cards', Netflix's first in-house production that won three Primetime Emmy Awards, which was the first one ever for a streaming service. Fueled by its success, they further released originals like 'Orange is the New Black', 'The Crown', 'Narcos', 'Stranger Things' which gained a lot of popularity and appreciation. The Netflix fervor was at an all-time and we got introduced to a new term 'binge-watching'- a new way of consuming

content. Netflix made all the episodes of a season available on their platform in one go. It kept the watchers glued to the screen to complete the entire season in one sitting.

A LEAP OVER THE BARRIERS

Netflix didn't want a demarcation among its viewers. They have broken the barriers of language and nationality and have connected people all across the globe through a common platform. They started producing content tailored to the culture and values of different countries. 'Money Heist', a series in Spanish, 'Sacred Games', based on the political landscape of India, and 'Squid Game', denoting the class struggle of South Korea. Such series, rendering a personal touch, resonated with the audience making these series worldwide sensations. By embracing and celebrating the native culture, Netflix left a notable impression in the minds of the people.



Introducing dubbing and subtitles in various languages helped them to capture the audience as they could enjoy the shows in their native language. Further, the user-friendly interface and studying the viewing algorithms helped Netflix to recommend personalized content to keep the viewers engaged.

A BLESSING IN DISGUISE

The year 2020 saw an event that none of us had ever imagined,- COVID-19. It had brought the entire globe to a standstill. As lockdowns were enforced worldwide people were obliged to stay locked in their homes away from social interactions. In this turmoil, entertainment was the only way to escape the boredom and Netflix provided what was the need for that hour. With all the concerts and theatres shut down, people turned to Netflix. They recorded around 36 million new users in the year 2020 and generated a whopping \$25 billion in revenue. Also, they crossed the 200 million subscriptions and there was a surge in viewing hours like never before. Other production houses had come to a halt but with pre-recorded originals and a vast library of shows Netflix kept the user engaged throughout the period. With this Netflix established a formidable foothold in the market.

THE WAR

Though Netflix was the pioneer of the subscription model, its position was rivaled by Amazon Prime, Disney+, and Apple TV. With exclusive franchise rights over fan-favorites Marvel and Star Wars and over 200 million subscribers, Disney+ posed as the biggest rival to Netflix. However, this battle is quite one-sided as of today as Netflix has retained its throne by providing a perfect balance

between quality and cost.

Another big step taken by Netflix was to enter the world of sports. With the tussle going on between the legendary Mike Tyson and Jake Paul, Netflix realized the opportunity. On November 15, 2024, they exclusively streamed the much-anticipated bout on their platform recording 65 million concurrent views and making it one of the most streamed sporting events in history. Netflix also entered into a historic deal with WWE Raw gaining its exclusive streaming rights for the next ten years. With their arrival in sports streaming, they have made it clear that they are not just limited to movies and web series. In the near future, we can very much expect them to battle for the streaming rights of the NFL, NBA, or the Premiere League to win over the sporting audience.

THE DREAM HAS NOW BECOME A REALITY

Netflix has always been visionary and futuristic in its approach and that is reflected in their journey. With all the hard work of the past three decades, Netflix has achieved a position in the industry that is next to impossible for any other platform to replicate. From struggling to sell DVDs in their early days, Netflix has today become a part of everyone's everyday life. With innovations taking place every day, Netflix still has a long way to go. It is on a journey to capture the sky and with their passionate team it is just another dream that is on its way to become a reality. Their ability to adapt to changing consumer behavior and embrace technology has been the cornerstone of their success. As global content consumption evolves, Netflix continues to set the benchmark for entertainment worldwide.

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A reconnaissance of the cab industry accompanied by the story of its disruption and subsequent restructuring, culminating in the creation of a new normal of cab hailing.

INTRODUCTION

From millennials being worried about traffic jams, congestion or just being torpid and not wanting to drive to the elderly searching for a comfortable ride, OLA is the first name that comes to mind. Acclaimed for operational efficiency, the brand is now synonymous with convenience. It has succeeded in providing its customers an innovative and dependable way to find cabs through its seamless application and has come a remarkably long way from 2010, when it was founded by two ingenious engineers from IIT Bombay, Bhavish Aggarwal and Ankit Bhati, the owners of ANI Technologies Pvt Ltd. The journey of OLA, however, has not been short of a roller coaster ride, with the company's services sporadically being subjected to criticism, majorly on social media platforms.

START

Ola stems from a Olatrip.com, a travel booking website specialising in providing its customers with unique and personalised holiday packages. Now part of popular lore, Bhavish, once travelling by taxi, had a harrowing experience when his driver dropped him off midway to his destination as Bhavish denied paying him more than the pre determined fare. This experience awakened Bhavish to the problem of filthy cars, driven by cantankerous and unsafe drivers, a problem faced by thousands of people on a quotidian basis. Hence, his brainchild OlaCabs was born by tinkering with Olatrip.com's business model. With an aim to achieve great heights, he brought in Ankit Bhati as his co-founder. Together, they set out to disrupt the taxi industry and revolutionise the way people hunted for cabs. Their dream was fuelled by funds poured in by Shaadi.com founder Anupam Mittal and Rehan Yar Khan, managing partner at Orios Venture Partners, who together invested about one crore INR. Armed with a scalable model and a pragmatic "zero inventory" approach, they successfully connected cab drivers and passengers, leading the company to a phenomenal

valuation of 7 billion USD, which, as of my writing this article in February 2025, is down to 2 billion as per Vanguard.

BUSINESS MODEL

Ola offers a smorgasbord of vehicle types, including ola mini, prime sedan, prime suv, prime plus, ola bikes and auto-rickshaws as well. While the 'mini' segment includes hatchbacks, the 'ola prime' includes sedans, prime plus delivers sedans with experienced and highly rated drivers and 'suv' caters to customers requiring a seven seater vehicle.

Prime facie, its business model is straightforward. Ola connects cab drivers and passengers through its well-designed mobile application and charges a commission for the same. As a government ruling forbids cab aggregators to charge more than 20

percent of the fare as their commission, Ola is known to charge approximately 15% of the fare in most cases.

THE ZERO INVENTORY MODEL

Ola's innovative promoters ingeniously followed this model, under which, the cab aggregator does not own the cars booked through the application, instead, it partners with local cab drivers or owners, who are then onboarded on the app. The owners of these commercial vehicles must possess all necessary documents, insurance and pollution certificate of the car, along with other commercial car licenses and approvals as mandated by law. A thorough reconnaissance of these legal necessities is undertaken by the aggregator to ensure full compliance. As the partner drivers can log on to the application as per timings suitable to them, this gives the drivers operational flexibility whilst

concomitantly ensuring that enough cabs are available to meet their demand at any given hour.

PROS AND CONS OF THE ZERO-INVENTORY MODEL

The model tremendously reduces costs for Ola by doing away with licensing fees, vehicle insurance premium, maintenance expenses and parking lot rentals, all of which are to be paid by the drivers/owners instead. However, with the burden of these essentials shifted to drivers, they, unfortunately, sometimes remain unfulfilled. The declining cleanliness of cabs, coupled with poor sanitary conditions often alienates customers, who shift to comparatively expensive services like BluSmart, which leases electric cars from large players like Gensol and employs drivers on a fixed monthly salary. BluSmart, hence, is able to keep better checks over the cleanliness and condition of their cars.

HOW ARE FARES DECIDED?

Apart from peak pricing, which raises cab prices due to increased demand at a given hour, the total trip fare includes a base charge (flat), distance charges that vary across cities, ride time fare and toll charges (if applicable), subject to taxes. While surge pricing discourages customers, it serves as an incentive for cab drivers. A study conducted by CCI revealed that surge prices incentivize drivers the most in the situation of bad weather, this conclusion being a result of responses of drivers from Delhi, Mumbai, Jaipur and Indore.

OLA PEDAL, RENTALS AND CORPORATE

Apart from regular intra-city travel, Ola also offers Ola outstation, a service specially curated for inter state travel and Ola Rentals, which allows customers to rent cars on an hourly basis. Additionally, Ola was immensely praised by customers and critics alike after it launched an eco-friendly initiative known as Ola Pedal, which encompassed fleets of bicycles, to be shared inaugurally amongst students in academic campuses including IIT Madras and IIT Kanpur. Even though Ola envisaged expanding its fleet of cycles penultimately across cities in a bid to boost last mile connectivity, this did not scale as expected due to lack of dedicated cycle lanes across Indian cities, fuelling safety concerns.

To further spread its roots across the cab and 'vehicle-for-hire' industry in India, it launched a service known as Ola Corporate. Aimed to satisfy both companies and their employees, it partnered with various companies who created accounts with Ola and transferred requisite funds to them. Employees were allowed to book cabs through this service and fares were directly deducted from the said company's account. This service dispensed with the need of companies to own extravagant fleets of vehicles, without sacrificing employee safety and convenience. Employees could reach office and go to meetings on time, without having to drive. They, instead, could use this travel time to work remotely, increasing efficiency at work.

COMPETITORS AND MARKET SHARE

Ola now faces competition from a number of large players in the industry, with some it competes directly, with others, indirectly. Its direct competitors are ventures like Uber, Rapido, inDrive and to a certain extent

BluSmart. This is because all these applications do not necessitate the pre booking of cabs, one can straightaway log on to the app, book a ride and hop in as soon as it arrives. Ola's indirect competitors include Meru cabs and other such companies who are conventionally seen as airport cab services. They compete with Ola primarily in the rental and outstation segments. Also contributing to the latter category are local taxi operators and drivers, who primarily rely on their local reputation, that being earned organically by word of mouth.

FINANCIAL OVERVIEW AND COMPARISON



The above graph shows how Ola's revenue and loss compared to Uber India's in FY 23. Whilst Ola clocked a massive revenue of INR 2799 crores, it incurred a loss of INR 772 crores. On the other hand, Uber India's top line stood at an impressive INR 2666 crores, with losses amounting to INR 311 crores. However, Ola's mobility business became EBITDA positive in India in FY23, reporting a standalone profit of INR 250 crores.

FUTURE OUTLOOK AND INCREASING COMPETITION

A couple of years ago, Ola cabs dominated the online cab aggregator industry, however, as of 2024, ola cabs has a market share of 34%, whilst Rapido, which rose to prominence relatively later, occupies 14% of the market. Uber, on the other hand, has the lion's share, with a 50% market share.



With the advent of competitors such as inDrive, an application which allows the cab driver and passenger to negotiate fares, Ola cabs must continually strive to up the ante and provide its customers with services superior to those that its competitors offer.

To gain market share and improve financial results, it must get rid of common pain points its customers face, the quintessential example being poor cleanliness of cabs.

EXPANDING MARKET

With increasing urbanisation, the demand of online cab aggregators is bound to rise not only in metropolitan cities but also in tier 2 and tier 3 cities, one following the other. The taxi market in India is estimated to reach USD23 billion in 2025 and is expected to grow to USD 44 billion by 2030, with a CAGR of 13.55%. This expanding demand for cabs must be met by increasing supply of reliable cabs driven by drivers adept in professionalism.

In the absence of empirical data in the following regard, it is believed that this increasing demand will reflect on all segments of the taxi business, budget cabs, SUVs and luxury commercial vehicles. Therefore, the future outlook for both Ola and the industry in its entirety is inherently positive, with there being a pressing need for aggregators to meet the needs and wants of customers. For sustainable success, they also need to meet the aspirations of cab drivers, the very suppliers of the service Ola offers, necessitating the achievement of a perfect balance between meeting demand and supply side aspirations, led by financial prudence.

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NVIDIA
-ANMOL

NVIDIA: FROM GRAPHICS PIONEER TO AI ARCHITECT

Founded on April 5, 1993, by Jensen Huang, Chris Malachowsky, and Curtis Priem, with a mission to bring 3D graphics into the gaming and multimedia markets, NVIDIA revolutionized computing with the introduction of the GeForce 256 GPU. This shifted the rendering of complex graphics away from the CPU and onto specialized hardware. Wildly popular with gamers initially, no one thought that these fancy graphics technology would launch a larger tech revolution. NVIDIA's chips are now ubiquitous. Doctors can craft cancer drugs in record time, processing climate data to forecast next year's fire season, and instructing cars to drive themselves without face-planting into traffic cones.

In 2020, they dropped \$40 billion to snag Arm—a move that basically lets them plant their flag in every gadget from smart toasters to iPhones. They've got this thing called Omniverse, a Metaverse-meets-Minecraft playground where engineers and artists can build virtual worlds together. NVIDIA isn't just powering AI—they're stitching the real and digital worlds together like a tech-crazed Dr. Frankenstein.

This aspiration was established in the conviction that GPUs had the potential to revolutionize not as it were the gaming scene but moreover a wide range of other spaces, enveloping plan, logical inquire about, and excitement. The company's to begin with critical breakthrough arrived with the presentation of the RIVA 128 design card in 1997, which advertised a considerable execution jump compared to its competitors. This victory was taken after by an arrangement of groundbreaking items, most outstandingly the GeForce arrangement of GPUs, which cemented NVIDIA's position as an overwhelming drive in the design card advertisement. These early victories set up NVIDIA's notoriety for specialized brilliance and laid the foundation for its future raids into more complex computational ideal models.

FROM PIXELS TO PARALLELISM: THE DAY BREAK OF A WORLDVIEW SHIFT

While NVIDIA's starting triumphs were established in its ability in illustration handling, the company's long-term vision expanded significantly past the limits of the gaming field. Recognizing the inactive potential of GPUs for

general-purpose computing, NVIDIA set out on a vital realignment in the early 2000s, contributing intensely in the advancement of innovations that would empower its GPUs to be utilized for a more extensive cluster of computationally serious applications.

This vital turn was driven by the adroit perception that the parallel handling engineering inalienable in GPUs, in a perfect world suited for dealing with the complex numerical computations required for rendering illustrations, might too be utilized for other computationally serious errands. This understanding led to the advancement of CUDA (Compute Bound together Gadget Engineering), a parallel computing stage that engaged engineers to saddle the colossal preparing control of NVIDIA GPUs for an assortment of applications, enveloping logical computing, money related modeling, and, most altogether, fake insights. This essential move in the center from simply graphical applications to general-purpose computing spoke to a significant turning point in NVIDIA's direction, setting the stage for its future dominance in the AI scene.

THE AI INSURGENCY: NVIDIA'S ESSENTIAL PART AS AN ENABLER

The rise of profound learning, a subfield of fake insights that depends on manufactured neural systems with numerous layers to extricate higher-level highlights from information, checked a watershed minute in the history of computing. Profound learning calculations, which require tremendous sums of computational control for preparation, found a normal partner in NVIDIA's GPUs.

NVIDIA's CUDA stage, with its capacity to essentially quicken the preparation of profound learning models, quickly became the de facto standard for AI analysts and engineers. The company's GPUs, with their unparalleled preparation control and optimized design, encouraged the improvement of progressively complex and advanced AI models, moving breakthroughs in regions such as picture acknowledgment, normal dialect handling, and discourse acknowledgment. This advantageous relationship between profound learning and GPU computing set NVIDIA's position as a key driver of the AI insurgency, changing it from an illustration card producer into an AI powerhouse.

REALITIES PRODUCED: NVIDIA'S AFFECT ON ASSORTED DOMAINS

NVIDIA's change from an illustration card producer to an AI colossus has had a significant and unavoidable effect on the world, penetrating essentially each viewpoint of present day life. The company's advances are presently at the center of a wide run of applications that are reshaping businesses and changing the way we are associated with innovation.

In the healthcare division, NVIDIA's GPUs are being utilized to quicken sedate disclosure, create novel therapeutic imaging strategies, and make AI-powered symptomatic devices, driving to more proficient and compelling healthcare arrangements. In the car industry, NVIDIA's self-driving car stage is clearing the way for the improvement of independent vehicles that guarantee to revolutionize transportation, possibly driving to more secure and more productive roadways.

THE FUTURE OF COMPUTING: NVIDIA'S VISION FOR THE FOLLOWING CHAPTER

As NVIDIA proceeds to thrust the boundaries of what's achievable, the company's vision for the future of computing is getting to be progressively well-defined. NVIDIA accepts that the future of computing will be molded by the joining of AI, illustrations, and high-performance computing, making a bound together stage competent of tending to the complex computational requests of the future.

The company is contributing intensely in the improvement of modern innovations that will empower this merging, counting novel GPU structures, progressed AI calculations, and high-speed interconnect innovations. NVIDIA's objective is to make a bound together computing stage that can consistently handle the requests of a wide run of applications, from immersive gaming and excitement encounters to cutting-edge logical inquiry about and progressively advanced counterfeit insights applications. This vision envelops not as it were equipment progressions but moreover the advancement of strong computer program devices and stages that make it less demanding for designers to use the colossal control of NVIDIA's innovations.

CHALLENGES AND CONTEMPLATIONS: EXPLORING THE ADVANCING LANDSCAPE

While NVIDIA's victory is verifiable, the company too faces a complex and advancing scene of challenges. Strong competition from other chip producers, the moral

contemplations encompassing the improvement and sending of progressively effective AI frameworks, and the consistent weight to improve and keep up a mechanical edge are a few of the challenges that NVIDIA must explore. Moreover, guaranteeing availability to its advances and tending to concerns approximately the potential societal effect of AI, counting issues related to work uprooting and algorithmic predisposition, are pivotal for the company's long-term supportability and dependable growth.

CONCLUSION: A BEQUEST OF DEVELOPMENT AND TRANSFORMATIVE IMPACT

NVIDIA's journey from a design card producer to an AI titan is a confirmation to the control of vision, development, and unflinching tirelessness. The company's tireless interest in brilliance has not changed the world of computing but too significantly reshaped the way we are associated with innovation and the world around us.

As NVIDIA proceeds to thrust the boundaries of what's conceivable, its commitments to the innovative scene are balanced to end up indeed more significant. The dreams that fueled NVIDIA's introductory rising are presently forming the substances of nowadays, and the company's vision for the future guarantees to usher in a modern time of computing that will change our world in ways we can as it were to start to imagine.

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INTRODUCTION: THE RISE OF AN ERA OF SPEED

The e-commerce and rapid commerce world has been revolutionized over the last decade. Of the new players in this fast-changing sector, Zepto has established a remarkable place for itself. What was an ambitious aspiration once—groceries and essentials being delivered in ten minutes—has become a reality today. From being a radical experiment of a startup, Zepto is today a brand in every household, changing consumer and logistics dynamics.

THE GENESIS OF ZEPTO: A STARTUP THAT DEFIED LIMITS

The idea of ultra-rapid delivery was greeted with skepticism at first. Same-day delivery and one-hour delivery models were already established, but ten-minute grocery delivery seemed unrealistic. Zepto was started by two Stanford dropouts, Aadit Palicha and Kaivalya Vohra, who dreamed of a world where grocery shopping was no longer a time-consuming drudgery but an instant affair. The two founders recognized a niche in India's urban

economy, where the hunger for convenience and speed was emerging at a high rate. Armed with the proper combination of technology, well-timed dark stores, and organized manpower, they made their dreams a reality. What began as a grand concept quickly became a strong business model that revolutionized the conventional grocery shopping experience.

THE ZEPTO BLUEPRINT: THE SECRET BEHIND ULTRA-FAST DELIVERIES

Zepto's secret is its hyper-efficient logistics and tech setup. While the typical e-commerce companies use sprawling warehouses at distance from consumers, Zepto follows a chain of strategically located dark stores—tiny, centrally based warehouses set up specifically for lightning-fast fulfillment. These dark stores are optimized by data-driven recommendations so that the high-demand products are stocked in hand and get replenished with urgency. One of the most important aspects of Zepto's business model is the reduction of order-to-delivery time. Zepto accomplishes this through a very effective warehouse management system that optimizes picking, packing, and

shipping. Every dark store is strategically located within a 2-3 kilometer range of densely demanded neighborhoods, and delivery staff are able to reach customers within minutes.

KEY PILLARS OF ZEPTO'S SUCCESS

Micro Warehousing (Dark Stores): Zepto locates its warehouses in dense urban areas to reduce delivery time. These warehouses use an up-to-date inventory model to adjust according to the demand of the consumer.

AI and Data Analytics: Zepto uses artificial intelligence and machine learning to forecast demand, optimize inventory, and deliver optimally. This ensures high-demand products are in stock and deliveries are made effortlessly.

Fleet of Delivery Riders: Zepto's delivery personnel network is strategically positioned across its cities of operation to deliver in the shortest time. The firm employs route optimization technology to allocate the quickest and safest routes for the riders.

Technology-Driven Operations: The algorithm in the app is optimized to reduce delays by optimizing the picking, packing, and dispatching process. Automated systems guarantee that orders are processed and delivered within minutes of being ordered.

CHALLENGES AND SUCCESS: TACKLING THE OBSTACLES OF HYPER-SPEED COMMERCE

Every disruptive innovation is accompanied by challenges. Zepto was no different. The startup had to face logistical challenges, regulatory issues, customer demands, and

intense competition.

1. Breaking the Logistics Code

It takes no small feat to deliver within ten minutes. The firm needed to ensure that all parts of the supply chain—from procurement to ultimate delivery—were streamlined. This meant an outlay of considerable resources in terms of infrastructure, coordination, and technology. Through relentless data analysis and optimization of operations, Zepto was able to master the art of super-speedy deliveries.

One of the biggest challenges was inventory management. Unlike traditional grocery stores, Zepto had to keep its inventory highly optimized to prevent overstocking while ensuring that customers had access to essential products. To achieve this, the company implemented predictive analytics that analyzed purchase patterns and restocked items accordingly.

2. Regulatory and Safety Roadblocks

The fast commerce sector has been under fire over the safety of delivery riders. The need to adhere to stringent delivery times generated fears of aggressive driving and highway safety. Zepto addressed this by introducing rider-friendly policies, providing equitable remuneration, and using technology to design safer delivery routes.

To solve these issues, Zepto also implemented a flexible delivery model that enables riders to value safety over speed. Rather than placing unrealistic demands, the firm centered on optimizing backend activity to minimize holdups at the warehouse level to enable riders to deliver safely within a reasonable time.

3. Winning Over Customers: The Battle for Loyalty

Consumer expectations keep changing. Although Zepto first gained popularity based on its promise of speed, it had to sustain customer satisfaction through high-quality products, competitive prices, and superior service. Through continuous improvement of its app, product curation, and integrating customer feedback, Zepto secured long-term loyalty.

Another reason for customer retention was the smooth user experience. The Zepto app was intuitive and easy to use, making it easy for customers to order with little effort. Personalized recommendations and loyalty rewards were additional features that increased customer interaction.

4. Taking on the Giants: The Competitive Showdown

Zepto tapped into a space dominated by online shopping giants Swiggy Instamart, Blinkit, and BigBasket. Zepto differentiated itself with reliability, pace, and higher user experience. Its hyper-local strategy and tech advantage enabled it to compete hand in hand with larger players.

The firm also had a customer-first policy, whereby complaints and grievances were resolved as soon as possible. This service quality focus ensured that Zepto gained a loyal customer base in spite of already established competitors.

ZEPTO'S RIPPLE EFFECT: CHANGING THE WAY WE SHOP

The arrival of Zepto has greatly changed the grocery shopping and essentials shopping behavior of people. Instant gratification is what consumers, particularly urban consumers, have come to expect. The weekly

or monthly grocery shop has been substituted by impromptu, need-based ordering.

HOW ZEPTO IS CHANGING CONSUMER BEHAVIOR:

No More Bulk Buying: Consumers increasingly order in small quantities frequently, eliminating the need for bulk storage space at home.

Digital Payments Rise: E-wallets and online payments have grown exponentially as consumers love the ease of app-based shopping.

Convenience Over Cost: Zepto's speed of delivery has made customers willing to forgo cost considerations in favor of convenience, valuing speed over discounts.

THE NEXT CHAPTER IN ZEPTO'S GROWTH:

As Zepto grows, the future of rapid commerce is bright. The firm will probably venture into new product categories like drugs, electronics, and daily essentials. Technological innovations like drone delivery and AI-based logistics might also improve efficiency.

Growing to New Cities and Countries: Zepto will probably expand its reach in India and potentially move into international markets.

Beyond Grocery: Zepto could launch its own line of products, appealing to a wider consumer segment.

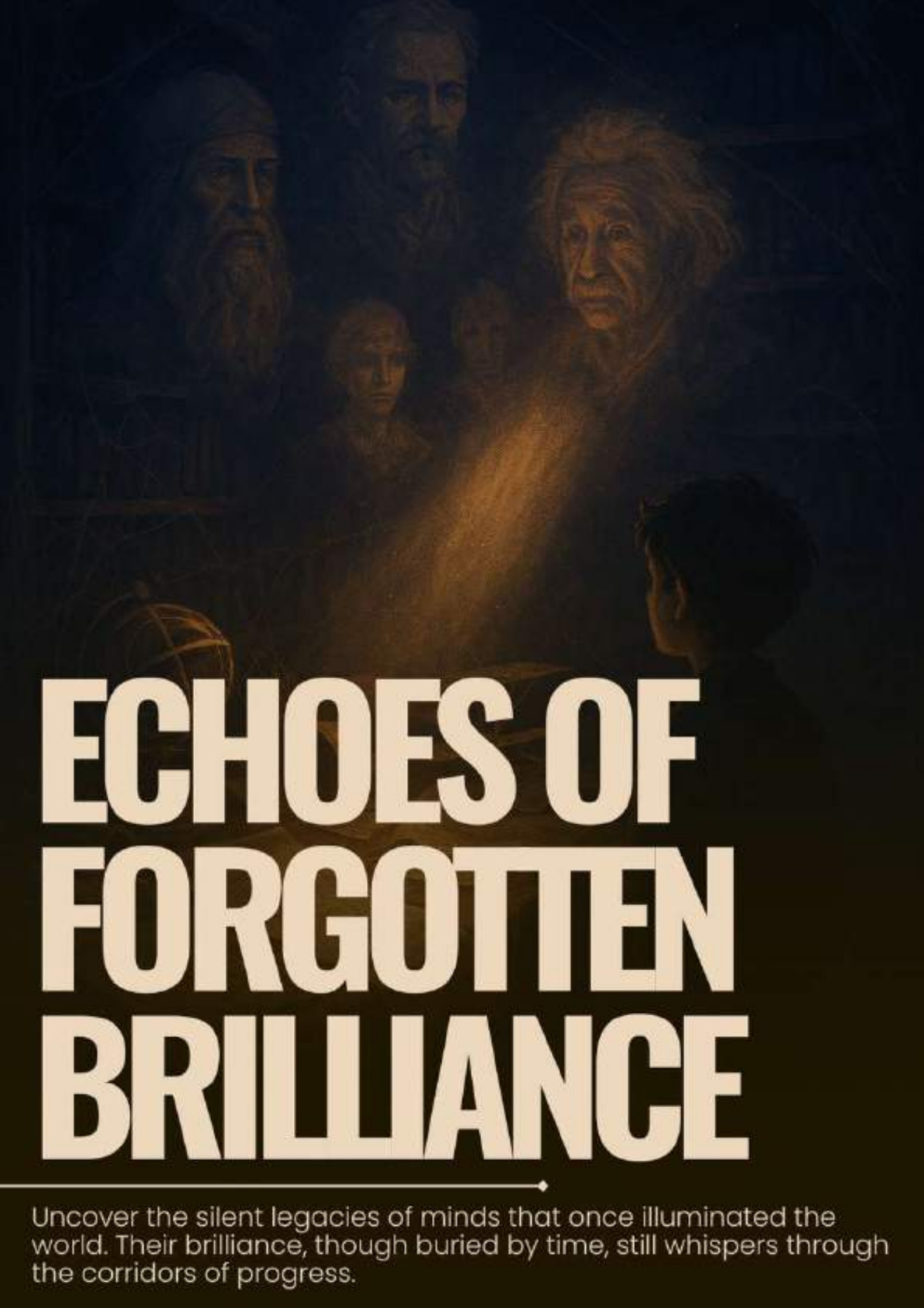
Going Green: Zepto could invest in green packaging and environmentally-friendly delivery mechanisms to reduce its environmental impact.

CONCLUSION: A VISION THAT BECAME A MOVEMENT

Zepto's evolution from an idea to a game-changer in fast commerce is a testament to how innovation, technology, and strategic implementation can make a big dream come true. Despite challenges ahead, the company's capacity to pivot, scale, and respo-

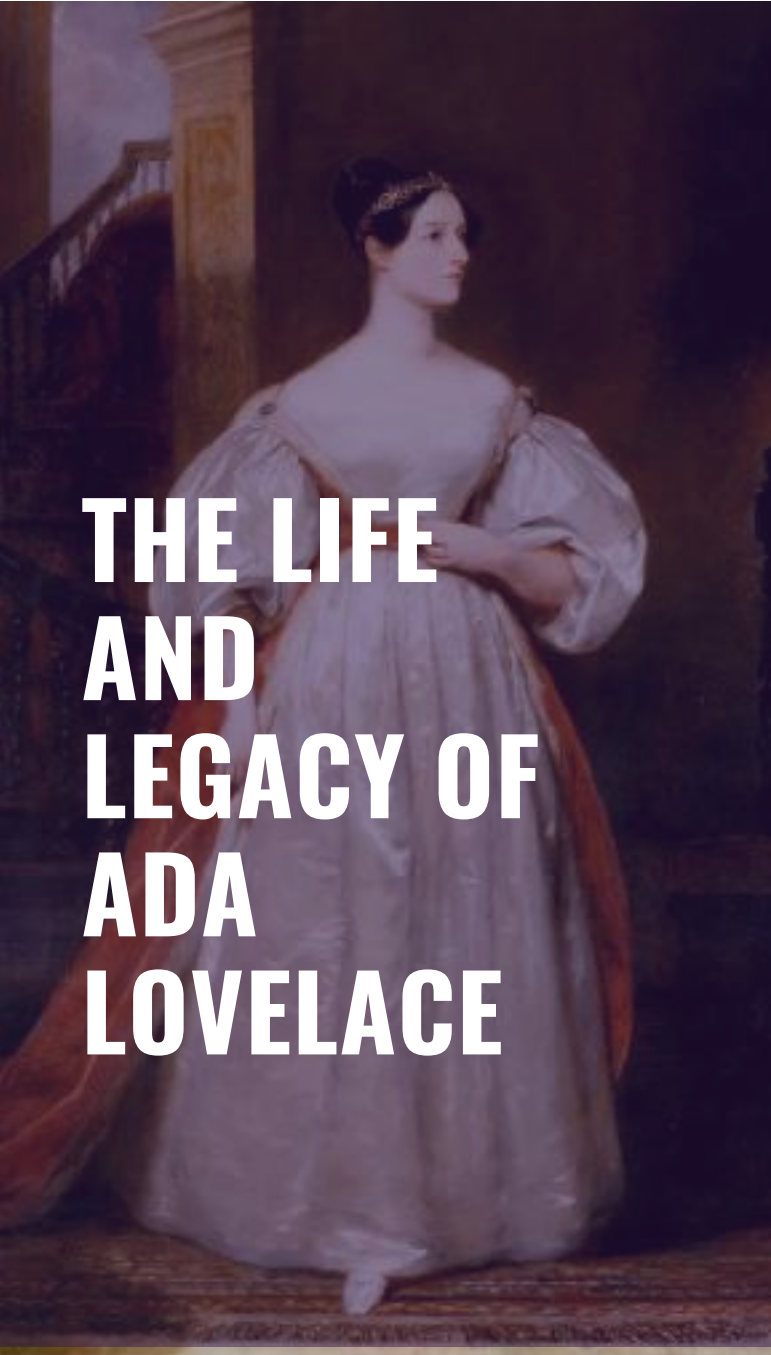
-nd to consumer needs puts it on a path to continued success. The days of waiting hours or days for deliveries are slowly becoming a thing of the past.

Zepto has demonstrated that speed, efficiency, and convenience are not merely wishes—standards to be met. What was previously an impossible dream is now a daily reality, reshaping the future of commerce in the making.



ECHOES OF FORGOTTEN BRILLIANCE

Uncover the silent legacies of minds that once illuminated the world. Their brilliance, though buried by time, still whispers through the corridors of progress.



THE LIFE AND LEGACY OF ADA LOVELACE

INTRODUCTION

When you think of pioneers in computer science, names like Alan Turing, Bill Gates, or Steve Jobs might come to mind. But long before Silicon Valley and the digital revolution, there was Ada Lovelace- a visionary mathematician, writer, and arguably the world's first computer programmer. Born in an era when women were largely excluded from scientific pursuits, Ada defied societal norms, blended poetry with mathematics, and laid the groundwork for modern computing. Her life was a fascinating mix of intellect, ambition, and imagination, earning her the nickname "the Enchantress of Numbers." Let's dive into the extraordinary journey of this 19th century genius whose vision of computing was a century ahead of its time.

A Poet's Daughter with a Mathematician's Mind

Born Augusta Ada Byron on December 10, 1815, in London, England, Ada was the daughter of the notorious Romantic poet Lord Byron. The same Byron who scandalized British high society with his passionate poetry and equally tempestuous lifestyle. But Ada never knew her father- he abandoned her and her mother, Lady Anne Isabella Milbanke Byron, when Ada was just a month old.



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"That brain of mine is something more than merely mortal, as time will show."
— Ada Lovelace

”

an educated woman with a deep interest in mathematics, was determined that her daughter would not inherit what she considered her ex-husband's "dangerous" poetic tendencies. Instead, she immersed Ada in the study of mathematics and logic, an unusual curriculum for a woman in 19th century England. Yet, fate had its own plans. Far from erasing her poetic inclinations, this dual exposure to logic and imagination became Ada's greatest strength.

Ada was a dreamer with a structured mind. She once wrote, "I believe myself to possess a most singular combination of qualities exactly fitted to make me pre-eminently a discoverer of the hidden realities of nature." In other words, she saw numbers not just as cold calculations but as the key to unlocking a deeper understanding of the world.

The Meeting of Minds: Ada and Charles Babbage

Ada's life took a historic turn when she met Charles Babbage, a brilliant but eccentric mathematician and inventor. At the time, Babbage was developing the Difference Engine, an early mechanical calculator. A young Ada, just 17, was invited to witness a demonstration of the machine, and it was love at first sight- not with Babbage himself, but with the idea of a machine capable of mathematical computations.

Babbage was impressed by Ada's intelligence and began mentoring her. Their friendship was an intellectual partnership, fueled by mutual admiration. He called her "The Enchantress of Numbers" because of her ability to grasp and articulate complex mathematical ideas with almost magical clarity.

Later, Babbage conceived the Analytical Engine, a more advanced, programmable

machine that would become the conceptual blueprint for modern computers. While Babbage provided the hardware vision, it was Ada who saw its deeper potential. She realized that this machine could do more than crunch numbers- it could manipulate symbols, generate music, and even create art. In essence, she predicted modern computing at a time when even the concept of a "computer" didn't exist.

A Life of Passion and Struggle

Despite her brilliance, Ada's life was far from easy. She battled chronic illness from a young age, often spending months bedridden. She was also a wife and mother, balancing intellectual pursuits with domestic responsibilities in a society that expected women to remain in the background.

Yet, Ada was far from conventional. She was fiercely independent, socially connected with some of the greatest minds of her time, including Michael Faraday and Charles Dickens, and even dabbled in gambling (though unsuccessfully, as she lost a considerable amount of money in failed betting schemes). Her letters reveal a witty, self-aware woman who never took herself too seriously. She once described herself as "a fairy employed in weaving algebraic patterns," a poetic yet precise description of her work in mathematics.

Ada's Legacy: From the 19th Century to the Digital Age

For nearly a century after her death, Ada Lovelace's contributions went largely unnoticed. But in the 20th century, as the field of computing took shape, her work was rediscovered and celebrated. In the 1970s, the U.S. Department of Defense named its new p

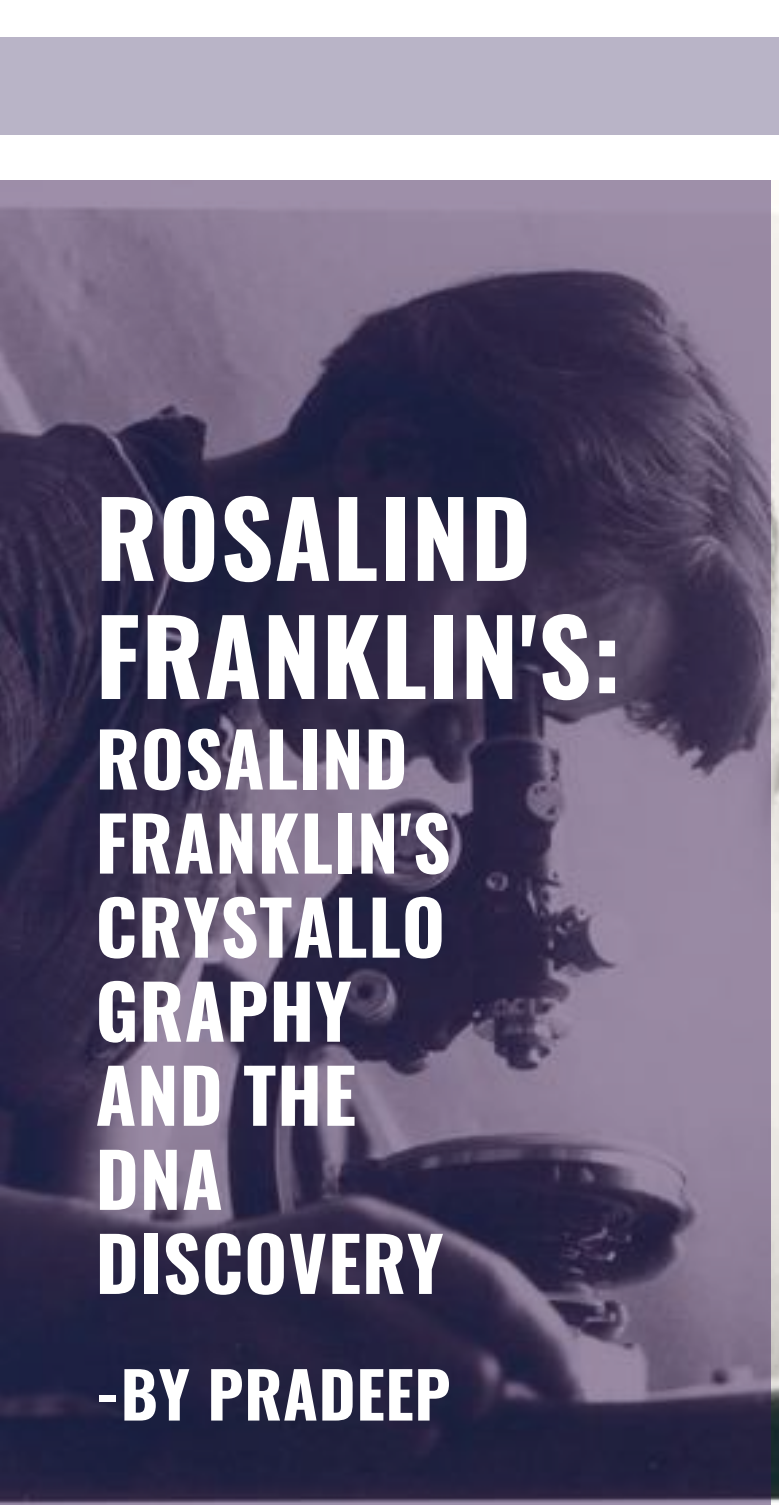
programming language "Ada" in her honor. And today, Ada Lovelace Day is celebrated annually on the second Tuesday of October to honor women in STEM fields.

Ada Lovelace was not just the first programmer- she was a pioneer, a visionary, and an inspiration for generations to come. And for that, the world of computing, and the world at large, owes her a great deal. Her

legacy is a powerful testament to the idea that technological innovation is not just about machinery, but about vision. Ada saw beyond the limits of her time, blending logic with imagination, and in doing so, anticipated the digital revolution by over a hundred years. She proved that creativity and analytical thinking are not opposing forces, but complementary ones that, when combined, can change the world.

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ROSALIND FRANKLIN'S: ROSALIND FRANKLIN'S CRYSTALLO GRAPHY AND THE DNA DISCOVERY -BY PRADEEP

Who is Rosalind Franklin?

Rosalind Elsie Franklin was a British scientist whose groundbreaking work in X-ray crystallography played a crucial role in the discovery of DNA's double-helix structure. Franklin was born in London on July 25, 1920, and showed a natural knack for math and science at a young age. One of the few schools at the period that placed a strong emphasis on teaching young women science was St. Paul's Girls' School, where she attended.

Franklin graduated from Newnham College at the University of Cambridge, where she majored in physical chemistry. Her thesis focused on the structure of coal, which had direct applications in fuel usage during World War II. After obtaining her doctorate in 1945, she went to Paris to advance her practical knowledge of X-ray crystallography, which would later help her make her most significant contribution to science: important photographs of DNA leading to its double-helix structure.

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"Science and everyday life cannot and should not be separated."
— Rosalind Franklin

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Apart from the scientific and professional feats she had achieved, Franklin also had passion in research, which differentiated her. Again, she had been faced with many hindrances as a female in a man's world but still left no stone unturned in her work. Franklin's painstaking work and precision in conducting research endeared her to the scientific community and opened the way for her formidable contributions to molecular biology.

The Discovery of DNA

Although scientists became aware that DNA contained genetic information by the middle of the 20th century, its structure was still unknown. James Watson and Francis Crick of the University of Cambridge, as well as Maurice Wilkins and Rosalind Franklin of King's College London, were major participants in the fiercely competitive race to unravel the structure of DNA.

A key piece of evidence supporting the helical shape of DNA was supplied by Franklin's X-ray diffraction photographs, especially Photo 51. Her efforts were overshadowed, though, and Watson and Crick ended up taking the most of the credit for the finding. The double-helix model of DNA, which was one of the most important scientific discoveries of the 20th century, was presented in their 1953 study published in *Nature*. Although they were mostly disregarded at the time, Franklin's own research was included in the same journal issue.

The scientific community widely celebrated Watson and Crick's DNA model, yet Franklin's research played a crucial role in confirming their theoretical framework. Through her exhaustive examination of DNA's physical and chemical attributes she produced critical data

sets which Watson and Crick used to perfect their structural model. The persistent influence of systemic gender biases combined with unethical practices caused Rosalind Franklin's scientific contributions to remain obscured in the background for an extended period.

Rosalind Franklin's Work in X-ray Crystallography

X-ray crystallography was a cutting-edge technique in the 1950s, used to determine the three-dimensional structures of molecules. It involved directing X-ray beams at crystallized substances and analyzing the resulting diffraction patterns.

Franklin was exceptionally skilled in this field. At King's College London, she worked rigorously to refine the technique, capturing high-resolution images of DNA. Her meticulous approach allowed her to distinguish between two structural forms of DNA: the A form, which was more crystalline and provided clearer diffraction patterns, and the B form, which was more hydrated and biologically relevant. Photo 51, an image of the B form, offered direct evidence of DNA's helical nature.

Her research was not limited to DNA. After leaving King's College London, she joined Birkbeck College, where she studied the molecular structures of viruses, including the tobacco mosaic virus and the poliovirus. Her work in this area helped establish the foundation for modern virology. Franklin's ability to analyze complex molecular structures made her a pioneering figure in structural biology, contributing far beyond DNA research.

Franklin's research methodology was marked by precision and dedication. She painstakingly refined her crystallographic techniques,

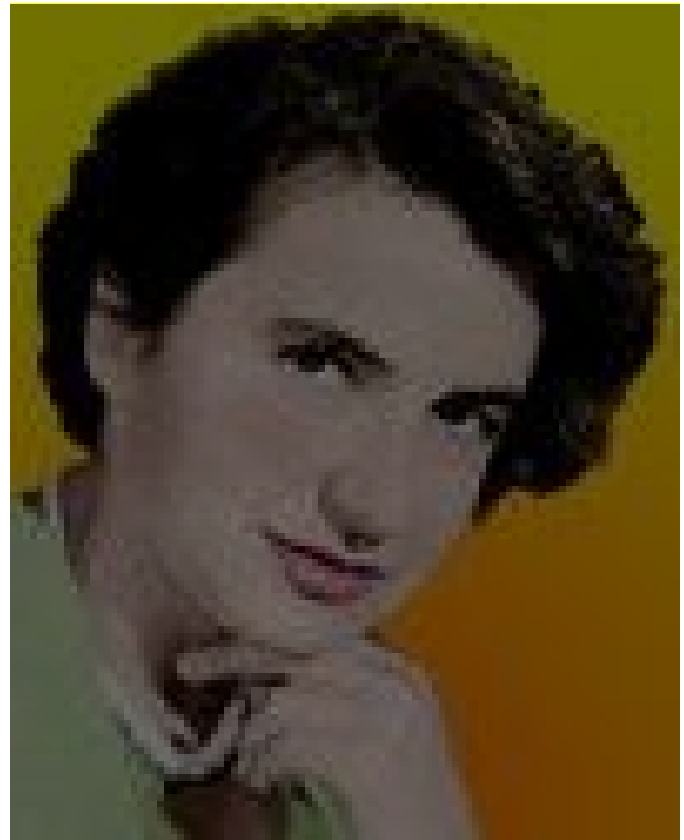
ensuring that her data was as accurate as possible. Her systematic approach to problem-solving and data interpretation set a high standard for future structural biologists. Her contributions to virus research, though often overshadowed by her DNA work, were just as significant and laid the groundwork for future advancements in medicine and virology.

The Controversy: Misuse of Franklin's Data

The most controversial aspect of Franklin's story revolves around how her data was used without her knowledge. Maurice Wilkins, who worked in the same lab but had a strained relationship with Franklin, showed Photo 51 to James Watson without her permission. Upon seeing the image, Watson immediately recognized its significance and, along with Crick, used it to refine their model of DNA.

Watson and Crick's famous paper in *Nature* did not explicitly credit Franklin's contributions. Instead, their acknowledgment of Franklin was understated and did not fully reflect her role in the discovery. Watson later wrote "The Double Helix" (1968), in which he described Franklin in a condescending manner, further contributing to her being overlooked in the public narrative of DNA's discovery. This account painted Franklin as difficult and unaware of the significance of her findings, an unfair characterization that misrepresented her role and intellect.

The ethical concerns surrounding the use of Franklin's data have led to discussions about scientific integrity and the recognition of contributions in collaborative research. The misuse of her work is now considered a significant breach of academic ethics, highlighting the need for greater transparency and fairness in scientific discoveries.



Her Legacy: Forgotten and Remembered

Forgotten in History

For many years, Franklin's role in DNA's discovery was largely ignored. Watson, Crick, and Wilkins were awarded the 1962 Nobel Prize in Physiology or Medicine for their work on DNA's structure. Since Nobel Prizes are not awarded posthumously, Franklin, who had died of ovarian cancer in 1958 at the age of 37, was never considered. Her contributions were overshadowed by the narrative that placed Watson and Crick at the forefront of the discovery.

How She Is Remembered Today

In recent decades, Franklin's contributions have gained widespread recognition. Books such as "Rosalind Franklin: The Dark Lady of

DNA” by Brenda Maddox (2002) have helped restore her legacy. Scientists and historians now acknowledge that Franklin’s meticulous experimental work was instrumental in the discovery of DNA’s structure.

Institutions and awards have also been named in her honor, including the Rosalind Franklin University of Medicine and Science in Illinois and the Royal Society’s Rosalind Franklin Award, which recognizes outstanding women in science. Additionally, her role is now frequently included in educational curricula, ensuring that future generations recognize her contributions.

A growing number of scientists and historians advocate for more accurate representations of Franklin’s work in textbooks and public discourse. The movement to acknowledge overlooked women in STEM has further elevated Franklin’s profile, helping to correct historical misrepresentations of her contributions. Today, she is seen as a trailblazer not just for her work in DNA but for her overall impact on the fields of chemistry, physics, and biology.

The given chart clearly depicts that major chunk of her revenue in her 17-year-long music career has been contributed by the Eras tour itself ie., about 80% contribution to her overall net worth till date. This was followed by her Reputation Tour, 1989 tour, The Red tour, Speak Now Tour and lastly her first album range: The Fearless Tour.

CONCLUSION

Rosalind Franklin’s pioneering work in X-ray crystallography provided the key evidence for DNA’s double-helix structure. Despite facing gender bias and the unethical use of her data, her scientific contributions remain undeniable. Although she was not fully recognized during her lifetime, her legacy continues to inspire scientists and researchers today. Her story serves as a reminder of the importance of ethical scientific practices and the need to acknowledge all contributors to major discoveries. Franklin’s legacy extends beyond DNA, influencing numerous scientific disciplines and paving the way for future generations of women in STEM.

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ARTEMISIA GENTILESCHI: THE SHADOWED CANVAS

-BY RACHIT

INTRODUCTION

The name Artemisia Gentileschi is synonymous with baroque paintings of the 17th century. An acclaimed artist, a strong feminist and a fighter who enjoyed the patronage of nobles and yet challenged the oppressive mindset of noblemen, she is best known for “Judith and the Maidservant”. The first woman to gain the membership of the “Academy of the arts of drawing”. Gentileschi was known for being able to depict the female figure with appreciable naturalism and for her skill in handling colour to express dimension and drama.

EARLY YEARS

Born in Rome in 1593 to Tuscan painter Orazio Gentileschi, who was pioneer of realistic art himself. He was one of the first artists who painted his models with a realistic touch, without sweetening or idealising them. Instead, he used their real appearance as a tool of artistic dramatic effects. After her mother died in 1605, Artemesia was single handedly raised by Orazio, with whom she spent considerable time in his workshop, slowly falling in love with painting. She exhibited a steep learning curve, learning to draw, paint and mix colour, being very well acclaimed by the age of 18.

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**"As long as I live I will have control over my being."
— Artemisia Gentileschi**

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TRYING CIRCUMSTANCES

However, the great painter's life was from being a bed of roses, if anything, the roses had a lot of thorns concealed under them. Now popular, an ambitious Italian painter Agostino Tassi, who aspired to nobility, worked with Orazio at his workshop. Under a professional setting, he was introduced to Artemisia.

One day in May, 1611, Tassi violated Artemesia when she was alone at home. A female friend and neighbour, Tuzia, declined to help the victim and pretended to know nothing about the incident when questioned later. It was at this stage that Artemesia first tasted betrayal and helplessness.

The Gentileschi family hoped that Tassi would marry his victim. However, Tassi did not accept the proposal. When the famous family of artists learnt about the rapist's intentions, Orazio pressed charges against him. The charges pressed accused Tassi of violating the Gentileschi family honour, not rape. This was done perhaps to save Artemesia from Social consequences. In the trial, it was revealed that Tassi had planned to murder his wife. It also let out a horrendous fact, which proved Tassi to be adulterous.

With laws being biased towards powerful males, Tassi was exiled from Rome, although his sentence was never enforced. Additionally, however unbelievable it may sound today, Artemesia was tortured for the purpose of verifying her testimony.

MELANCHOLIC ART

This terrifying oppression, discrimination and torture faced by her led her to create masterpieces that were subtle self-portraits,

which appeared to be a war cry for women. A staunch feminist, her paintings were meant to inspire women to act, although traces of bitterness graced those paintings. In two of her paintings, two women are shown sawing a man's throat, with one of them holding down his neck to arrest him. Blood oozes out of his body, making the paintings a gory sight. These two paintings were almost alike, barring a few details like the colour of tunics. On the face of it, the young woman is Judith and the dying man is Holofernes, an Assyrian General. However, the subtle self-portraits she drew so well, indicated that the omen was Artemesia and the man she was heading was Tassi.

These paintings serve as a painful testimony to the haunting sights Artemesia saw, the sights that remained etched in her heart and soul, no matter the effort she exerted to forget them. After this episode Artemesia was married off to a modest artist from Florence. In Florence, she spent six years, which brought her success and recognition. She became a famous court painter (someone who paints for royal families, nobles or the political elite) and enjoyed the patronage of the reputed banking family, House of Medici. Here, she entered elite social circles, enjoying good relations with the Grand Duke and Grand Duchess of Tuscany. Under Medici's patronage, she significantly influenced court culture, becoming friends of enviable people. She was also familiar with Galileo Galilei, evidenced by a letter she wrote to the famous scientist. This acquaintance may be the driving force behind Artemesia's depiction of a compass in her painting "Allegory of inclination".

In Florence, Artemesia's life saw another positive change. She learnt to read and write, gaining immense exposure to the outside

world. Her education enabled her to get a broader view of her art, contemporary issues affecting it and the business aspect of painting. She understood that depicting mythological figures in contemporary dress was key to elite court life.

LATER YEARS

Later, she was commissioned by noblemen to paint the ceilings of their palaces. In a particular instance, she was paid thrice the other artists involved in the same work, as a tribute to her exceptional virtues as an artist.

However, havoc in her personal life never ceased. She was rumoured to have a lover and any documentation of her husband and Artemesia's relationship in this period has not been found. Just as she moved back to Rome, her father left the city and her son died. In Rome, she found many patrons, who funded her artwork. However, perhaps in search of richer commissions, Artemesia moved to Venice, where she stayed for three or four years, post which she moved to Naples and stayed there for some time.

In London, Artemesia's financial troubles eased. She got to interact and network with

several other artists of her time, due to whom she got other lucrative offers as well. She, by now, had become famous amongst the European elite, many of whom bought her paintings. She is believed to have died in 1953.

CONCLUSION

She is now remembered as the face of a little-known subtle feminist movement, her paintings symbolising the power, courage and capability of women. Although some of her paintings depicted women as sensitive damsels, it is understood that those paintings may have been commissioned by people who instructed and guided the creative instincts of an artist.

The evidence of her childhood melancholy is abundant, for example in the painting of dying Cleopatra. Some critics argue that her achievements have been overstated, although they agree upon the effort exerted by Artemesia to make her art act in a revolutionary manner, albeit in a subtle and non-offensive way, to keep the patronage of nobles secured and concomitantly serve the world as an icon of the power and capability of women.

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SILENCES IN SCIENCE: THE STORY OF MARY ANNING

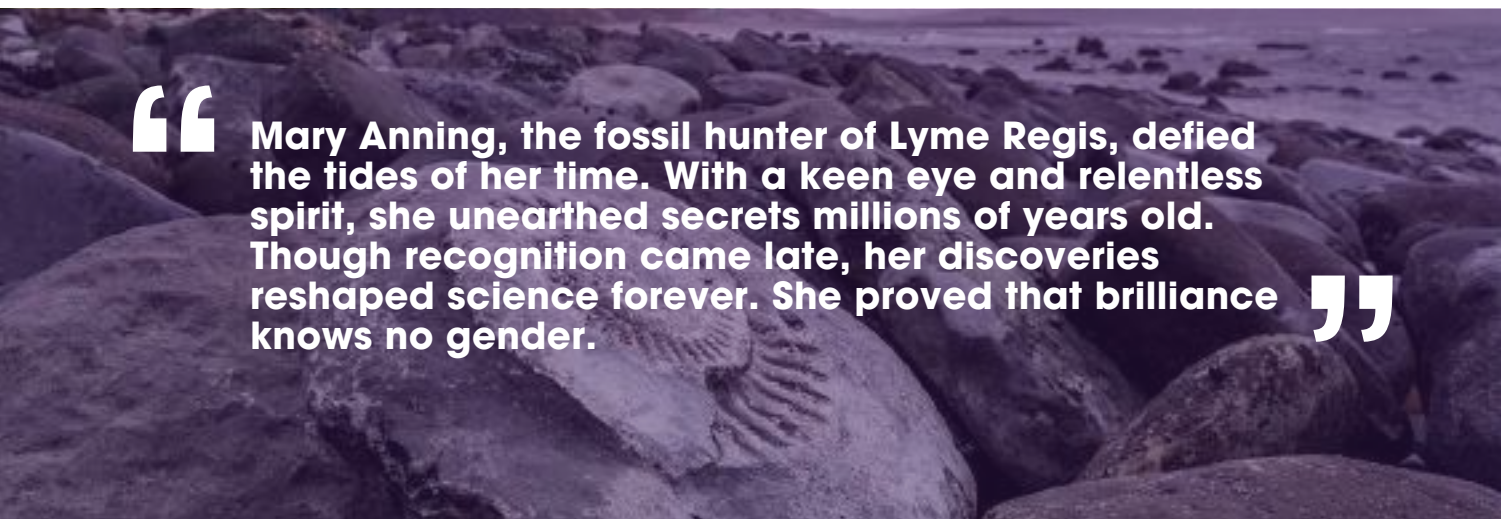
-BY RACHIT

INTRODUCTION

A life lived as a destitute, but highly valued and richly remembered when gone, such was the curious case of Mary Anning, now a highly acclaimed British palaeontologist and fossil collector, known for her discoveries of marine fossil beds along the English Channel in Dorset. Her findings enabled researchers to get an accurate picture of prehistoric marine life, a topic on a lack of evidence troubled them until then. Her plethora of discoveries include the first correctly identified skeleton of ichthyosaur, a large marine reptile. Mary earned this feather in her cap when she was Merely twelve years old. She also informed the world that fossils of belemnite, an extinct marine being very similar to the modern squid, was adorned with ink sacs, used to scare off predators by ejecting a dark and dense ink-like liquid.

EARLY YEARS

Born in Lyme Regis in Dorset, England, on 21 May, 1799 to Richard Anning and Mary Moore, Anning faced financial difficulties much throughout her life. Richard was a carpenter and cabinetmaker, who sought additional income by mining the sea bed for fossils and selling them to tourists. Often, mystical or



“ Mary Anning, the fossil hunter of Lyme Regis, defied the tides of her time. With a keen eye and relentless spirit, she unearthed secrets millions of years old. Though recognition came late, her discoveries reshaped science forever. She proved that brilliance knows no gender. ”

medicinal properties were attached to these fossils by local sellers, in a bid to sell their wares at good prices. The Anning residence was built excruciating close to the sea, on the town's bridge, as a consequence of which their house was flooded due to storms. The storms that exposed fossil beds, often forced the family to the first floor of their house, forcing them to crawl out of there on one occasion to avoid drowning.

Adding to financial woes was religious asynchronization, as Mary's family attended the dissenter chapel, members of whom were called independents at the time and later came to be known as Congregationalists.

Their pitiable financial situation, coupled with outbreak of disease, resulted in only two of the ten Anning children, Mary and her brother, surviving till adulthood. Mary Anning was named after the first of the Anning children, her namesake, who died due to a domestic accident involving fire. The fact that only two out of ten children survived till adulthood, however, was not unique to the Annings, as testified by the high infant mortality rates of the day and frequent outbreak of diseases such as smallpox and measles in crowded conditions. Due to her being, well, a woman, she was ruled ineligible to join the Geological Society of London, her sex coming in her way to financial respite.

Her education was terribly limited to her church's Sunday School, in which she learned to read and write. It is noteworthy that her church emphasized the importance Geology as a science, urging the dissenters to gain knowledge of the subject.

Their Father, Richerd, took Mary and her brother on fossil hunting expeditions in a id to increase family income. The business landscape for small vendors like them was favourable at the time, owing to the fact that Lyme Regis had become a popular seaside destination fot the rich and middle class. The French revolutionary wars and activities contributed to the fame of Lyme Regis, now considered one of the most fossil rich areas in Europe, as the wars made travel to mainland Europe exceptionally dangerous. This part time activity of poor folk gradually turned into one of scientific importance as the sciences of geology and fathomed and acknowledged the importance of fossils as a resource to study.

The expeditions for fossils, however, were fraught with danger. The sea storms that exposed fossil beds also led to loosening of soil on seaside cliffs, which were prone to landslides. These landslides then exposed more fossils towards whom finders were attracted. Instances of people dying or being severely injured were dangerously common. The rising prices of food staples like bread gave impetus to poor families to risk their lives. Due to wars and other conditions, the price of bread had tripled whilst workers' wages remained almost unchanged. This forced families like Anning's to protest against food shortages. Richard Anning, once fell off a cliff and sustained severe injuries., These, along with tuberculosis, led to the death of Richard Anning, aged forty-four. Worse, the family found themselves struggling to repay their debts as they had no savings, forcing them to apply for poor relief, which referred to government and community action to relieve people of poverty.

She stuck steadfast to her profession, embracing it with all its risks, finding the first complete plesiosaurus, a reptile with a small

THE FOSSIL BUSINESS

head, broad turtle-like body, short tail and a long and slender neck. Following this, she found the fossil of a flying reptile, known as the flying dragon, which was later displayed at Britain's National Museum. Her professional prowess continued and she discovered prominent fish fossils. Global viewership, with 70 million per race in 2022 and a 36% YoY increase in the US, contributes to soaring valuations. Media rights

TASTING SUCCESS

By the time she was 27, she had saved enough money to buy a house with a glass-store front window for her shop, called Anning's Fossil Depot, a move that was covered by the local newspaper, indicating that the business had reached a reasonable stature in importance. Many fossil collectors and researchers, including prominent ones, often from America or Europe, visited Mary Anning at this address. It has been recorded that King Frederick Augustus II of Saxony visited her shop and purchased a fossil for 15-pound sterling.

Ironically, the only writing of Anning's published as a part of scientific literature was a piece she wrote to the Magazine of Natural history to question the claim made in an article Anning had found incorrect based on her experiences and findings years ago.

UNFAIR TREATMENT

Being a woman, apart from not being allowed to be a part of the Geological society of London, she was not allowed to attend university, hold public office or vote. Resultingly, she had to sell her discoveries to influential and wealthy fossilists. These rich men then wrote scientific notes and

dissertations on them, in which, more often than not, they omitted Mary Anning's mention. Anning was anguished due to this, believing that the world used her unfairly and unkindly.

BENEFACTORS

Henry De la Beche, one of the most prominent British geologists who had amassed great wealth, was Mary's old friend, a friendship forged in their teens. William Buckland, an Oxford lecturer and other leading men also interacted with Anning on Fossils, even going with her for fossil hunts occasionally.

By 1830, Mary Anning's financial problems resurfaced, primarily due to gaps between major finds and the difficult economic conditions in Britain. It was here that Henry helped his old friend by commissioning copies of his watercolour painting 'Duria Antiquior', which was based on fossils found by Mary. These copies were sold to his fellow geologist and other wealthy friends, the proceeds of which were donated by him to Mary. She, approximately at this time, began attending the Anglican church instead of the Congregational church.

William Buckland helped her by convincing the British Association for the advancement of Science and the Government to award her a 25 pound-sterling annual pension.

END

It is often said that people increasingly care for a person twice – once at the time of birth and the other nearing death. The latter was particularly true for Mary, who had developed Breast cancer by then. The geological society raised money for her treatment, the Dorset County Museum made Anning an honorary

member. After she died, Henry De la Beche, then president of the Geological Society, a

eulogy for her, the first time such an honour was bestowed on a woman, especially of humble origins.

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MARIE CURIE: THE INVISIBLE FORCE OF DISCOVERY

-BY SIDDHANT

INTRODUCTION

Whenever we are asked to name a female scientist whose work has been most impactful, most people would take the name of Maria Salomea Skłodowska-Curie, or Marie Curie for short. A Polish-French scientist, known for the discovery of Radium, she became the first woman to win a Nobel Prize and the first person to win two Nobel Prizes, cementing her an iconic legacy, alongside the likes of Issac Newton and Albert Einstein. She is, by many people, regarded as the Greatest Woman Scientist of all time. And guiding her throughout this journey was her relentless persuit and drive for greatness. Despite facing many adversities, some of which we will talk later in the article, her drive and determination to reach her goal and be respected across the world ensured she persevered through the tough times and became the legend, we all know and respect

EARLY LIFE

Marie was born on 7th November, 1867 in the city of Warsaw, then part of the Russian Empire. She was the youngest of 5 children of famous teachers, Bronisława, née Boguska, and Władysław Skłodowski. On both the paternal and maternal sides, the family had

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Marie Curie, a pioneer in science, lit the world with her brilliance. Fearless in the face of the unknown, she discovered elements and broke barriers. Her dedication to truth outweighed every obstacle. She showed the world that curiosity, not convention, drives progress.

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lost property due to being involved with Polish freedom movements, aimed at restoring the independence of Poland. This led to Marie and her 4 siblings struggling to reach ahead in life.

Władysław Skłodowski taught mathematics and physics, subjects that Maria was to pursue, and was also director of two Warsaw gymnasia (secondary schools) for boys. He was eventually fired by his Russian supervisors for pro-Polish sentiments and forced to take lower-paying posts. Moreover, the family also lost money on a bad investment and eventually chose to supplement their income by lodging boys in the house. Maria's mother Bronisława operated a prestigious Warsaw boarding school for girls; she resigned from the position after Maria was born. She died of tuberculosis in May 1878, when Maria was ten years old. This was just 3 years after Maria's older sibling Zofia had died of Typhus. These two instances had such a profound impact on Maria, that she embraced Atheism and lost faith in the religion of the family, Christianity.

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THE MOVE TO PARIS

In late 1891, Maria, or Marie as she would be later known, left Poland for France. She lived with her sister and brother-in-law while pursuing studies of Physics, Chemistry and Maths in the University of Paris. She worked really hard, often forgetting to eat, and survived on little money. She tutored in the evenings, and barely managed to survive on limited expenses. In 1893, she was awarded a degree in physics and began work in an industrial laboratory of Gabriel Lippmann. Meanwhile, she continued studying at the University of Paris and with the aid of a

fellowship she was able to earn a second degree in 1894.

The same year, she met Pierre Curie, and they developed a close bond due to their interests in Natural Sciences. Pierre Curie was an instructor at The City of Paris Industrial Physics and Chemistry Higher Educational Institution (ESPCI Paris), and he was able to find some space in his laboratory for Maria to work and continue on her scientific dream. However, Maria initially rejected Pierre's proposal due to her preference of going back to Poland. Although, as fate would have it, due to the rampant sexism in the industry, she was denied a place in Krakow University. Hence, on Pierre's insistence she returned back to Paris to pursue her PHD. Finally they were married on 26th July, 1895, and many call Marie "Pierre's biggest discovery".

DISCOVERY OF RADIUM

Together, both Marie and Pierre took upon the mission to study various radioactive elements, building on the work of Mr. Henri Becquerel, who had discovered natural radioactivity in Uranium.

They used an innovative technique to investigate samples, using the electrometer discovered by Pierre to measure the electric charge. Using that, she found that uranium rays caused the air around a sample to conduct electricity. Her hypothesis about radiation that it wasn't the outcome of the interaction of molecules, rather comes from the atom itself, was an important assumption to disprove that atoms are indivisible.

Curie's systematic studies included 2 uranium minerals: pitchblende and torbernite. The former was considered to be a mineral, highly

rich in radioactive substances. After years and years of painstaking effort which involved grinding, dissolving, filtering and analysing tons of ore, they isolated and discovered 2 new elements: polonium(named after Marie's home country) and radium. The latter proved to be astonishingly radioactive, glowing with an eerie blue-green light. Between 1898 and 1902, the Curies jointly or separately, presented a total of 32 research papers including one that announced that, when exposed to radium, diseased, tumour-forming cells were destroyed faster than healthy cells. Radium's discovery had profound implications, particularly in the field of medicine. It became a crucial concept in early cancer treatments, giving rise to radiation therapy. Earlier, it was also used for luminous paints in watches and clocks, however this has now been largely discontinued due to its highly toxic nature.

NOBEL PRIZES

In December 1903, the Royal Swedish Academy of Sciences awarded the prestigious Nobel Prize of Physics to Pierre Curie, Marie Curie and Henri Becquerel "in recognition of the extraordinary services they have rendered by their joint researches on the radiation phenomena discovered by Professor Henri Becquerel." At first only Pierre and Henri were nominated, but after Pierre's complaint, the committee added Marie's name as well. With this Marie Curie became the first woman in history to be awarded a Nobel Prize.

Initially, both Pierre and Marie declined to go to Stockholm due to being occupied with their work and the introverted nature of Pierre as well. Due to the mandation of Nobel Prize Winners to deliver a lecture, they finally made the trip in 1905. The award money allowed the Curies to hire their first lab assistant and upon a complaint from Pierre, the University of

Paris, finally agreed to furnish a new Laboratory till 1906, and appointed Pierre as a Professor and the Chair of Physics.

However on 19th April 1906, tragedy struck. Pierre Curie was killed in a road accident. Struck by a horse-drawn vehicle and falling under its wheels, he fractured his skull, killing him instantly. Marie was devastated. On 13th July 1906, the physics department offered Pierre's chair to Marie, which she accepted to create a world-class laboratory as a tribute to her husband Pierre. With this she became the first woman to become a professor at the University of Paris.

In 1910 Curie succeeded in isolating radium; she also defined an international standard for radioactive emissions that was eventually named for her and Pierre: the curie. And so, the Royal Swedish Academy for Sciences, honored her for the second time in 1911, despite controversies around her personal life, with the Nobel Prize for Chemistry. This award was "in recognition of her services to the advancement of chemistry by the discovery of the elements radium and polonium, by the isolation of radium and the study of the nature and compounds of this remarkable element." She was the first person to win or share 2 Nobel Prizes and remains one of only 2 people to win a Nobel Prize in 2 different fields.

LEGACY

Unfortunately, the constant exposure to and working with a mineral as toxic as Radium posed a severe detrimental effect on Marie's health. On 4th July, 1934, she passed away aged 66 in Passy, Haute-Savoie. She died due to aplastic anaemia, believed to have been contracted from her long-term exposure to radiation, causing damage to her

bone-marrow. The damaging effects of ionising radiation were not known at the time of her work, which had been carried out without the safety measures later developed.

Her legacy lives on till today, with many scientists as well as commoners describing her as the Greatest female scientist of all time. The physical and societal aspect of the Curies' work contributed to shaping the world of the twentieth and twenty-first centuries. Moreover, everyone acknowledges the barriers she had to overcome due to the patriarchal society, in both Poland and France, facing sexism and discrimination every step of the way.

Apart from her extraordinary scientific achievements, she was known for her honesty

and moderate lifestyle. She returned her scholarship money as soon she began earning her keep. She intentionally refrained from patenting the radium-isolation process, for unhindered access to the scientific community. She insisted to give the monetary gifts and awards be given to the scientific institutions rather than herself. Even Albert Einstein, remarked that she was probably the only person not to be corrupted with fame.

Over time, she became one of the most famous scientists in history, Marie Curie became an icon in the scientific world and received tributes from across the world, even in the realm of pop culture. Today, institutions, awards, and research centers bear her name, ensuring her influence endures. Marie Curie remains an icon of perseverance, intellect, and scientific progress.

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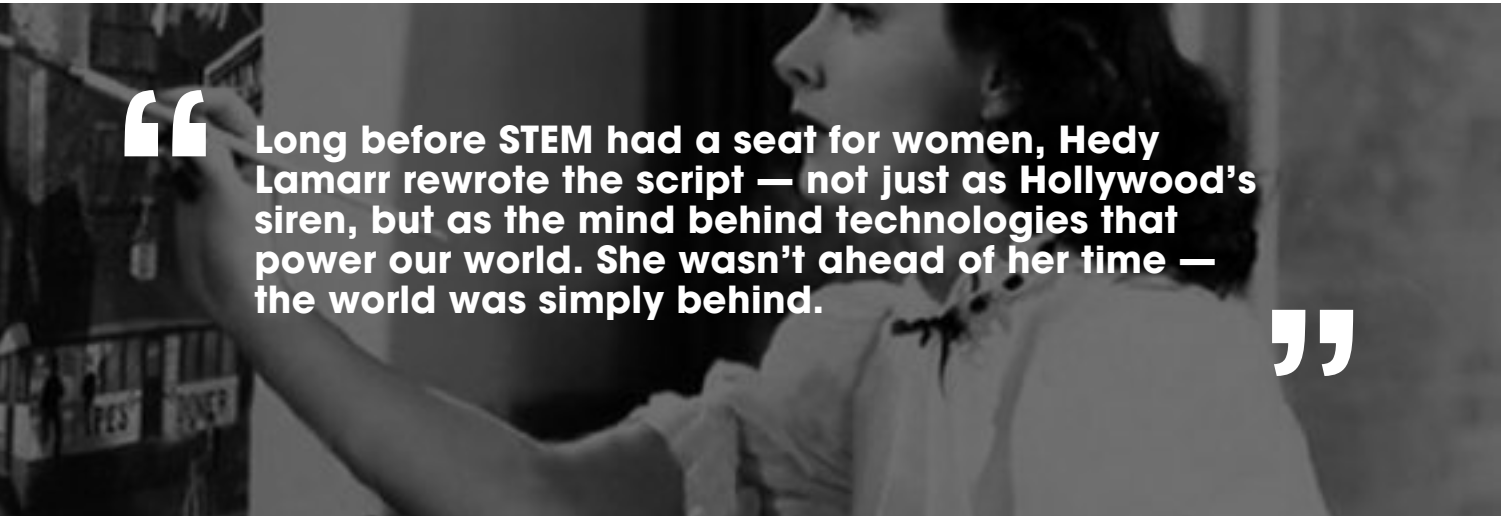
BEYOND THE SILVER SCREEN: HEDY LAMARR'S SECRET GENIUS

-BY AAHAD

INTRODUCTION

Hedy Lamarr, born as Hedwig Eva Maria Kiesler on November 9, 1914, in Vienna, Austria, is often remembered as “The Most Beautiful Woman in Film.” Her captivating beauty and phenomenal screen presence made her one of Hollywood’s most iconic stars of the 20th century. She embarked on her cinematic journey at the age of 17, starring in the German production, *Geld auf der Straße* (*Money on the Street*). Her career progressed with roles in both German and Czechoslovakian films. The 1932 German film, *Exstase*, was a significant turning point for her and garnered international attention. However, behind her glamorous image lay a brilliant mind that made significant contributions to the world of science and technology. Lamarr’s dual identity as a celebrated actress and an innovative inventor makes her story one of the most fascinating in history.

Despite having exceptional stardom, Lamar’s marriage to Friedrich Mandl came at the cost of her acting career. Mandl, who was 30 years older than her, forbade Lamarr from acting and even attempted to buy and destroy all existing copies of *Ecstasy* due to its controversial scenes. Mandl, a Vienna-based arms merchant who sold munitions and



“ Long before STEM had a seat for women, Hedy Lamarr rewrote the script — not just as Hollywood’s siren, but as the mind behind technologies that power our world. She wasn’t ahead of her time — the world was simply behind. ”

manufactured military aircrafts, kept Lamar isolated. Mandl's wealth and influence granted him access to powerful figures of the time, including Adolf Hitler and Benito Mussolini, whom he entertained at lavish gatherings. Lamarr, forced into these settings, found herself absorbing crucial knowledge about military technology. Because of this, despite her not being able to acquire a formal education, she learned a great deal about guided torpedoes and the disadvantages of radio-controlled weapons as they were prone to jamming and interference.

Disillusioned with her restrictive marriage and her husband's controlling behaviour, Lamarr orchestrated a daring escape to Paris in 1937, disguising herself as a housemaid and filed for divorce from Mandl. She later moved to London, where she met MGM studio head, Louis B. Mayer, who saw her potential and signed her to a Hollywood contract. Once in Hollywood, she officially changed her name to Hedy Lamarr and starred in her first Hollywood film *Algiers* (1938), opposite Charles lawyer, which marked the beginning of a successful acting career in America. In Hollywood, her striking beauty set her apart in an industry filled with glamorous women. Actor George Sanders once remarked that Lamar was "so beautiful that everybody would stop talking when she came into our room." Despite the adoration and fame her beauty brought her, it often overshadowed the other remarkable facets of her life, particularly her role as an innovator. The world remembers her as an actress, but her greatest legacy lies in the field of technology, where she pioneered the very foundation of the modern communication systems.

LAMARR'S TECHNOLOGICAL CONTRIBUTIONS

Beyond her striking features, Hedy Lamarr possessed talents as a mathematician, a scientist and an innovator. Alongside the famed composer George Antheil, Lamarr patented the "Secret Communication System" during World War II. Her idea - now referred to as "frequency hopping" - aimed to have radio guidance transmitters and torpedo receivers jump from frequency to frequency simultaneously. This invention sought to prevent enemies from intercepting sensitive military communications. While the technology of the time initially made frequency hopping impractical, the later advent of the transistor and its subsequent miniaturisation propelled Lamarr's idea into widespread use, both in military applications and the cell phone industry.

Frequency hopping is the simplest version of a radio transmission technique today, known as spread-spectrum technique. This refers to any method that expands the frequency band of a signal. Normally, radio stations broadcast on a single carrier frequency, making eavesdropping easy. However, frequency hopping prevents the interception and decipherment by continuously shifting the carrier frequency in a predetermined manner - one that appears random but is produced by a deterministic algorithm. A receiver that hops in synchrony with the transmitter can successfully pick up the message, while an eavesdropper tuned to a single frequency will only hear brief, meaningless bursts of sound. Additionally, frequency hopping is largely jam-proof, as any jamming signal would only interfere with a small portion of the message rather than completely blocking the communication.

At the time, the military was exploring the use of radio-controlled torpedoes, but these weapons had a major flaw - they were

susceptible to enemy jamming. If an enemy transmitted radio signals on the same frequency as the torpedo's guidance system, they could disrupt or even completely disable it. Lamarr recognised this vulnerability and believed that by continuously changing the frequency used to communicate with the torpedo, the enemy would find it nearly impossible to jam the signal.

While Lamarr lacked formal engineering training, she had accumulated valuable knowledge about military technology from her time with Mandl. She conceived the idea of frequency hopping as a way to secure military transmissions. George Antheil, an avant-garde composer known for his experimental music, helped translate Lamarr's idea into a practical design. Drawing from his experience with synchronized player pianos, Antheil proposed using a player-piano roll to coordinate the frequency shifts between a transmitter and a receiver. Their invention, which they called a "Secret Communication System", involved rapidly switching radio frequencies in a synchronised manner between the transmitter and the receiver. This prevented enemy forces from locking onto and disrupting the signals, making military transmission far more secure.

Hedy Lamarr's development of frequency hopping has played a crucial role in shaping modern wireless communication. Originally designed to prevent enemies from jamming military transmissions, the concept has since become a fundamental part of secure and reliable communication systems. Over time, frequency hopping evolved into spread-spectrum technology. By enabling signals to shift across multiple frequencies, it allows for more secure and interference-resistant communication. This method has been integrated into modern wireless networks,

mobile communications and satellite systems, making it essential for global connectivity. The increasing demand for efficient and secure wireless communication has made frequency hopping more relevant than ever. Today, this technique supports the functioning of essential technologies, including Wi-Fi, Cellular Networks and GPS Systems. Lamarr's invention has had an enduring impact on modern technology and is estimated to hold a value of \$30 billion.

HOLLYWOOD GLAMOUR: BEAUTY AS A MASK

Despite her scientific achievements, Hedy Lamarr was often overshadowed by her image as a Hollywood starlet. Her extraordinary beauty became both a blessing and a curse. While it propelled her acting career, it also led many to dismiss her intellectual capabilities. Yet, despite the attention she garnered for her looks, Lamarr was more than just a starlet - she was also a brilliant innovator whose invention would lay the groundwork for modern wireless communication.

On film sets, Lamarr would spend hours in her trailer working on scientific ideas, yet the entertainment industry never acknowledged her inventive mind. Even after she received the patent for frequency hopping, the world remained unaware of her contributions. Lamarr herself expressed frustration over this perception, once lamenting that while people assumed that she had everything due to her looks, she was often ignored for her ideas. She noted that people would rather discuss her appearance than her inventions, leading to a lifelong struggle for acknowledgement in the scientific community. Her beauty, which had made her a Hollywood legend, ironically became a barrier to the recognition of her intellect.

LEGACY & RECOGNITION: BEAUTY MEETS BRAIN

Despite her groundbreaking invention, Hedy Lamarr received little recognition for her technological contributions during her lifetime. After securing the patent for frequency hopping in 1942, she and George Antheil donated their invention to the U.S. military, believing it would aid the war effort. However, the military did not immediately implement the technology and Lamarr's role in its creation went largely unnoticed. It wasn't until decades after her death that Hedy Lamarr received widespread acknowledgment for her contributions to science and technology. In 1997, she was honoured with the Pioneer Award from the Electric Frontier Foundation for her role in developing frequency-hopping spread spectrum technology. She also received accolades such as the Invention Convention's Bulbie Gnass Spirit of Achievement Award. Beyond her technological contributions, Lamarr's story serves as an inspiration for women in STEM fields (Science, Technology, Engineering, Mathematics). She challenged stereotypes by proving that beauty and intelligence are not mutually exclusive traits. Her life exemplifies how individuals can excel across diverse domains when given opportunities to explore their potential.

CONCLUSION

Hedy Lamarr's story is a powerful example of

challenging stereotypes. Lamarr's life exemplifies the intersection of art and science, defying the conventional notion that an individual must be confined to a single domain. She demonstrated that a person can be both, a celebrated actress and a significant inventor, proving that intellectual capabilities are not limited by one's public image or career. Her innovative contributions to technology, particularly the development of frequency hopping, serves as a profound source of inspiration for women in STEM fields. The spread spectrum technology that Lamarr helped develop has become an indispensable part of our daily lives, connecting people across the globe and enabling countless technological advancement.

Lamarr's success in a male-dominated field highlights the often overlooked potential and the substantial impact that women can have in science, technology, engineering and mathematics. Her work encourages aspiring female scientists and engineers to pursue their passions and break through existing barriers. By recognising and celebrating Hedy Lamarr's multifaceted legacy, we honor not only her brilliance and creativity but also the importance of encouraging individuals to explore their full potential, irrespective of societal expectations or stereotypes. Her story serves as a reminder that true innovation knows no boundaries and that the most remarkable contributions often come from those who dare to defy convention.

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STOLEN STROKES, SILENT STRENGTH: THE MARGARET KEANE STORY

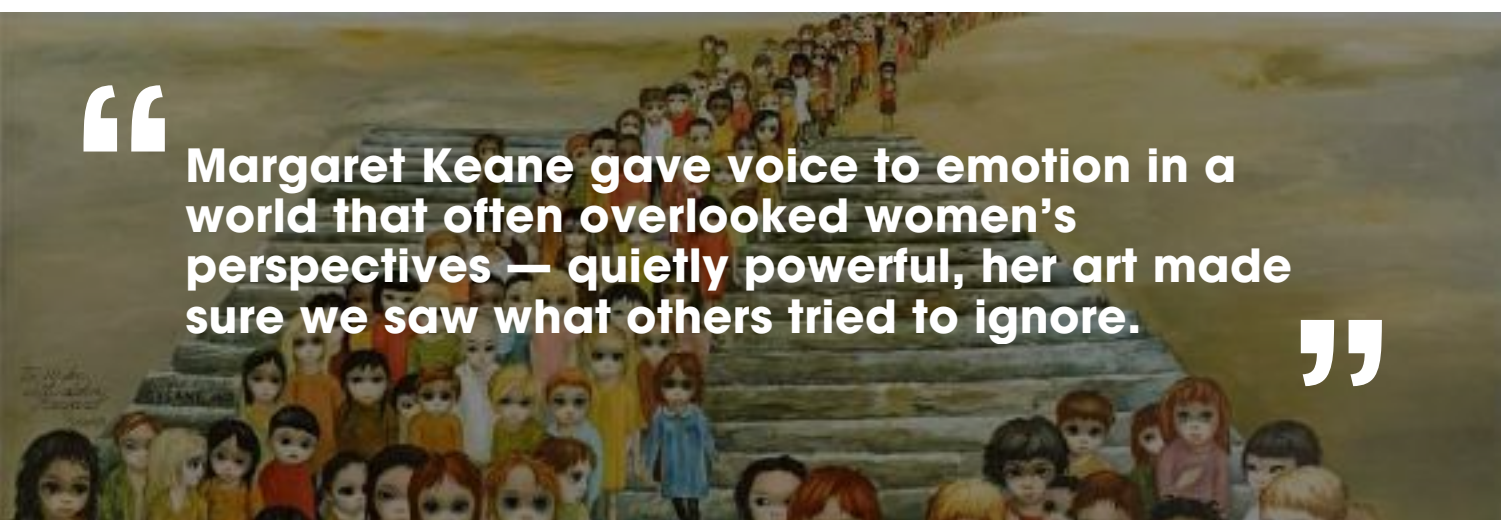
-BY JAPGUN

CANVAS OF TRUTHS

Eyes are said to be the windows to the soul of the person and Margaret Keane did a remarkable job in capturing such haunting intensity. She is best known for her distinctive portraits of wide-eyed children creating a visual language which is both tender and unsettling. The story behind the canvas was even more compelling with the struggle for recognition, deception and the ultimate redemption.

Margaret Keane wasn't just painting big eyes, she was sending a message of innocence, raw vulnerability and pain that prevailed in the world. Her art drew people in, because there was something in her art that resonated with people's own pain and sufferings.

Her recognition of the art as her own was a long and painful journey full of struggles that put a mark on the world. Her journey from silence to spotlight took a lot of efforts, rebellion and being betrayed by her own husband. But she went through it all and stood victorious at the end.



“

Margaret Keane gave voice to emotion in a world that often overlooked women's perspectives — quietly powerful, her art made sure we saw what others tried to ignore.

”



WHERE IT ALL BEGAN: MARGARET'S ROOTS IN ART AND EMOTION

Margaret Keane was born in 1927 in Nashville, Tennessee. She was deeply fascinated with art from a very young age particularly with drawing eyes believing that the most innermost feelings are communicated through a person's eyes. Her sense of visual expression might have been heightened due to her suffering from a partial hearing loss as a child. She went to Traphagen School of Design in New York City to pursue her passion of art and began her work of painting big eyes which later became her signature work. Even before fame or controversy, Margaret's work stood out—quietly emotional, hauntingly beautiful, and deeply personal.

BEHIND CLOSED DOORS: A SILENT STRUGGLE FOR CREDIT

In 1946, Margaret married another artist, Walter Keane. Walter came to Europe to learn how to be a painter. He said that his paintings were inspired from the heartbroken, big eyed children fighting over scraps of food in a pile of rubbish. He later quoted, "As if goaded by a kind of frantic despair, I sketched these dirty, ragged little victims of the war with their bruised, lacerated minds and bodies, their matted hair and runny noses. Here my life as a painter began in earnest."

Keane's paintings became an art sensation and people loved the melancholic big-eyed paintings of children. Some time later, Margaret discovered that her husband was taking all the credit for her work. When she confronted him, he emotionally turned the conversation around to saying things like they needed the money and it will bring bad name to them now if they say her wife was the artist all along. This led to Margaret nodding her head while Walter used to claim her work as his own in all the interviews.

The situation escalated so much that Walter started learning how to paint from Margaret but was not successful in doing so. Margaret didn't leave him for financial reasons and had to go along with his ideas.

Margaret spent up to 16 hours a day painting behind closed doors while Walter reveled in the attention. Millions of copies of their prints were sold. They were gathered by celebrities like Kim Novak and Natalie Wood. The sad-eyed waifs and wistful poodles were a hit with the American public. Margaret, meanwhile, lived almost in captivity. Her schedule, her friendships, and even her cherished pet were all under Walter's authority. He frequently threatened her, telling her not to tell the truth.



PAINTING HER WAY TO JUSTICE

Margaret lived like this for more than ten years, imprisoned in what she subsequently called a "jail." But after a while, something inside her changed. She started taking back her life and her truth following their divorce in the late 1960s. She told a reporter in public that Walter was a fraud in 1970. She owned the paintings.

Naturally, Walter denied everything and began a campaign of defamation against her. Margaret, however, had had enough. She filed a defamation lawsuit against him, and the trial ended in a dramatic courtroom altercation. In front of the court, the judge requested that each party paint a portrait. Margaret finished hers in less than an hour. Walter said he had a sore shoulder that prevented him from painting. At last, the truth could not be denied. The case, and Margaret's legacy, were won.

FROM CANVAS TO CINEMA: MARGARET'S STORY RETOLD

The 2014 release of Tim Burton's live-action biopic *Big Eyes* reignited interest in Margaret Keane's work. Burton, a lifelong fan of Keane's expressive paintings, brought her remarkable, hidden life to light in a way that captivated a new generation. The film, which starred Christoph Waltz as Walter Keane and Amy

Adams as Margaret, revealed the layers of deceit, manipulation, and, eventually, victory that characterized a large portion of her life.

There was a gentle sense of justice in the film's production itself. Images from the set capture Keane gently teaching Adams how to paint her famous wide-eyed characters. It was a silent, almost poetic, moment of mentoring. These pictures implied a handover, a quiet and private conversation between the performer and the artist. However, there was a more nuanced reality hidden behind the still images.

For Keane, seeing the movie for the first time was anything but easy. At an early screening, she acknowledged, "It was a very emotional, traumatic experience when I first saw the movie," according to *The Hollywood Reporter*.

For Margaret, the film was more than just a story; it was her entire life, painfully depicted on a large screen. Old wounds were uncovered by witnessing her years of silence, having her identity erased, having her artwork stolen, only this time with the whole world watching.

However, there was also healing in the audience's cheers and in the careful depiction of her suffering and tenacity. *Big Eyes* supported her truth rather than merely dramatizing it. It made it possible for the world to see her as the artist behind the myth as well as the woman behind the art; she had been exploited and was finally in the spotlight.

A NAME RECLAIMED, A LEGACY RESTORED

Margaret Keane never wavered in her commitment to her art over the years. She kept painting practically every day from her San Francisco gallery, which was aptly

named the Keane Eyes Gallery. Her brush was never far from her hand. Her wide-eyed, soul-baring faces were still as tender and haunting as ever.

The acknowledgment came full circle in 2018. Margaret Keane received a lifetime achievement award at the Los Angeles Art Show, a moment that represented both artistic brilliance and personal success. It was a subdued yet impactful recognition of a life dedicated to the truth and a legacy that had at last been given the recognition it deserved.

More than just a story of artistic tenacity, Margaret Keane's story is a tribute to the subdued strength of honesty, tenacity, and individual initiative. Her story serves as a reminder that the human spirit can speak again, even when silence and betrayal are present. She told a story that only she could tell with each brushstroke, and eventually the

world paid attention. In addition to her children's haunting beauty, her legacy today is the bravery she displayed by signing her name beneath them. It is admirable to follow Margaret Keane's journey, not only as an artist but also as a woman who vowed to keep her genius alive.



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INTERVIEW CORNER



“

I think, overall, India is today on the move. The economic reforms that our salvation lies in- operating an open society, political and economic system- that has widespread support. Manmohan Singh

”

**ET Money**

MUKESH KALRA, Founder & CEO
JAPGUN KAUR, Panelist

Q. Your journey and the impact you've created in the fintech space are truly inspiring. Building and scaling ventures like ET Money requires immense dedication and resilience. What's one personal habit or mindset that has played a crucial role in your success?

At ET Money, we help Indians manage approximately INR 80,000 Crores (\$9bn) in mutual fund assets, but I see us as early in our journey, with 100x growth potential over the next decade. So we are yet to be called a huge success in my opinion. Coming to your question – Over the years what's driven me is a mindset of driving, refining deep conviction and relentless optimism, rooted in our large purpose of empowering Indians to achieve financial freedom. When one starts building a company, it is ~10x, if not 100x harder than imagined, with just a 2-3% chance of success combined with the fact that in India's financial services, it takes ~ 15 years to build a sustainable and large business. So, starting is 10x harder with lower probability of success and takes ~ 1.5 decades. When such data and facts are stacked against you, imo, it is impossible to power through all the challenges without having a deep conviction in what problem you are solving and relentless pursuit toward it.

Q. In a previous interview, you mentioned that you ticked off almost every entrepreneurship mistake while building Moneysights. Looking back, what are some key things you could have done differently to avoid those mistakes? More importantly, how have these lessons shaped your approach to building and scaling ET Money?

Building a company is a minefield of mistakes—you can't dodge them all. For example, with Moneysights, we said no to Tier 1 VCs because their cheque felt too small. Fresh off InMobi's

unicorn ride, we thought we'd cracked the code—until the market humbled us fast. But if I have to highlight one big mistake – we didn't get that India wasn't ready for what we were selling.

I wish I'd dug into what our user segment actually needed instead of what we wanted to build. That's the fire behind ET Money now—we're obsessed with figuring out how people tick, what money means to them, and how we can help them win, achieve their financial goals and do that at a very low cost using tech and do it with long term sustainability .. It's messy, it's hard, but that's how you turn stumbles into something worth fighting for.

Q. Every entrepreneur faces moments when things don't go as planned—whether due to market shifts, competition, or unforeseen challenges. Can you share a time when ET Money faced a major setback, how you handled it, and what key lessons you took from that experience to turn things around?

Back when ET Money was just getting legs, we got blindsided. A huge online player—tons of money, a big brand—rolled in and copied everything we'd built. I'd walk into meetings, and people were already burying us. Even some of our team started looking shaky, like we were on borrowed time. It sucked, like we were already done. But we didn't just sit there—we locked the door, silenced all noise and started tearing it apart. What do our users actually care about? Why do they rate us high? Where are we messing up? We'd argue, scribble on boards, barely sleep—total chaos, but we were in it together. By the end, we had solid roadmap which was built on the core of making investing even more easy,, frictionless and build the destination for long term wealth creation, where people feel confident about their decisions by empowering them with a series of intelligent products . We launched our 'One-Tap/30-Second' product series and more such

themes. 18 months later, we weren't just alive—we'd grown investments on the platform by ~300%, stronger than ever.

We learnt Resilience is everything. A small team, laser-focused on what's in our control, can outlast anyone. I am sure every startup faces these do-or-die moments—handle them right, and they're your launchpad for something awesome.

Q. Many consumers, especially first-time investors, are skeptical about investing online due to concerns around security, transparency, and reliability. How does ET Money address these concerns and build long-term trust with its users?

Trust is the foundation of fintech—without it, you can't touch people's hard-earned money. At ET Money, we treat it with the seriousness it deserves, embedding it deeply into every part of what we do. I'll walk you through how.

People: It begins with our people. We bring on individuals of exceptional integrity and intellect, and we trust them fully to uphold our mission. A company reflects its team—if we didn't foster a culture of trust internally, we'd have no credibility asking for it from our users.

Products: Our products carry that same weight. Every product faces a rigorous test: would we ourselves invest in the product or recommend it to family? If the answer's no, we don't build it. It means we give up on certain high revenue products but Trust demands that kind of unwavering standard.

Design/Experience: Trust is a feeling. We painstakingly craft every experience to be clear, intuitive, and honest—no hidden catches, no shortcuts. It's meticulous, deliberate work, because trust isn't accidental—it's earned through reliability users can feel. That's why we're

consistently the highest-rated app in our space.

Regulatory oversight: Compliance and security are ironclad. We're regulated by SEBI, PFRDA, IRDA—India's toughest authorities—and every transaction flows directly from a user's bank to the mutual fund, secured with two-factor authentication. No one can interfere. Beyond that, we've invested heavily in cutting-edge security—across our app, servers, systems and data—to protect what's entrusted to us.

Sustainable business and Patient Partners: And we play the long game. Backed by strong partners and a lean cost structure, we're focused on decades of impact, not just the next funding cycle. That freedom lets us prioritize trust over short-term pressure—unlike startups forced to chase unsustainable growth.

Trust is a system we've built with intention. That's why \$9 billion in wealth is managed on our platform today. Trust isn't a buzzword—it's a discipline.

Q. A significant portion of Indian retail investors still rely on traditional agents or avoid investing altogether due to a lack of financial literacy. How do you see the role of fintech platforms like ET Money in not just offering investment solutions, but also educating users and instilling confidence in them to make independent financial decisions?

At ET Money, we see education as a cornerstone—not just for bringing in users, but for empowering them to take charge of their finances. A huge chunk of Indian retail investors stick to agents or skip investing because they don't understand it or trust it. We're changing that. Our content engine runs on hard data, research, and behavioral insights—no fluff, not opinions, no clickbait. We don't sensationalize

because we're not chasing ad revenue; we're here to make Indians smarter about money.

That focus pays off. With over 2 million followers across YouTube, Instagram, X, Quora, and Reddit, we're clocking 60,000 hours of watch time monthly and seeing serious engagement. It's proof people crave real, grounded education. We're not just handing them investment tools—we're showing them why and how to use them, step-by-step, backed by facts.

Over time, users go from hesitant to independent, because they've got knowledge they can trust—not hype. That's how we're rewiring financial literacy in India, one informed decision at a time.

Q. Indian investors have traditionally preferred actively managed mutual funds, but there is a growing shift towards passive investing via index funds and ETFs. Do you see passive investments overtaking actively managed funds in India?

There is always this healthy debate between Active and Passive. The data on performance in India is not very conclusive yet because of the smaller history of Passive investing in India.

Active funds argue markets are mispriced for exploitation; index funds counter that prices reflect all info, making outperformance elusive without extra risk.

Performance-wise, Indian index funds have edged out active funds recently, though differences are small yearly. Risk-wise, picking active funds introduces selection risk—overperformers rarely offset underperformers enough, especially as India trends toward a 1:2 active-to-passive underperformance ratio. So eventually the both will co-exist for years, depending on Investor's preference toward an option.

Q. People often make irrational decisions when it comes to money. What is one behavioural bias you see most often in Indian investors, and how can they overcome it?

Overconfidence stands out as the most persistent behavioral bias among Indian investors, and it's a costly one. They overestimate their ability to outsmart the market, piling into risky bets despite clear warning signs, only to suffer heavy losses when those investments falter. At ET Money, we've seen this firsthand through our Investor Personality Assessment, a precise 1-2 minute tool rooted in behavioral science. Taken by 800,000 users, it evaluates four key traits—risk tolerance, loss aversion, financial mastery, and overconfidence—delivering a dynamic risk score and one of eight profiles, like 'Strategizer' or 'Adventurer.' The data is stark: overconfidence drives irrational moves, like chasing highs without a safety net, far too often.

The antidote is process, not instinct. One way is capping exposure to volatile assets and setting strict profit-booking or stop-loss rules—but that's very very hard to stick to when emotions kick in. A more robust fix, backed by evidence, is an asset allocation approach. It's what the world's best—Warren Buffett or Howard Marks and many more investors—swear by: manage risk across equity, debt, and other classes, not chase market timing or max returns. This curbs overconfidence by forcing discipline over impulse. At ET Money, we built Genius for this—a quant-driven advisory solution that crafts hyper-personalized portfolios based on your assessment profile, rebalancing monthly to cut risks as markets shift. Take a Strategizer: they might skew toward risk but overestimate their edge; Genius might set them at 60% equity, 40% debt, adjusting systematically. Overconfidence thrives on chaos; we're replacing it with clarity, turning a bias that breaks wealth into a foundation for lasting financi-

-al control.

Q. High-risk investments such as cryptocurrencies, blockchain-based assets, penny stocks, and leveraged or derivative instruments like futures and options have gained significant traction among investors. While they offer high return potential, they also come with extreme volatility and regulatory uncertainties. What is your perspective on these investment classes, and how should retail investors approach them in a balanced portfolio?

High-risk investments—cryptocurrencies, blockchain assets, penny stocks, futures, options—draw a lot of attention because the promise of outsized returns is intoxicating. But the flip side is brutal: extreme volatility, regulatory gray zones, and the real chance of losing everything. At ET Money, we've seen investors chase these hoping to strike gold, only to grapple with risks they didn't fully size up. The question isn't just 'what's the return?'—it's 'what's the cost, and can you stomach it?'

My take: these aren't off-limits, but they demand caution. Retail investors should cap them at a small slice of their portfolio—say, under 10%. That way, if the bottom drops out, your core wealth stays intact. It's not about fear; it's about discipline. The bulk—80-90%—should sit in a balanced, asset-allocated mix: equity, debt, mutual funds, something grounded in fundamentals. High-risk plays are speculative by nature; they're not your foundation. Look at crypto: one day it's soaring, the next it's crashing—most can't handle that ride without panic-selling at the worst time. Data backs this—SEBI study shows over 90% of day traders in derivatives lose money long-term.

Our approach at ET Money reflects this. We built tools like Genius to prioritize risk-managed,

diversified strategies over speculative bets. If you're tempted, do your homework—understand the asset, the market, the rules—and set strict limits. High risk can spice up a portfolio, but it's the steady base that builds wealth, not the wild swings.

Q. The Indian IPO market has seen a surge in recent years, with several startups going public. However, not all IPOs have performed well post-listing. What's your take on the current IPO frenzy—do you see it as a sign of a maturing market, or is there an element of hype-driven investing?

The surge in India's IPO market is a strong signal—companies going public is a win for everyone. It's the stock market doing its job: funneling capital to businesses so they can scale. I see it as a mark of a maturing ecosystem, especially for startups. More IPOs mean more fuel for innovation, job creation, and economic growth, and that's only going to grow as India's market deepens.

But there's a catch, and it's tied to the frenzy. In a bull market, everything flies—hype can carry a stock far past its fundamentals. The real test comes post-listing: can these companies deliver? Revenue growth, margin improvement, profitability—these are what justify a valuation, not just buzz. We're seeing PE multiples of ~100 at debut, but history shows that's unsustainable.

The best firms, over time, settle closer to 2-3X PE multiples of NIFTY 50 or peer group benchmarks. Look at some recent IPOs: a few soar, then stumble when earnings don't match the promise. My view: it's both. The IPO wave is a healthy step forward, but investors need to cut through the noise.

Q. Your journey has been truly inspiring. For students or aspiring entrepreneurs who are

just starting out, what key advice would you give them?

Starting a company is incredible—you get to create something from nothing and put it out into the world. But don't do it for the hype, to 'be your own boss,' or because everyone else is jumping in. Those are shaky reasons that won't hold up. It's got to come from a real drive to change something—your customer's life, an industry, a problem you can't let go of.

Know this: it's 10 times harder than you think, painful, with maybe a 2-3% shot at making it big, and it'll take years, not months. That's why you need deep conviction—obsession, even—to push through when it's all falling apart. That only comes when you're hooked on solving something that matters.

For me, it's been about empowering people financially. Find your 'why,' dig in, and let it carry you. The payoff? Beyond the insane joy of building something real, it's seeing the lives you touch—your customers, your co-founders, your team, and their families, your shareholders, your own family.. That's what shapes you and makes it worth every brutal day!

Q. What's one piece of advice you received early in your career that still guides you today?

Early on, my mentor told me, 'Trust people by default, and the future's as bright as you make it.' It stuck. I was young, skeptical, and thought trust was a risk—especially in business, where you're sizing everyone up. But I learned it's a strength: assume the best in people— your team, your partners, your investors—and they'll often rise to it. Actually, the second part hit me harder: nothing's guaranteed, but if you pour yourself into building something meaningful, the future opens up.

That's guided me ever since, from our first venture to ET Money. We trust our team to own their work, and it's why we've built a culture that delivers. And that optimism-with-effort – It's what drives us to tackle financial empowerment for millions of Indians. You don't wait for a bright future—you grind to make it real. It's simple, but it's kept me steady through every mess and milestone.

Q. For students looking to understand financial markets and entrepreneurship, what TED Talks or books would you recommend that had a significant impact on your own journey?

I've leaned on books a lot —no TED Talks hit me harder, but these reads stand out.

For company-building, Jim Collins' series - Good to Great, BE2, Great by Choice, How the mighty fall is a cornerstone—it's deeply researched and is about endurance, and that resonates deep. Clayton Christensen's series – The Innovator's Dilemma, Innovator's Solution, Seeing what's next helped me to see market cracks and opportunities—vital for financial plays.

For the tough stuff, *The Hard Thing About Hard Things* by Ben Horowitz is a lifeline—raw, honest, and perfect for surviving startup chaos. *Atomic Habits* by James Clear —small steps, big impact. I am deep into founder stories, but beyond the usual Steve Jobs or Elon Musks, for example, *The Outsiders* by William Thorndike is a gem. It's about lesser-known CEOs who crushed it quietly with unconventional moves—fresh perspective, less noise.

On finance and psychology, more foundational books work best imo, Gregory Mankiw's Principles of Economics (micro and macro) and The History of Money, Influence by Robert Cialdini and Thinking, Fast and Slow by Daniel

Kahneman reveal how people think about money—gold for entrepreneurship. Then there's Viktor Frankl's Man's Search for Meaning—not business, but it cuts to why we push, fueling conviction.

Q. What is your future vision for ET Money? Are there any upcoming innovations, expansions, or new features that you're particularly excited about?

Our vision for ET Money is to become the go-to wealth partner for affluent Indian families, guiding them toward true financial freedom. We're working on some big moves that get us fired up. Imagine ET Money as a single window where families can see everything—mutual

funds, stocks, fixed deposits, EPFO, you name it—all in one place. We're also opening the doors to NRIs, so they can tap into India's growth too.

Then there's Genius, our personalized advisory platform—we're upgrading it with sharper, risk-savvy strategies across all asset classes, plus hands-on assistance for members. And we're pushing boundaries with stuff like startup investing, lending against portfolios, opening doors to opportunities affluent families don't usually get. What's got me most excited, though, is AI. Our early experiments show it can unlock insane value for users—think smarter insights, tailored moves, better outcomes. It's all about deepening that trust we've built, and we can't wait to see it come alive!



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If you build your present-day bricks,
probably the future will be good.

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NoBroker

AMIT KUMAR, CO-FOUNDER
ANMOL & RASHI, Panelist

Q. With India's proptech market evolving at an unprecedented pace, how has your background in both finance and engineering shaped NoBroker's tech innovation and financial strategies?

India's proptech sector is advancing at a breakneck pace, and my dual expertise in finance and engineering has been pivotal in shaping NoBroker's innovation trajectory. While I had no prior experience in real estate, this outsider perspective allowed me to challenge entrenched norms—like questioning why exorbitant brokerage fees were necessary when digital platforms such as Zoom, Google Meet, or Instagram enable direct connections. Engineering instilled first-principles thinking to dismantle complex problems, while finance provided the strategic rigor to monetize a frictionless model. Together, these disciplines fostered resilience and a solutions-oriented mindset, driving our mission to eliminate intermediaries through scalable technology.

Q. Every entrepreneur faces tough moments of uncertainty. What were your biggest challenges while launching NoBroker in an industry which is deeply set in its traditional ways? How did you navigate those critical turning points?

Launching NoBroker in a tradition-bound industry presented unique hurdles. Skepticism from investors was the first challenge: with no global precedent (e.g., a "Zillow for India"), they questioned the viability of a zero-commission model. Second, adoption was inherently slow—brokerage reliance was systemic, and trust couldn't be bought through capital alone. Third, pioneering prepaid transactions in real estate, where platforms rarely collect fees upfront, seemed untenable. Finally, brokers attempted to infiltrate our platform by posing as owners. To navigate these, we leaned on patience and

innovation.

Over a decade, we built AI-driven algorithms to detect and block broker activity, cultivated user trust through transparency, and proved prepaid models work as customer confidence grew. The journey was gradual, but today, we stand as India's largest proptech platform.

Q. One intriguing aspect of NoBroker is that it charges no broker fees in an industry that typically runs on commissions. What inspired you to take this unconventional route, and how do you believe it has shaped NoBroker's growth and industry impact?

Our decision to eliminate brokerage fees stemmed from a belief that real estate transactions should be equitable. Unlike traditional models that charge exorbitant commissions (often 2–6 months' rent), NoBroker offers 95% of users free access, charging a nominal flat fee only for premium services. This democratizes access while aligning incentives: success depends on user satisfaction, not hidden costs. This unconventional approach has fueled our growth, positioning us as a disruptor that prioritizes affordability and transparency—key drivers in a price-sensitive market.

Q. Trust and relationships have always been at the heart of real estate transactions. How does NoBroker integrate technology while preserving the human connection that buyers, sellers, and renters seek? Are there specific internal policies or strategies that reinforce this balance?

While technology streamlines transactions—like aggregating neighborhood data, predicting fair rents, and enabling virtual tours—we recognize the irreplaceable value of human connection. Our platform emulates the ideal broker's role by providing comprehensive, verified property details

details, but without bias. Internally, policies emphasize empathy: AI flags discrepancies, while human teams verify listings and offer personalized support. This hybrid model ensures efficiency without sacrificing the nuanced understanding renters and buyers seek.

Q. What obstacles did you encounter while bringing donors on board or promoting awareness about the movement? Did the process become more streamlined due to the network you established in your career, or were there persistent challenges in gaining support and spreading the word?

Our packers-and-movers service alone prevents 15,000 tons of paper waste annually by using recyclable materials—a testament to embedding sustainability into operations. Customers increasingly prioritize eco-conscious brands, and our digital-first approach (e.g., virtual tours, accurate listings) reduces physical visits, saving millions of commutes and cutting fuel consumption. This resonates deeply: users appreciate cost savings and environmental impact, proving that green practices aren't just ethical but also commercially strategic.

Q. The post-COVID landscape has significantly altered market dynamics. Considering commercial real estate typically involves higher fees than residential, how is NoBroker adapting its approach to expand and succeed in the commercial real estate space?

The pandemic accelerated demand for hyper-local commercial spaces—dark stores, warehouses, and quick-commerce hubs such as those for Zepto or Blinkit. Unlike residential units, commercial properties offer higher rental yields (~10% vs. 3%), attracting investors and businesses alike. By extending our residential

model—zero brokerage, transparent pricing, AI-driven analytics—we're tapping this lucrative segment. Additionally, flexible leasing tools cater to post-COVID trends like hybrid workspaces, positioning NoBroker as a one-stop solution for India's evolving real estate needs.

Q. Real estate rules and regulations keep evolving in India. What key policy changes do you foresee in the near future, and how is NoBroker preparing to adapt? Are there any industry reforms you believe would be particularly beneficial?

In the real estate industry in India, there is no formal licensing system except for builder and broker licenses. The primary regulatory framework is the Real Estate (Regulation and Development) Act, known as RERA. We have taken the RERA license. This has been a significant reform, particularly in addressing issues where builders have taken payments without delivering properties.

In the National Capital Region (NCR), there have been numerous cases where builders collected funds but failed to complete projects, resulting in "ghost towers." Areas like Gurgaon and Greater Noida are filled with incomplete structures, leaving many buyers in a difficult situation. RERA has introduced accountability by making builders responsible for the money they collect, ensuring they deliver on their commitments, and imposing penalties for delays. This has been a positive development for the industry.

Looking ahead, I do not foresee any further major reforms. While there is a desire for a regulatory framework for brokers, it does not seem to be a priority for the government at this time. Our objective continues to be saving money for customers, as we save thousands of crores in brokerage fees each year for end consumers.

Q. McKinsey has reported that generative AI could create \$180 billion or more in value for the proptech industry. In your opinion, which emerging technologies do you think will transform the Indian real estate market, and how is NoBroker positioning itself to leverage these advancements?

When considering the customer's perspective in the real estate market, the process begins with searching for a property. Today, this search has predominantly moved online. Whether a customer is looking to rent or buy a house, their first step is to go to Google to research the locality and the builder.

Technology plays a crucial role in this process. In the past, builders would help customers visualize how a house would look without constructing it. Now, thanks to advancements in AI, customers can access models that allow them to see how their future home will appear even before it is built. Design is increasingly facilitated through technology, enabling customers to visualize elements such as paint colors on walls.

Additionally, as customers search for properties, we are leveraging AI to enhance their search experience. The next search options are tailored based on their previous queries, making the process more efficient. Moreover, technology contributes to overall efficiency in the real estate sector. It simplifies legal processes, streamlines loan applications, and facilitates sale registrations.

However, it is important to note that the real estate sector is still lagging behind other industries, such as food delivery, surface transportation, and fashion, where technology

has advanced more rapidly. Despite this, real estate is beginning to catch up. Nonetheless, it remains a sector where consumers must physically visit and inspect properties, given the high value of these transactions.

Q. Your expansion to serve NRIs in Greenland shows NoBroker's global ambitions. What's your future vision for NoBroker? Are there any upcoming innovations, expansions, or new features that you're particularly excited about? Which milestones do you aim to achieve in the near future?

Currently, NoBroker has a cumulative customer base of 3 crore, adding half a crore new customers each year. We employ 6,000 people and generate annual revenue of 1,000 crore rupees. In terms of numbers, we are performing well, holding an 85% share of the online market. However, when considering both online and offline markets, our overall share is still only 10%.

In cities like the National Capital Region (NCR), our market share is around 5%. To put this into perspective, if you look outside your home or hostel and see 20 houses, we are involved with just one of those properties. Our objective is to increase that presence—ideally, we want to move from one out of 20 to five out of 20, and eventually to ten out of 20.

We believe customers should have options. Just as you can choose to dine at a restaurant or opt for home delivery, we are offering a choice in real estate. Customers can list their properties with both a broker and our platform. The goal is to see which option can sell or rent the property faster and at a lower cost.



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Success comes from filling a genuine need. Find a problem and create a solution that empowers others.

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Future Sense

RAGHAV GUPTA CEO
PRADEEP & AAHAD, Panelist

Q. So when you envisioned Futureense, what are some of the biggest challenges you face in convincing people, both personally and professionally, about the potential of AI and the company's mission?

I think initially, when we were starting, the problem was that AI as a concept was still not popularized yet. AI became popularized in twenty twenty November when ChatGPT was launched.

Till then, AI was very theoretical, very research oriented, which people did not see real world applications towards. So at that time, when we started the business, the thought was that India has been at the forefront of technology because of the IT services industry. And that IT service industry was built on cost arbitrage. Basically, the jobs were coming to India because Indians are cheaper. That was the reason why Indian tech story was written.

But the future was not about cheaper talent. Future was more about quality of that talent because broad level automation was coming, and that automation will make 80 to 90 percent of the jobs in the IT sector redundant. So the thought was that we need to have a ten, twenty year horizon vision with building the new age talent pipelines for India in deep tech. And deep tech, obviously, AI is the center point of deep tech. But AI is not the only thing. Right? On one side, you have cyber. On one side, you have VLSI, semiconductors. On one side, you have blockchain. On one side, you have basic data structures. So broad level, AI is what powers everything, but the future is all deep tech. So that was a big challenge where to explain to people that deep tech is coming, jobs will not be there. But for us, the lucky thing was ChatGPT came in 2022. Remember, And everyone realized that it is coming.

Q. So there are various setbacks in the innovation process. Could you please elaborate upon a specific setback, based in your journey at Futureense and elaborate upon the insights that you derived from that experience?

I think that the biggest setback that anyone is facing today is that during covid,, very few people had figured out performance marketing, had figured out social media. So the first one, if you were one of the early ones. So we were seeing growth very fast. And we thought that, ham hi smart hai. We are the smart ones.

Problem, what happened was that by 2023, every Tom, Dick and Harry had figured out social media and performance marketing. So the growth that you are expecting from doing the same thing did not pan out. So you had to look at different channels. So that was a big setback.

Right? Because you plan your expenses, your revenue targets, all thinking that the growth rate that I am working on on online channels will continue. But the problem is that same online channel earlier had 10 people. Now we have thousand people competing for the same audience. That was a big setback, so we diversified into basically new channels where we loaded a lot of b to b partnerships. We went offline. We partnered with all universities. So that I think it's all about distribution, basically. Right.

Q. You have co founded two big companies. One is One Percent Club and another is Futureense . So what are some major life lessons that you have learned personally in your twenty five years that you would like to share with us? And what advice would you give us to commerce and its graduates?

Q. Since you have studied from, United States, what is the difference between people here and people who studied there?

Sure. So I think, learning, if you were to ask me, right, on the journey till now is that you should constantly be, paranoid. You should never think that you are smart. You should never think you are successful. You should never underestimate anyone else because that is the only way you will survive. Right now, the past was all about finding the right answers. The present and the future is all about asking the right questions because answers are all out there. There's not a single thing that ChatGPT does does not know that you and I know. As simple as that. Right? So what I have learned is that you need to be constantly paranoid. You need to be constantly obsessed. You need to constantly think about what can go wrong. If you look at the past, businesses used to have a life of ten, fifteen, twenty years. Now businesses have a life of six, eight, twelve, eighteen months. So disruption is happening very fast. So I think that is one learning that I have had that from day one, you should assume the worst. That helps you plan better. From a commerce student viewpoint, I think there's no better time to be a commerce student because the world we are moving towards is all about context. It will not be about your hard skills. So commerce students, the worry the commerce students have is that I don't have hard skills like coding or finance or accounting or whatever. But I say a different thing. Right? A commerce student has context as a business frame of mind. Future will all be about people who are good in context and can use AI tools. So my learning to my thought to the commerce students is that start getting more and more context, start getting deeper into understanding a domain, start getting deeper into understanding a business. Don't just go on Shark Tank and watch a eight minute video. That will give you fluff. You should watch it.

But that should be the start of your learning journey about that topic. The problem is that I see a lot of young people. They watch Shark Tank and they think they know it all. So that's not the case. Star Shark Tank is a great starting point, but your knowledge needs to be more detailed. Right? My favorite quote is devil in the detail. And I tell everyone that you have to be extremely detail oriented. So, yeah, I think that those are some of my simple pieces of advice. Now what is the difference between India and The US in terms of the students or the people that I see? I think fundamentally, if you look at any company in India, about 0.5% of the budget of an Indian private company goes into research. In The US, that number is 6% 7%. So fundamentally, India has always been a Jugadu nation where we have figured out that we want fast returns. I need a fast return. And that's true in anything and everything we do. I believe that for all the young folks who are listening to me, I think if you really wanna create value, figure out where can you go in detail, can you go in-depth, where can research happen.

Because that is where you will see abnormal returns. Last four, five years, the interest rates were low. So every Tom, Dick, and Harry was making a lot of money. Next five years, it will be very tough to make money. If you wanna make a lot of money, devil is in the detail.

Q. Now moving to the third question, Fusions recently collaborated with IIT Roorkee to launch an AI certification course. In that regard, what role do you believe education and, skill development play in shaping the future of AI in India?

It's a very simple fact, right, that whatever is being taught today or whatever is being learned today by our engineers or by most people is something which by the time they graduate, that job will not remain.

So I can promise you, you will graduate in 2027, '20 '20 '8? Yes. 2027. I can promise you when you graduate.

Whatever they are teaching you, SRCC will not be applicable. I can promise you that. So what that means is that the need for skilling will be more aggressive than ever. The good thing for India is that India has always been a knowledge economy. If you look at the last ten thousand years, out of the last ten thousand years, India has been the number one power for nine thousand four hundred years. So 94 percent of the history, India has been at the top because of intellectual capital. I think, again, the future will be all about intellectual capital, and India has the talent like yourself. But the need for scaling and reskilling so what I say is that the ability to learn and the ability to unlearn, That is very critical. What do you study today? On day one of your job, you need to do think, I don't know anything. That is the only way you can you can grow.

Q. Taiwan has 77 semiconductor fabs. China has 44 while India has currently zero to become a global leader in AI and ensure self sufficiency in semiconductor manufacturing while creating more employment opportunities. What steps can the Indian government actually do to transform our country in the semiconductor space?

First thing first thing is that we need to realize that if a government wants to do something about it, it is gonna be a decade long journey. It can't you can't expect government to give you results in six months. Because if you have to build a fab plant, if you have to build a whole embedded firmware structure, if you have to build your own semiconductors, silicone, you need to have a supply chain to support that. And when you look at supply chain in a lot of places, supply chain, is is a combination of

multiple people taking risks along with government subsidies and then working and building on and maturing it for five, six years. So right now, as we speak, Tata is working on a very big semi con plant. A couple of other big industrialists like Vedanta was working, but did not pan out.

Yeah. So the thought is that it has to be a public private partnership with a seven to ten year horizon where the focus needs to be on building a full stack supply chain to support a semiconductor plant. In that aspect, I believe the government is working on it, but you will not see very fast results. Yeah. That's I hope to see a future where India is one of the leading semiconductor hubs instead of the East Asian or Southeast Asian countries.

Q. What are the key reforms needed to position India as a global leader in the AI industry?

India needs to develop core technology and emerge as the intellectual powerhouse for the products of the world. Sure, we have top-notch tech talent, but 85% of engineers remain unemployed because there's a skilling gap. That requires fixing. On the product side, we have an absence of patient capital—investors want instant gratification, but innovation is a multi-year journey. Government must subsidize deep-tech startups and bridge the gap. A second key input is compute infrastructure—data centers and stable power. Nations competing on AI are because they dominate compute and power. India must construct data centers aggressively and invest in clean energy solutions to drive this growth.

Q. Many young Indians migrate abroad every year. Why did you return, and what should the government do to retain talent?

Although brain drain may sound negative, remittances from NRIs help significantly in boosting our economy. And taking people abroad exposes them to superior practices that can be brought back. That is why Futureense partners with US institutions—to adopt the finest global knowledge. I returned because I saw an opportunity to build something worthwhile in India. The government can retain people by subsidizing research, creating better local opportunities, and de-bureaucratizing. If we build a vibrant innovation ecosystem, more will want to remain or return.

Q. What are the most common skill gaps concerning artificial intelligence and data science in India?

The most significant challenge is not technical know-how—it's expression and context understanding. Any engineer can code but cannot express good questions or comprehend the business problem they are attempting to resolve. AI is shifting towards prompt engineering and insight-based application. Commerce students excel here—they comprehend context and analytical thinking. We need to integrate this with good communication skills and domain knowledge. Real problems demand more than algorithms; they must know the "why" of the "how."

Q. How do the professionals upskill full-time, particularly if they cannot get entry into Futureense? We at Futureense create courses for working professionals—weekend or evening courses, and recordings. But learning content is everywhere outside Futureense too. Just type in any topic prefixed by "101" on YouTube and you will get good content. The actual problem isn't availability—it's motivation. Everyone craves results without effort. Those willing to commit can quite well create a learning plan on free or low-cost platforms. Self-motivated, disciplined

learning is the secret to remaining relevant in a rapidly changing area like AI.

Q. Has Futureense struggled to deploy talent, particularly in light of worldwide layoffs?

In fact, no. We've trained and deployed over 20,000 people on various models, and the demand is growing. AI evokes fear and greed—fear of losing jobs but also massive earning opportunities. That is driving skilling demand. Businesses require talent with AI tool knowledge and the ability to deliver fast. The trick is to show actual, measurable skills. Even in recessions, organizations invest in things that give long-term ROI. Our model is on applied, practical learning—so our learners remain competitive and employable.

Q. Is AI creating more jobs than it's eliminating? Should students of commerce worry?

AI will automate a lot of jobs in the short term—industry-wise. But in the long term, it will create more, as human beings tackle more complex problems with better tools. For commerce students, the future is bright if they stay current. Procure low-code or no-code platforms, understand data, and most importantly—build context. You don't need to be a coder to excel in AI—you need to understand how AI impacts your area and be able to make the most of it smartly. Build a personal brand and stay curious.

Q. Can AI substitute human-oriented management positions?

Management is changing already. We've introduced India's first agentic AI program in partnership with IIT Roorkee. AI agents can now be used to handle workflows between tools. Managers in the future will have to work with

systems and agents, not teams. Traditional management degrees could become obsolete unless they adapt to these changes. One needs to learn how to use and handle AI agents. So yes, human roles in management will shift, but will not disappear. It's all about redefining the definition of management.

Q. Is blue-collar labor at risk from AI?

Unexpectedly, no. Blue-collar jobs are one of the last to be affected because automation and robots are still expensive for straightforward, manual jobs. It's actually educated individuals who are at more risk. They're jobless not due to a lack of jobs—but due to their unwillingness to do certain jobs due to social stigma. While these jobs are done by uneducated people. The bigger issue is getting educated youth prepared to adjust and be open to shifting jobs.

Q. What do you do at 1% Club, and what are the common financial blunders made by young Indians?

I am in charge of strategy and partnerships at 1% Club. One of the biggest problems I see among youth is overspend on wants—not needs—because of social media. Nothing but EMIs. People buy shoes or devices they don't need, driven by appearances. We must put an end to it. Wealth is not about showing off—it is about discipline. Understand compounding. Avoid debt traps. Spend less than you earn. Consider long-term value over instant pleasure.

Q. What is your long-term vision for Futureense?

We would love to make Futureense the world's largest AI talent pipeline. Whether we build AI skills here or source talent out, India would be at the center of the world AI revolution. That's the north star. We're attempting to do it through

deep skilling, contextual learning, and scalable system design. We would love to empower youth across India—especially in Tier 2 and Tier 3 cities—to be able to partake in the AI wave globally.

Q. Are we really going towards becoming an AI superpower like China or the US?

Honestly, no. We're a long way behind in basic AI innovation. We don't have foundation models, compute, and infrastructure. The US and China are lightyears ahead, but we do have talent. If we concentrate the right skills and invest the right compute and research, we can catch up. But we cannot be unrealistic—there's gotta be monolithic effort and long-term planning.

Q. There's an adage: "There's always an Asian better than you." Thoughts?

It's a mindset. In India, we've become lazy. East Asians work ridiculously hard—and that discipline gives them an edge. If you want to earn more or build more—you need to work more. Simple. There is no shortcut. Consistent, hard work matters.

Q. And what about underpayment? Too many workers are overworked and underpaid.

True—but the market corrects itself. You can change jobs. You're not stuck. We don't have slavery in India. If someone underpays you, you can quit. Improve, deliver results, and you'll receive better jobs. The market is open—use it.

Q. Will Futureense build AI courses for its commerce and management students?

Absolutely. Initially, we were targeting engineers, but now we're teaching AI to all—

commerce, management, anyone who wants to learn. AI is a tool, and anyone can learn to use it. The barriers are coming down.

Q. Will I get selected if I apply to Futureense?

It depends on the programme and how prepared you are. We assess on the basis of intent, preparation, and appropriateness for the course. If you're serious and prepared to do it, you'll be given space.



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I think, overall, India is today on the move. The economic reforms that our salvation lies in- operating an open society, political and economic system- that has widespread support. Manmohan Singh

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Bharti Airtel

**MANOJ KOHLI, FORMER CEO
RAGHAV & JAPGUN, Panelist**

Q. You've had an incredible career leading major organizations like Airtel and SoftBank. Looking back, what key experiences from your early career shaped your leadership style?

With 46 years of career experience, I've had thousands of unique and invaluable experiences. My first career spanned 16 years in the manufacturing sector with the Shriram Group, working across Delhi, Mawana, Doral, Calcutta, Hyderabad, and even internationally with Honda Motor and Tecumseh in the U.S. This period was fantastic, and I truly loved building the foundations of the manufacturing sector.

After that, I spent 20 years in the telecom industry, where I helped build one of the most admired and expansive brands in the world. Starting from a small startup, Airtel now serves 570 million customers, a truly world-class achievement, both in terms of scale and impact.

Following my time at Airtel, I spent nearly a decade with SoftBank, focusing on investment planning and opportunities in India. I played a key role in investing \$15 billion in remarkable ventures like Ola, Lenskart, Zomato, Blinkit, Oyo, Delivery, FirstCry, Snapdeal, and many others. During this time, India became SoftBank's top-performing market globally in terms of return on investment.

Last year, after 45 years of full-time work, I transitioned into a new phase of my career. Now, as a global business advisor, director, and coach, I focus on four regions: the U.S., Asia Pacific, the Middle East, and Africa. My work revolves around three core areas: Scaling and growing businesses globally, Modernizing, digitizing, and transforming established businesses, Helping CEOs and founders build high-quality leadership teams and cultivate high-

performance work cultures. Looking back on my journey, I feel deeply gratified. It's been a fulfilling experience, and I'm proud of the impact I've had on the industries and organizations I've been a part of.

Q. You played a pivotal role in establishing Airtel as India's telecom leader. What were the most critical decisions that helped scale Airtel against tough competition, particularly during the early 2000s?

Airtel, in my view, was India's first true startup, long before the term became popular. Building it was an extraordinary journey. One of the biggest factors behind our success was the deep self-belief within the organization, from the founders to the management and every employee. We genuinely believed we could lead the market, move faster than our competitors, and deliver better service to customers.

What really changed the game was the business model we introduced in 2003. Traditionally, telecom was seen as a capital-heavy industry. But we challenged that by creating a new model based on outsourcing. We kept the core, people, brand, and regulatory management in-house and partnered with world-class players for operations like network, IT, towers, and customer service. This not only gave us flexibility and speed, but also made the model far more cost-effective and scalable.

Execution was another crucial element. We operated with incredible speed and discipline. Decisions that took weeks elsewhere, we made overnight. But this wasn't random, it was a structured approach with clear processes and goals, which helped us maintain quality even while growing fast.

Brand building also played a key role. Airtel had zero brand equity when we started, and we built

it from scratch, with passion, consistency, and a strong focus on customer experience. Today, it's a brand admired not just in India, but across 20 countries.

And finally, the culture at Airtel made a huge difference. We built a performance-driven, open, and empowering work environment where people felt motivated to give their best. We stayed close to our customers, listened actively, and evolved quickly. This combination of belief, innovation, speed, brand, and culture helped us lead the market.

Q. Post Airtel, you led SoftBank India's expansion into renewable energy. What motivated you to start this team and how did your telecom experience shape your time there?

After spending 20 years in telecom, I felt the need to refresh my professional life. SoftBank was an incredible opportunity, working under Masa, one of the greatest visionaries in the world, was a remarkable experience. He was deeply invested in expanding SoftBank's presence in India, and as the country head, I had the privilege of leading that effort.

One of the most unique and rewarding aspects of my time at SoftBank was working in the renewable energy sector. We built about 7 gigawatts of solar, wind, and hybrid energy plants, which were of exceptionally high quality and performed very well in terms of efficiency. This experience was especially enriching, as my background in telecom proved to be incredibly valuable. Telecom and energy both represent infrastructure-heavy industries that require substantial investment. The lessons I learned in telecom were directly applicable to building the energy business, skills that helped us scale and execute large-scale energy projects across states like Andhra Pradesh, Karnataka, and

Rajasthan. What made it especially gratifying was the role renewable energy plays in shaping the future. As environmental concerns grow, especially in India and globally, renewable energy is crucial for future generations. However, like the telecom sector, the energy sector also faces its own set of challenges. Understanding those challenges and finding solutions became key to our success.

Looking back, while telecom laid a strong foundation for me, transitioning into the energy sector allowed me to learn a great deal of new things—experiences and challenges I hadn't faced before. That growth was incredibly rewarding and broadened my horizons in ways I hadn't anticipated.

Q. With advancements in 5G, AI, and satellite internet rapidly transforming the telecom industry, where do you see the next major breakthrough? How should companies like Airtel adapt to stay ahead in this evolving landscape?

The telecom sector is constantly evolving. I was on the global board of GSMA for years, where we often discussed upcoming opportunities. One major shift is the growing focus on Fixed Wireless Home (FWH) broadband, high-speed internet delivered directly into homes. Today, 90% of data usage happens indoors, so delivering fast, reliable home broadband is becoming a key priority globally.

Satellite internet is another big development. It's gaining traction in parts of the US and will eventually come to India. Over time, it will become more seamless and affordable. Alongside this, 6G is already in development. In two years or so, it will bring even faster speeds than 5G, transforming user experiences further. These advances demand strong infrastructure—more towers, extensive fiber networks, and

and large-scale data centers. Sharing infrastructure, something Airtel pioneered years ago, will be crucial. It keeps costs down and enables better services.

Another important factor is energy. With AI's growing role in data centers, energy consumption is rising fast. So, the industry will increasingly rely on renewable energy to remain sustainable. These shifts will shape the next decade of telecom.

Q. With growing data privacy concerns, how should telecom companies balance innovation and regulation?

Telecom has always operated within a framework of tight regulations, so it's not that the sector is unfamiliar with this. In fact, many new sectors are still adjusting to the impact of regulation and, at times, are surprised by it. However, telecom regulations have a long history. They started with the ITU (International Telecommunication Union) regulations, followed by national regulations, and later the National Telecom Policy (NTP) in 1999, with newer iterations and policies emerging over time. The Telecom Regulatory Authority of India (TRAI) has played a key role in shaping these regulations, and they are well-established and generally well-accepted by the industry.

For telecom, there's really nothing surprising or new about regulations. The sector has learned to adapt to new policies and regulations swiftly and efficiently. I don't see regulations as a barrier to innovation in telecom; in fact, innovation will continue to thrive regardless of regulation. The main purpose of these regulations is to prevent misuse, avoid negative societal impacts, and ensure the system runs smoothly. They are not designed to stifle innovation.

Innovation and regulation can coexist. So, while

I expect regulations to become tighter in the future, I believe innovation will continue to flourish within the telecom sector.

Q. Having worked with startups during your tenure at SoftBank, what's your biggest advice for Indian startups looking to go global? What mistakes should they avoid?

I currently advise 25–30 startups, both in India and abroad. My biggest advice is to build a strong foundation: solid systems, great teams, sound governance, and financial discipline. Growth should never come at the cost of profitability. Cash flows and governance are critical for long-term success. Startups must first establish leadership in India before expanding globally. Once you've become a market leader at home, international expansion becomes easier. But go step by step. Choose markets carefully, tailor your offering to local consumers, and invest time to build a healthy market share, 20–30% ideally, not just a superficial presence. Lenskart is a great example. They acquired a Japanese company, which gave them access to 12 Asia-Pacific markets. That's a smart, focused way to go global.

Q. What has been the toughest business decision you've had to make, and what were some learnings you managed to derive out of the situation?

There have been many, but the most challenging was acquiring and managing Airtel's Africa operations across 17 countries with a \$10.7 billion deal, one of India's biggest international acquisitions. Every country in Africa has its own culture, language, government, and consumer behavior. The company we acquired wasn't in great shape either, so we had to rebrand, rebuild, and bring in a new performance-driven culture, while being sensitive to diverse nationalities and work

styles. One big learning was around market behavior. In India, a small drop in tariffs leads to a big traffic increase, but that elasticity didn't exist in Africa. So we had to rethink our strategy. Despite all the hurdles, I'm proud of how the team turned it around. Airtel Africa now enjoys strong margins, healthy cash flows, and growing market leadership. It's a testament to resilient execution and adaptability.

Q. Is there any book that has guided you and motivated you through these tough times and you'd recommend to young professionals?

One of my key influences was my teacher, C.K. Prahalad, who wrote the groundbreaking book "The Fortune at the Bottom of the Pyramid." This book taught me how to build high-quality, profitable businesses for the masses—not just for the wealthy. It's relatively easier to build a business for the affluent, but building a business that serves the lower strata of society, particularly in regions like Asia Pacific and Africa, is far more challenging. C.K. Prahalad's insights on this are invaluable.

Another book that made a significant impact on me was "Execution" by Ram Charan, written in collaboration with my former boss, Larry Barsity from GE and Allied Signal. This book is an excellent resource on how to execute effectively, a critical skill that separates good businesses from great ones.

Additionally, "Good to Great" is a book I read many years ago, and it really shaped my approach to building a company. Many businesses can be good, but the key is understanding how to elevate them into great companies. This was a pivotal read for me in my career.

These are just a few of the many high-quality books that have shaped my thinking. I highly recommend them to anyone looking to deepen their understanding of business and leadership.

Q. After such an accomplished career, what still drives you? What's the one leadership principle you always live by?

For me, it's all about continuous learning. Even after 45 years of full-time work, I feel like I'm learning faster now than ever before. Over the last year in my advisory roles, I've been exposed to 20–30 companies across different technologies, regions, and teams, and the diversity of experiences has accelerated my learning. I focus a lot on emerging technologies that are shaping our future. But equally important is unlearning, letting go of outdated experiences or ideas that no longer serve a purpose. As we grow older, it's essential to make space for fresh perspectives. So for any leader, the real mantra is a balance of learning and unlearning. That's what keeps you sharp, relevant, and forward-looking.



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If you build your present-day bricks,
probably the future will be good.

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Wipro

R. PADMANABHAN, VICE PRESIDENT
SIDDHANT & RASHI, Panelist

Q. From studying electronics and communications engineering at Karnatak University to Harvard and MIT, and now leading at Wipro - how has the journey been? Who have been your biggest inspirations along the way?

For me, the inspiration that I started with has been my Late Father. He was an inspiration when we started very young. After completing my engineering in 1996, and joining a prestigious institute like Wipro, for all of us in the lower middle class, it is always an ambition in terms of how do we actually look at a role model and obviously he being an engineer by profession has helped me find the right path in life. As I grew up and moved up the ranks at Wipro, there have been a lot of my own colleagues, influencers, visionaries, and my clients who have come along the way, and many of them have taught me to think about what makes things reimagine and that's why I am here today. It's been about 28 years with Wipro now and the beauty of it is every 2 years you keep reinventing yourself and I too have had multiple roles in the company and that is how life is moving on.

Q. With your leadership role comes immense responsibility and pressure. There's an ongoing debate about work-life balance in corporate life. Having climbed the ranks at Wipro, what's your perspective on it?

I think Work-Life Balance with many leaders having put their own Point of View on this issue, at the end of the day you have to draw the boundary of what Work and Life is. I may not be a great proponent in terms of the number of hours. I think it is more about quality and how to bring about an outcome-driven culture right. So many a times, it all goes back to how your team comes along in order to deliver an outcome. For me as well, many a times I have looked at that

as a big inspiration for how I have been able to live through it. Obviously there are times it brings stress to the family members, in things that require more focused attention and I have been lucky to have a family that supports it. So it is about how you balance out both of them. One of the key things at Wipro is we have made it mandatory over the last 5-7 years to take the last 2 weeks of December as a forced mandatory holiday. That's where it is a family time and most of the family takes breaks too. We too take breaks rejuvenate, and come back to the new calendar year in good spirits. So that is how I look at it.

Q. Leading a global company like Wipro must come with its challenges. What has been the biggest challenge in your career, and what key lesson has shaped your leadership approach?

I think so every year or every role that we have been elected to play has its own set of challenges and many a times these challenges are either with respect to technological challenges, geopolitical challenges in terms of how businesses are going to be there in the changing political scenario. So I have seen both ups and downs in the close to 30 years I am going to be completing in a couple of years. I have seen 3 major shifts in terms of how we approach things. The first phase from 1996-2000 was the time where the IT industry really boomed. That brought in significant amount of work to the Indian IT and a lot of secondary industries too have the IT boom to thank for where they are today. This helped us in reckoning ourselves to be the global talent for the entire world. The second phase was post the 2008 financial crisis and that brought a significant downfall in the industry. This made everyone to reinvent to become more resilient and we all learnt how to be more resilient after that. The third crisis as we all call it would be the

Covid crisis and we all refer to the new world as before covid and after Covid and things have changed. I think so one of the key things is how well and how quickly you adapt to the new ways of working and how you adapt to the changes of how things are gonna happen. The new change is obviously AI and the new challenge is Human vs Machines. Now we are trying to get to a stage where in aviation terms, we are all co-pilots to AI. Similar to Aircrafts there is just as important of a role of a co-pilot as there is of the Main Pilot. So AI will play that role. Human being a social animal will quickly adapt to what the changes are gonna be there. So as a leader, to being in the company for many years, for me it is very important that I balance it out and now I am really looking at learning from the new generation and figuring it out in terms of what it really means to be a learner again in this industry. So that's what gives us a lot of interesting times to re-invent ourselves. You can have a great strategy, but if you don't know on how to focus on strategy, you fail.

Q. Wipro was recognized as a Leader in the 2023 Gartner Magic Quadrant. How does this shape your strategic priorities in cloud and AI transformation? What differentiates Wipro's approach from its competitors?

All of these are resonating in terms of what is your vision and your ability to execute it. There is a global recognition in terms of the analysts and advisors recognise that your vision is going in the right direction, your customers recognise that you have been able to execute towards your vision. One of the key things we focus at Wipro is what makes you different from the others and all of the various competitors have a nicheness in terms of what they would want to get out of it. To be in the pack of leaders, it is all about how best you are able to scale up and be consistent regarding your differentiation. So true to our philosophy, we always look at how do we

actually become a player in terms of Cloud and AI and provide integrated solutions and we proudly claim ourselves that we are one of the companies that can provide solutions from Chip to Cloud, we can start from an entry device and help them in realising their entire value chain. We are also a company that not just do strategic consulting, but also help in execution and drive that at scale. So from that perspective, we have been focusing a lot on how value realisation can actually be accounted for. A lot of customers need to see a value. We aren't just a cost player, because it makes you low in the food chain and doesn't give clients trust over you actually creating a difference for them.

Q. At VMware Explore, you emphasized the convergence of multi-cloud and generative AI. How is Wipro helping enterprises navigate the complexities of integrating these technologies while ensuring security and scalability?

For AI to take a scale, and be in the industry. One of the big problems the Company is facing is the security aspect of AI. If you would have heard the talk of me at VMware explore, that stack of making sure that your infrastructure is actually ready, taking into account that your responsible AI aspect is actually taken care of, we are focusing big time on that, or as I call it building the digital core. As I talked about in Microsoft's ignite event as well, my focus is to re-imagine every enterprise business the AI way. AI really needs to scale, or move from Pilots to Production. It requires us to take a complete view, not just of the core infrastructure but also ensure no vulnerabilities are present and if hallucinations need to get reduced, you need to ensure that the security and the data aspects are even stronger. That is where the focus has been, not just at Wipro but across the industry everyone acknowledges that this is where the industry is getting reverted.

Q. Wipro recently reported its best operating margin in three years. How do you balance the need for profitability with heavy investments in emerging technologies like AI and multi-cloud infrastructure?

Obviously, as I said, return to shareholders in terms of profitability is going to be the most important aspect of our business. I spoke about being a company with profit with purpose. But alongside this, we invest significantly in R&D. The public information regarding our spending is readily available. Investment is key to ensuring we're addressing market needs.

There's a recent article published about 10 days ago detailing our \$200 million investment through Wipro Ventures, our venture arm that invests in emerging startups. We focus on startups in the US, Israel, and India to understand where the market is heading. We continue to make these investments and maintain this focus.

Lab 45, which is the arm of our CTO organization, focuses heavily on innovation as well. This commitment will continue. Much of this information is available in our annual report published on our investor relations page. There, you can also read about our focus on sustainability.

We've been recognized as one of the most ethical companies for the past 13 years, as defined by Ethisphere. We emphasize social costs with respect to sustainability and are part of the Dow Jones Sustainability Index. All these initiatives are integral to our business. It's not just about running a business for profit, but also about giving back to society in a meaningful way. All of this is part and parcel of how we drive our business.

Q. With the increasing scrutiny of data

privacy, how does Wipro navigate regulatory challenges while delivering innovative solutions? What strategies do you employ to ensure compliance?

Data privacy and security are non-negotiable. They are paramount to conducting any business. At the end of the day, even a minor breach can cause significant brand reputation damage and break customer trust. At Wipro, we consider this the single most important priority—the backbone of how we drive business, including for AI and responsible AI implementation.

We have a very senior leader based in Europe who is an industry expert and thought leader in data privacy. It's essential for us to be thought leaders in this space, and we continue to maintain this position. We adhere to the highest standards required in the industry.

At times, this approach leads to us being somewhat paranoid about security—perhaps more than necessary. We continuously work to balance these concerns with business needs. But ultimately, security takes precedence as our highest priority.

Q. Reflecting on the AI tours with Microsoft that you had across Europe, what were your most significant takeaways from your sessions with customers? And how do you see these insights and how do you see implementing these insights into Wipro's future strategies?

Obviously, you are all aware that AI became mainstream with the introduction of ChatGPT from OpenAI. Microsoft has been at the forefront of leveraging OpenAI and other technologies. This has required us to educate many of our customers and work with those who are currently conducting significant pilot

programs. Since taking over the Microsoft business at Wipro—a relationship that spans about three decades—I recognized that we had been operating this business somewhat in isolation. Whether it was our go-to-market approach, how we engaged with Microsoft customers, or how we helped Microsoft engineer their products, these efforts were not fully integrated.

We've now brought all these experiences together to truly add business value to our customers. This has required me to work very closely not just with the Microsoft team but also directly with our customers. My recent trip to Europe was focused on exactly that, Siddhartha.

I met with customers to discuss our joint value propositions, identify business use cases and customer personas that would see the most benefit, and determine how to achieve meaningful ROI. You cannot implement something without a return on investment. As commerce students, you understand what economics means—don't do anything where you don't get returns. So we needed to educate customers about the potential returns before proceeding.

My goal was to meet customers directly. In just 10 days, I covered five cities and met with over 30 customers. These interactions provided valuable learnings on how to effectively communicate business value propositions.

Q. Azeem Premji's leadership left a lasting impact. If you were to leave your own legacy at Wipro, what would you want it to be?

So obviously, this is a common question I get asked every time: 'How have you spent 29 years in a single company?' My answer is that while I've been with one organization, I've essentially worked in 17 different organizations within it. One of the key benefits the company provides me is the flexibility to innovate and

express myself. I've been part of some very innovative business approaches at Wipro.

I've held almost every different role, except for HR and finance functions. I've performed most roles in the company. But if I have to focus on what legacy I'll leave behind, I believe I'm recognized as a more empathetic leader in what I do. I've always focused on mentoring people and ensuring that the team working with me—whether they're still in my group or have moved on to make names for themselves elsewhere—has been strongly impacted by my leadership style, which has helped them shape their own careers.

My philosophy is to be known for who you are and what you stand for. I'm a big believer in karma and focus on what makes all of us live with purpose. That's my perspective.

The company has given me tremendous support, both professionally and during my personal setbacks. There are leaders who have stood by me and shown conviction in my abilities. I continue to pay this forward.

My legacy should be that of a leader who has made an impactful contribution to the company and has been able to carry that legacy forward. If someone following in my footsteps can benefit from even 30% of what I've contributed, I would be more than happy.

Q. For young professionals looking to enter the AI industry, what advice would you give? What skills and mindsets should they develop?

I am grappling with that answer. I've met many young professionals recently, and I've observed that in the past, technology skills primarily drove an individual's intellectual quotient. Now, I believe it's a balance between IQ and EQ. I'm also seriously considering AQ—adaptability quotient—as equally important. The challenge is that many of you were born in the digital world where gadgets have been your primary

interface with life's journey. I find that this has led to a reliance on shortcuts rather than understanding fundamental principles. When I was your age—Rajshri's age—we were given difficult problems to solve without gadgets. Our minds were engaged more than our hands. Now, you ask a question, get an answer, and that becomes the solution.

We've become so dependent on technology. Today, if Google Maps provides incorrect directions, we still follow it to the destination, right or wrong. I remember my first trip to the US when there was no Google Maps. We used physical maps and had to manually plot routes from one road to another.

Technology is beneficial, but understanding the basics is crucial. That foundation will be the most critical element of your success. I believe the younger generation is extremely sharp, creative, and expressive. However, I sometimes feel there's too much emphasis on taking shortcuts to fame. You can achieve fame quickly, but as you progress, you'll realize it's merely a hopping culture rather than substantive achievement.

I might sound counterproductive in answering this question, but while money is necessary and provides status, it's equally important to understand the work you do and how well you're acknowledged for it. In the US, and having lived in India as well, I've seen many people take pride in being researchers. Their satisfaction comes from proving concepts and examining possibilities. Researchers might not be the highest-paid professionals, but they create foundational impacts on our world.

I also appreciate how the younger generation helps me maintain an entrepreneurial mindset—someone who can take calculated risks. It's a balancing act.

My advice is to focus on who you are, drive your passion and vision, express yourself, embrace the 'fail fast' culture, but don't pursue shortcuts. That's my thought of wisdom for you all.

Q. Lastly, Is there a book that has guided and motivated you during tough times - one you'd recommend to young professionals?

I'm not an avid reader who can recall many books offhand. However, some books that genuinely captured my attention include 'Hit Refresh' by Satya Nadella, which details how he transformed Microsoft during its downturn following Scott Ballmer's leadership and the Nokia mobile strategy. The book offers valuable insights into how Nadella changed the company's culture, made it more open, and redirected its focus.

There are also fascinating books about Netflix's disruption of the entertainment industry when Blockbuster dominated the market. 'No Rules Rules' is particularly enlightening—I recommend reading it to understand how transformative change happens.

I recently read 'Unlearn,' which addresses how we often cling to past methods instead of adopting the philosophy of unlearning to relearn. This connects to my interest in adaptability quotient and learning ability, which I believe are especially crucial for millennials today. You need to continuously commit yourself to learning.

While these books provide important perspectives, my current routine includes regularly following McKinsey podcasts. I appreciate their unique market analyses and insights. Of course, beyond books and podcasts, my practical experience has been my most significant teacher.



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Success comes from filling a genuine need. Find a problem and create a solution that empowers others.
”



FamPay

KUSH TANEJA, FOUNDER
PRAHARSH & ANMOL, Panelist

Q. Your journey from being an IIT Roorkee graduate to co-founding Fam has been inspiring. Can you walk us through the initial idea behind Fam? Was there a specific problem you experienced or observed that led to its inception?

There were many problems that I observed. It all started a little earlier when I entered college. In the first semester, I was excited about technology. Whatsapp and Ola cabs were really popular at that time so I wanted to explore how apps and websites work. So I started building a bunch of stuff for college students. I started learning more about technology and the power of problem-solving. I was pretty sure in my mind that I wanted to be an entrepreneur but there was a sense of insecurity. I used to Brainstorm different ideas with a lot of people every day. It was not that one day I woke up with the idea of starting a neo-bank for teenagers. It was a very gradual process. There were a number of data points and observations that were constructed for a few months which led to the inception of FamPay. I went to a RazorPay event for networking and at that time Kunal had launched Cred where he shared all his insights. I had no idea of fintech before. India, a country where 40% of the population is under 18 and tech-savvy and where parents don't know much about technology, was a great opportunity for us to start FamPay. Being from IIT it was easier for us to attract placements and my colleagues were getting placed. People used to just learn to code and do things they didn't even want to. The objective is not only to earn money but also to achieve their dream. If you are not doing what you love how can you expect yourself to grow and make a lot of money? Other factors like opportunity cost and risk appetite at a young age are perfect. Most Indians are raised in away to not think of money at a young age as our parents are too overprotective. The main problem is that we never deal with money and

all of a sudden we are thrown to deal with it at the age of 20-21 which backfires because we are afraid of it. I started studying teenagers and UPI, which was very popular at that time. Every kid was getting a smartphone at a young age. Just like we can't expect someone to drive a car just by seeing a YouTube video, we can't expect a child to deal with money by just teaching them that in school. So we thought of giving teenagers a bank account so they can learn to deal with money and make better and more informed decisions when they grow up. Our idea could indirectly change how the young generation makes decisions.

Q. Every entrepreneur faces hurdles in their startup journey. What were some of the biggest roadblocks you encountered while setting up Fam? Were there any moments when you doubted the success of this venture, and how did you push through them?

The hardest of all was to figure out the regulatory framework and how could we navigate the framework by partnering with a bank. In the fintech industry where everyone is around the age of 40, no one gave us the credibility as a 21-year-old. How to be credible in front of RBI was a major roadblock. Partnering with banks was very difficult just because the regulatory framework was not figured out. Some things were allowed where as some were not. We did not have the full freedom with our consumer or product part. It was the hardest because we hadn't dealt with regulations and guidelines before. You need to get certified, get an audit, security formalities, and a number of things that were not allowed unless approved by the government. In fintech, things work a little slowly, but as youngsters, we were quite impatient.

The hurdle that mattered most in our journey was when we had very little time left with the

partnering bank and they had almost pulled the plug. They didn't give us much time and we only had a month to get the things licensed otherwise all our accounts, that was, millions of accounts would be blocked. We decided not to invest more in marketing and first fixed these things. By reducing cashback and rewards we started attracting quality and organic users. That was our signal of PMF (product market fit) and that changed everything.

Q. The Indian fintech sector has witnessed an exponential rise in recent years, with increased digital adoption and evolving financial behaviors. What, in your opinion, are the key factors driving this rapid fintech growth, especially among young users?

UPI was definitely a tailwind. Without UPI this growth would have been impossible. They opened around 300 million merchants which made it easier for us. Penetration of smartphones among youngsters and exposure to the internet brought in growth. Convenience on the other hand played a major role. Especially in India, everyone needs convenience, why would someone go to traditional bank branches and the breaking bank apps? So fintech was able to provide a better platform to them. The expectations of GenZ for the user interface of products is very different from the boomers and millennials. The idea was to create a user-friendly interface. Children were left with the option to ask their parents for cash or use their parents' cards for transactions which was very inefficient. There was a unique opportunity to serve for fast transactions. When you are 12 or 13 you always think how will I look when I grow? Similarly, the kids always thought about how will use their own bank cards. Even if 2-3 kids use the card the entire school will know the next day. This is the nature of how the kids behave which definitely helped us to drive the growth.

Q. With India making strides in digital payments, where do you see the industry heading in the next five years? What new trends do you predict will dominate the fintech landscape, and how do you plan to position Fam accordingly?

We are already growing fast and in the next 5 years, we will definitely grow faster. RBI envisions that the E-rupee must be adopted more, so people will invest more. In the past few years, credit has been available easily. People are focusing more on responsible credit and investment because of the recent ups and downs. The recent slice merger with the bank is a good example where fintech gets a chance to do long-term banking full banking license. In a few years, we can see them reaping the fruits which will give us more opportunities in general. Investment has a lot of scope for growth because payments have not even touched the tipping point of UPI but we have the first majority and we will keep on growing. It will keep on growing but in terms of investment, we are all still early. There will be a surge in investment in the upcoming years as the next generation is interested in investment. Students are not taught much about inflation in school and that money in banks is not holding its value. It will increase in value only when you invest. Hence a lot of people don't invest. The mindset that we will invest when we have money needs to be changed. UPI will surely keep on growing and I see it growing. Our approach is better and unique and it will eat all the card businesses.

Q. The fintech space, especially in digital payments, is becoming increasingly saturated with neo-banks, UPI platforms, and traditional financial players entering the market. What differentiates Fam from its competitors, and how do you ensure that your brand remains top-of-mind for Gen Z

users?

There are many players but we are still early. A lot of people are trying to enter and I would love it if more and more competitors enter. But the entry barriers are high with all the regulations. In the last 2 years, RBI has made clear that no one can enter fintech without a proper license. In my opinion, the landscape will be very different in a few years. We stand out among the genZ by giving them value. We give so much value that they not only give us money but also their love and the long-term commitment that they will stay with us forever. It's not that they start their journey, get their card at 18, and bid us goodbye. They stay with us not because they don't have other choices but because of the value we provide. They want to start their first investment with us. We have delivered so much value to them wholeheartedly that they prefer us. So we invest to update the product to satisfy them. We are genZ and many of our team members are also young so it's relatively easier for us. Our aim is to keep innovating and satisfying the needs and wants of our users.

Q. Building a fintech product for teenagers was not an obvious market choice. What was the biggest unconventional decision you made while building Fam, and what made you believe in its potential when others might have been skeptical?

I can share a personal decision because being in a regulated space we couldn't do much from the point of view of the company, everything is very straightforward.

On the unconventional side, one choice I made was not to do my end-semester exams. I was ready to not get a degree from college. For my last semester, I was outside the university. Everyone around me was just chilling and enjoying the last semester, getting placements and doing BTPs B-Tech Projects. I had 0 marks

in the end-semester exams but the professors were kind and generous to at least give me my degree so I can go forward in life. At that point, I had concluded that it wouldn't make much of a difference. I should give myself some discomfort and that turned out to be great.

Q. In fintech, user trust is paramount, especially when dealing with financial transactions for minors. How did you approach the challenge of building trust among both teenagers and their parents? What measures have you implemented to ensure security, transparency, and responsible financial behavior?

Trust begins with compliance and innovation. We rigorously adhere to RBI and banking regulations, leveraging decades of institutional wisdom to design safeguards. For instance, our physical cards are numberless—a deliberate choice to prevent misuse if lost. This isn't just a “cool” feature; it's a security imperative. We've stress-tested our systems through audits by ethical hackers to ensure zero data leaks. Transparency is embedded: teenagers access full transaction histories, while parents receive updates to foster oversight without overreach. At 18, users can transition to adult accounts, ensuring autonomy aligns with maturity. Internally, RBI-mandated protocols govern data handling, employee workflows, and device security, creating a fortified ecosystem where privacy and accountability coexist.

Q. AI is reshaping industries across the board. How do you see AI impacting digital banking, payments, and financial literacy, especially for young users? Is Fam leveraging AI in any innovative ways?

AI's greatest contribution will be operational efficiency and personalized guidance. In digital banking, it can automate error-prone tasks -

fraud detection, reconciliation, customer support—freeing humans for creative problem-solving. For young users, AI-driven tools like interactive financial literacy modules or spending habit analyzers could demystify money management. At Fam, we're piloting AI for hyper-personalized insights, such as categorizing "needs vs. wants" in real-time spending. Longer-term, we envision AI assistants that act as financial coaches, helping users optimize savings, navigate credit, and even outpace inflation. While adoption is gradual industry-wide, our focus is on integrating AI to simplify complexity, not replace human judgment.

Q. As a young entrepreneur who successfully built a disruptive fintech startup, what advice would you give to aspiring founders? What are some of the biggest misconceptions about entrepreneurship that you've encountered along the way?

The biggest myth? That fundraising equals success. Capital is a tool, not a trophy. True validation lies in achieving product-market fit (PMF)—creating something so indispensable that users can't imagine life without it. Founders often obsess over scaling prematurely, but PMF requires patience and iteration. Money is fuel; you need it to move, but sustainable companies generate momentum while moving. My advice: Obsess over PMF, ignore vanity metrics, and remember that entrepreneurship isn't about glamour—it's about solving real problems with relentless focus.

Q. As a founder, you've probably received a lot of advice—from investors, mentors, and fellow entrepreneurs. What's the best piece of advice that has shaped your mindset or decision-making as a leader?

Early in my career, a mentor challenged me:

"What makes your product irreplaceable?" This became our North Star. At Fam, every feature is scrutinized through this lens—does it deliver "irreversible value"? Similarly, Y Combinator's mantra, "Build something people want," grounds us. Leadership isn't about chasing trends; it's about aligning teams around a mission that resonates deeply, even if it's unglamorous in the short term.

Q. Beyond financial success, what kind of long-term impact do you hope Fam will have on India's younger generation? How do you measure success beyond just metrics like transactions and user growth?

Success isn't in our numbers - it's in our users' stories. We measure impact by how confidently young Indians navigate financial decisions. When a user skips traditional college to launch a startup, it reflects financial empowerment enabling bold choices. Our goal is to make money a tool for freedom, not fear. If a generation grows up viewing finances as a strategic ally, we've achieved our purpose.

Q. What is your future vision for Fam? Are there any upcoming innovations, expansions, or new features that you're particularly excited about?

Three pillars excite us: AI integration, inflation-proofing, and reimagining credit. We're developing tools to visualize the "shelf life of money," educating users on inflation's silent erosion of purchasing power—and how to combat it. For credit, we're experimenting with milestone-based credit journeys tailored to young earners, blending education with access. Globally, expanding our AI-driven financial coaching could redefine how Gen Z interacts with money. The vision? A platform that grows with users, evolving from a pocket-money app to a lifelong financial companion.



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One of the most important lessons I've learned over the years is to keep an open mind — to stay receptive to all the possibilities that the future may hold.

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ChessBase India

**SAGAR SHAH, Founder & CEO
SIDDHANT & PRAHARSH, Panelist**

Q. You began your journey as a chess player, earning the International Master title, but eventually shifted towards entrepreneurship with ChessBase India. What motivated this transition, and was it a difficult decision to step away from full-time competitive chess?

Absolutely. I was always a very passionate chess player — maybe not the most naturally gifted, but incredibly dedicated and hard-working. I tried to carve my own path in the chess world, learning through books, watching countless videos, and constantly seeking knowledge. The improvement was slow, but the depth of understanding I gained over time really laid the foundation for what came next.

The transition from being a chess player to becoming a chess entrepreneur was very subtle — almost organic. Initially, both Amruta and I resisted the shift. Like many chess players, I had dreams of becoming a Grandmaster, and that journey demands absolute focus and discipline. But even while I was training and competing, I found myself naturally drawn toward writing, reporting, and covering the world of chess. It wasn't something I consciously planned — it just started to flow in that direction. Eventually, we reached a point where balancing both playing and building something meaningful for the chess community became increasingly difficult. In 2017, we made a big decision: to stop playing professionally and devote ourselves entirely to ChessBase India. It was not an easy choice. I had been playing chess since I was around 10, and stepping away from the board left a void. For a while, I felt disoriented — like something integral to my identity was missing.

But the work kept us busy. In fact, soon after that decision, we embarked on a one-year journey across India — a sort of nomadic

exploration of the country's chess landscape. We packed our belongings into a single box and travelled from city to city, trying to understand the grassroots level of Indian chess. That experience was incredibly enriching and, in many ways, marked the true beginning of our entrepreneurial journey in chess.

Q. Every success story comes with its fair share of hurdles. What were some of the most significant challenges you faced, both in your journey as a chess player and in building ChessBase India from scratch? Were there moments when you doubted your path, and how did you push through?

One of the most challenging periods in my chess career came when I was chasing the International Master (IM) title. In 2013, Amruta and I had decided that we would get married the following year. At that time, things were going quite well for me in chess — at least from the perspective of personal growth. I was close to 2400 Elo, had two IM norms under my belt, and I thought, "Wouldn't it be amazing to become an IM before we get married?"

But life had other plans. Just two months before our wedding, I went through a rough patch and dropped around 100 Elo points. Suddenly, the IM title seemed very far away again. It was a tough time — mentally and emotionally. That goal, which had felt within reach, had slipped away, and it really tested my resilience.

But looking back, I truly believe that getting married was one of the best things that happened to me during that phase. It gave me emotional stability, a fresh perspective, and a renewed sense of purpose. In February 2014, Amruta and I got married, and just a few months later, in June, I travelled to Spain, where everything finally clicked. I completed my IM title, made my first GM norm, and even crossed 2450 Elo. It was one of

the most memorable comebacks of my career — a reminder that setbacks can often be the setup for a stronger return.

Interestingly, when it comes to ChessBase India, I've never faced a challenge that made me question the path we chose. In fact, this journey has felt like a road filled with abundance and endless possibilities. Every time we felt we were hitting a roadblock, something new and exciting would emerge — whether it was the rise of YouTube live-streaming, new content formats, or even products and collaborations. The evolution has been incredibly rewarding, and the support from the chess community has been nothing short of amazing.

If I had to point to a real challenge, it's been more internal — learning how to manage my own expectations and those of the people around me. What started as just Amruta and me working together has now grown into a team of nearly 30 people. Each person brings their own dreams, goals, and aspirations to the table. So, one of the most important responsibilities I've felt is creating an environment where everyone can thrive — not under pressure, but with purpose and joy.

So, while there haven't been major hurdles in the traditional sense, navigating team dynamics, scaling up with heart, and staying grounded in our values has been the ongoing learning curve. But that's also been the most fulfilling part of this journey.

Q. In recent years, India has produced a new generation of exceptional chess talents like Gukesh, Praggnanandhaa, Nihal Sarin, and Arjun Erigaisi. What do you think has fueled this meteoric rise? Is it a result of better coaching, increased access to technology, or something else?

I don't think there's a single reason — it's really the result of a beautiful confluence of many

factors working together over time.

First and foremost, the towering presence of Viswanathan Anand at the top of world chess for over three decades has been immensely inspiring. His consistency, humility, and excellence have set a benchmark and sparked the imagination of generations. He has shown Indian players what's possible and continues to lead by example even today.

Equally important has been the role of India's top grandmasters who transitioned into full-time trainers. Coaches like R.B. Ramesh, Vishnu Prasanna, Srinath Narayanan, and Swayams Mishra have dedicated themselves completely to nurturing the next generation. Many of India's brightest talents — Praggnanandhaa, Gukesh, Arjun Erigaisi — have grown under their mentorship. For instance, Ramesh has been a guiding force for Praggnanandhaa, and Vishnu Prasanna for Gukesh.

We also can't ignore the contribution of a strong chess ecosystem — the support from both the central and state governments, the consistent efforts of the All India Chess Federation in organizing national and state-level tournaments, and the backing from institutions like the Petroleum Sports Promotion Board (PSPB). Organizations like Indian Oil, ONGC, and BPCL have provided stable employment opportunities to players, giving them financial security and the freedom to pursue chess professionally.

Then there's the impact of the pandemic — an unexpected accelerator. With the world moving online, young players suddenly had the opportunity to compete regularly against top international opponents. That exposure significantly boosted their confidence and sharpened their skills.

And of course, initiatives like the WestBridge

Anand Chess Academy have made a big difference. The guidance of Vishy Anand and the involvement of top trainers there have played a pivotal role in shaping talents like Gukesh and Praggnanandhaa further.

So yes, this golden age is the result of a collective, sustained effort — by legends, coaches, federations, institutions, and the players themselves. It's truly been a team effort, and the results we're seeing today are just the beginning.

Q. YouTube and social media have completely changed how chess content is consumed, from live tournament commentaries and analysis to fun collaborations and challenges. What have been the biggest trends in chess content creation over the past few years? Where do you see it evolving next, and how can chess creators continue to innovate?

I think the rise of platforms like YouTube and social media has completely transformed the landscape of chess content — both in terms of accessibility and creativity.

I still remember the early 2010s, when live chess commentary was just starting to take off. It was quite rare and technically challenging to pull off. I used to follow online broadcasts and loved watching commentaries by legends like Peter Svidler. His work with Sopiko Guramishvili during the 2014 World Championship match between Anand and Carlsen really stood out. Even in 2013, we had figures like R.B. Ramesh, Susan Polgar, Tanya Sachdev, and Lawrence Trent doing commentary — and those were very memorable experiences for me as a viewer.

Back then, setting up a live stream or any commentary was a big task. But now, with the rise of YouTube and streaming tools, it's

become much more feasible to do it regularly. Platforms like ChessBase India, Chess.com, and Chess24 have all embraced it. Today, it's almost expected that major tournaments come with high-quality live commentary and engagement.

Beyond that, what's really interesting is how chess content has become fun and more approachable. People aren't just watching games — they're watching opening traps, tactical puzzles, game breakdowns, and even casual blitz matches. The pandemic, the success of *The Queen's Gambit*, and the influence of stand-up comedians and influencers who began playing and promoting chess — all of that brought in a new wave of enthusiasm and widened the audience.

Earlier, when I used to upload videos in 2018 or 2019, each piece of content had a long shelf life because there wasn't a lot of similar material online. Now, the space is incredibly vibrant. The number of creators has exploded across platforms — from YouTube and Instagram to Twitter, Facebook, and even TikTok. Audiences today have a huge range of voices and formats to choose from, which is wonderful, but it also means content needs to evolve constantly to stay relevant.

So yes, social media has democratized chess content. It's allowed more people to contribute, share, and connect — making the chess community richer and more global than ever before. The challenge now is to stay creative, adapt quickly, and be open to the new ways people engage with the game.

Q. ChessBase India has already revolutionized chess journalism and content creation in India. But where do you see it heading in the next five to ten years? Are there any new projects, innovations, or

expansions that you are particularly excited about?

One of the most important lessons I've learned over the years is to keep an open mind — to stay receptive to all the possibilities that the future may hold. While there are certain projects we continue to build with consistent focus, like ChessRanga — a platform close to my heart that aims to make learning chess accessible and engaging through technology — I also believe it's essential to remain adaptable.

ChessRanga.com has been a long-term effort, and we're constantly improving it, step by step. But alongside that, the chess world is evolving rapidly. Technologies like AI are advancing, and new opportunities are emerging that we might not have imagined just a few years ago. For instance, who would have thought we'd be on the verge of having an Indian World Champion so soon, or winning gold medals at the Olympiad? These moments expand our vision of what's possible.

My approach is not to limit ourselves by saying, "this is what we do" or "that's outside our scope." Instead, it's about staying present and open — embracing new directions as they come. Thinking five or ten years ahead can be exciting, but I believe if we focus too much on the distant future, we might miss what's unfolding right now.

So for me, the path forward is about balancing long-term commitments with the agility to explore new ideas — staying grounded in the present, yet open to the next big possibility.

Q. With ChessBase India being known for discovering the new talents in chess at an exceptionally young age, could you describe the process to us with the consistent discovery of the new superstars.

Yes, I truly believe chess is for all ages. What's fascinating, though, is that the game is getting younger every day. Today, we see children like Anish Sarkar, who became a rated player at just four years old — which is simply incredible. In fact, it's now quite common to see kids picking up chess as early as the age of three.

That early exposure inspired us to launch the *Chesspa* book series, with the very first book designed specifically for three-year-olds. It introduces chess through fun, interactive elements like colouring and playful exercises. The idea is to create a gentle and engaging introduction to the game at a time when young minds are incredibly receptive.

On the other end of the spectrum, chess offers tremendous benefits for older individuals as well. There have been instances where people suffering from Alzheimer's or other cognitive challenges found chess to be a helpful mental exercise — keeping their minds active and engaged. And that's something I feel we need to highlight more often.

It's important that we don't view chess solely through the lens of competition. Over the years, I've come to deeply appreciate the social, emotional, and educational value of chess. Whether it's teaching focus, decision-making, or simply bringing people together across generations — chess offers something meaningful to everyone.

I believe these aspects are just as valuable as trophies and titles. They're worth nurturing, preserving, and celebrating.

Q. Chess is one of the most mind-testing and engrossing board games, that requires a high level of wisdom, skill and patience. Could you tell us, if your chess skills and your challenges while playing games

actually helped you in the business side of growing ChessBaseIndia too?

Chess has definitely played a significant role in shaping how I approach both life and entrepreneurship. One very direct example is from the time I was preparing for my Chartered Accountancy exams. The ability to sit with focus and engage deeply with something for long hours — a habit I built through years of playing chess — really helped me while studying. That discipline and endurance translated perfectly into an academic setting.

But beyond that, I think the biggest impact chess has had on my entrepreneurial mindset is in the way it trains you to think ahead. In chess, you don't just think one move at a time — your mind is constantly projecting into the future: "If I do this, what are the possible responses? What happens next?" This kind of structured, anticipatory thinking has naturally seeped into the way I work.

As an entrepreneur, I find myself instinctively analyzing different outcomes before making decisions. When I come up with an idea, my brain immediately starts exploring its ripple effects — the challenges, opportunities, and the next steps that might follow. This analytical ability, I believe, has been deeply honed through years of playing chess.

So whether it's planning strategy, managing risk, or making long-term decisions, chess has provided a solid mental framework. I truly feel that many of the qualities required to be a good chess player — patience, foresight, adaptability — are the same ones that help in building and running something from the ground up

Q. While chess is growing in popularity, many parents still see it as a hobby rather than a sustainable career option. What

changes need to happen—whether in sponsorships, media exposure, or government support—to make chess a financially viable profession for more players in India?

I think things are definitely moving in the right direction. Over the last few years, we've seen increasing support from various quarters — corporate sponsors, state governments, and individual patrons who truly believe in the value of chess. Governments like those of Tamil Nadu and Maharashtra, for example, have taken concrete steps to promote the sport. And more recently, we're also seeing corporate involvement through CSR initiatives, as well as new platforms like the Esports World Cup offering structured opportunities to chess professionals.

That being said, real change takes time. For any field to become truly mainstream and financially viable, there has to be a strong ecosystem — and we're still in the process of building that in Indian chess. What's crucial now is that more corporates and state bodies step in to support young talent early in their journey. The path to excellence in chess is long and requires deep focus, dedication, and often, significant financial backing. When parents see consistent support systems — from sponsorships to scholarships and long-term career opportunities — they'll feel more confident encouraging their children to pursue chess seriously.

We must also acknowledge that, like in any profession — be it engineering, music, or sports — not everyone reaches the top. But that doesn't mean the pursuit is any less valuable. In engineering, for instance, only the top few land the most lucrative roles, while others continue in more modest jobs. Chess is similar — it's highly competitive, but we are now seeing many more players than ever before able to sustain

themselves, not just through playing but also through coaching, content creation, commentary, and other related avenues.

If we look back, there was a time when only someone like Viswanathan Anand could make a full-time living as a chess professional. Then came the likes of Sasikiran, Harikrishna, and Surya Ganguly. Now we have a whole generation of talented young players — Gukesh, Pragg, Arjun, and many others — who are changing the perception of what's possible.

So yes, things are changing — and changing fast. With more visibility, structured events, media coverage, and institutional support, I believe the day isn't far when chess will be widely accepted not just as a brilliant intellectual pursuit, but also as a credible and inspiring career option.

Q. The chess world has multiple big media platforms, such as Chess.com, FIDE's official coverage, and other news sites. Yet, ChessBase India has built a loyal and passionate community. What do you think makes ChessBase India different from other chess media platforms globally? How do you ensure that ChessBase India remains relevant and continues to grow despite competition from larger, well-funded organizations?

One of the things that I truly believe in is that

there is no real competition. Competition is a word that is created through, let's say, the ego. And I personally think that everyone who exists in the ecosystem help each other, sometimes directly, sometimes indirectly. And so I've always thought this way, that my aim is never to grow Chessways India, but to grow the ecosystem of chess in India and the world. And in doing so, I know that everyone who's involved, including us, will benefit out of it. And so whenever I see someone doing something good, I want to promote them. I want to write about them, talk about them. Because somewhere, the greed to earn more or to grow is not so relevant to me. What is more relevant is how can we create a beautiful community, beautiful ecosystem of chess. And in that respect, I feel that more and more people should come into chess. More players should come into it. More companies should come into it. More organisers should organise. More arbiters should join in. More trainers should teach and so on. And I always try to look out for that. And I think the same is the attitude of every team member of ours. And in this, we have, I guess, if you are always going to look out for everyone involved in the ecosystem, then, of course, you are going to remain relevant because you are not just working for yourselves. You are working for a much bigger cause, a much bigger reason.



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But here's the thing: pressure is inevitable. It's not the exception - it's the norm. If you're not experiencing pressure, chances are you're not pushing your potential.

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**MyGate**

VIJAY ARISSETTY, FOUNDER & CHAIRMAN
SIDDHANT & JAPGUN, Panelist

Q. Your transition from being a helicopter pilot in the Indian Air Force to corporate life and then launching MyGate is fascinating. What drove this shift, and how did your military background shape your leadership style?

Honestly, there was nothing really planned. It wasn't like I had a clear roadmap of what I wanted to do after my time in the Air Force. Opportunities just came my way—or I stumbled upon them, you could say—and I chose to explore them. That's how the transition happened: from the Air Force to the corporate world, and eventually to starting MyGate.

I saw an opportunity in the space, and I thought, "Why not try to solve this?" I spoke to a couple of friends and asked them to join me in addressing this problem, and that's how we ended up starting MyGate.

Q. You had a successful tenure as VP at Goldman Sachs before founding MyGate. What lessons from your corporate career helped you navigate the challenges of entrepreneurship?

I think one of the most important things I learned at Goldman Sachs was the value of organizational culture, how critical it is to building a scalable company. I learned to think about culture from day one: how to define it based on the kind of product you're building and the market you're serving.

That insight stayed with me. Another big takeaway was understanding how to build organizations. It was fascinating to watch how Goldman Sachs built such a large and successful presence in India from the ground up. Some of those lessons directly influenced how we approached organizational design at MyGate.

Q. Security in gated communities was largely a manual process before MyGate disrupted the space. Was there a personal experience or market insight that led you to this idea?

It all started with a very specific and relatable problem, the influx of e-commerce delivery personnel into gated communities. These communities are designed to restrict access to outsiders, but with the rise of online commerce, more and more people were entering through the gates. This created a lot of friction at the entry points.

We wanted to solve that problem and make the process smoother. That's how the idea of MyGate was born, the name itself reflects that goal. It started as a way to enable seamless transactions at the gate, not necessarily as a security solution. But because the product was positioned at the gate, and due to the nature of the features we built, it naturally evolved into something people began to associate with security. Over time, as the product matured, we began managing several aspects of gate-level security, and the perception of MyGate as a security tech solution grew from there.

Q. With new players entering the gated community management space, what key strategies have helped MyGate stay ahead and maintain its leadership?

I think the key has been staying true to the core problem we set out to solve. We've always prioritized the user and focused relentlessly on addressing their pain points. That customer-first mindset has helped us gain significant market share and maintain product leadership.

Our continuous attention to evolving customer needs, combined with a strong product roadmap, has kept us ahead of the curve. This consistent

focus has been crucial in staying ahead of the competition.

Q. Every entrepreneur faces setbacks. What has been the most challenging moment in your journey, and what did you learn from it?

Every entrepreneur faces setbacks, and they often come daily. While none stand out as significant, the journey is full of small, persistent challenges that require quick decision-making and resilience.

That said, COVID-19 was a particularly unusual challenge. Before the pandemic, gated communities saw a lot of foot traffic, and our product was very relevant. But once lockdowns were enforced, gates were practically shut, and that affected the core use case of our platform. Suddenly, our gate management product seemed less relevant.

To navigate that, we pivoted quickly and built features tailored to the COVID scenario—like enabling or disabling lockdowns within societies, managing essential deliveries, and allowing residents to track and control movement within the community. These features not only helped communities stay safe but also made our product even more useful during the pandemic.

Q. Handling sensitive resident data comes with risks. How does MyGate ensure cybersecurity, protect against data breaches, and build trust with users?

Absolutely, we fully understand that we are custodians of sensitive resident data. From the very beginning, we've treated confidentiality as a core principle. That mindset partly comes from my background in the Air Force and other sectors like banking, where data security is critical.

First, our culture is built around data confidentiality. It's one of our foundational values. Second, we've designed the technology to ensure that even internal access to data is highly restricted. Third, we regularly work with external auditors to conduct penetration testing and security audits to ensure our systems are secure.

We're also GDPR-compliant, which is one of the highest standards for data privacy globally. In fact, we were one of the first Indian companies in our space to achieve GDPR compliance. We're also aligned with the Indian Data Protection Bill passed by the Parliament. Ensuring data privacy is something we take extremely seriously.

Q. As India moves toward digital transformation, do you think we are ready for fully automated security solutions, or will manual systems continue to play a role?

So we need to have a combination of both, right? Manual as well as technology. I think the existing manual protocols would not suffice with the increasing traffic, whether it is at, whether it is at universities or whether it is at malls or airports? I think with all these tools, you require a combination of physical people standing there as well as technology to assist them in doing their job. Both will coexist and both need to coexist together. Although technology increases efficiency, it isn't completely foolproof yet.

Q. Many societies were hesitant to adopt digital security. What were the biggest challenges in convincing them, and how did you overcome these barriers?

I believe that for people to truly appreciate a product — especially a category-creating one — it takes time. These kinds of innovations are often difficult for people to grasp at first. That's

why we need to be patient, show up every day, and consistently demonstrate the value the product brings.

Once users begin to experience the real benefits, switching becomes difficult for them — not just because of the value they get, but also because they become advocates. They start sharing their experiences with other digital communities, which helps the product grow organically.

In our case, it took nearly a year for influential communities to fully recognize the value. But once they did, we saw a steady uptick every month, with more and more communities adopting the product.

Q. MyGate started with a focus on security but has now expanded into community engagement and commerce. How has your revenue model evolved, and what's next for MyGate?

We believe we have a strong captive audience — one that's actively seeking more advanced and meaningful services. Our experience with MyGate has helped us deeply understand the complexities of new algorithms, and with that understanding comes exposure to new opportunities.

These complexities have opened the door for innovation, and we're building businesses specifically to unlock these emerging possibilities.

One such example is the development of smart locks. MyGate recently launched smart locks that can be installed on personal computers. While the brand originally focused purely on security, our insights into digital communities and modern urban living enabled us to design the MyGate Lock — a product that resonates with today's households.

As a result, it's now one of the highest-selling smart locks in its category across Amazon and other major online platforms.

This is just one example of the kind of innovation we're pursuing. There are many more in the pipeline, each designed to address real, everyday challenges faced by urban households.

Q. You've built and scaled successful ventures. What are the key qualities and strategies that aspiring entrepreneurs should focus on to thrive in today's fast-changing world?

I believe we're building a completely new category — and we're doing it at a time when India is rebooting itself. The way people live is changing, the way they consume is changing — and these aren't just minor tweaks, they're delta shifts.

In such a dynamic environment, it becomes crucial to identify problems that are emerging due to this transformation — and more importantly, understand the frequency with which people face these problems.

Take MyGate as an example. Your interaction with the gate happens 70 to 80 times a day. It's not just you — it's visitors, delivery agents, support staff — someone or the other is at the gate constantly. That's a high-frequency problem, and solving it makes a noticeable difference in daily life.

So, when you're building a new product or business, I'd recommend focusing on three key things:

1. Frequency of the problem – Is it something people deal with multiple times a day?
2. Size of the addressable market – Is the

target group (PG) large enough to justify scale?

3. Speed of distribution – Can the solution be distributed quickly enough to stay ahead of copycats?

If you miss on distribution speed, someone else will copy the idea and reach your potential customers before you do. That's the game. So, frequency, market size, and distribution velocity — these are the three pillars I'd strongly emphasize when evaluating opportunities.

Q. You've led teams in high-pressure environments, from the military to startups. What keeps you motivated, and what's the most valuable leadership lesson you've learned?

Look, the military is a high-pressure environment — probably one of the most intense there is. And honestly, nothing in the past compares to that kind of pressure.

But here's the thing: pressure is inevitable. It's not the exception — it's the norm. If you're not experiencing pressure, chances are you're not

pushing your potential. Growth demands discomfort. If you want to move forward in life, you have to face pressure head-on.

The environment you're in now? It's meant to prepare you for that. You're being trained — whether by SAS, CQ, or real-life challenges — to handle it. Don't view this as something separate from the journey. This is the journey. So, my advice is simple: you don't need some special training to take on this pressure. What you need is the mindset — the willingness to embrace it, not run from it. That willingness makes all the difference.

Q. If you had to sum up your entrepreneurial mindset in one sentence, what would it be?

I think keep observing, keep connecting dots and keep, you know, every observation of yours, whether good or bad, is a dot in your mind. And when you see problem statements, these dots get connected and you come up with a solution that is inside you. And that is what is entrepreneurship in my mind.

Q. Your journey in the stock market and financial education has been inspiring. Can you take us back to where it all started? What was your initial exposure to the stock market, and what motivated you to pursue this field seriously?

My father, a CA, had a very keen interest in the stock market. This, coupled with the fact that I am from a Baniya household, led us to have numerous dinner table discussions on the subject. My father also made it a point to take his children along to the stockbroker's office. I remember seeing the charts and graphs in those offices, which appeared to be video games to me. He was also very open with us about finance and would tell us about listed companies, their financials et al. That ignited my interest and I used to ask him questions like the pencil brand I used is listed on the stock market or not. When I came into senior secondary school, my interest further developed and advanced, which is when I decided that I want to get into the stock market full time.

Q. Success stories are inspiring, but struggles shape us. What were some of the biggest obstacles you faced when you first started investing or educating others? Were there moments of self-doubt, and if so, how did you overcome them?

There were many self-doubts. Straight out of school, I took the bold decision of pursuing my graduation from open schooling. Being a dropout was a very big thing back then and stock markets were not cool. A lot of people put question marks, however, perseverance leads to success and also gives reality checks.

Q. Every investor has that one defining moment—an investment, a loss, or a realization—that changes their entire outlook on the market. Did you have such a

moment that completely changed your perspective on investing?

There were two moments. The first one was in 2012, I had started trading in 2010 and I was solely engaged in reading. A couple of years later, I realised that I had no real returns on my trades. I had paid much more as brokerage. It would have been different if I were into investing instead. At this point, I understood that it takes 5 minutes to read about compounding but it takes 5 years to really understand the power of compounding. The second moment was the hit I got in Dewan Housing Finance. That share tanked. When it was on its peak, my ego took over, I could not digest the fact that I went wrong. I selectively read articles that supported my point of view, such that Rakesh Jhunjhunwala was buying shares of DHFL, even though he was buying a minute percentage for his portfolio but the amount was very big in absolute figures. Ultimately, my dad had to call the broker and ask him to sell my shares. So these were the two defining moments in my stock market journey.

Q. The Indian stock market has evolved significantly, with more retail investors joining in and new investment instruments emerging. What do you see as the key trends shaping the industry today, and how do they impact investors?

For me, one of the key metrics that is common to all industries is the China plus one policy. In the early 2000s, BRICS nations were expected to bridge the gap between developing and developed. At that time, India and China were at a comparable position. Now, of course, China is an 18 trillion dollar economy and India is hoping to be a 5 trillion dollar economy. As people don't want to be solely dependent on China, that is helping India out. So, we are trying to serve global businesses and an alternative to China.

India has immense potential and the landscape is really favourable for us. I'm proud that the launch of Chandrayaan 2 is one of the most watched videos on YouTube, which represents the influence India now has on the global landscape.

Technology and AI are disrupting the financial world, with algorithmic trading and robo-advisors becoming more mainstream. Do you think automation and AI will replace human decision-making in investing, or will human intuition always play a crucial role?

Investing is an art, trading is more of a science. AI cannot replace an art. Algorithmic trading is not a new concept, it has been in India since 2005. It's older in the USA. Most people haven't made it big using the technology. One example quoted everywhere is that of Blackrock, where they have a system called Alibaba. However, I'll be on the fence for this, as of now, it hasn't done very well. Now I have reached a stage where I don't see anything remarkable anymore when people talk about this. I may be completely wrong here and I hope that I am. However, AI can replace trading. There was a time when buying and selling on different exchanges could give you profits. Now that systems are automated, noticeable price differences between the same stock on NSE and BSE are rarely seen. It will be similar for trading, as soon as we see an opportunity to trade, systems, which are much quicker than humans, will take better advantage of the situation. If you look at SEBI data, retail traders are mostly suffering losses and the large organisations that are profitable traders use such technologies.

Q. Given the uncertainties in the global economy—rising inflation, geopolitical tensions, and the risk of recessions—what strategies should retail investors adopt to

safeguard their wealth while still achieving growth?

Stop reading the newspaper. Something will always keep on happening, be it fluctuations of interest rate, sectorial problems, or geopolitical issues. Stock market is like a Salman Khan Film. Same story, same scene only the villain keeps on changing. The only rule which works in the stock market in the long run, and which is also the simplest one, is to invest in companies which are making good profit. Between 2002 to 2008 the sector which pushed India forward was the IT sector. In Jan 2008, after the US bubble burst, everyone said US and IT was finished. People started selling the IT stocks of Wipro, tcs etc. and the market crashed. But if you check the quarter result, all the IT companies were profitable and in fact they were increasing their revenue margins and the rate of growth was higher. Those who had purchased the stock at that time, I would say that probably their next few generations are financially free. My biggest advice to retail investors is that it doesn't matter what people are saying, whether interest rates are going up or down, one should keep it simple and invest in those businesses which you understand and that are profitable and will be needed in the future.

Q. Stock market bubbles and crashes have been a part of history. Do you think India is at risk of any major market corrections in the coming years? What warning signs should investors look out for?

If I quote the Goldman Sachs report or IMF report, most of them say that it is going to be a bit slow for Indian stock market till 2025 end and then they see it going up. But the biggest warning sign to any stock market crash in any part of the world is when the majority of retail investors start coming in. That's how stock market works. As we saw in the case of

Cryptocurrency, every second person was a crypto expert. The moment everyone enters the market, the game is absolutely over. As in the case of Harshad Mehta crash, when at the peak, everyone was investing in the stock market. I see the cab drivers, people travelling in the metro, employees, CEOs, everyone has become a stock market expert and they boast about their investment and portfolio. To quote Warren Buffett "Be fearful when people are greedy, be greedy when people are fearful". The biggest and only sign of a stock market crash is when the retail investment goes very high and it becomes higher than the promoters and FIIs.

Q. India is often referred to as the next big economic powerhouse. What specific industries or sectors do you believe will drive the Indian stock market in the next decade? Where should long-term investors focus their attention?

We are so fortunate to be in a country like India because at this point in time it is not common in other economies that every second sector has so much potential and growth prospects. I'm optimistic for almost all the sectors in India. But if I have to draw a niche I would be more optimistic about the service sector than the manufacturing sector. This is because though India as a country is pushing 'Make in India' campaigns but still if we see the ground reality, setting up a manufacturing unit is not easy. There are a lot of government regulations and protocols. Secondly, in the long run I believe that the health care sector will do fantastic. I'm also really optimistic about defence sector as India is looking to be a geopolitical superpower. We need to have a strong military. This is not even negotiable as we share border with Pakistan and China and unfortunately we don't have much friendly relations with them. Also because of Donald Trump and the Ukraine issue, most European countries are going to

invest more and more percentage of their GDP into defence. India can be a great option to buy for. The government is pushing the defense sector, there is an international need, and debt levels are decent. The only threat I see is that India needs to focus more on R&D. Other than that the Banking sector, automobile sector and automobile ancillary sectors are a few for which I'm very excited about.

Q. Many young people are interested in investing but feel overwhelmed by financial jargon, market volatility, and the fear of losing money. What's your advice for someone who is just starting their investing journey with no prior knowledge?

If someone is feeling overwhelmed by the stock market then something is wrong because stock market is the easiest thing in the world. It's just playing by simple logic. So if a person is getting overwhelmed there could be two possibilities. Either he doesn't understand the stock market or the person whom he is consulting is not able to make him understand. Don't try to complicate stuff and try to keep it simple. For someone who is starting their journey, my advice would be to not look at profitability. Just look at the ROI. Your target should be to beat NIFTY with approximately 3 to 4 percent. Even if a person has invested a small amount of rupees 1000 or 5000 or any smaller amount, my advice will be to not look at the profit of 100 or 200 rupees but rather focus on the profit as a percentile. Once he is stable on the returns on the nominal amount of 1000 rupees he can get the same on 10000, 20000 or even 1 lakh. So my advice would be to focus on ROI and take the benefit of compounding. Don't get into trading. Don't think that you are different and you are going to change the world with trading and you will do something which the world hasn't done. Investing should be your top priority. When you earn some good returns you may trade with a

small amount. You will soon realise that trading is nothing but a waste of time.

Q. Beyond just stock market knowledge, what other skills do you think are crucial for financial success in today's world? Are there any particular books, habits, or disciplines that have helped shape your financial mindset?

First thing will be money management, not saving. For Indians I feel that whenever I talk about money management people think I'm talking about savings. Money management is far beyond saving. It means making sure that you are enjoying life and spending money on things you like. So I would say that learning to manage money should be your first step. Second step should be to define your relationship with money. As children we know how to be around friends. We have fun, laugh and spend time together. We have a relationship with everyone around us. But with money we don't. As a result someone either grows to be really insecure about money and tries to save every second rupee as he is scared that he will lose everything or someone is just a spender who doesn't even care about money and spend everything or the person becomes an avoider who doesn't want to talk of money. So I feel that defining your relationship with money is really important. Acknowledging that it is important in life but it is not everything. The skills of how to manage money is definitely number one for achieving financial success.

Q. Looking ahead, what are your future plans for Goela School of Finance? Are there any new initiatives, courses, or projects in the pipeline that investors and learners should look forward to?

Yes, there are actually quite a few interesting things we are doing. What we have realised

from our experience is that not everyone has time to go through a 60 hours recorded course content and then apply it in real life. Maybe students have much more time than professionals ageing around 28-30. At that age many even start their family. So we are trying to make a consulting service for them where we will help them to invest for the long term. This is something we are really excited about in the near future.

Q. Investing is as much about psychology as it is about strategy. Can you share an instance where emotional control played a crucial role in your success or helped you avoid a significant mistake?

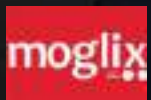
The reality is that you can't control your emotions. We are humans and that's the reality. The more you try to discipline yourself the harder it gets. It's not going to work. For me only animals are disciplined. Like we command a dog to sit down or command a lion to jump through the fire loop. Humans don't need to get disciplined. Do humans discipline themselves to not jump out of a metro or a rooftop? No, because they know the outcome. So it's very important for humans to know the outcome and stop trying to control their emotions. The only space when people get emotional is when they don't have data in their hand, when they don't know the outcome. One of our students was investing in the PayTM IPO when it came out. So much time had passed and he kept on purchasing PayTM at a lower and lower price and kept averaging his price down. Even after that he is sitting at a 35 percent loss on PayTM. Just because he is in hope that one day the stock will do well. My question is what is hope in the stock market? This is where the emotional challenge comes in. We don't know when to quit. The answer to all this is data. If that person was looking just at quarterly result he would have known that Q1 was bad. Q3 was abysmal.

Would he have invested more money in PayTM? No. So if one needs to control emotions, you need to have data. It doesn't matter what people are saying, whether it's a bull run or bear run because it changes every week in stock market. What matters the most is that he must know the data of the company and

he won't be scared. For those who have the data, there is no scope for emotions. For me the stock market is like a horse race. I love my horse a lot but when he is on the track (portfolio) he has to perform or he is out. There is no place for emotions and I make sure that I have the data and I know the numbers.

A portrait of Rahul Garg, a man with dark, curly hair, wearing a dark suit jacket over a light blue shirt. He is looking directly at the camera with a slight smile. His hands are clasped in front of him.

Disrupting traditional industries with technology isn't just about having a great idea, it's about execution, speed, and scale. My biggest advice to young entrepreneurs is to stay focused on solving real problems and be prepared for a long, sometimes unpredictable journey.



Moglix

RAHUL GARG, FOUNDER
ANMOL, Panelist

Q. Your journey from working at top companies like Google and ISB to founding Moglix is truly inspiring. What pivotal moments or experiences in your career shaped your decision to venture into the B2B manufacturing space?

My journey has always been about solving big, complex problems. During my time at Google, I saw firsthand how technology could transform entire industries. But when I looked at India's manufacturing sector, contributing nearly 17% to the country's GDP. I saw a huge gap. Procurement was fragmented, supply chains were inefficient, and digital innovation had barely scratched the surface.

I kept asking myself: Why hasn't technology changed the way factories and industries buy and operate?

That question led me to start Moglix in 2015. The idea was simple, bring technology into industrial procurement to make it faster, more transparent, and more efficient. Over time, this vision has evolved into something much bigger: reimagining supply chains for manufacturing with a tech-first approach.

Building Moglix has been an incredible journey, and what excites me the most is that we're just getting started. There's so much more to do to make manufacturing smarter, more resilient, and truly Aatmanirbhar.

Q. Every entrepreneur faces moments when things don't go as planned whether due to market shifts, competition, or unforeseen challenges. Can you share a time when Moglix faced a major setback, how you handled it, and what key lessons you took from that experience to turn things around?

In the early days of Moglix, one of our biggest challenges was convincing traditional manufacturers to shift from offline procurement to a digital platform. The industrial supply chain

had been running the same way for decades, and many businesses were skeptical about making the switch.

We realized early on that **trust was everything**, so we focused on delivering transparency, ensuring timely deliveries, and making the user experience seamless. Over time, this approach helped us onboard **700,000+ SMEs and 20,000+ suppliers**, building a strong ecosystem that proved the value of digital transformation. The biggest lesson? **Patience and persistence matter**. Change doesn't happen overnight, but when you stay committed to solving real problems, trust follows.

Then came **2020**, and the world changed overnight. The pandemic tested supply chains like never before, and businesses across industries faced unprecedented disruption. At Moglix, we knew we had a responsibility, to keep essential goods moving, no matter what.

We worked round the clock to ensure our supply chain stayed up and running, facing only **three days of disruption in March 2020**. From collaborating with **Dr. Reddy's Laboratories and Bharat Biotech** (the manufacturers of **Sputnik V and COVAXIN**) to ensuring supplies for **Air India's Vande Bharat mission, Tata Projects, and Tata Steel**, our priority was clear: **keep industries running and help India navigate the crisis**.

Through it all, what kept us going was our belief in a few core values, **fearlessness fuels innovation, ownership builds trust, and speed drives impact**. Looking back, these challenges weren't just obstacles—they were defining moments that shaped the company we are today.

Q. You've been recognized as a Fortune 40 Under 40 lister. How has this recognition influenced your vision for Moglix and your role as a leader in the industry?

Being named in Fortune India's 40 Under 40 in

019 wasn't just a milestone—it was a reminder that the journey of building, learning, and evolving never really ends. At Moglix, we set out to digitize and streamline industrial supply chains, but along the way, it became about something bigger: challenging old ways of working, earning trust in digital solutions, and making a real impact.

What this recognition really reinforced for me is that nothing stands still. The world moves fast, and to stay ahead, you must be willing to rethink, adapt, and grow—every single day. Speed and scale aren't just business metrics; they define how you navigate challenges and seize opportunities.

For us at Moglix, transforming industrial procurement has meant more than just technology. It has been about changing mindsets, fostering resilience, and building something that lasts. This recognition was never about looking back—it's about moving forward with even more passion, curiosity, and commitment to shaping the future of manufacturing.

Q. The B2B manufacturing and industrial supply industry in India is highly fragmented. What are the key trends you see driving consolidation and digital transformation in this space?

India's B2B manufacturing and industrial supply sector is rapidly evolving, driven by digital transformation and consolidation. Industry 4.0 technologies like AI and ML are enhancing efficiency and supply chain transparency, accelerating adoption across industries. Government initiatives like the PLI scheme are pushing manufacturers to scale and invest in technology. B2B marketplaces, including Moglix, are streamlining procurement and reducing inefficiencies, while strategic acquisitions strengthen ecosystems. Post-pandemic, resilience and sustainability are

non-negotiable, businesses are prioritizing agile, tech-driven supply chains. At Moglix, we're enabling this shift, helping businesses navigate uncertainty while driving growth and innovation.

Q. With the rise of Industry 4.0 and smart manufacturing, how do you see technology reshaping the industrial supply chain in India over the next decade?

India is entering an exciting "tech-ade" where digitalization is at the heart of industrial transformation. Historically, our economy has been services-driven, but to achieve the \$20 trillion GDP target by 2047, the manufacturing sector must grow to 22% of GDP. Technology is the enabler of this shift.

Industry 4.0 technologies are accelerating the adoption of smart factories, improving efficiency, predictive maintenance, and supply chain transparency. The rise of B2B e-commerce is revolutionizing procurement, making transactions seamless and unlocking efficiency for businesses of all sizes. While B2B e-commerce currently represents just 1% of the market, it is expected to reach 5% and grow into a \$200 billion sector by 2030.

At Moglix, we are at the forefront of this transformation. Our digital procurement and supply chain financing platforms are empowering MSMEs to streamline operations and expand their market reach. Additionally, India's robust digital payment infrastructure is making B2B transactions more efficient, reducing friction in trade, and driving financial inclusion. As more businesses digitize, India's industrial supply sector will become more resilient, competitive, and globally relevant.

Q. The government's push for initiatives like Make in India and Atmanirbhar Bharat has been significant. How has this impacted the industrial supply chain, and what role does Moglix play in supporting these initiatives?

Make in India and Atmanirbhar Bharat have been pivotal in reshaping India's industrial landscape. These initiatives aim to enhance domestic manufacturing, reduce import dependency, and increase the sector's contribution to GDP. However, for India to become a global manufacturing powerhouse, we must ensure that MSMEs who form the backbone of the economy are fully integrated into the formal industrial supply chain.

The informal sector, which employs nearly 80% of India's labor force and contributes 50% to GDP, faces critical challenges such as lack of formal job contracts, limited social security, and restricted access to credit. To bridge this gap, government initiatives like the Pradhan Mantri Mudra Yojana (PMMY) and Stand-Up India Scheme are providing microcredit and financial support to small businesses. However, further simplification of regulations and better access to benefits like pensions and health insurance will be key to unlocking the full potential of India's workforce.

Moglix aligns with these national priorities by offering digital procurement platforms that help MSMEs participate in organized supply chains, access working capital, and grow their businesses. Our collaboration with DPIIT showcases our commitment to strengthening India's manufacturing ecosystem, fostering innovation, and supporting businesses in navigating this evolving landscape.

As India scales up its manufacturing ambitions, integrating informal sector enterprises into digital trade ecosystems and improving financial access will be crucial. With the right policies and continued innovation, India is well-positioned to become a \$7 trillion economy in the next seven years and a \$20 trillion powerhouse by 2047.

Q. The pandemic disrupted global supply chains. What long-term changes have you observed in the B2B manufacturing sector post-COVID, and how is Moglix adapting to

these changes?

The COVID-19 pandemic reshaped the B2B manufacturing sector, exposing supply chain vulnerabilities and accelerating the need for digital transformation. Businesses are now focusing on resilience diversifying suppliers, strengthening digital capabilities, and shifting from just-in-time to just-in-case inventory strategies to mitigate risks.

At Moglix, we've adapted by expanding our digital procurement solutions, onboarding thousands of new suppliers, and enhancing real-time tracking to help businesses navigate disruptions with confidence. The shift towards digital B2B transactions has been massive, making efficiency, transparency, and agility more critical than ever.

Our goal is to empower businesses with the tools they need to build future-ready supply chains that are not just reactive but proactive, ensuring stability even in uncertain times. The lessons learned over the past few years are shaping a smarter, more connected industrial ecosystem, and we're excited to be at the forefront of this transformation.

Q. Moglix is known for its tech-driven approach to industrial supply chains. What specific technologies or innovations have you implemented to streamline procurement and supply chain processes for your clients?

At Moglix, we're reimagining the industrial supply chain with technology at its core. Our AI-powered procurement platform helps businesses cut procurement cycle times by up to 50%, optimize inventory, and unlock savings of up to 40%. With IoT-enabled tracking, we provide real-time visibility into shipments, ensuring proactive risk management and seamless logistics. Digital twins are another game-changer offering real-time insights and

predictive maintenance to keep supply chains running smoothly. Our e-procurement solutions simplify complex workflows, enhance collaboration, and drive cost efficiencies at scale.

By integrating AI and automation, we're making procurement smarter, supply chains more resilient, and businesses more agile helping them navigate disruptions, reduce costs, and scale with confidence.

Q. Your platform also offers supply chain financing solutions. How does this service address the pain points of SMEs, and what has been the response so far?

Credlix, the digital supply chain financing platform of Moglix, addresses the working capital challenges faced by SMEs. Access to timely credit is often a hurdle that slows down growth, and our solutions provide faster access to financing by leveraging transaction data to assess.

Q. What advice would you give to young entrepreneurs looking to disrupt traditional industries with technology-driven solutions?

Disrupting traditional industries with technology isn't just about having a great idea, it's about execution, speed, and scale. My biggest advice to young entrepreneurs is to stay focused on solving real problems and be prepared for a long, sometimes unpredictable journey.

Agility is key. Markets change fast, and so should you. The ability to adapt, experiment, and pivot when needed is what separates true disruptors from the rest. Stay close to your customers, listen to their pain points, and refine your solutions continuously.

Speed matters. The difference between success and a missed opportunity often comes down to how quickly you can execute. Move fast, optimize processes, and use technology to

automate and scale efficiently.

And when you think about scale, don't just think about growing bigger, think about growing smarter. Build systems that can handle complexity, invest in the right talent, and create structures that support long-term growth.

Most importantly, stay purpose driven. Building trust takes time, and real impact doesn't happen overnight. But if you stay committed to solving meaningful problems, success will follow. Keep learning, keep iterating, and most of all, enjoy the journey.

Q. Building and scaling a pioneering B2B commerce platform like Moglix require continuous learning and adaptability. Are there any TED Talks, books, or thought leaders that have profoundly influenced your entrepreneurial journey and leadership approach?

Books like *The Lean Startup* by Eric Ries, *Good to Great* by Jim Collins, and *The ONE Thing: The Surprisingly Simple Truth Behind Extraordinary Results* by Gary Keller and Jay Papasan have provided invaluable insights into building and scaling businesses with focus and efficiency. I also find inspiration in Simon Sinek's *Start with Why*, which emphasizes purpose-driven leadership. These perspectives have shaped my approach to decision-making, fostering innovation, and driving long-term impact.

Q. Moglix has grown exponentially since its inception. What are the key milestones you're most proud of? What is your future vision for Moglix? Are there any upcoming innovations, expansions, or new features that you're particularly excited about?

As Moglix celebrates **10 years of innovation**, we look back on a journey that has redefined industrial procurement and supply chains.

From launching Asia's largest B2B e-commerce platform to empowering 700,000+ SMEs and serving 3,000+ manufacturing plants, our impact spans across 19,000+ pincodes.

We've built India's most comprehensive industrial catalog, expanded to 58 fulfillment centers, and introduced next-day delivery in 12 cities—soon scaling to 40. Our AI-driven procurement solutions and the acquisition of Khatema Fibres reinforce our commitment to efficiency and sustainability.

Through Credlix, we've disbursed \$500M+ in supply chain financing, helping 5,000+ SMEs grow. During COVID-19, we supported 4 million people with oxygen cylinders and PPE kits worldwide.

Looking ahead, our partnership with DPIIT to launch a manufacturing incubation program marks the next phase of our vision—leveraging AI, expanding globally, and strengthening India's industrial ecosystem for the future.



Leading Audi India in a dynamic market has been a fulfilling journey. The luxury automotive sector presents unique opportunities and challenges, from evolving consumer preferences to increasing demand for sustainability and digitalization.

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Audi INDIA

BALBIR SINGH DHILLON, HEAD
PRAHARSH, Panelist

Q. Stepping into the role of Head of Audi India in 2019, you were entrusted with leading the brand in a highly competitive market. What were some of the biggest challenges you faced in your early days, and how did you navigate them to drive growth?

Taking charge of Audi India in 2019 was a pivotal moment for the brand amidst evolving customer preferences, stricter emission norms and the global shift toward electrification.

Transitioning to a BS6-only portfolio required temporarily streamlining our product lineup while ensuring clear communication with customers and dealers to maintain brand desirability.

We strengthened our product strategy, reintroduced models tailored to consumers and laid the foundation for our electric mobility journey with the Audi e-tron range. The COVID-19 pandemic added challenges, disrupting supply chains and altering customer interactions. In response, we accelerated digital initiatives like the 'myAudi Connect' app, virtual showrooms and an enhanced online sales platform for seamless, contactless experiences. By combining a strong product offensive, digital-first strategies and a focus on electrification, we reinforced Audi's position in India's luxury automotive market.

Q. Luxury car brands operate in a niche market in India. What do you think differentiates Audi from other luxury carmakers in the country? What is the key USP of Audi India in terms of products and services?

Luxury car brands operate in a niche segment in India. What truly differentiates Audi is our commitment to innovation, customer-centricity and progressive luxury. The brand with the four rings is synonymous with cutting-edge design, first-class quality, groundbreaking technology

and high performance—all deeply ingrained in our DNA.

2024 was a milestone year for us as we delivered our 100,000th car in India—an achievement that reflects the trust and loyalty of our customers. Today, every fourth Audi sold in India is purchased by an existing customer, highlighting the strength of our brand, the value we offer and the seamless ownership experience we provide. Over the years, Audi India has set industry benchmarks with several firsts:

- The first luxury carmaker to introduce the 24x7 'Top Assist' after-sales program in 2009.
- The first to sell 10,000 cars in a single financial year (2013).
- The first to open a luxury showroom in North East India (2015).
- Pioneers in launching high-performance EVs like the Audi e-tron GT and RS e-tron GT (2021).
- The first luxury brand to offer a 5-year warranty (2022).
- Establishing India's fastest 450KW EV charger and dedicated battery repair centers for e-tron models (2023).

Our key USP lies in this pioneering spirit—whether through our extensive product portfolio that spans from high-performance RS models to cutting-edge electric vehicles or our customer-first approach with industry-leading after-sales programs.

Our digital innovations, sustainable mobility solutions and unwavering commitment to redefining the luxury experience ensure that we continue to set new standards in the Indian automotive industry.

Q. The Indian automobile industry is going through a significant transformation, with electrification, sustainability, and digitization at the forefront. How do you see the Indian luxury car market evolving in the next five years?

The Indian luxury car market is evolving with electrification, sustainability, and digitization at its core.

EV adoption is accelerating, and Audi is expanding its e-tron range while strengthening infrastructure and after-sales support. Sustainability is now essential, with a focus on carbon neutrality and circular economy principles. Digitization is redefining luxury, from AI-driven services to connected cars and AR/VR showrooms. Audi leads this shift with innovations like the myAudi Connect' app and digital retail platforms. India is a dynamic and fast-evolving market, and we see a future where luxury is defined not just by performance and design but also by sustainability and intelligent digital experiences. Audi India is fully aligned with this shift and we are excited to drive the change.

Q. Luxury car buyers in India are becoming more tech-savvy and demand advanced digital experiences. How is Audi India integrating new-age technology, such as AI, connected cars, and autonomous features, to enhance customer experiences?

Luxury car buyers in India are increasingly tech-savvy and expect seamless, intelligent, and personalized experiences. At Audi India, we are at the forefront of this transformation, integrating cutting-edge technologies such as AI, connected car solutions and advanced driver assistance systems to enhance the overall ownership experience. Our myAudi Connect app is a key pillar of our digital ecosystem, offering customers real-time vehicle insights, geo-fencing, emergency assistance and concierge services, ensuring a connected and convenient driving experience. Additionally, Audi's Virtual Cockpit and MMI touch response system provide intuitive, high-resolution displays and AI-driven voice commands for effortless control. Beyond the car, we are leveraging AI and

AR/VR technology in our digital retail journey, allowing customers to explore, configure and experience their Audi virtually through immersive showrooms and online platforms. This blend of digitalization and intelligent mobility ensures that our customers enjoy a future-forward, tech-driven luxury experience with every Audi they own.

Q. Audi has announced that it will go fully electric globally by 2033. How does this impact Audi India's strategy, considering India's EV infrastructure is still developing? What are the challenges and opportunities in the Indian EV market?

The luxury EV industry in India is at a pivotal stage, driven by the growing focus on sustainability, increasing government support and evolving consumer preferences. While overall EV sales face temporary challenges, the luxury segment holds significant potential in India. India's growing base of high-net-worth individuals (HNIs) and the rise of eco-conscious consumers present a unique opportunity for us. These consumers are willing to invest in premium products that align with their environmental values.

Q. Many global brands are moving towards alternative fuels like hydrogen and synthetic fuels alongside EVs. Do you think India is ready for a diversified clean mobility ecosystem beyond electric vehicles?

India's transition to clean mobility is gaining momentum, with EVs leading the way. While technologies like hydrogen and synthetic fuels hold promise, their adoption will depend on infrastructure readiness, policy frameworks and market demand.

Q. With high import duties and taxation policies impacting luxury car pricing, many

brands face challenges in balancing value and exclusivity. How does Audi India navigate these factors to deliver a compelling proposition to its customers?

India's luxury car market operates within a unique framework of import duties and taxation, but we remain committed to offering a compelling value proposition as a brand. We balance exclusivity and accessibility through a strong mix of locally assembled models, best-in-class warranty and service packages and flexible finance options.

Beyond pricing, we focus on delivering a premium ownership experience through our dedicated after-sales programs and an expanding EV ecosystem. As the industry evolves, we continue to work with stakeholders to drive sustainable growth while keeping customer expectations at the core of our strategy.

Q. Leading a luxury car brand in a dynamic market like India must come with unique challenges. What has been the most rewarding aspect of your journey with Audi so far?

Leading Audi India in a dynamic market has been a fulfilling journey. The luxury automotive sector presents unique opportunities and challenges, from evolving consumer preferences to increasing demand for sustainability and digitalization. What truly makes this journey special is the trust and passion our customers have for the brand. Delivering our 100,000th Audi in India in 2024 was a major milestone, reflecting the strong bond we share with our customers. Notably, one in four Audis sold today goes to an existing customer, underscoring deep loyalty and satisfaction. Audi has led the way in electrification and digitalization, from introducing EVs in India to setting up the country's fastest

450kW EV charger. Our digital innovations continue to redefine customer interactions. Most importantly, it's the unwavering commitment of our team and dealer partners that drives our success. Seeing Audi India grow, innovate, and strengthen its position in the luxury space while enhancing customer experiences has been the most rewarding part of my leadership.

Q. Beyond cars, Audi has always emphasized an aspirational lifestyle-be it through motorsports, luxury events, or brand collaborations. What are some unique or unconventional ways Audi India has engaged with its elite customer base outside of the traditional dealership model?

Audi India organizes an array of exclusive and fascinating experiences that enable customers to Live Luxury. As a brand, we want to redefine luxury beyond cars with curated, tailor-made events for our customers, thus celebrating the diversity of luxury experiences.

We conduct Audi Club Rewards drives - an exclusive loyalty program that provides our customers the opportunity to explore different formats of drive that encompass different affinities of living luxury, like Wellness, Performance, Culinary, Lifestyle, Royalty and Wildlife. These exclusive events are curated only for our Club Rewards members.

We conducted 720+ custom-made events for our customers last year. In addition, we also give our top-end, RS/S and electric car owners the chance to experience the Audi ICE Experience in Austria and Finland - a one-of-a-kind experience that involves training, driving and drifting on sheets of ice.

Q. As the head of Audi India, what aspects of the brand's future are you most excited about, and how do you envision Audi's growth and evolution in the Indian market over the next few years?

Additionally, what kind of legacy do you aspire to leave behind, both for the brand and the team you've built during your leadership?

Audi India is at an exciting juncture and I am most enthusiastic about our continued growth in electrification, digitalization and customer experience. I see Audi India strengthening its position as a leader in progressive luxury, offering a seamless blend of performance, innovation and sustainability. Our commitment to human-centricity, strong dealer partnerships.

As for my legacy, I hope to leave behind a brand that is more connected, sustainable and future-ready than ever before along with a team that is empowered, passionate and committed to excellence. Audi's journey in India has always been about pushing boundaries and I am confident that we will continue shaping the future of luxury mobility in the country.



RESEARCH PAPERS



IMPACT OF UPI ON CONSUMER PAYMENT BEHAVIOR IN INDIA

BY RISHABH RISWADKAR,
RIDDHI BHARGAVA
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**"INDIVIDUALS
DO NOT ALWAYS
CHOOSE WHAT
IS BEST; THEY
CHOOSE WHAT
IS EASIEST."**

**— HERBERT A.
SIMON**

ABSTRACT

The Unified Payments Interface (UPI) has emerged as a transformative force in India's digital payment ecosystem, reshaping consumer financial behavior and accelerating the shift toward a cashless economy. This study examines the impact of UPI on consumer payment preferences, financial inclusion, and spending habits, drawing insights from both primary survey data and secondary sources. Through behavioral economic frameworks, including Prospect Theory and Mental Accounting, we explore how UPI adoption is influenced by factors such as ease of use, incentives, and security perceptions. Additionally, we analyze demographic variations in UPI usage and the challenges associated with its widespread adoption, including fraud risks and policy considerations. The findings highlight key trends in digital transactions, the role of government initiatives, and potential regulatory interventions to enhance security, sustainability, and inclusivity. By offering data-driven policy recommendations, this research contributes to a deeper understanding of UPI's

long-term implications on India's financial landscape.

KEYWORDS

UPI, digital payments, consumer behavior, financial inclusion, behavioral economics, India, security, policies.

INTRODUCTION

1.1 BACKGROUND

The rise of digital payments in India has been driven by technological advancements in the digital finance infrastructure, policy initiatives, and a wave of consumer adoption. UPI, launched by the National Payments Corporation of India (NPCI) in 2016, enables seamless, real-time, and interoperable transactions between bank accounts, in effect eliminating the need for intermediaries. According to the NPCI Sustainability Report 2023-24, the UPI has become a dominant force in the digital payment landscape, accounting for more than 80% of digital transactions in India. Policy initiatives such as the Digital India Programme by the Ministry of Electronics and Information Technology (MeitY) have further accelerated the adoption, versatility, and growth of the UPI infrastructure.

1.2 RESEARCH OBJECTIVES

- Critical analysis of the factors influencing the adoption of UPI across different demographics in India.
- Examination of how UPI has impacted consumer behavior in areas such as spending habits and payment preferences.
- Assessment of challenges faced by consumers and merchants in the adoption and use of UPI.
- Explore the adoption of UPI using behavioral economics.

- Understand the influence of regulatory policies and government initiatives on UPI.

1.3 Research Questions

1. What are the key drivers in the adoption of UPI?
2. How has UPI influenced spending habits and reduced dependence on cash?
3. What demographic trends can be inferred from the usage of UPI across different income and education levels?
4. What challenges hinder the adoption of UPI to its full potential in rural India?
5. How do behavioral economics principles influence UPI adoption, incentives, and long-term usage?

LITERATURE REVIEW

2.1 KEY DRIVERS OF UPI ADOPTION

Ali, Akhtar, and Haque (2024) highlight the role of consumer awareness in the adoption of UPI and digital transactions across both rural and urban demographics. The study identified ease of use, scope for acceptance at stores, and cashless payments as the primary key drivers. It further lays emphasis on trust and awareness as crucial determinants for payment preferences.

Swain and Rout (2024) explored the tendency to adopt UPI when they trust the system's security, especially biometric and two-factor authentications. The ease of payments has led to increased discretionary spending among young consumers, particularly for food delivery and e-commerce.

2.2 DEMOGRAPHIC TRENDS IN UPI USAGE

Manda et al. (2024) highlight that higher-income and well-educated users are more likely to use UPI due to their higher digital literacy and greater access to banking services. It also underscores the need for

financial literacy programs and digital financial infrastructure improvements to bridge the gap across demographics.

Jacob et al. (2024) investigated factors influencing the behavioral intention to use UPI applications among low-income Indian consumers. They found that performance expectancy, effort expectancy, and facilitating conditions positively influence the intention to use UPI apps, whereas perceived risk acts as a barrier. Notably, social influence did not significantly affect usage intention among low-income consumers. These insights emphasize the importance of improving user-friendly features and mitigating security concerns to drive UPI adoption in low-income segments.

2.3 CONSUMER BEHAVIOR

Razi-ur-Rahim, Rabbani, Uddin, and Shaikh (2024) studied UPI adoption among urban Indian users using the extended meta-UTAUT model and found that performance expectancy influences use behavior, attitude affects behavioral intention, and trust shapes attitude. Based on data from 894 users, the findings support enhancing UPI features and easing CBDC adoption.

Padvi and Mishra (2025) investigate the impact of UPI adoption on the business performance of retailers in Nandurbar District. They found that UPI users have greater purchasing power than cash users, with digital payments significantly reducing offline transactions. Their study highlights UPI's role in enhancing financial security, promoting transparency, and driving economic growth in India.

Kumar (2024) examined customer perceptions of mobile wallets in rural Haryana, finding that perceived usefulness, attitude, and risk perception significantly impact adoption. The

study highlights increasing acceptance of UPI apps, influenced by demographics like education and occupation, and recommends awareness initiatives to address security concerns.

2.4 RESEARCH GAPS

While studies do explore the consumer behavior aspect of UPI adoption among Indian consumers, there is a lack of use of behavioral economics theory to try and understand the factors influencing and the impact they will have in both the short and long term.

Studies point out the low adoption of UPI among rural consumers, but there is a lack of research on cultural and psychological barriers. The effectiveness of government interventions such as Digital Literacy missions has not been properly analyzed, opening the door for policy recommendations. Additionally, there is also no proper publication of data from either the Ministry of Finance or the NPCI on the actual cost of these incentive schemes, programs and, most importantly, the cost of keeping the UPI transaction-charge free, including 0% merchant discount rate (MDR). However, the government is weighing bringing back merchant charges on UPI for large merchants.

In terms of primary research, there exist regional studies that explore the UPI infrastructure and its adoption among consumers, but due to the varied demographics across the country, it would be wrong to generalize the results to a national level.

Most of the existing literature focuses on transaction volume and frequency but does not take into account individual-level finance and behavior. More research into personal-

level financial management surrounding UPI can help uncover the impact of credit-based UPI transactions such as Buy Now Pay Later (BNPL) in a more deterministic manner. While it is not the objective of this paper, similar research into merchants at an individual level can help understand the drivers and challenges in the adoption of UPI, especially among small merchants.

Since security and trust are both major drivers and challenges in the adoption of UPI, further research can be done into the integration of AI and blockchain into the digital infrastructure. This can be especially useful in countering scams such as OTP scams and phishing.

RESEARCH METHODOLOGY

3.1 PRIMARY RESEARCH

Primary data was collected through an online survey to understand the impact of UPI on consumer behavior in India. The survey was designed to capture quantitative and qualitative insights into UPI usage, preferences, and perceptions.

Table-1 Research Methodology

Research Design	Descriptive
Sample Method	Non-Probability - Convenient Sampling method
Data Collection Method	Primary method
Questions	Structured Questionnaire 18 Close-ended Questions (See Appendix A)
Data Collection Mode	Online through Google Form
Data Analysis Methods	Tables
Data Analysis Tools	Python and Excel
Sampling Size	126
Sampling Unit	Students, salaried employees, self-employed individuals, business owners, retired individuals, and homemakers

Source: Authors' Compilation

3.2 SECONDARY RESEARCH

In addition to primary data collection, secondary research was conducted to provide a broader context for UPI adoption trends in India. This involved reviewing reports from government agencies, financial institutions,

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Key sources for secondary research:

- Reserve Bank of India (RBI) Reports
- National Payments Corporation of India (NPCI) Publications
- Industry Reports and Market Analysis:
- Academic Research Papers

ANALYSIS

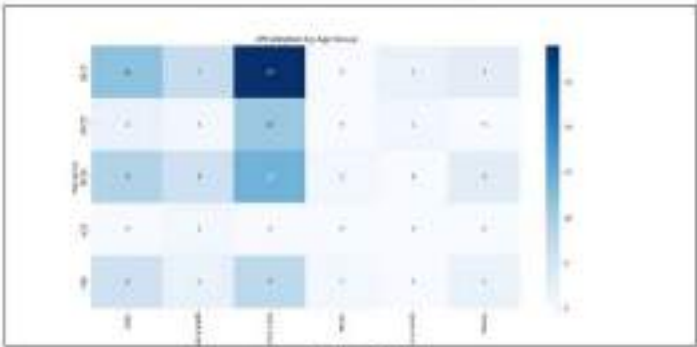
4.1 PRIMARY DATA ANALYSIS

CHI-SQUARE TESTS

(a) Age vs. UPI Usage Frequency ($\chi^2 = 18.54$, $p = 0.552$)

- The high chi-square value (18.54) suggests some variation in UPI usage across age groups.
- However, the p-value (0.552) is much greater than 0.05, meaning this relationship is not statistically significant. Age does not appear to be a strong predictor of UPI usage frequency.

Chart-1 Age vs. UPI Usage Frequency



(b) Cashback Influence on UPI Usage ($\chi^2 = 3.48$, $p = 0.626$)

- The low chi-square value (3.48) indicates a minimal association between cashback

cashback incentives and UPI adoption.

- A high p-value (0.626) suggests no significant influence, implying that cashback offers do not strongly affect users' choice to use UPI.

(c) Perceived Taxation Impact on UPI Usage ($\chi^2 = 15.97$, $p = 0.043$)

- A chi-square value of 15.97 with a p-value of 0.043 suggests a statistically significant relationship.
- This means that perceptions of taxation impact do influence UPI usage behavior, likely indicating that users consider tax policies when deciding on digital payments.

(d) Traditional Banking Decline vs. UPI Growth ($\chi^2 = 11.22$, $p = 0.341$)

- The chi-square value (11.22) is moderate, but the high p-value (0.341) indicates that the decline of traditional banking is not significantly linked to UPI growth.
- This suggests that UPI adoption may be independent of users' perception of decline in traditional banking.

(e) Occupation vs. Preferred Payment Method ($\chi^2 = 36.15$, $p = 0.053$)

- A high chi-square value (36.15) suggests some dependence between occupation and payment preference.
- The p-value (0.053) is very close to the significance threshold of 0.05, implying a marginally significant relationship. This indicates that occupation may play a role in payment preferences, but more data might be needed to confirm this.

(f) Security Concern vs. UPI Usage ($\chi^2 = 24.02$, $p = 0.065$)

- A relatively high chi-square value (24.02) indicates potential dependence between security concerns and UPI usage.

- However, the p-value (0.065) slightly exceeds the 0.05 threshold, meaning the relationship is not statistically significant but is close enough to warrant further investigation.

(g) UPI App Preference vs. UPI Usage ($\chi^2 = 216.81$, $p < 0.0001$)

- The very high chi-square value (216.81) suggests a strong association between users' preferred UPI app and their UPI usage frequency.
- The extremely small p-value (< 0.0001) confirms that this relationship is highly significant, indicating that app choice plays a crucial role in usage frequency.

Predictive Modelling and Sentiment Analysis

Please note that we have run models suitable for large sample sizes on a small sample size, leading to lower accuracy. However, this study can be eventually expanded into one with a larger sample size, in which case we would just have to alter the dataset in the code.

1. Tax Preference Prediction Using Logistic Regression

Accuracy: 76%

Logistic Regression was applied to classify whether a user would continue using UPI if a tax were introduced. The response variable was converted into a binary outcome ("Yes" vs. "No/Maybe"). Logistic regression was suitable because it estimates the probability of a user falling into one of the two categories. With an accuracy of 76%, the model effectively captures trends in user behavior, suggesting that transaction habits (frequency, amount, and demographics) significantly influence tax preferences. However, since this is a simple linear model, it assumes a logit (log-odds) relationship between features and tax preference, which may not always be

ideal.

2. Tax Preference Using Support Vector Machine

Accuracy: 76%

SVM was used as an alternative to Logistic Regression for tax preference classification. The linear kernel was chosen to maintain interpretability. The accuracy of 76% matches that of Logistic Regression, suggesting that UPI tax preference is linearly separable based on the given features.

3. Fraud Prediction Random Forest Classifier

Accuracy: 59%

This model predicts whether a user has experienced or knows someone who has experienced UPI fraud. Since fraud cases are imbalanced (most responses are "No"), SMOTE (Synthetic Minority Over-sampling Technique) was used to balance the dataset. Random Forest was chosen due to its ability to handle non-linearity and avoid overfitting.

Precision-Recall Tradeoff:

- Precision for "Yes" (Fraud Experienced) → 0.00
- Recall for "Yes" → 0.00
- Precision for "No" → 0.62
- Recall for "No" → 0.93

The Random Forest Classifier was trained to predict whether a user had personally experienced or knew someone who had experienced UPI fraud. However, despite an overall accuracy of 59%, the model performed poorly in detecting fraud cases (0% recall for fraud cases).

Key Observations:

- Severe Class Imbalance: Most respondents reported no fraud experiences, leading the model to predict "No" almost always.

- Low Sensitivity: The model fails to detect fraud cases, making it unreliable for real-world fraud detection.
- Overfitting to Majority Class: The model is biased towards predicting "No" since fraud cases are rare.

For a larger, more robust, and accurate dataset, this model would definitely perform better.

4. Global UPI Adoption Sentiment Analysis

The survey data reveals the following user opinions on the potential global adoption of UPI:

- 55.37% of respondents support UPI's global expansion, seeing it as beneficial for international transactions.
- 41.32% express conditional support, emphasizing the importance of strong security measures.
- 3.31% believe India's digital infrastructure should remain local and not expand globally.

Interpretation & Insights

A majority (96.7%) of respondents are open to UPI's global expansion, indicating strong confidence in its ease of use and efficiency. A significant portion (41.32%) would only support global UPI if security is robust, highlighting a critical factor for international adoption. Only a small fraction (3.31%) prefer restricting UPI to India, suggesting that concerns about sovereignty or exclusivity are not widespread.

5. Public Sentiment on India Becoming Cashless in 10 Years

The survey data reveals the following perspectives on whether India can become completely cashless within the next decade:

- 41.32% believe that India can become cashless in the next 10 years.
- 57.85% think that some reliance on cash

- will always remain, even if digital transactions dominate.
- 0.83% feel that India will never go fully cashless.

Interpretation & Insights

- **Optimism Toward a Cashless Future:** A substantial 41.32% believe in the possibility of a fully cashless India, reflecting confidence in UPI, digital banking, and fintech advancements.
- **Skepticism About Complete Elimination of Cash:** The majority (57.85%) foresee a dominant digital economy but recognize that cash will still play a role due to accessibility issues, rural dependency, or behavioral inertia.
- **Minimal Absolute Resistance:** Only 0.83% believe India will never go cashless, suggesting that even skeptics acknowledge digital transactions as the future.

4.2 SECONDARY DATA INSIGHTS

Transaction Volume and Value Over the Years:

Chart-2 Volume of UPI Transactions



As can be seen from the growth of the volume of transactions, the adoption of UPI has seen a sharp increase since its launch, with only a few minor downward trenches.

Chart-3 Value of UPI Transactions

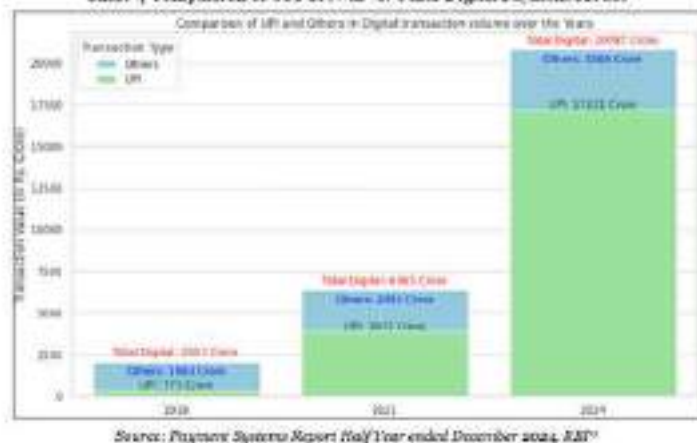


The value of UPI transactions has seen a similar trend since its launch. Both of these statistics support the strong consumer adoption of UPI in India.

Comparison of UPI Growth vs. Other Digital Payment Modes:

In the Payments Systems Report published by RBI, it has been reported that UPI's contribution to digital payments volume has increased from 34% in 2019 to 83% in 2024. On the other hand, other digital payment systems such as RTGS, NEFT, IMPS, credit cards, and debit cards have seen a decline from 66% to 17% in the same period.

Chart-4 Comparison of UPI Growth vs. Other Digital Payment Modes



Growth of P2M and P2P UPI transactions:
UPI has seen tremendous growth in both peer-to-peer (P2P) and person-to-merchant (P2M) transactions, reflecting its widespread adoption and change in consumer payment

behavior. The growth trajectory has been, in essence, similar for both; however, P2M transactions surpassed P2P transactions in 2023, but by the value of transactions, P2P is almost thrice that of P2M. The volume aspect of transactions is visible in the primary dataset as well. (Refer to Chart-7)



UPI-Related Frauds:

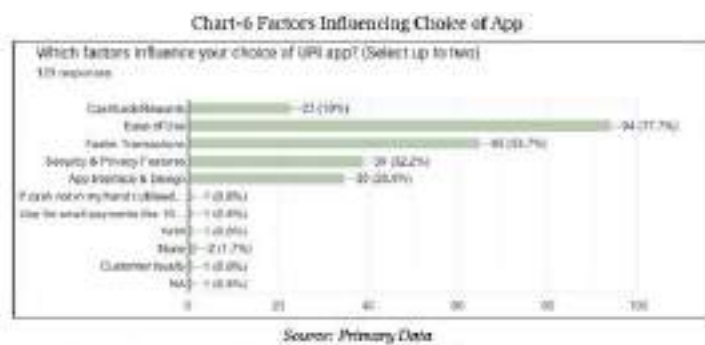
The surge in digital transactions has been coupled with a rise in digital frauds such as phishing, vishing, SIM cloning, QR code tampering, and many more. Since security and trust are two major drivers and challenges, it is important for all stakeholders in the digital payments infrastructure to understand and counter them. In FY24, cyber fraud cases jumped more than four times and caused losses of over \$20 million. According to a news article, in 2023, over 55% of the cyber frauds in India were UPI-related. This negatively hinders the adoption of UPI, as it decreases incentive and increases risk.

4.3 BEHAVIORAL ECONOMICS ANALYSIS

The way the introduction of UPI has changed consumer payment behavior and payment preferences can be better understood from a behavior-economic standpoint.

Kahneman and Tversky's Prospect Theory (1979) posits that individuals perceive losses more intensely than equivalent gains. This principle applies to UPI adoption because consumers tend to avoid cash payments due

perceived inconvenience and potential loss of discounts/cashback offered on UPI. Banks, fintech firms, and merchants make use of this loss aversion by structuring incentives in a way that makes digital payments appear more beneficial than cash payments. This claim is further supported by the primary data collected, where *ease of use*, *faster transactions*, and *cashback* are three of the top five factors driving the choice of the UPI app.



Present Bias and Hyperbolic Discounting explains why individuals tend to prefer(value) immediate rewards over future benefits disproportionately. UPI's seamless and instant payment feature caters to this bias, making it preferable over delayed payments such as credit cards or traditional banking transactions. Hence, consumers lean towards using UPI for instant gratification, facilitated by the integration of UPI in e-commerce and food delivery platforms. This claim is further supported by the primary data collected.

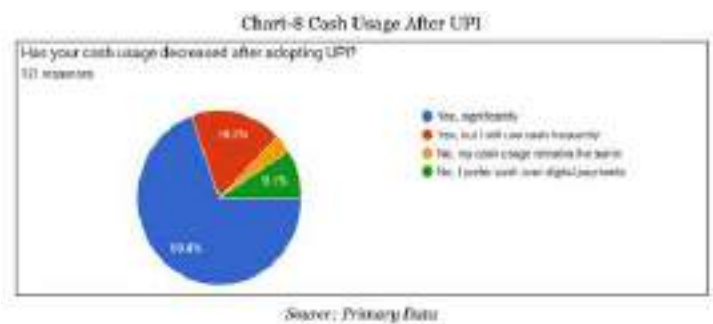


Thaler's Mental Accounting Theory (1985) suggests that individuals categorize money

into different “accounts” and spend accordingly. UPI has altered consumer spending behavior by reducing the psychological barrier associated with parting with physical cash and also the mental strain of calculating change when making payments. UPI payment apps make transactions feel less tangible, leading to higher discretionary spending. Users of UPI also tend to spend more on micro-transactions such as food delivery and ride payments than cash users.

Despite UPI’s convenience, some consumers resist shifting from traditional payment methods due to the **Endowment Effect (Thaler, 1980)** and **Status Quo Bias (Samuelson & Zeckhauser, 1988)**. These biases explain why certain demographics, such as older individuals or those with low digital literacy, prefer familiar cash-based transactions despite the objective benefits of digital payments. This assertion is not supported by the correlation between age and UPI usage from the primary dataset, but it cannot be rejected completely on a generalized level due to the small sample size and use of the convenience sampling method.

Herbert Simon’s Bounded Rationality theory (1955) suggests that individuals make decisions with limited information and cognitive constraints. UPI has simplified the payment process by reducing the time taken and eliminating transaction costs, making it simple and, in turn, the default payment preference for many. Due to the integration of UPI into various commerce and retail platforms, this is coupled with the elimination of bank and ATM visits. This claim is strongly supported by the primary data, where nearly 70% of respondents reported that their cash usage has decreased *significantly* after the adoption of UPI.



Behavioral economic theories can provide a deep and nuanced understanding of UPI adoption and usage patterns, addressing both the drivers and challenges. Cognitive biases such as present bias and loss aversion have shaped consumer preferences surrounding digital payments, and the same is used by businesses and merchants to incentivize consumers.

POLICY RECOMMENDATIONS

As UPI continues to dominate India’s digital payments landscape, ensuring its long-term sustainability, security, and inclusivity is crucial. While its rapid adoption has driven financial inclusion, challenges such as fraud risks, data privacy concerns, and revenue sustainability must be addressed. The following policy recommendations, inspired by global best practices and tailored to India’s unique financial ecosystem, aim to enhance UPI’s efficiency, security, and accessibility.

1. Implementing a Tiered Merchant Discount Rate (MDR) Structure

To ensure the financial sustainability of the Unified Payments Interface (UPI), India could adopt a tiered MDR model. This approach would involve charging larger merchants a nominal transaction fee while keeping transactions free for micro and small businesses. Such a structure is inspired by Brazil’s Pix system, which offers lower transaction costs for merchants compared to traditional card payments. Specifically, Pix

transactions cost merchants approximately 0.22% per transaction, whereas debit card fees are over 1%, and credit card fees can reach up to 2.2%. Adopting a similar model could balance cost-effectiveness with sustainability for UPI.

2. Enhancing Security Through Strong Customer Authentication (SCA)

To bolster security and reduce fraud, India can implement Strong Customer Authentication (SCA) protocols akin to the European Union's Payment Services Directive 2 (PSD2). SCA requires authentication based on at least two of the following elements: knowledge (something only the user knows), possession (something only the user possesses), and inherence (something the user is). This multi-factor authentication approach ensures that electronic payments are performed securely, thereby enhancing consumer protection.

3. Promoting Financial Literacy and Digital Inclusion

To increase UPI adoption in rural and underserved areas, targeted financial literacy programs should be implemented. These programs can educate users about the benefits and usage of digital payment systems, drawing inspiration from successful initiatives like Kenya's M-Pesa, which significantly boosted financial inclusion through widespread agent networks and user education.

Collaborating with local communities and leveraging existing government schemes can further enhance the reach and effectiveness of these programs.

4. Strengthening Data Privacy Regulations

As UPI transactions generate substantial amounts of financial data, robust data protection regulations are essential. India can

look to the European Union's General Data Protection Regulation (GDPR) as a model, which mandates explicit consumer consent for data usage and grants individuals greater control over their personal information. Implementing similar regulations would enhance consumer trust and ensure that data is handled responsibly. The U.S. too, has implemented measures to supervise large nonbank payment companies, ensuring they adhere to federal laws designed to protect consumers and their personal data. India could adopt similar regulatory frameworks to ensure that digital payment providers implement robust data protection measures, thereby enhancing consumer trust and participation in the digital economy.

5. Establishing a Dedicated Regulatory Body for Digital Payments

To enhance oversight and consumer protection within India's digital payment ecosystem, the establishment of a dedicated regulatory body similar to the U.S. Consumer Financial Protection Bureau (CFPB), is recommended. The CFPB supervises nonbank companies offering digital funds transfer and payment wallet apps, ensuring compliance with federal laws and safeguarding consumer interests. A comparable entity in India could oversee digital payment providers, enforce regulations, and address consumer grievances effectively.

CONCLUSION

The Unified Payments Interface (UPI) has undeniably revolutionized India's digital payment ecosystem, driving widespread adoption across diverse demographics. Through our research, we have identified key factors influencing UPI's success, including ease of use, financial incentives, and behavioral economic drivers such as loss

aversion and present bias. The empirical findings demonstrate that while UPI has accelerated financial inclusion and reduced reliance on cash transactions, challenges such as security concerns, digital fraud, and sustainability of zero-MDR policies persist.

Our analysis also highlights the role of regulatory frameworks and government initiatives in shaping UPI's trajectory. The rapid adoption of UPI has implications beyond digital payments, influencing consumer spending habits and reshaping financial

behaviors. However, as India moves closer to a digital-first economy, ensuring the security, scalability, and financial viability of UPI will be crucial.

Looking ahead, continued research is needed to explore the long-term impact of UPI on consumer financial health, the effectiveness of policy interventions, and its potential for global expansion. By addressing existing challenges and leveraging behavioral insights, policymakers and fintech stakeholders can further enhance UPI's role as a cornerstone of India's digital economy.

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QUICK COMMERCE IN INDIA - SUSTAINABLE BUSINESS MODEL OR A BUBBLE WAITING TO BURST?

BY ARCHIT JAIN
MAHIMA MANUJA
SHRI RAM COLLEGE OF COMMERCE

**“AMAZING
THINGS WILL
HAPPEN WHEN
YOU LISTEN TO
THE
CONSUMER.”**

**– JONATHAN
MIDENHALL,**

ABSTRACT

The quick commerce industry in India has shown rapid growth, driven by urban consumers demand for convenience and speed. But this growth is constrained by significant challenges, including income inequality, limited market size in Tier 1 and Tier 2 cities, and high operational costs. With only 7% of the population purchasing goods online and a majority prioritizing affordability over convenience, the sector's scalability remains limited. Competition is further heightened by the need for venture capital funding, unsustainable unit economics, and the arrival of e-commerce behemoths like Amazon and Flipkart. The structural obstacles to rapid commerce expansion are examined in this research, including the widening economic gap, low average order values, and the cost of operating dark businesses. It comes to the conclusion that although rapid commerce has potential, its development will be modest, and that only three to four large firms would likely be able to survive in the Indian market over the long term, with consolidation becoming unavoidable as the

industry develops. The findings in this research paper evaluate the whole scenario of problems which surrounds quick commerce in India.

INTRODUCTION

When we think about the future, we hope for a future of progress. That progress can take one of two forms. Horizontal or extensive progress means copying things that work—going from 1 to n. Horizontal progress is easy to imagine because we already know what it looks like. Vertical or intensive progress means doing new things—going from 0 to 1. Vertical progress is harder to imagine because it requires doing something nobody else has ever done. If you take one typewriter and build 100, you have made horizontal progress. If you have a typewriter and build a word processor, you have made vertical progress (Thiel & Masters, 2014).

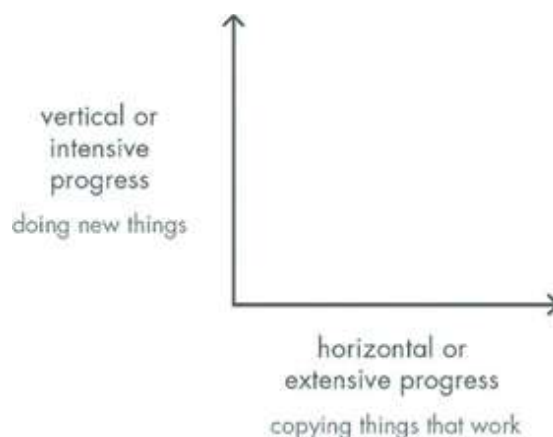
India's quick commerce is now MAKING A VERTICAL PROGRESS where all companies are now just following the same 10-30 minutes delivery model with NO innovation.

1.What is Quick Commerce and how is it different from traditional concepts?

How often have you felt the need to get the products delivered to your doorstep instantly? E-commerce landscape has transformed completely, Quick commerce is transforming the E-commerce industry in India by offering Fast delivery (10-30 minutes) for goods like groceries, fashion, medicines, and personal care items. By words, it is a model that delivers products to customers in the shortest possible time from dark stores to consumers. Fundamentals of quick delivery were borrowed from the AmazonPrime's value proposition, Quick commerce companies

moved this from fast to instant gratification, reducing the desire-to-consumption cycle to 10-30

minutes (Quick Commerce Is New E-commerce: What Began as a Gimmick Is Now a Tsunami Threatening Traditional E-commerce, 2024).



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minutes (Quick Commerce Is New E-commerce: What Began as a Gimmick Is Now a Tsunami Threatening Traditional E-commerce, 2024).

Now, first of all, what is E-commerce and hyperlocal delivery model?

E-commerce (electronic commerce) is the buying and selling of goods and services, or the transmitting of funds or data, over an electronic network, primarily the internet. These e-commerce transactions typically fall within four types: business-to-business, business-to-consumer, consumer-to-consumer or consumer-to-business (Hashemi-Pour & Lutkevich, 2023).

Quick commerce (Q-commerce) started by concentrating on rapidly moving essentials such as groceries and personal care, within a confined category scope. On the contrary, e-commerce has always involved a wide spectrum of products, ranging from electronics to fashion, with an outlook towards variety and price rather than speed. Previously, there was no meaningful disruption between the two since their value propositions at the core were different. Quick commerce players are now, however, venturing into categories outside essentials, going into electronics, beauty, and even high-value items. This is putting them in direct competition with traditional e-commerce.

The challenge for quick commerce in this growth is logistics and cost efficiency. We'll understand this in detail, whereas grocery delivery is built on high frequency and frequent buying, larger and lower frequency items need different operating models. If quick commerce players do not optimize logistics for these new categories, they are likely to dilute their core competitive advantage—ultrafast delivery.

Now let's understand hyperlocal delivery model. The word 'hyperlocal' means going local in your business.

A hyperlocal delivery model is an online business model in which the on-demand needs of customers are met through local offline shops via a digital app. The main benefit of such a delivery model is that the needs of customers are easily met. The demand for goods and services

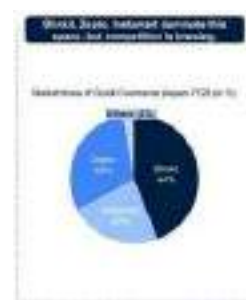
of customers like grocery, medicine, laundry service, etc. are met instantly (What Is Hyperlocal Delivery? | What Is a Hyperlocal Business, n.d.).

2. What led to the rise of 10 minutes delivery in India.

Urbanization, busy lifestyles, Covid 19 and the rise of e-commerce have created the demand for instant delivery services. Instead, they prefer apps that deliver groceries to their doorstep in 10 minutes or less. This trend has led to the emergence of platforms like Blinkit, Zepto, and Swiggy Instamart, which promise delivery with exceptional speed. For businesses, this presents an opportunity to tap into a lucrative market by investing in grocery delivery app development. A well-designed app with advanced features can cater to consumer demands while ensuring operational efficiency ((11) India's Leading 10-Minute Grocery Delivery Apps to Explore | LinkedIn, 2024).

1. Major Players in India –

Zepto, Blinkit, Swiggy, Instamart, Dunzo, Reliance JioMart, Flipkart Quick, Amazon Fresh, etc.



Over the past few years, the high growth of quick commerce in India has revolutionized the retail industry by offering ultra-fast delivery of basic goods to urban consumers. Zepto, Blinkit, and Swiggy Instamart are among the companies leading this trend through deep discounting, frequent orders, and high venture capital investment. But as they start expanding product lines and enter Tier 2 and Tier 3 markets beyond metros, very fundamental questions exist regarding their viability in the long run. Costly operations, difficulties in scaling to Tier 2 and Tier 3 geographies, and fierce competition from established Kirana stores raise doubt about this model of business. This research paper aims to analyze if rapid commerce is a sustainable business model in India or a bubble ready to burst?

India's Consumption Model

To grasp quick commerce, one must first examine India's consumption pattern. India's economy is primarily driven by consumption [PFCE], with Private consumption forming the backbone of GDP {figure 1}. This dependence on consumption reflects not only the behavior of the market but also the critical role that retail and services play in overall economic growth of India which might not be fruitful for the country but it is for the quick commerce sector (Pai et al., 2025).

Given that India's GDP is largely dominated by consumption and the services sector, there is a significant opportunity for the quick commerce industry. However, while this environment appears favorable for rapid expansion, further analysis suggests that certain facets of India's consumption model may not ultimately support the long-term sustainability of quick commerce. In this section and the next one, I will summarize the relevant data and examine these limitations

which the quick commerce sector may have to deal with.

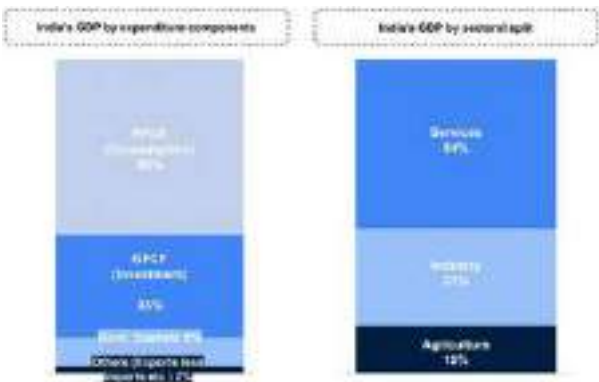


FIGURE – 1 {Sources – MOSPI}

India's private final consumption expenditure accounts for 56% of GDP, while the service sector contributes 54% to the country's overall economy (figure 1). In India's consumption economy, retail and services contribute 55% and 40%, respectively. Within retail, grocery and FMCG make up 50% of the 55% share (figure 2). In India's retail sector, 93% of sales come from offline channels, while only 7% happen online (Figure 2). This 7% is where quick commerce operates as of now (it would grow definitely but not with CAGR as quoted). Out of the total 55% retail sales, 71% goes to non-discretionary spendings (essential goods), while 29% is discretionary spendings (non-essential goods) (Pai et al., 2025).

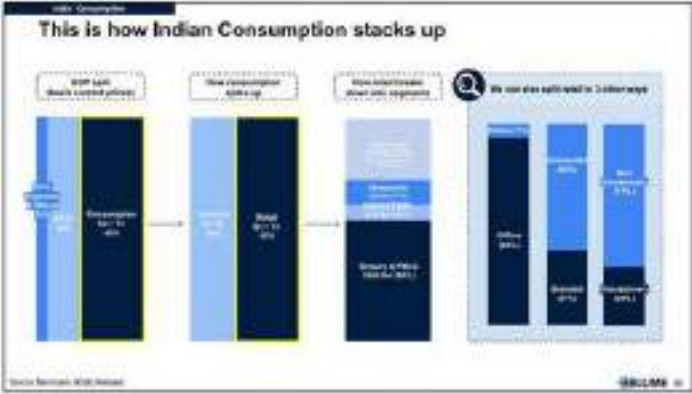


FIGURE – 2 {Sources – MOSPI}

Here comes the most important part of India's consumption model, India's consumption model lies at a very low base (where China was in 2010) divided into three segments: India 1, India 2, and India 3, based on income and consumption pattern.

The population is divided into three broad segments: India 1, India 2, and India 3, with very disparate consumer behavior. India 1 comprises the top 10% of the population and contributes almost two-thirds of the total discretionary expenditure. India 2, comprising 23% of the population, contributes the balance discretionary expenditure. The largest segment, India 3, comprises the majority two-thirds of the population, for whom discretionary expenditure is zero. For them, discretionary consumption generally involves the application of savings, revealing the financial weakness of the majority of the country.

The income distribution of India's population, as per UBS 2023, is extremely uneven, which is the reason for this classification where the majority earning under 10000-12000 per month. The following breakdown, as seen from figure 3, shows the discretionary spendable power to be skewed towards a small population segment (less than 120 million population), and this has direct implications for the expansion of quick commerce.

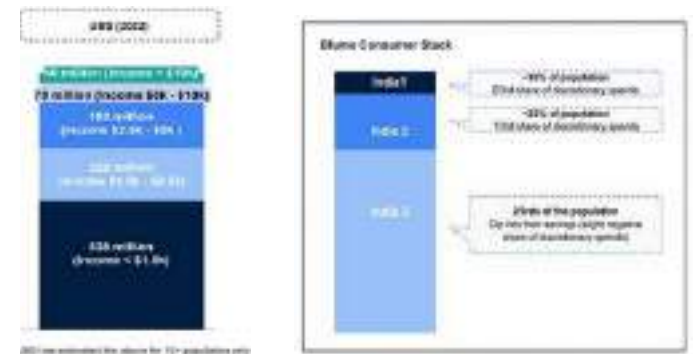


FIGURE – 3 {Sources – MOSPI}

Financials of Quick Commerce Industry:-

1. Dark store model

Dark stores are walk-in-less supermarkets; they are located in commercial belts surrounding high-density, high- and mid-income areas, usually 2,500–4,000 sq.ft.in size and designed for loading high volumes of goods for quick commerceplatforms. Dark storesdeliver orders only within a 2–3 km radius, chosen based on parameters such as the number of homes, incomes, and infrastructure. To supplythe dark stores,enormous "mother warehouses" (20,000–175,000 sq.ft.) on city peripheries act as central procurement and distribution centers. With dynamic assortment and technology-enabled organization, dark stores deliver2–3 times the throughput of well-designed offline supermarkets.

2. Profitability

Zomato's CEO Deepinder Goyal revealed that the total quarterly quick commerce industry cash burn is Rs 5,000 crore, while Zepto alone burned Rs 2,200-2,300 crore last quarter. However, Blinkit's burn rate is Rs 35 crore per month (Awasthi, n.d.). At present,none of the players in Quick commerce are profitable. While Zepto's losses have increased to Rs 1,272 crore in FY23 from Rs 390 crore in the last financial year, Swiggy's losses increased to Rs 4,179 crore, as against a loss of Rs 3,629 crore in FY22. Blinkit is attempting a breakeven in Q1 FY25,following its lossesincreasing to Rs 1,190 crore in FY23 from Rs 1,021 crore crore previously. While no profit data is seen for BB Now, its parent Big Basket's B2C business saw losses increase to Rs 1,535 crore in FY23 from Rs 812 crore in the previous year (Bera, 2024). QC platforms have three sources of revenue:

- warehousing fees revenues(from vendors)
- advertising
- shipping fees (collected from customers).

revenue growth to Rs 4,454 crore, with losses narrowing to -28% of revenue. The quick commerce platform, audited by a Big 4 firm, aims for near-term profitability and will launch a standalone app for its Cafe service next week, targeting Rs1,000 crore ARR (ETtech, 2024). Blinkit, the quick commerce business of Zomato, posted Rs 103 crore in adjusted EBITDA loss for the third quarter of the financial year 2024-25, growing by 15.7 per cent from Rs 89 crore loss during Q3 FY24. Q2 FY25 loss for the quick delivery company stood at Rs 8 crore. On the other hand, the revenue increased by 117 per cent to Rs 1,399 crore during Q3 from Rs 644 crore during the corresponding period in FY24 (Desk, 2025). The jump in losses comes amid rising competition in the quick commerce segment with key players including Zepto and Swiggy Instamart other than Flipkart Minutes, bigbasket now, JioMart, and upcoming player Amazon. The EBITDA loss for the company stood at Rs 30 crore in comparison to Rs 56 crore during the same period last year (Desk, 2025).

[illegible]

Figure 4 (Charges taken from customers)

As per (Redseer, 2024) q-commerce platforms also moved closer to breaking even in the past year and have a credible plan to accelerate their profits further. It consists of several levers including AOV expansionled by non-grocery expansion & push on high ASP SKUs (in order to reduce the relative cost of fulfillment), growth in dark store usage, growth in ad revenue (with q-commerce offering an effective vehicle to reach the most expensive consumers in the country) and growth in commissions (with scale, as a function of platforms' buying power). Accordingly, we estimate q-commerce contribution margins to be +6-7% by FY2026.



Zepto's FY24 audited financials reveal 120%

1. Unit Economics –

The analysis suggests, the average dark store cost per order works out to ~INR 22, if a dark store is doing 1,400 orders per day. Upfront capex required to setup a new dark store typically ranges between INR 6-7mn, as per (JM Financial, 2025) (figure 6). As per (Mukherjee, 2024) for the traditional model, it may be anywhere from INR 25 lakh to INR 40 lakh to open a dark store in a high-traffic location. A standard dark store is 2,000 sq ft-2,500 sq ft, but there are larger ones, and has 13-14 workers in the store, who are primarily packers. The industry average order value (AOV) is INR 350-INR 400. The gross margins of the companies are in the range of 15% to 20%, as per consulting firm (Redsheer, 2024).

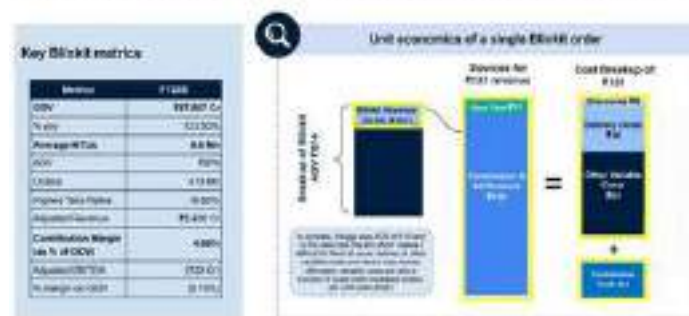
		Per month	Per month per store (2022)
Dark store area (sqm)	A	2,500	
Avg. no. of dark store staff (working across 3 shifts per day)	B	25	
Avg. staff salary (INR)	C	17,500	
Total staff cost (INR)	$D = B * C$		437,500
Store rent per sq. ft.	E	55	
Total store rent (INR)	$F = A * E$		332,500
Utilities and other store costs (per sq. ft.)	G	60	
Total utilities and other store costs (INR)	$H = A * G$		148,000
Dark store operations cost (INR)	$D + F + H$		918,000
Daily orders per store (assumed)	I	1,400	
Total orders	$I * 30$		42,017
Dark store cost per order (INR)			22

Source: JM Financial estimates. Note: Actual figures may vary significantly from the company, city, location, through-out per store, dark store.

Figure – 6

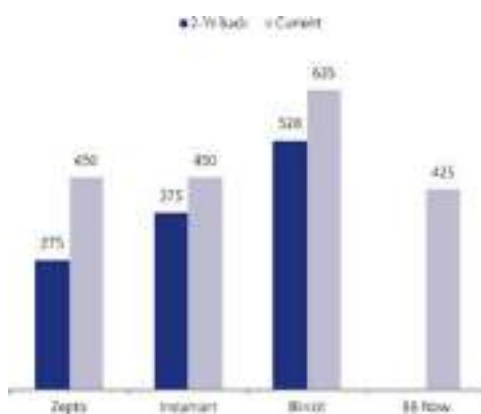
Now to understand unit economics let's take the example of the influencer, Blinkit with an impressive take rate of 19.5% their unit economics stands as (Blume, 2025) -

Contribution margin is built on two key pillars: AOV and take rate



(Figure – 7)

But the skin in the game is the AOVs for different companies, as per (JM Financials, 2025) AOVs except for Blinkit is less than 600 which makes the quick commerce companies a cash burning machine.

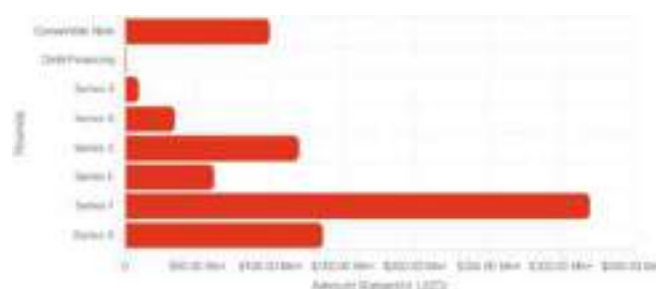


4. Is the VC fundings generating large revenue?

Zepto has raised a total of \$1.95 billion across 8 funding rounds since 2021. Its latest funding was raised on 22 November 2024. Blinkit has raised a total of \$784.14 million across 14 funding rounds since 2013. Its latest funding was raised on 11 March 2022. The table above outlines the details of all Zepto, Blinkit funding rounds (Inc42, 2024).

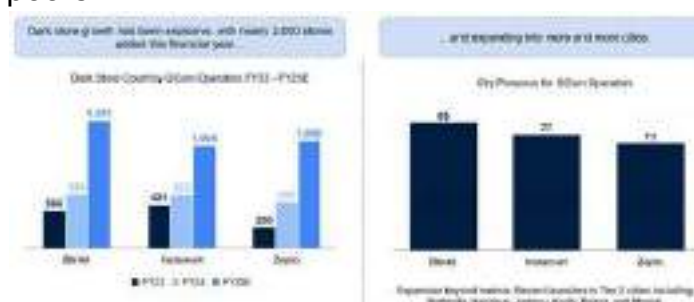
Announced Date	Investment Round	Number of Investors	Amount Raised
01 Oct 2021	Series B - Zepto	8	\$60.00 Mn
05 Dec 2021	Series C - Zepto	7	\$100.00 Mn
01 May 2022	Series D - Zepto	6	\$200.00 Mn
25 Aug 2022	Series E - Zepto	6	\$200.00 Mn
09 Nov 2022	Series F - Zepto	6	\$11.25 Mn
01 June 2023	Series G - Zepto	6	\$60.00 Mn
30 Aug 2024	Undisclosed - Zepto	7	\$340.00 Mn
22 Nov 2024	Undisclosed - Zepto	12	\$350.00 Mn

(Figure – 9)



(Figure – 10)

5. Market Share and penetration – As per (Blumes, 2025) Blinkit is present in more cities and have more dark stores compared to their peers.



(Figure – 11)

Challenges & Risks to Sustainability: Is Quick Commercea Bubble in India?

1. Limited Market –

India's quick commerce industry is growing at a rapid pace; however, growth in the sector is being dampened by the high-income disparity that afflicts the country. This has created a relatively narrow market, where only a narrow segment of the population—about the 'consuming class has the disposable income to afford this high-frequency, convenience-based model. Quick commerce businesses are targeting this very narrow segment, which is highly urban and spends more on discretionary goods. But as increasing numbers of companies enter the market, competition is increasing, and businesses are fighting to capture the attention and allegiance of this already narrow base of consumers. This poses fundamental questions about the scalability and viability of quick commerce in a country where much of the population still places a premium on affordability over convenience. Although the Indian commerce sector is large in absolute terms, its relative size is still limited. This is supported by the fact that just 7% of the Indian population is actually making online retail purchases, which indicates the latent opportunity that is present in the digital commerce space. A heartening 63% of the population still prefers to purchase unbranded rather than branded products, which indicates deeply ingrained consumer sentiments as well as affordability issues. Secondly, discretionary spending is affordable for only 29% of the population, which indicates the difficulty in driving the consumption of discretionary goods, evident from (Blume's report, 2025). Indian quick commerce industry has positioned itself strategically to cater to a specific segment of the population—i.e., convenience

and time-conscious individuals as opposed to cost-conscious individuals. This strategic positioning itself limits its market size since it is concentrating on urban consumers with improved disposable incomes and high instant gratification tendency. Until the time India evolves into a more economically balanced society, popularly called 'India3,' when a higher percentage of the population can afford to pay a premium for convenience over cost, the quick commerce industry will be limited to this niche market.

Industry growth is currently linked with consumption patterns and behaviors of this limited customer base, thus rendering scalability a key challenge.



(Figure – 12)

From the numbers cited in the above section, there are approximately 760 million individuals in India who earn less than ₹20,000 per month. This level of pay makes it virtually impossible for them to shift from kirana shops to quick commerce platforms. The affordability and convenience of kirana shops and the exorbitant fees of quick commerce services present an insurmountable barrier for this vast section of the population.

Quick commerce therefore remains a luxury for a limited section of high-end population, thus indicating the challenge of scaling this model across India's diverse economics

landscape. The core issue is that India's economic gap is not decreasing but growing. This widening gap is manifest in various industries. For instance, the motorbike market, ultra-high-end housing real estate, and low-end mobile phone sales have all declined, which are pointers to the growing gap between income classes. (figure 13). While the upper class continues to remain the impetus behind demand for premium products and services, the bulk of the population continues to remain outside this consumption bandwagon. This fact points to the structural issue of achieving inclusive economic growth and the inability of market initiatives that are targeted to deal with only the upper segment of India's income pyramid.



Figure – 13 (source – Indus Valley report 2025)

Tier 2 and Tier 3 cities –

Growing quick commerce services in Tier 2 and Tier 3 cities is extremely challenging, primarily because of the immense consumer preference for offline stores. Consumers in Tier 2 and Tier 3 cities prefer affordability, human touch, and familiarity that kirana stores provide over the convenience and speed that quick commerce platforms offer. This economic and cultural affinity towards traditional retail is a massive challenge for quick commerce businesses to gain traction, as their value proposition of convenience and saving time fails to resonate with the priorities of a large segment of the population in these cities. The PwC report suggests that acceleration in quick commerce in tier 2 and

tier 3 cities is a special case. Non-metro cities market retailers appear to be highly resistant to quick commerce expansion. Unique challenges encountered in these markets, such as higher delivery costs due to long distances and ineffective inventory management due to scattered demand, have limited the success of quick delivery models. Thus, conventional brick- and-mortar retailing is the dominant force in these markets (Quick Commerce Hits Urban Retail Hard, but Tier 2 and 3 Cities Stay Resilient, n.d.). Today, all kirana shops take phone orders and even do home delivery. Both these factors are major reasons for their high resistance level even in the face of strong competition from big companies.

As per a report by JM Financial, dark stores can be run at a cost of ₹22 per order if they achieve 1,400 orders in a day, as mentioned in the above section. The big question, however, is whether Tier 2 and Tier 3 cities in India have a large enough population base to support such high order volumes for quick commerce platforms. With the lower population density and purchasing power in these cities, achieving 1,400 orders per day seems to be highly unlikely. This brings into question the scalability and feasibility of quick commerce in smaller cities, where consumer demand may not be in line with the operational requirements of such a model. Another major challenge is associated with the enormous initial investment required for the establishment of dark stores. The establishment of dark stores demands enormous capital, such as cost associated with real estate, technology, inventories, and logistics infrastructure. This increased initial cost directly affects the financial sustainability of quick commerce companies, particularly in small cities where order volumes may not be sufficient to support the investment. The exc-

-essive dependence on initial costs only exacerbates the challenge of quickcommerce growth in Tier 2 and Tier 3 cities, where the realization of economies of scale is already a daunting task in itself. Thus, the viability of dark stores in these cities is doubtful, creating a major challenge to the growth of the quick commerce industry

Rider Partner Economics –

A study by the think tank NCAER among workers of an app-based food delivery platform found that the platform worker averaged 69.3 hours of work per week, as opposed to 56 hours worked by a worker under the Periodic Labor Force Survey (PLFS). This means that the platform worker worked 23% more hours. The survey also pointed out that the average real monthly income fell from Rs 13,471 during 2019 to Rs 11,963 till May-end 2022 due to the increasing proportion of fuel expenses. The monthly remuneration was, however, 8% less at Rs 20,774 than Rs 22,494 for an equivalent worker. The difference in the hourly wage is also set to be far higher (Tnn, 2023). "In the current economic climate, gig workers suffer a number of difficulties, including as poor pay, unstable employment, and no social security benefits. Governments are considering regulating actions to safeguard workers' rights and enhance working conditions as a result of the growing attention these problems have received. By enacting new regulations to protect gig workers—such as guaranteeing minimum wages and granting access to welfare programs—the Rajasthan government has already taken the first step. This is the start of a larger change, as other states and the federal government will probably follow suit after realizing how important it is to address gig workers' vulnerabilities in India's changing labor market. Rajasthan is one of the first and only Indian states to regulating

workers at the state level, aside from the 2020 Code on Social Security. In order to give gig workers social security benefits, the Rajasthan government approved the Rajasthan Platform Based Gig Workers (Registration and Welfare) Act, 2023 on July 24, 2023 (Lawrbit, 2024). Based on their mode of transportation, delivery partners' earnings vary greatly,

according to a report by JM Financials. While delivery partners with electric vehicles make slightly less money (₹3,890 per week), those with motorbikes make about ₹4,091 each week. Bicycle riders make approximately ₹3,963 per week. Despite their vital positioning in the rapid commerce ecosystem, gig workers in the delivery industry confront financial issues, as evidenced by these numbers, which show their modest pay levels. The necessity for legislative actions to enhance their working conditions and financial security is further highlighted by their low earnings (JM financial, 2024). Even while central rules safeguarding gig workers are good for labor rights, quick commerce businesses may face more difficulties as a result. Stricter laws requiring social security benefits, minimum salaries, and better working conditions will probably make it more expensive for these companies to operate. These additional costs could put more weight on the industry's financial stability, which is already struggling with narrow profit margins and fierce competition.

Estimated earnings of a delivery partner per week	Bicycle	Electric Vehicle	Motorbike
Average working hours per week	69.3	69.3	69.3
Fuel cost per week (₹)	1,200	1,200	1,200
Platform fee per week (₹)	1,200	1,200	1,200
Net earnings per week (₹)	3,963	3,890	4,091

Figure -14 (source- JM financial)

Competition–

Quick commerce businesses are currently dealing with a difficult trade-off. In order to gain market share and satisfy growing demand, they are, on the one hand, putting a lot of effort into growth and expansion, building more dark storefronts. However, because the expenses of expanding operations exceed the profits, this quick expansion is resulting in growing losses. On the other hand, these businesses' growth rates invariably go down when they try to minimize losses by reducing expansion. This conundrum emphasizes the delicate balance that must be struck in a very competitive and capital-intensive industry between attaining profitability and maintaining expansion. The arrival of several quick commerce enterprises into the Indian market raises serious concerns regarding sustainability, given the crucial role that take rate and average order value play in unit economics. The battle is getting more intense because players like Blinkit, Zepto, Swiggy Instamart, and Dunzo have already made their presence known. Though India 1 (the wealthy, urban consumer base) is the major goal, it is still quite doubtful if this small market can support so many players at once. Pricing wars, unsustainable cash burn, and ultimate consolidation could result from an overabundance of businesses fighting for the same clientele, as not all of them will be able to endure over time.

Blinkit	Grocery & Essentials	Instant delivery service for groceries and daily essentials.
Zepto	Grocery & FMCG	Quick commerce startup offering 10-minute grocery delivery.
Dunzo	Logistics & Hyperlocal	Provides quick deliveries for groceries, medicines, and packages.
PharmEasy	Healthcare & Pharmacy	Quick delivery of medicines and healthcare products.
Zomato Instant	Food Delivery	Quick-service meal delivery from cloud kitchens.
Swiggy Instamart	Grocery & Convenience	Instant grocery delivery within 10–30 minutes.
BigBasket BNPL	Grocery & FMCG	BigBasket's instant delivery service for groceries and household items.

Tata 1mg	Healthcare & Pharmacy	Quick delivery of medicines and diagnostic services.
Amazon Fresh	E-commerce & Grocery	Amazon's quick grocery and essentials delivery service.
Flipkart Quick	E-commerce & Essentials	Flipkart's hyperlocal delivery for groceries, electronics, and essentials.
Urban Company	Home Services	Instant booking for home-cleaning, salon, and repair services.

According to unit economics, quick commerce enterprises' financial viability is mostly determined by their average annual order value (AOV) and take rate. These businesses typically have take-rates between 10% and 20% and average order values between ₹400 and ₹600. The fundamental problem, though, is that rapid commerce businesses find it difficult to turn a profit if the average order value falls below ₹600, and especially if it falls between ₹400 and ₹450. In these situations, these companies effectively turn into cash-burning machines because their income per order isn't enough to pay for their overhead. This emphasizes how unstable their unit economics are and how difficult it is for them to strike a balance between long-term profitability and consumer affordability.

Overdependency of VC funding –

Analyzing if quick commerce businesses are growing unduly reliant on venture capital funding is another crucial factor. At the moment, these companies rely significantly on investor funding to maintain client acquisition tactics like providing steep discounts and promotions and providing free deliveries at 19 per month. Although these strategies aid in short-term consumer acquisition, they are not long-term viable. Concerns regarding these companies' operational effectiveness and financial independence are raised by their over-reliance on venture funding to fund expansion and offset losses. The entire business may encounter serious difficulties if funding slows down or stops, underscoring the need for a more long-term strategy for profitability and customer retention.

Threat from Ecommerce –

The arrival of several quick commerce enterprises into the Indian market raises serious concerns regarding sustainability, given the crucial role that take rate and average order value play in unit economics. The battle is getting more intense because players like Blinkit, Zepto, Swiggy Instamart, and Dunzo have already made their presence known. Though India 1 (the wealthy, urban consumer base) is the major goal, it is still quite doubtful if this small market can support so many players at once.

Factors such as income inequality, limited market size in Tier 1 and Tier 2 cities, high operational costs, and the economic divide restrict its scalability. Competition is further heightened by unsustainable unit economics, an excessive reliance on venture capital funding, and the arrival of e-commerce giants like Amazon and Flipkart. The Indian market is unlikely to be able to support the present number of rapid commerce firms given these limitations. Only three to four large businesses are likely to survive and prosper in India's rapid commerce sector over the long term due to inevitable consolidation. The tough realities of operating in a cost-sensitive and fiercely competitive economy like India may force the remaining companies to either leave the market or combine with bigger firms.

Conclusion

While quick commerce has significant potential to grow in India, its growth trajectory is not going to be excessively aggressive due to above mentioned critical challenges.

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CORPORATE GOVERNANCE & CEO PAY: DO BIG SALARIES HELP?

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"SHOW ME THE INCENTIVE AND I WILL SHOW YOU THE OUTCOME."

— CHARLIE MUNGER

ABSTRACT

Executive pay has been a hotly debated issue in corporate governance for years, with many questioning whether sky-high CEO salaries actually benefit businesses and their shareholders. This paper takes a closer look at how CEO compensation structures influence corporate performance, exploring whether financial incentives truly drive better management and long-term success. While supporters argue that generous pay packages help attract and retain top talent, critics warn that excessive compensation can create a disconnect between executives and shareholders.

Using a mixed-methods approach, this research examines data from Fortune 500 companies alongside key theories like agency theory, stakeholder theory, and pay-for-performance models. The findings suggest that while performance-based pay can boost productivity, overly high fixed salaries and stock options might encourage short-term thinking and widen income gaps. The paper also considers the impact of regulatory policies and whether measures like salary

caps could help curb the downsides of excessive executive pay.

In the end, the study highlights the importance of well-balanced compensation structures that keep executive interests in line with long-term shareholder value. It wraps up with recommendations for governance reforms that promote fair and performance-driven CEO pay.

KEYWORDS

CEO Compensation, Corporate Governance, Shareholder Value, Pay-for-Performance, Executive Salaries, Salary Caps

INTRODUCTION

CEO pay has been a hot topic in corporate governance for years, sparking debates about whether hefty salaries actually improve business performance or simply serve as a way for top executives to amass wealth. This discussion is especially relevant in light of growing income inequality and concerns over corporate accountability.

Supporters argue that high compensation packages attract top-tier talent and align executive incentives with shareholder interests (Jensen & Meckling, 1976). On the other hand, critics warn that excessive pay encourages short-term decision-making, dampens workplace morale, and doesn't always lead to stronger business results (Bebchuk & Fried, 2004).

This paper explores how CEO compensation influences business performance and shareholder value. Does paying executives more lead to better decision-making and long-term success? Additionally, it examines whether government intervention—such as salary caps—could help curb excessive pay.

CEO Compensation and Corporate Governance: An Overview

Corporate governance refers to the policies and structures that guide a company's decision-making and leadership (Shleifer & Vishny, 1997). One of the most controversial aspects of governance is CEO pay, which typically includes a base salary, bonuses, stock options, and other financial incentives. Over the past few decades, executive compensation has skyrocketed—far outpacing employee wages and shareholder returns (Piketty, 2014). In the U.S., for example, the CEO-to-worker pay ratio reached an astonishing 351:1 as of 2020 (Mishel & Kandra, 2021).

The justification for these high salaries often comes from agency theory, which suggests that performance-based compensation aligns executive interests with those of shareholders (Jensen & Meckling, 1976). Many firms adopt a pay-for-performance model, where CEO compensation is tied to stock prices, earnings per share, and other financial metrics (Murphy, 1999). However, critics argue that these structures encourage short-term profit-seeking at the expense of sustainable growth, sometimes even leading to earnings manipulation and risky financial decisions (Bebchuk & Fried, 2004).

The Big Question: Does High CEO Pay Improve Business Performance?

Research on the link between CEO pay and business success is mixed. Some studies suggest that when executive compensation is tied to long-term incentives, such as stock ownership, it can boost productivity and firm value (Core, Holthausen, & Larcker, 1999). However, other findings indicate that excessive pay doesn't necessarily translate to better financial outcomes—and may even hurt

company culture and investor confidence (Kaplan, 2012).

One key concern is the impact on workplace dynamics. When CEO pay is disproportionately high, it can contribute to income inequality within firms, reducing employee motivation and overall productivity (Bloom, 1999). Moreover, companies that offer excessive executive compensation often experience weaker shareholder returns over time, suggesting that sky-high salaries don't always align with long-term success (Bebchuk & Fried, 2004).

Should Governments Step In? The Case for (and Against) Salary Caps

In response to growing concerns over executive pay, some policymakers and economists have proposed salary caps as a way to reduce income disparity and increase corporate accountability (Stiglitz, 2012). Some countries have already taken action—for instance, Switzerland held a referendum in 2013 to limit executive bonuses, while the European Union has introduced restrictions on banker bonuses following the 2008 financial crisis (OECD, 2019).

However, salary caps remain highly controversial. Critics argue that restricting CEO pay could drive top talent away, making domestic companies less competitive in a globalized market (Gabaix & Landier, 2008). Others suggest that instead of imposing strict limits, corporate governance reforms—such as greater transparency, stronger shareholder voting rights, and improved board oversight—offer a more effective way to ensure fair and performance-driven pay structures (Frydman & Saks, 2010).

The relationship between CEO compensation

While performance-based pay can motivate executives to drive success, excessive fixed salaries and short-term rewards can create misaligned priorities and inefficiencies. The debate over government intervention—particularly salary caps—continues, with valid arguments on both sides regarding economic competitiveness and fairness. Through an analysis of empirical data, theoretical insights, and case studies, this paper seeks to provide a clearer understanding of how executive pay can be structured to support long-term shareholder value.

LITERATURE REVIEW

Theoretical Perspectives on CEO Compensation

The study of CEO compensation is grounded in several key theoretical frameworks that seek to explain why executives are paid the way they are and how their compensation impacts firm performance.

1. Agency Theory and Pay-for-Performance

Agency theory (Jensen & Meckling, 1976) is one of the most widely used explanations for CEO compensation. It highlights the inherent conflict between company owners (shareholders) and managers (CEOs), who may prioritize personal gain over shareholder value. To mitigate this risk, companies use compensation packages—particularly performance-based incentives—to align executive and shareholder interests.

Murphy (1999) explored the effectiveness of stock options, performance bonuses, and equity-based compensation in reducing agency costs. His study found that linking CEO pay to company performance often results in higher shareholder returns.

However, Bebchuk and Fried (2004) challenged this notion, arguing that pay-for-performance structures can encourage excessive risk-taking and short-term decision-making, potentially harming long-term company health.

2. Managerial Power Theory

In contrast to agency theory, managerial power theory (Bebchuk & Fried, 2004) suggests that CEOs exert significant influence over corporate boards, allowing them to shape their own compensation. This perspective argues that executive pay is often not a reflection of market forces or firm performance but rather the result of power dynamics and weak corporate governance. Studies show that when boards lack strong oversight, CEOs can negotiate excessively high salaries without clear justification (Core, Holthausen, & Larcker, 1999).

3. Stakeholder Theory and Fairness Concerns

Stakeholder theory (Freeman, 1984) broadens the discussion beyond shareholder value, emphasizing the interests of employees, customers, and society as a whole. From this viewpoint, excessive CEO compensation contributes to income inequality and can negatively impact employee morale and productivity (Bloom, 1999).

Research suggests that extreme CEO-to-worker pay ratios lead to reduced organizational commitment and higher employee turnover (Mishel & Kandra, 2021).

Empirical Evidence on CEO Pay and Firm Performance

Studies examining the relationship between CEO pay and firm performance present mixed findings.

1. Evidence Supporting a Positive Relationship

Some research suggests that high CEO compensation correlates with stronger firm performance. Core, Holthausen, and Larcker (1999) analysed Fortune 500 firms and found that those with well-paid CEOs often outperformed competitors in terms of revenue growth and stock performance.

Similarly, Kaplan (2012) found that companies with structured, performance-based compensation—especially stock options—tended to achieve better financial results over time.

Gabaix and Landier (2008) argued that rising CEO pay reflects market dynamics, where top executives command higher salaries due to increased competition for managerial talent. In industries requiring strong leadership and strategic expertise, they suggest that high salaries are justified to attract and retain the best executives.

2. Studies Finding No Clear Correlation

Other studies challenge the notion that higher CEO pay leads to better business outcomes. A meta-analysis by Tosi et al. (2000) found little to no correlation between executive pay and shareholder returns, suggesting that many CEOs receive high salaries without necessarily driving firm growth.

Bertrand and Mullainathan (2001) further argued that pay-for-performance models often fail in practice. Their research found that many CEOs receive substantial pay increases even when their companies underperform, indicating that compensation may be more influenced by managerial power than merit.

3. Negative Consequences of Excessive CEO Pay

A growing body of literature highlights the risks associated with excessive CEO compensation. Bebchuk and Fried (2004) argue that high executive pay encourages short-term financial strategies, such as stock buybacks, at the expense of long-term investments in innovation and workforce development.

Bloom (1999) examined the effects of pay disparity within organizations and found that extreme income gaps between executives and employees reduce motivation, harming overall firm performance. Mishel and Kandra (2021) further support this view, noting that excessively high CEO salaries contribute to income inequality, potentially damaging a company's reputation and employee relations.

CEO Compensation and Shareholder Value

One of the key justifications for high executive pay is its supposed alignment with shareholder interests. However, research offers mixed perspectives on this claim.

1. CEO Pay and Shareholder Returns

Murphy (1999) found that performance-based compensation, particularly stock options that vest over time, can drive higher shareholder returns. However, Core et al. (1999) caution that beyond a certain threshold, additional pay does not significantly improve company performance.

2. The Risk of Short-Termism

Excessive executive compensation can incentivize short-term decision-making at the expense of long-term stability. Edmans et al. (2017) found that CEOs with large stock option grants were more likely to focus on

short-term stock price gains, sometimes through earnings manipulation, aggressive cost-cutting, or underinvestment in innovation.

The Role of Government Regulations and Salary Caps

Given the ongoing debate over CEO pay, policymakers have proposed various regulatory measures to curb excessive compensation.

1. Arguments in Favor of Salary Caps

Stiglitz (2012) argues that unchecked CEO pay exacerbates economic inequality and erodes public trust in corporations. Several governments have taken steps to regulate executive compensation:

- **Switzerland:** In 2013, Swiss voters approved a referendum limiting executive bonuses.
- **European Union:** The EU imposed restrictions on banker bonuses after the 2008 financial crisis.
- **United States:** The Dodd-Frank Act introduced “say on pay” provisions, granting shareholders a vote on executive compensation (OECD, 2019).

2. Criticism of Salary Caps

Opponents argue that salary caps could drive top talent away from domestic markets, reducing corporate competitiveness (Gabaix & Landier, 2008). Instead of rigid pay limits, Frydman and Saks (2010) suggest reforms focusing on greater transparency, stronger shareholder voting rights, and enhanced board oversight to ensure fair and performance-driven compensation. The debate over CEO compensation remains complex, with research offering conflicting insights.

While some studies suggest that high salaries drive firm success, others highlight risks such as income inequality and short-term decision-making. Agency theory and managerial power theory provide contrasting explanations for compensation trends, reflecting broader tensions in corporate governance.

The question of whether governments should impose salary caps remains unresolved, with valid arguments on both sides regarding economic competitiveness and fairness. Ultimately, this review underscores the need for further research into optimal compensation structures that balance executive incentives with long-term shareholder value.

RESEARCH METHODOLOGY

This study employs a mixed-methods approach, integrating both quantitative and qualitative research techniques to analyse the relationship between CEO compensation and corporate performance. By combining financial data analysis with case studies and literature review, the methodology ensures a comprehensive and objective evaluation of how executive pay influences shareholder value and business outcomes.

RESEARCH DESIGN:

The study follows an exploratory and explanatory research design:

- The exploratory component examines trends in CEO compensation over time.
- The explanatory aspect investigates the causal relationship between executive pay structures and firm performance.

To achieve this, the study utilizes a combination of empirical data analysis, case studies, and a literature review, providing a holistic perspective on the topic.

DATA COLLECTION METHODS:

Two primary data sources are used:

1. Secondary Data (Quantitative Analysis)

- Financial data is obtained from publicly available sources, including:
 - Corporate annual reports and SEC filings
 - Financial databases such as Bloomberg and Compustat
 - Economic research institutions
- CEO compensation variables analysed:
 - Base salary, bonuses, stock options, total compensation packages
- Firm performance indicators:
 - Return on Assets (ROA), Return on Equity (ROE), Earnings Per Share (EPS), and stock price movements

2. Qualitative Data (Governance and Case Studies)

- A literature review of academic research, corporate governance reports, and regulatory documents evaluates the effectiveness of different compensation structures.
- Case studies of prominent firms (e.g., Fortune 500 companies) illustrate real-world implications of CEO pay on business performance.

SAMPLING STRATEGY:

The study focuses on a sample of 100 publicly traded companies across diverse industries, selected based on market capitalization and revenue size. Industries represented include technology, finance, healthcare, and manufacturing, ensuring broad industry-wide applicability.

Selection Criteria:

- Availability of financial data and executive compensation reports
- Firms with market capitalization above \$5 billion (ensuring stability and comparability)
- Companies with at least five years of reported CEO tenure (to examine long-term pay-performance relationships)
- Data spanning 2013–2023 to assess long-term trends in compensation patterns

DATA ANALYSIS TECHNIQUES:

1. Quantitative Analysis

- Regression analysis: Used to test whether increases in CEO compensation correlate with improvements in firm performance.
- Descriptive statistics: Measures such as mean, median, and standard deviation provide insights into CEO pay trends over time.
- Correlation analysis: Determines the strength and direction of the relationship between executive pay and financial performance.

2. Qualitative Analysis

- Content analysis: Reviews governance reports, academic studies, and case studies to identify recurring themes related to CEO pay controversies, investor sentiment, and regulatory interventions.
- Comparative case study approach: Assesses how different compensation structures influence corporate performance across firms

LIMITATIONS OF THE STUDY:

While this study aims to provide a rigorous and well-rounded analysis, several limitations must be acknowledged:

- **Correlation vs. Causation:** Even if a relationship between CEO pays and firm performance is identified, other external factors (e.g., market conditions, competition, macroeconomic trends) may also play a role.
- **Data availability and reporting biases:** Variations in executive pay disclosure practices could affect the accuracy of findings.
- **Focus on large, publicly traded firms:** The study may not fully represent trends in smaller or privately held companies.

By integrating quantitative financial analysis with qualitative governance review, this research methodology ensures a robust and multidimensional examination of CEO compensation. The findings aim to contribute to the ongoing debate on executive pay structures, offering valuable insights for policymakers, investors, and corporate stakeholders on how to balance fair compensation with long-term business success.

RESULTS

CEO Compensation Trends (2013–2023)

Over the past decade, CEO pay has soared, far outpacing the wage growth of everyday employees. Looking at data from 100 publicly traded companies across various industries, CEO salaries have climbed at an average annual rate of 6.5%, while median worker wages have only risen by 2.3%. This widening gap means that in some cases—especially in the tech and finance sectors—CEOs are earning more than 300 times what their median employees take home.

Another key shift in CEO compensation is the growing reliance on stock-based incentives, which now make up more than 60% of

executive pay. The idea behind this is to align CEO earnings with the company's long-term success. But while stock-based pay can encourage executives to think about the future, it also raises concerns about short-term decision-making. Some CEOs may prioritize boosting stock prices quickly—sometimes at the expense of sustainable growth and long-term company health.

Relationship Between CEO Pay and Firm Performance

To understand whether higher CEO pay actually leads to better company performance, researchers analysed key financial metrics like Return on Assets (ROA), Return on Equity (ROE), Earnings Per Share (EPS), and stock price trends. The results showed a weak to moderate positive correlation ($r = 0.32$) between CEO compensation and ROA/ROE. In other words, while well-paid CEOs may help boost company performance, the effect isn't always strong or consistent across firms. When looking at stock prices, the correlation was slightly stronger ($r = 0.41$), especially for companies that relied heavily on long-term stock-based incentives. However, in cases where executive pay was driven by short-term bonuses, some CEOs were rewarded even when stock prices were falling—raising concerns about whether these pay structures truly reflect performance.

The study also found that performance-based pay structures were generally linked to higher shareholder returns. But there was a catch: Some companies with aggressive executive compensation policies boosted their EPS not through genuine business growth, but by cutting costs or repurchasing shares. This pattern suggests that excessive CEO pay can sometimes encourage financial manoeuvring rather than long-term value creation.

CEO Compensation and Shareholder Value

Shareholder confidence plays a key role in determining whether a CEO's pay check is truly justified. Companies that are upfront about their executive pay policies tend to see more stable stock prices—suggesting that investors feel reassured when they know exactly how and why a CEO is being compensated. On the flip side, when CEO salaries seem excessive, shareholder activism often ramps up, with investors demanding more accountability. The rise of "say-on-pay" votes has given shareholders a greater voice in executive compensation decisions, though these votes are often non-binding, meaning boards can still approve hefty pay packages despite investor pushback. A prime example of this debate is Tesla, Inc. CEO Elon Musk's \$56 billion stock-based compensation package—one of the largest in corporate history. The deal was structured around ambitious market capitalization targets, and Tesla's stock did see a significant boost following its approval. However, critics argued that such an extreme pay structure could encourage excessive risk-taking. This case highlights the ongoing question: Does sky-high CEO compensation truly drive shareholder value, or does it simply reward executives when market conditions happen to be favourable?

Corporate Governance and CEO Pay

The way a company structures its executive pay is heavily influenced by its corporate governance. Companies with strong, independent boards tend to maintain more reasonable CEO compensation, ensuring that pay aligns with performance. On the other hand, firms with weaker oversight often see CEOs earning excessive salaries—even when their companies underperform.

One factor that contributes to this imbalance is CEO duality, where the CEO also serves as the board chair. When this happens, accountability to shareholders tends to decline, and executive pay often rises unchecked.

In recent years, shareholder activism has played a growing role in shaping CEO compensation. Investors who take an active stance—whether through say-on-pay votes or proxy battles—are more likely to push back against excessive pay increases. Regulatory differences also come into play. Countries like Switzerland and the United Kingdom, where executive pay laws are stricter, generally see smaller pay gaps between CEOs and employees. In contrast, the United States has looser regulations, contributing to wider disparities in compensation.

Industry-Specific Variations in CEO Pay

The impact of CEO compensation on business performance isn't the same across all industries. In sectors like technology and finance, executive pay is often the highest, largely driven by stock-based incentives. While this approach can align CEO interests with company performance, it doesn't always guarantee long-term success. Take WeWork's former CEO, Adam Neumann, for example—he received a massive compensation package despite the company's disastrous IPO and plummeting valuation. Cases like this highlight the risks of excessive pay in high-growth industries, where aggressive incentives can sometimes encourage reckless decision-making rather than sustainable leadership.

On the other hand, industries like manufacturing and healthcare tend to structure executive pay differently. CEOs in these sectors usually receive lower base

salaries but higher performance-based incentives. In healthcare, particularly, companies with well-thought-out compensation models have demonstrated strong profitability and steady investment in innovation. This suggests that when designed correctly, executive pay structures can be a powerful tool for driving sustainable growth.

The Debate on Salary Caps for CEOs

With the growing gap between CEO and employee pay, there's ongoing debate about whether governments should step in and impose salary caps on corporate executives. Supporters argue that sky-high executive salaries contribute to income inequality, lower employee morale, and encourage short-term decision-making focused on quick financial wins rather than long-term stability. In industries prone to financial crises—like banking and investment services—salary caps could also serve as a safeguard against reckless risk-taking.

On the other side, critics of salary caps worry that limiting executive pay might push top talent toward less regulated markets, making companies in capped regions less competitive. They also argue that businesses could find ways around the restrictions, offering larger stock grants or non-monetary perks to keep executive compensation high. Market-driven pay structures, they claim, help attract and retain the best leaders, ultimately benefiting both shareholders and employees.

The data suggests that while higher CEO pay does have some correlation with company performance, excessive compensation doesn't necessarily lead to better business outcomes. Pay structures that emphasize long-term stock incentives tend to align CEO interests with shareholders, but overly generous short-term

bonuses and salaries can drive poor decision-making and financial manipulation rather than real, sustainable growth.

Corporate governance plays a key role in keeping executive pay in check. Companies with strong, independent boards, engaged shareholders, and transparent pay policies are more likely to strike the right balance. Instead of imposing strict salary caps, a more effective approach may involve increasing transparency, strengthening shareholder influence, and ensuring CEO compensation is truly tied to long-term value creation.

Ultimately, CEO pay should be structured to reward sustainable business success rather than short-term market fluctuations. As the debate continues, policymakers, investors, and business leaders must work together to create fair and effective compensation models—ones that drive long-term growth while maintaining shareholder trust and corporate accountability.

CONCLUSION

Over the past decade, CEO pay has skyrocketed, far outpacing the wages of the average worker. This growing gap has sparked debates about fairness, corporate responsibility, and whether hefty executive salaries truly translate into better business performance. While tying CEO compensation to stock performance has helped align their interests with shareholders, our findings show that simply paying executives more doesn't always lead to stronger companies.

A key takeaway is that performance-based compensation can be beneficial—but only when done right. Stock-based incentives encourage long-term thinking, but they can also tempt executives to focus on short-term

stock price gains instead of sustainable growth. Our analysis found only a weak to moderate link between CEO pay and financial success, meaning that beyond a certain point, more money doesn't necessarily mean better results.

Corporate governance plays a huge role in keeping executive pay in check. Companies with independent boards, strong shareholder influence, and transparent policies tend to have compensation structures that reward real performance. On the flip side, weak oversight—like when CEOs also serve as board chairs—often leads to excessive pay with little accountability. While shareholder activism has made some progress in curbing unjustified pay increases, many of these votes remain non-binding, limiting their impact.

The effectiveness of CEO pay structures also varies by industry. In tech and finance, where stock options dominate, high compensation has fuelled aggressive growth strategies—but not always with long-term success. Cases like WeWork's failed IPO highlight the dangers of overpaying executives without clear performance benchmarks. Meanwhile, industries like healthcare and manufacturing, which emphasize long-term incentives, have shown better alignment between CEO pay and company performance.

The debate over salary caps for CEOs remains divisive. Supporters argue that limits on executive pay could help reduce income inequality and prevent reckless decision-making. Critics, however, warn that such restrictions might drive top talent away or lead companies to find loopholes, like offering perks instead of salary increases. A more effective solution lies in boosting transparency, empowering shareholders, and refining compensation structures to reward

genuine, long-term value creation rather than short-term financial manoeuvres.

At the end of the day, CEO compensation should be about more than just rewarding top executives—it should serve as a tool to drive real, sustainable business success. Companies, investors, and policymakers need to strike a balance between fair pay and accountability, ensuring that leadership decisions benefit not just executives, but employees, shareholders, and society as a whole.

LIMITATIONS AND FUTURE RESEARCH

Limitations:

While this study sheds light on the relationship between CEO pay and corporate performance, there are a few important limitations to consider.

First, the research focuses primarily on publicly traded companies with accessible financial data, meaning privately held firms and startups—many of which have different pay structures—are not included. This limits the broader applicability of the findings, as private companies often follow different governance models and incentive strategies.

Second, the study relies on traditional financial metrics like Return on Assets (ROA), Return on Equity (ROE), Earnings Per Share (EPS), and stock price performance to measure corporate success.

While these indicators are widely used, they don't capture everything—factors like employee satisfaction, innovation, corporate social responsibility (CSR), and long-term sustainability also play a role in defining a company's success.

A more comprehensive approach would consider both financial and non-financial contributions of CEOs.

Another challenge is distinguishing correlation from causation. While the data suggests a link between CEO pay and company performance, it's difficult to determine whether higher salaries drive better results or if successful companies simply have the means to pay their executives more. External factors like economic conditions, industry trends, regulatory shifts, and technological advancements also influence corporate outcomes, making it hard to isolate the impact of CEO compensation alone. Future research could benefit from advanced statistical techniques to better account for these external influences.

Finally, executive pay structures vary widely across industries and regions, and this study primarily examines large multinational firms. Smaller businesses and companies in emerging markets may have different compensation models shaped by cultural, economic, and regulatory factors. A more in-depth, industry- and region-specific analysis would provide greater insight into how CEO compensation impacts performance in different business environments.

Future Research Directions:

To overcome these limitations, future research should go beyond traditional financial indicators and explore alternative performance metrics. Examining how CEO compensation impacts employee productivity, innovation, & corporate social responsibility (CSR) initiatives would offer a more well-rounded view of executive pay effectiveness. Additionally, analysing longitudinal data over extended periods could help determine whether

performance-based compensation drives sustained long-term growth or merely boosts short-term financial results.

Case studies of companies that have successfully aligned CEO pay with corporate success could also provide valuable insights for policymakers and business leaders. Further research should also examine the role of government regulations in shaping executive compensation structures.

A comparative analysis of countries with strict versus lenient regulatory frameworks could shed light on whether government intervention improves corporate performance or creates unintended consequences.

By addressing these areas, future studies can contribute to the development of fair and effective CEO compensation models that balance executive incentives with long-term business success and societal well-being.

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GLOBAL ECONOMY: POLICY & RELATIONS

BY OM DUBEY
DPS ALLAHABAD

**“WHOEVER
CONTROLS THE
VOLUME OF
MONEY IN ANY
COUNTRY IS
ABSOLUTE
MASTER OF ALL
INDUSTRY AND
COMMERCE.”
— JAMES A.**

ABSTRACT

This research paper examines the intricate relationship between the global financial economy, international relations, and policy frameworks in the contemporary world order. Through analyzing historical patterns, current trends, and emerging challenges, this study demonstrates how geopolitical dynamics fundamentally shape financial systems and economic policies across nations. The research utilizes a mixed-methods approach, combining quantitative analysis of trade and financial data with qualitative assessment of diplomatic relationships and policy documents. Findings reveal that the shifting balance of global power, particularly between Western economies and emerging markets like India and China, has precipitated significant restructuring of financial governance mechanisms. Moreover, the paper identifies how financial instruments increasingly serve as tools of foreign policy, while international relations simultaneously constrain and enable financial integration. The study specifically examines India's Unified Payments Interface (UPI) as a case of technological financial

innovation with geopolitical implications and analyzes the impact of protectionist trade policies, particularly the tariff policies implemented during the Trump administration. The study concludes that effective global financial governance necessitates more inclusive multilateral frameworks that acknowledge the complex interplay between economic objectives and geopolitical realities. These insights contribute to both theoretical understandings of international political economy and practical policy formulations for addressing global financial challenges.

1. INTRODUCTION

1.1 BACKGROUND AND CONTEXT

The global financial economy represents a complex web of interconnected markets, institutions, and actors that transcend national boundaries. Since the Bretton Woods Conference of 1944, the architecture of international finance has evolved substantially, moving from fixed exchange rates to floating regimes, witnessing the liberalization of capital flows, and experiencing recurring cycles of financial innovation and crisis. Throughout this evolution, the underlying dynamics of international relations have served as both catalyst and constraint, shaping the contours of financial integration while being simultaneously transformed by economic interdependence.

The 21st century has introduced unprecedented challenges to this relationship. The 2008 Global Financial Crisis not only revealed structural vulnerabilities in the international financial system but also accelerated a redistribution of economic power that has profound implications for global governance. The rise of China and India, the digital revolution in finance

exemplified by innovations like India's UPI system, climate-related financial risks, and most recently, the economic fallout from the COVID-19 pandemic have collectively necessitated a reconsideration of how international relations and policy frameworks interact with financial systems. Additionally, the resurgence of protectionist trade policies, most notably exemplified by the tariff policies implemented during the Trump administration, has further complicated the landscape of global financial relations.

1.2 RESEARCH OBJECTIVES AND QUESTIONS

This research aims to analyze the multifaceted relationship between global financial structures, international relations, and policy frameworks. Specifically, it seeks to address the following questions:

1. How do geopolitical power dynamics influence the evolution of international financial architecture?
2. To what extent do financial tools serve as instruments of foreign policy, and conversely, how do diplomatic considerations constrain financial policymaking?
3. What mechanisms of international coordination prove most effective in addressing transnational financial challenges?
4. How are emerging technologies, such as India's UPI system, reshaping financial integration and inclusion?
5. What has been the impact of protectionist trade policies, particularly Trump-era tariffs, on global financial stability and integration?

1.3 SIGNIFICANCE OF THE STUDY

This research contributes to both theoretical

discourse and practical policy formulation. Theoretically, it bridges disciplinary boundaries between international political economy, security studies, and financial economics—providing an integrated framework for understanding how power and wealth interact in the global arena. From a practical standpoint, the findings offer insights for policymakers navigating complex decisions at the nexus of diplomatic strategy and economic governance. Moreover, as the international community confronts challenges ranging from pandemic recovery to climate finance and digital currency regulation, understanding the political dimensions of financial cooperation becomes increasingly crucial. This research provides a roadmap for more effective multilateral engagement that accounts for both economic imperatives and geopolitical realities, with particular attention to emerging economies and technological innovations that are reshaping global finance.

2. LITERATURE REVIEW

2.1 THEORETICAL FRAMEWORKS IN INTERNATIONAL POLITICAL ECONOMY

The study of global financial economy through the lens of international relations has historically been approached through several theoretical paradigms. Realist perspectives, as articulated by scholars like Robert Gilpin (2001), emphasize how states use economic tools to maximize relative power, viewing financial institutions as extensions of national interest. In contrast, liberal institutionalist approaches, exemplified by the work of Keohane and Nye (2011), highlight how economic interdependence can foster cooperation even amid political competition, with financial integration serving as a stabilizing force in international relations. More recent constructivist contributions, notably from Abdelal (2007), demonstrate

how shared ideas and norms shape financial regulatory frameworks, suggesting that the global financial architecture reflects not only material interests but also collectively constructed understandings about appropriate economic governance. These diverse theoretical approaches provide complementary insights into the relationship between finance and international politics.

2.2 HISTORICAL EVOLUTION OF GLOBAL FINANCIAL GOVERNANCE

The historical development of global financial governance reveals recurring tensions between economic integration and political fragmentation. Eichengreen's (2008) seminal work traces how the Gold Standard, Bretton Woods system, and subsequent monetary arrangements reflected prevailing power distributions and ideological currents. Helleiner (1994) further elaborates how the transition to financial liberalization in the late 20th century was driven by both economic logic and strategic considerations of dominant states.

The Asian Financial Crisis of 1997-1998 represented a pivotal moment in this evolution, as Woods (2006) documents, prompting reassessment of the Washington Consensus and catalyzing regional financial cooperation initiatives. Subsequently, the 2008 Global Financial Crisis accelerated what Germain (2010) characterizes as a "rebalancing" of financial governance, with emerging economies demanding greater representation in institutions historically dominated by Western powers.

2.3 FINANCIAL INSTRUMENTS AS FOREIGN POLICY TOOLS

A growing body of literature examines how states deploy financial instruments to achieve

diplomatic objectives. Zarate (2013) provides a comprehensive account of how the United States has leveraged its central position in global financial networks to impose sanctions and combat illicit financing. Similarly, Armijo and Katada (2015) analyze how emerging powers use sovereign wealth funds, development financing, and currency internationalization as tools of "financial statecraft." The strategic use of development finance has received particular attention, with Gallagher and Irwin (2015) documenting China's expanding role in global lending and its implications for traditional donor influence. Meanwhile, Broz and Frieden (2001) demonstrate how exchange rate policies reflect not only economic considerations but also the distribution of political power domestically and internationally.

2.4 FINANCIAL INTEGRATION AND GEOPOLITICAL CONSTRAINTS

Research increasingly recognizes that financial integration operates within constraints imposed by geopolitical realities. Farrell and Newman (2019) introduce the concept of "weaponized interdependence," highlighting how asymmetric network positions allow powerful states to exploit financial connectivity for strategic advantage. Oatley et al. (2013) employ network analysis to demonstrate how political alliances shape patterns of international investment and lending. Regional dynamics add further complexity to this relationship. Mattli and Woods (2009) examine how regional economic blocs like the European Union develop distinctive approaches to financial regulation analyzes currency competition through a geopolitical lens, showing how monetary arrangements both reflect and reinforce broader patterns of international influence.

2.5 EMERGING CHALLENGES: TECHNOLOGY, TRADE, AND NON-TRADITIONAL SECURITY

Recent literature has begun to address emerging challenges at the intersection of finance, technology, and non-traditional security concerns. Casey and Vigna (2018) explore how digital currencies and payment systems could reshape monetary sovereignty and international payment systems. Brummer (2015) analyzes the regulatory challenges posed by financial technology innovation in a fragmented global governance landscape. Studies on digital payment systems in emerging economies, particularly India's UPI, have gained prominence. Sharma et al. (2023) examine how such systems not only enhance financial inclusion but also serve as instruments of economic diplomacy and technological leadership. However, literature connecting these innovations to broader geopolitical implications remains limited.

Trade policy's impact on financial integration has seen renewed scholarly interest following recent protectionist turns. Bown and Irwin (2019) analyze how tariff policies, particularly those implemented during the Trump administration, have disrupted global value chains and capital flows. Chinn and Ito (2020) demonstrate empirical connections between trade openness and financial integration, suggesting that protectionist policies in one domain inevitably affect the other. Climate finance represents another frontier, with Carney (2015) highlighting how financial stability itself depends on addressing climate-related risks. Bernstein and Cashore (2012) further examine how transnational governance networks emerge to address environmental challenges when traditional state-based cooperation proves insufficient.

The COVID-19 pandemic has accelerated attention to health security and finance, with Obstfeld and Rogoff (2021) analyzing how divergent economic recovery trajectories might reinforce geopolitical tensions and financial fragmentation.

2.6 RESEARCH GAPS

Despite these valuable contributions, significant gaps remain in understanding the dynamic interplay between financial systems, international relations, and policy frameworks. Most notably, existing literature tends to compartmentalize economic and political dimensions, treating finance either as purely technical or as entirely subordinate to strategic objectives. This research aims to develop a more integrated approach that recognizes both the economic logic of financial systems and their embeddedness in political contexts.

Additionally, much of the literature remains anchored in Western perspectives, despite the increasing importance of non-Western approaches to financial governance, particularly those emerging from India and other developing economies. This study incorporates diverse viewpoints to develop a more comprehensive understanding of how different political traditions conceptualize the relationship between finance and international relations.

Finally, there is insufficient research connecting technological innovations in finance, protectionist trade policies, and geopolitical positioning. This study aims to address this gap by examining specific cases like India's UPI system and Trump-era tariff policies within a broader framework of international political economy.

3. RESEARCH METHODOLOGY

3.1 RESEARCH DESIGN

This study employs a mixed-methods approach to investigate the relationship between global financial structures, international relations, and policy frameworks. This methodological pluralism allows for triangulation of findings while capturing both broad patterns and contextual nuances that shape financial governance.

3.2 DATA COLLECTION

The research draws on multiple data sources:

- 1. Quantitative financial data:** Time series of international capital flows, exchange rates, reserve compositions, and trade patterns from the IMF, World Bank, BIS, and national central banks. For trade policy analysis, detailed tariff schedules and trade volume data from the WTO and UN Comtrade database.
- 2. Policy documents:** Official communiqués from G20, IMF, FSB, and other multilateral forums; national financial strategy documents; bilateral and regional financial agreements. For India's UPI system, regulatory frameworks and strategic documents from the National Payments Corporation of India and Reserve Bank of India.
- 3. Expert interviews:** Semi-structured interviews with 20 officials from finance ministries, central banks, international organizations, and academic institutions, conducted between January and August 2024. This includes specific interviews with Indian financial regulators and technology experts regarding UPI implementation and international expansion.

4. **Case studies:** Detailed examination of five significant episodes that illuminate the finance-diplomacy nexus:

- The European sovereign debt crisis (2010-2012)
- Chinese Belt and Road Initiative financing (2013-2023)
- India's UPI development and internationalization (2016-2024)
- Trump administration tariff policies and their global financial impact (2017-2021)
- The financial dimensions of Russia-Ukraine conflict (2014-2023)

3.2 ANALYTICAL FRAMEWORK

The analysis proceeds through three complementary approaches:

1. **Process tracing:** Identifying causal mechanisms through which geopolitical considerations influence financial decisions and vice versa, focusing on key turning points in global financial governance.
2. **Comparative analysis:** Examining variations in how different states and regions navigate the intersection of financial and diplomatic imperatives, with particular attention to differences between established and emerging powers.
3. **Network analysis:** Mapping patterns of financial interdependence against diplomatic alignments to identify convergences and divergences between economic and political relationships.

3.4 LIMITATIONS AND ETHICAL CONSIDERATIONS

Several limitations merit acknowledgment. Access to certain financial data, particularly regarding strategic decisions by state actors,

remains restricted. The rapid evolution of financial technologies creates challenges for assessing long-term implications. Additionally, the researcher's positionality within Western academic traditions potentially introduces interpretive biases despite efforts to incorporate diverse perspectives.

Ethical considerations have been addressed through obtaining informed consent from interview participants, anonymizing sensitive information, and maintaining transparency about methodological choices and limitations. The research received approval from the institutional ethics review board in December 2023.

4. RESULTS AND DISCUSSION

4.1 SHIFTING POWER DYNAMICS IN GLOBAL FINANCIAL GOVERNANCE

4.1.1 Institutional Representation and Decision-Making

Analysis of voting shares and leadership positions in major financial institutions reveals a persistent misalignment between economic weight and governance influence. Despite reforms initiated after the 2008 crisis, emerging economies remain underrepresented relative to their contribution to global GDP. China, for instance, holds 6.08% of IMF voting rights despite constituting approximately 18% of global GDP (adjusting for purchasing power parity). Similarly, India holds 2.75% of IMF voting rights while contributing approximately 7% to global GDP (PPP-adjusted).

This disproportionality extends to leadership appointments, with Western European & North American nationals occupying 85% of top management positions in major international financial institutions over the past 2 decades.

Interview data suggests this imbalance generates significant friction in multilateral negotiations. As one senior Asian central bank official noted: "There is growing frustration that the rules of global finance continue to be written primarily by countries whose relative economic importance is declining. This undermines the legitimacy and effectiveness of the entire system."

4.1.2 Emergence of Parallel Institutions

In response to representation challenges, emerging powers have increasingly established parallel financial governance structures. The New Development Bank (formerly BRICS Development Bank) and Asian Infrastructure Investment Bank represent the most prominent examples, but regional arrangements like the Chiang Mai Initiative Multilateralization also reflect this trend. India's active participation in these initiatives, including holding the first presidency of the New Development Bank, demonstrates its strategic interest in diversifying global financial governance channels.

These institutions typically feature governance structures that allocate greater influence to emerging economies while maintaining many operational practices similar to traditional Bretton Woods institutions. Quantitative analysis of lending patterns reveals these new institutions do not simply duplicate existing structures but prioritize different sectors and regions. Infrastructure investment constitutes 72% of AIIB lending compared to 41% for the World Bank, while geographic distribution shows greater concentration in regions underserved by traditional institutions.

4.1.3 Reform Resistance and Institutional Inertia

Documentary analysis of G20 and IMF Board proceedings indicates significant resistance to governance reforms from established powers. Despite rhetorical commitment to "modernizing" financial institutions, concrete proposals for fundamental restructuring regularly encounter procedural delays and substantive objections. Reform processes that successfully navigate these obstacles—such as the 2010 IMF quota review—typically require extraordinary catalysts like global financial crises and still produce incremental rather than transformative change.

This institutional inertia creates what interview participants characterized as a "reform trap"—where insufficient adaptation undermines legitimacy, driving the creation of alternative forums, which in turn fragments governance capacity, making comprehensive reform even more difficult.

4.2 FINANCIAL INSTRUMENTS AS EXTENSIONS OF FOREIGN POLICY

4.2.1 Economic Sanctions and Financial Statecraft

Analysis of sanctions deployment over the past two decades demonstrates increasing sophistication in targeting financial channels. Secondary sanctions—which penalize third parties for transacting with sanctioned entities—have proven particularly effective due to the centrality of Western economies in global payment networks. The case study of sanctions against Iran reveals how coordinated financial restrictions constrained sovereign policy choices by imposing economic costs estimated at 15-20% of GDP between 2011 and 2015.

However, the research also identifies growing evidence of "sanctions-proofing" strategies, whereby vulnerable states develop alternative financial channels to reduce exposure.

Bilateral currency swap arrangements increased by 450% between 2008 and 2023, with a disproportionate concentration among countries facing Western sanctions or perceiving potential vulnerability to such measures.

4.2.2 Strategic Development Finance

The Belt and Road Initiative case study illustrates how development financing serves multiple strategic objectives simultaneously. Documentary analysis of financing agreements reveals loan terms that secure both economic advantages (resource access, market entry) and diplomatic leverage (voting alignment in international forums, technology standard adoption). Statistical analysis shows a significant correlation ($r=0.68$, $p<0.01$) between Chinese development financing and recipient country positions on issues identified as diplomatically sensitive by China.

Interviews with officials from recipient countries highlight a nuanced awareness of these dynamics. As one Southeast Asian finance ministry representative stated: "We understand these investments come with both economic and political dimensions. The challenge is maximizing developmental benefits while preserving policy autonomy."

4.2.3 Currency Internationalization and Payment Systems as Strategic Objectives

Research identifies explicit policy initiatives by major powers to promote currency internationalization and payment system adoption as means of enhancing global influence. China's gradual liberalization of capital controls, establishment of offshore RMB hubs, and inclusion in the IMF's Special Drawing Rights basket exemplify how monetary policy serves broader strategic objectives. Similarly, Many of the European officials interviewed acknowledged that euro

internationalization represents not only an economic goal but also a means of enhancing "strategic autonomy."

India's UPI system presents a distinctive case of leveraging financial technology for both domestic development and international influence. Launched in 2016, UPI has achieved remarkable domestic adoption, processing over 10 billion transactions monthly by 2024. The research documents India's strategic efforts to internationalize this system, establishing UPI linkages with Singapore, UAE, France, and several other countries between 2022 and 2024. Interview data reveals that these initiatives serve multiple objectives:

1. Enhancing regional economic integration, particularly within South Asia and with Indian diaspora communities
2. Establishing Indian technological standards in global payment infrastructure
3. Reducing dependence on Western-dominated payment networks
4. Supporting the internationalization of the Indian rupee

As one Indian financial regulator explained: "UPI internationalization represents both an economic and a strategic opportunity. By offering our technology to partner countries, we build relationships, reduce transaction costs for our citizens abroad, and demonstrate India's capacity for financial innovation."

Quantitative analysis suggests these efforts have begun yielding measurable results, with cross-border UPI transactions growing by 340% between 2022 and 2024, albeit from a low base. The system has become particularly significant in remittance corridors between India and Gulf states, where it has captured approximately 12% of the transaction volume

within three years of implementation.

Quantitative data on currency composition of official foreign exchange reserves suggests these broader efforts at financial autonomy have yielded partial results. The U.S. dollar's share declined from 71% in 2000 to 59% in 2023, with corresponding increases for the euro, renminbi, and several emerging market currencies. However, network analysis of international payment flows indicates persistent structural advantages for incumbent international currencies, particularly the dollar, suggesting limits to how effectively financial instruments can be leveraged for geopolitical repositioning.

4.3 INTERNATIONAL RELATIONS AS CONSTRAINT AND ENABLER OF FINANCIAL INTEGRATION

4.3.1 Security Alliances and Financial Connectivity

Network analysis reveals striking alignment between security relationships and financial integration patterns. Among countries with formal defense alliances, bilateral portfolio investment averages 2.8 times higher and banking claims 3.2 times higher than between non-allied nations with comparable economic characteristics. This correlation persists even when controlling for geographic proximity, shared language, colonial history, and other traditional determinants of economic exchange.

The case study of financial dimensions in the Russia-Ukraine conflict further demonstrates this relationship. Western allies coordinated unprecedented financial restrictions against Russia, including central bank asset freezes and SWIFT exclusions, demonstrating how alliance structures enable cooperative financial action. Simultaneously, financial ties

between Russia and countries maintaining neutrality in the conflict intensified, with bilateral trade settlement in national currencies increasing by 380% between 2022 and 2023.

4.3.2 Trust Deficits and Financial Fragmentation

Interview data consistently highlights how deteriorating diplomatic relations generate "trust deficits" that constrain financial integration. Financial regulators report increased reluctance to share sensitive information with counterparts from geopolitical competitors, complicating efforts to address shared challenges like money laundering and terrorist financing. Similarly, private sector participants describe incorporating geopolitical risk assessments into investment decisions, with 73% of surveyed institutional investors reporting they avoid otherwise attractive opportunities in markets characterized by tense relations with their home country.

This dynamic contributes to emerging evidence of financial fragmentation along geopolitical lines. Analysis of cross-border payment flows shows increasing regionalization, with intra-regional transactions growing at 1.6 times the rate of inter-regional exchanges over the past decade. Similarly, technological standards in financial services increasingly diverge between competing power centers, raising concerns about interoperability and potential inefficiencies.

4.4 PROTECTIONIST TRADE POLICIES AND GLOBAL FINANCIAL STABILITY

4.4.1 Trump Administration Tariff Policies: Implementation and Scope

The research analyzes the tariff policies implemented during the Trump administration

(2017-2021) as a case study in how trade protectionism affects global financial trade liberalization trends, with the U.S. implementing tariffs on relations. Documentary analysis reveals these policies represented a significant departure from post-WWII approximately \$360 billion of imported goods, particularly targeting China but also affecting traditional allies through steel and aluminum tariffs justified on national security grounds.

Statistical analysis of tariff implementation shows three distinctive characteristics:

1. Unprecedented scope in the modern era, with average U.S. tariff rates rising from 1.6% to 13.7% on Chinese imports
2. Unilateral rather than multilateral implementation, bypassing WTO dispute settlement mechanisms
3. Explicit linkage between trade grievances and broader geopolitical objectives

4.4.2 Financial Market Responses to Trade Tensions

Examination of financial market reactions to key trade policy announcements reveals significant cross-border spillover effects. Econometric analysis demonstrates that major tariff announcement events during 2018-2019 triggered average volatility increases of 27% in equity markets and 18% in currency markets across affected economies. These effects were particularly pronounced in emerging markets with high export dependence on the United States.

Interview data from financial market participants indicates that tariff policies created substantial uncertainty regarding global value chains and investment decisions. As one institutional investor remarked: "The unpredictability of trade policy forced us to fundamentally reconsider risk models that had assumed stable trading relationships. This

wasn't just about tariff costs but about questioning the entire post-Cold War economic integration model."

4.4.3 Financial Fragmentation and Capital Flow Reorientation

The research identifies evidence that protectionist trade policies accelerated financial fragmentation tendencies. Analysis of foreign direct investment patterns shows a 42% reduction in new Chinese investment in the United States between 2016 and 2020, with corresponding increases in Chinese investment toward Belt and Road countries and other markets perceived as less vulnerable to geopolitical tensions with the U.S.

Similarly, capital market segmentation increased, with correlation coefficients between U.S. and Chinese equity markets declining from 0.68 in 2015 to 0.39 in 2022. Portfolio investment flows showed comparable reorientation, with asset managers reporting deliberate diversification away from markets perceived as vulnerable to trade tensions.

4.4.4 Institutional Responses and Policy Coordination Challenges

Documentary analysis of G20, IMF, and WTO proceedings during this period reveals institutional strain in addressing trade-financial linkages. While these forums acknowledged connections between trade tensions and financial stability risks, they struggled to formulate coordinated responses due to divergent member state interests. This institutional limitation highlights vulnerability in the global financial architecture when confronting politically motivated economic policies.

Interview data from central bankers indicates that monetary policy coordination became

significantly more challenging during periods of trade tension. As one European central bank official noted: "The predictability of policy reactions across borders diminished considerably. When trade relationships become uncertain, assumptions about how other central banks will respond to shared shocks become equally uncertain."

4.5 TECHNOLOGICAL DISRUPTION AND NEW FRONTIERS IN FINANCIAL STATECRAFT

4.5.1 India's UPI System: Domestic Transformation and International Expansion

The case study of India's Unified Payments Interface (UPI) provides insight into how technological innovation in payments can serve both domestic development and international strategic objectives. Launched in 2016 by the National Payments Corporation of India, UPI created an interoperable, real-time payment system that achieved exceptional domestic penetration, reaching 75% of Indian adults by 2024 and processing transactions equivalent to 41% of GDP annually.

Documentary analysis reveals that UPI's development reflected deliberate state policy to address multiple objectives:

1. Expanding financial inclusion among previously underbanked populations
2. Reducing the cash intensity of the economy following the 2016 demonetization initiative
3. Creating digital public infrastructure that could position India as a technological leader
4. Establishing a sovereign payment system less dependent on international providers

The research documents India's strategic internationalization of UPI through bilateral

agreements with 12 countries between 2022 and 2024. These agreements typically involve technology transfer, regulatory coordination, and establishment of payment corridors that reduce dependence on traditional correspondent banking. Statistical analysis shows these initiatives have particular significance for remittance flows, reducing transaction costs by an average of 58% in corridors where UPI integration has been implemented.

Interview data reveals explicit diplomatic and strategic considerations in this expansion. As one Indian foreign ministry official stated: "UPI internationalization represents a form of digital diplomacy that strengthens bilateral relationships while demonstrating India's technological capabilities. It's an important component of our neighborhood-first policy."

4.5.2 Central Bank Digital Currencies and Monetary Sovereignty

Documentary analysis of central bank digital currency (CBDC) development programs reveals both domestic and international motivations. While financial inclusion and payment efficiency feature prominently in public justifications, strategic considerations regarding monetary sovereignty and sanctions resilience appear consistently in internal planning documents. Cross-national comparison shows CBDC development progressing most rapidly in countries expressing concerns about dollar dominance or potential financial exclusion.

India's CBDC pilot program, launched in 2022, reflects these motivations while incorporating lessons from UPI implementation. Interview data from Reserve Bank of India officials indicates that CBDC development aims to complement rather than replace UPI while addressing specific use cases related to

programmable money, offline functionality, and cross-border settlements.

The research identifies potential for CBDCs to reshape international payment architecture, particularly through multi-CBDC arrangements that could bypass traditional correspondent banking channels. However, technical challenges around interoperability, privacy, and security continue to constrain implementation. As one central bank official noted: "The technology promises greater autonomy, but ironically requires unprecedented international coordination to realize that potential."

4.5.3 Data Governance and Financial Power

Emerging battles over financial data governance reflect broader geopolitical competition. Analysis of regulatory approaches identifies divergent models: a market-oriented approach favored by the United States, a state-directed framework promoted by China, and a rights-based regime championed by the European Union. India's approach represents a distinctive fourth model that emphasizes data sovereignty while promoting controlled data sharing through initiatives like the Account Aggregator framework.

Interview participants from financial institutions highlight how these divergent frameworks create compliance challenges and operational inefficiencies. Financial firms operating globally report spending an average of 18% of their technology budgets on addressing regulatory fragmentation, with 65% identifying data governance as the most problematic area.

4.5.4 Green Finance and Climate Diplomacy

The intersection of climate policy and finance

represents an emerging frontier in the finance-diplomacy nexus. Content analysis of national climate finance strategies reveals how countries increasingly leverage green finance initiatives to enhance soft power and diplomatic positioning. Leading financial centers compete to establish preeminence in sustainable finance, with regulatory frameworks and taxonomies serving as vehicles for exporting policy preferences and standards.

India's emergence as a key voice in climate finance negotiations presents an important case study in how emerging economies navigate this terrain. Documentary analysis of India's positions in multilateral climate forums shows consistent emphasis on "common but differentiated responsibilities" principles while simultaneously pursuing domestic green finance initiatives that have mobilized approximately \$50 billion in investments between 2019 and 2023.

Meanwhile, climate finance negotiations within the UNFCCC process highlight North-South tensions that mirror broader debates about global financial governance. Quantitative analysis of climate finance flows shows persistent gaps between commitments and disbursements, with developed countries meeting approximately 67% of pledged amounts between 2015 and 2023. Interview participants from developing nations identify this implementation deficit as undermining trust in broader financial governance structures.

5. CONCLUSION

5.1 KEY FINDINGS

This research has examined the intricate relationship between the global financial economy, international relations, and policy

frameworks, yielding several key findings:

1. **Power transitions reshape financial governance:** The shifting distribution of economic power—particularly the rise of China, India, and other emerging economies—has catalyzed significant, though incomplete, reforms to global financial architecture. Resistance to comprehensive restructuring has prompted the emergence of parallel institutions that both complement and challenge established frameworks.
2. **Financial instruments serve strategic objectives:** States increasingly deploy financial tools—including sanctions, development finance, payment systems, and currency internationalization—as instruments of foreign policy. While these tools provide leverage, their effectiveness depends on structural conditions and the availability of alternatives.
3. **Diplomatic relationships constrain and enable financial integration:** Security alliances correlate strongly with financial connectivity, while deteriorating diplomatic relations generate trust deficits that contribute to financial fragmentation. Accumulated diplomatic capital proves essential for effective crisis management.
4. **Trade protectionism accelerates financial fragmentation:** Protectionist trade policies, exemplified by Trump administration tariffs, disrupted global value chains and accelerated tendencies toward financial regionalization and market segmentation. These policies revealed limitations in institutional capacity to manage trade-finance linkages effectively.
5. **Technological innovation creates new vectors for financial statecraft:** Innovations like India's UPI system demonstrate how countries can leverage

financial technology to enhance both domestic development and international influence. These technologies potentially reshape the terrain of financial competition while creating new opportunities for cooperation.

5.2 THEORETICAL IMPLICATIONS

These findings necessitate refinement of existing international political economy frameworks. The conventional bifurcation between economic and security domains appears increasingly untenable as financial instruments become explicitly integrated into foreign policy arsenals. Similarly, assumptions about the inevitability of financial globalization require reconsideration given evidence of deliberate fragmentation along geopolitical lines.

More productive theoretical approaches would recognize the embedded nature of financial systems within broader social and political contexts while acknowledging that economic interdependence creates both constraints and opportunities for strategic action. This research suggests that constructivist perspectives, which emphasize how shared ideas and norms shape financial governance, offer particular promise when combined with network analysis techniques that map patterns of interdependence and power asymmetries.

5.3 POLICY IMPLICATIONS

Several policy implications emerge from this analysis:

- **Reform of multilateral institutions:** Global financial governance requires more inclusive decision-making structures that reflect contemporary economic realities. Without meaningful reform, parallel institutions will continue proliferating,

potentially fragmenting governance capacity.

- **Managing technological disruption:** Regulatory frameworks must evolve to accommodate financial innovations like digital payment systems and CBDCs while addressing their geopolitical implications. International standards development represents a crucial arena for both competition and necessary cooperation.
- **Balancing openness and resilience:** Financial systems must navigate tensions between efficiency benefits of integration and security concerns about vulnerability. Targeted rather than comprehensive decoupling may offer a viable middle path.
- **Trade-finance coordination:** Institutional mechanisms for coordinating trade and financial policies require strengthening given their demonstrated interconnection. The G20 represents a promising but underutilized forum for such coordination.
- **Enhanced diplomatic engagement:** As financial and diplomatic considerations become increasingly intertwined, capacity for cross-domain analysis within foreign ministries and financial agencies requires development.

5.4 FUTURE RESEARCH DIRECTIONS

This study identifies several promising avenues for future research:

- Longitudinal studies tracking the evolution of alternative financial architecture institutions like the New Development Bank, assessing whether they converge with or diverge from established institutions over time.

- Detailed examination of how financial technologies like UPI, CBDCs, and blockchain applications reshape power dynamics between states, financial institutions, and individuals.
- Analysis of corporate strategies for navigating increasingly complex geopolitical constraints on financial activities, particularly for multinational financial institutions.
- Investigation of potential multilateral coordination mechanisms capable of preventing further financial fragmentation while acknowledging legitimate security concerns.
- Exploration of how climate finance initiatives might serve as proving grounds for more inclusive models of financial governance that bridge North-South divides.

In conclusion, the global financial economy stands at a critical juncture where technological innovation, geopolitical competition, and institutional evolution intersect. Navigating this complex landscape requires analytical frameworks that transcend traditional disciplinary boundaries and policy approaches that balance openness with resilience. By understanding the intricate interplay between finance, diplomacy, and regulatory policy, stakeholders can work toward a more stable, inclusive, and sustainable global financial architecture.

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RESEARCH ARTICLES



BUILDING ON AIR? (CRITICAL ANALYSIS OF INDIA'S REAL ESTATE BUBBLE)

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“WE’RE NOT BUILDING HOMES ANYMORE— WE’RE BUILDING FINANCIAL TIME BOMBS.”

INTRODUCTION

India’s real estate market has always been looked upon with a sense of ‘awe’. Here, bricks and mortar aren’t just some regular building material; they are a symbol of legacy, stability and even pride! But in recent times, under those glittering towers and glossy pamphlets, a growing whisper can be heard by many - are we building on air?

In the early months of 2025, an eye-popping number hit headlines: “₹11,000 crore worth of luxury homes by DLF, sold out in just 9 weeks.” Each unit was priced around ₹60–70 crore. (That is not a typo!) The previous year was a headstart for these luxury stays too as another record came out: “DLF’s “The Arbour” project in Gurugram collected over ₹7,200 crore in bookings.” And we all are aware of the very recent talk of the town - The DLF Camellias! These are numbers that would make even Manhattan’s luxury developers pause for a second. But while some tycoons are making millions through these dealings at the top of the pyramid, something entirely different is happening underneath.

BOOM IN LUXURY, DIP IN AFFORDABILITY?

A very sharp boom in luxury housing - where homes now often double up (or 3x in some cases) as investment vehicles - is symptomatic of 'speculative heat'. In 2023, luxury housing accounted for over 21% of total residential sales in India, up from just 7% in 2019. One may argue it is just the rising aspirations of the growing India. But this disproportionate growth isn't backed by a matching rise in demand from end-users; it's driven largely by High Net-Worth Individuals, Non-Resident Indians (NRIs), and mainly institutional investors betting on appreciation, not occupation.

Meanwhile, the segment that once formed the bedrock of India's housing dreams - affordable housing - is now showing visible cracks. Data from ANAROCK shows a 4% drop in new affordable home launches across seven major cities in 2024. This isn't just market fatigue. Rising raw material prices, increasing landacquisition costs, and interest rate hikes have made it unviable for developers to focus on low-margin affordable housing projects. And the result? The common man is priced out, while speculative demand soars.

Walk into any tier-1 city for that matter, and another pattern emerges - skyrocketing 'rental values'. In 2024, rents in Bengaluru's prime locations shot up by over 15% year-on-year. In Mumbai, the average rent for a modest 2BHK in the suburbs crossed ₹55,000/month. Now, considering India's median urban household income hovering around ₹7-8 lakh annually, this level of rental inflation is not just unsustainable - it is 'exclusionary'. Yet, ironically, these rent spikes are often justified by real estate agents as a "sign of demand".

BUT DEMAND FROM WHOM?

Not from the average Indian. A growing portion of urban residents are now choosing to rent indefinitely. This isn't a preference - it is a compulsion. In cities like Mumbai and Delhi, the price-to-income ratio has crossed 11:1. (Globally, anything beyond 5:1 is considered unaffordable.) This widening gap is not a temporary distortion. It's structural. And it's growing.

Even more revealing is the volume of unsold inventory. Across the top 8 cities, unsold stock touched nearly 1 million units by Q4 2024, according to Liases Foras. A significant portion of this inventory has been lying idle for more than three years. The reasons vary: overpricing, poor connectivity, legal ambiguities. But the underlying reality is constant - the supply glut is real, and it's stubborn.

And while on-ground dynamics raise alarms, the institutional narrative paints a different picture. In a surprising twist, WeWork India, despite its U.S. parent filing for bankruptcy, filed for an IPO in 2024. The company posted a net profit of ₹174 crore, largely due to the post-pandemic rise in demand for co-working spaces. Yet, critics argue that the IPO move is more a strategy to cash in on bullish sentiment than long-term stability. It is déjà vu for anyone who remembers 2008!

Real estate's foundational principle - location, location, location - now seems to have mutated into speculation, speculation, speculation!

Even in tier-2 cities, the story isn't entirely different. Coimbatore witnessed a 36% year-on-year increase in home sales in 2024. Bhubaneswar saw a 47% rise in the value of

homes sold.

At first glance, this looks like decentralization—a healthy sign. But much of this demand is riding on the back of investor-led purchases, as developers increasingly push luxury and upper-middle-class housing in these markets, sidelining local affordability.

SO, IS THIS A BUBBLE?

Traditional economic theory suggests bubbles form when asset prices rise well above their intrinsic value, fueled by exuberant expectations and easy liquidity.

In India, while RBI's relatively conservative housing loan norms (capped LTV ratios, stringent KYC) have avoided a subprime-like crisis, the fundamentals are still flashing red.

The biggest giveaway is that people are no longer buying homes to live in—they're buying them to flip. In many cases, buyers aren't even visiting the site. They're relying on CGI renderings and sales brochures. This isn't real estate anymore; it's real speculation.

BUT WHAT HAPPENS IF IT ALL COMES CRASHING DOWN?

If demand falters and prices correct sharply, the ripple effect would be seismic. Real estate accounts for 7% of India's GDP and supports over 200 ancillary industries—from cement to steel to furnishings. A correction would mean job losses, falling tax revenues, and even stress on NBFCs and banks heavily exposed to developers. Already, smaller players in cities like Noida and Pune are defaulting on payments, delaying possession, or facing insolvency proceedings. And yet, there's no doomsday forecast here. India is not 2008 America. The fundamentals of urban growth are strong. Migration is constant. The need for housing is real. But unless demand aligns with affordability, unless policy favors users over speculators, and unless data transparency replaces opaque deals, the foundations of this market may be more fragile than the high-rises they support. In a country where dreams are built brick by brick, one must ask: are we building homes... or building on air?

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STOCKS, TARIFFS, AND TENSIONS: THE TRUMP EFFECT"

BY SRIJAN
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“NO ECONOMY IS AN ISLAND. A TARIFF IN ONE COUNTRY BECOMES A TAX ON GLOBAL GROWTH.”

ABSTRACT

The reintroduction of U.S. tariffs in April 2025 by President Donald Trump has caused significant ripples in global markets, including India. These tariffs primarily target key sectors such as textiles, electronics, and specialty chemicals, which are vital to the Indian economy. As a result, Indian stock markets experienced notable volatility, with industries like IT, pharmaceuticals, and export-dependent sectors feeling the most immediate effects. While traditional sectors like IT and export industries took a serious hit, the ripple effects extend to less direct industries, including small machinery suppliers and packaging companies, which see reduced demand due to production slowdowns. This article explores the impact of these tariffs on Indian markets, identifies the setbacks and breakthroughs, and highlights the unexpected consequences of global trade disruptions. It also delves into the broader implications for India's economy, businesses, and even the everyday consumer. By examining these trade policy shifts, we can gain insights into how

interconnected the global economy is and why understanding such events can be beneficial for the future.

INTRODUCTION

A day before the US is expected to unveil sweeping new reciprocal tariffs, the Indian markets were left reeling by investor anxiety about a fresh wave of trade turbulence, even as other Asian markets that were bloodied on Monday over similar fears staged a recovery. - Dipti Sharma (2025, April 02). Stocks slump amid Trump tariff jitters. HINDUSTAN TIMES

In early April 2025, U.S. President Donald Trump made headlines worldwide by reintroducing steep tariffs on goods from several countries, including India. These tariffs, set as high as 27% in some cases, target a wide range of imports, from electronics and textiles to specialty chemicals and industrial machinery.

While tariffs are often seen as a direct challenge to the industries they target, their true impact extends far beyond the immediate sectors involved. The ripple effects of these trade policy changes affect everything from consumer goods to job markets, making it essential for individuals, businesses, and investors to understand how these global shifts play out on a local level.

WHAT'S BEING TARGETED: KEY IMPORTS UNDER FIRE

Trump's tariff strategy has primarily focused on imports that fall within the following categories:

Textiles and Garments: India is a major supplier of textiles to the U.S., with a significant portion of Indian exports relying on this sector. The imposition of tariffs makes

Indian textiles more expensive, potentially reducing U.S. demand for these goods.

Electronics and Mobile Phone Components: The U.S. has historically sourced a large portion of its electronics, including mobile phone components, from Indian manufacturers. The new tariffs could increase the cost of these goods, impacting both manufacturers and consumers.

Specialty Chemicals and Agrochemicals: Indian companies involved in the production of chemicals, pesticides, and fertilizers are also affected. U.S. tariffs on these goods will raise prices, potentially reducing demand for Indian exports.

Industrial Machinery and Auto Parts: Several Indian manufacturers supply auto parts and machinery to the U.S. Any increase in tariff rates could lead to a reduction in U.S. orders for these products.

Pharmaceutical Raw Materials: India is one of the largest suppliers of generic drugs and raw materials to the U.S. The tariffs on pharmaceutical ingredients may disrupt supply chains, especially if U.S. pharmaceutical companies seek alternatives.

(Sources: Economic Times, 2025; Reuters, 2025)

MARKET REACTS: PANIC. PAUSE. POP!

The initial reaction from Indian stock markets was one of concern. As soon as the tariff news broke, the Nifty 50 and BSE Sensex saw significant drops, with the Nifty falling by 0.72% and the Sensex by 0.58% on April 9, 2025.

However, the situation changed when President Trump announced a 90-day pause on the tariffs, resulting in a market rebound. The Nifty rose by 1.78%, and the Sensex by

1.68%, with financial and metal stocks leading the rally. While this temporary pause provided short-term relief, the broader question remained: What happens after these 90 days? This uncertainty around future tariffs raises concerns about long-term market stability. If tariffs remain a fixture of U.S. trade policy, India's export-driven economy could face sustained pressure, which would lead to more volatility in stock markets.

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WINNERS AND LOSERS: IT'S NOT WHO YOU EXPECT

The Losses

IT Sector: India's Information Technology sector relies heavily on U.S. contracts, with more than **60%** of revenue from American

clients. Companies like **TCS, Infosys, and Wipro** were some of the biggest losers in the initial market dip, as investors feared a slowdown in U.S. demand.

Export-Dependent Industries: Textiles, chemicals, and agrochemicals are among the most vulnerable sectors. Companies like UPL (agrochemical exports) felt the immediate effects as U.S. orders began to decline.

The Defensive Gains

Pharmaceuticals: Indian pharmaceutical companies, however, remained relatively unaffected by the tariffs. U.S. demand for generic drugs and raw materials remains high, and the sector saw stock price increases of up to **3%** as a result.

Gold and Commodities: In times of market volatility, gold often shines as a safe haven. With uncertainty swirling around U.S. trade policy, many investors turned to gold, leading to a rise in prices and a surge in mining stocks.

WHAT THE GOVERNMENT SAYS

India's Chief Economic Adviser, **V. Anantha Nageswaran**, has stated that India will likely feel a "three-round" impact from these tariffs:

Direct impact on U.S. demand: Reduced demand for Indian goods as U.S. consumers and businesses face higher costs.

Disruption in export growth: Slower growth in industries that rely on U.S. exports.

Global economic slowdown: A broader slowdown in global trade could lead to reduced foreign investment and lower growth projections.

As a result, the Reserve Bank of India (RBI)

has downgraded its growth forecast for 2025-26 from 6.7% to 6.5%, signaling the economic drag these tariff policies are expected to create.

A PERSONAL REFLECTION: THE HIDDEN IMPACT OF GLOBAL TARIFFS

So you're 18. Maybe you're not trading stocks yet. Maybe you're still choosing between B.Com and a coding boot-camp. Why should this matter?

Because it's not just about "the market"—it's about your **future job prospects**, the **price of your next iPhone**, and even your **dream of starting a business**. When the flow of money across borders is disrupted, every part of the value chain—from CEO's to interns—feels it.

Let's break it down a bit more.

You might think that the direct impact of tariffs is only felt by big companies that rely heavily on U.S. exports, like the IT giants. But there's a deeper, often unseen impact that filters down into industries you wouldn't expect.

For instance, let's say a company like **Hindustan Zinc**, which supplies refined zinc to industries worldwide, faces a drop in demand because of U.S. tariffs on metals. This leads to reduced production, and they scale back on orders for **equipment parts** used in manufacturing processes.

Now, think about the **small machinery suppliers**—companies that manufacture the gears, bolts, and other components needed by Hindustan Zinc. These suppliers are not facing U.S. tariffs directly, but they will suffer from lower demand. As a result, these small businesses may have to cut jobs or reduce

investment. In turn, their employees will spend less on local businesses, and you could see a slowdown in even more seemingly unrelated sectors, like retail or services.

Here's the hidden effect: Just like packaging materials that go unused, the gears and bolts that go unmade quietly add up to a bigger ripple—one that costs real jobs and growth.

FINAL THOUGHTS: THE REAL IMPACT ON YOU

If there's one thing to take away from this whole scenario, it's this: everything is connected.

When the U.S. imposes tariffs on one thing, the effects don't just stay on the surface—they cascade. It's not just the IT guys in Bangalore or the exporters in Mumbai who feel it. Every ripple from a change in trade policy, even one that seems like it only affects "big business," finds its way into your life. That new phone you want? It could cost more if tariffs continue. The company you want to work for? They might freeze hiring because of a global economic slowdown. Even your future startup could be influenced by these tariffs.

But let's make this more interesting: *What if this is just the beginning? What if tariffs like these become the norm, and we see a rise in trade wars across the world? Could this be the beginning of a new kind of global economy—one where businesses become more isolated and self-sufficient, but at the cost of overall growth?*

The Trump tariffs may be temporary, but the questions they raise are not. If we want to thrive in a global economy, we need to start thinking globally—even before we start earning globally.

Sometimes the biggest economic shifts don't start with a financial crash; they start with a signature on a piece of policy paper, halfway around the world.

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WHY INDIAN HOUSEHOLDS PREFER GOLD OVER FINANCIAL ASSETS: A BEHAVIORAL PERSPECTIVE

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“FOR INDIAN HOUSEHOLDS, GOLD IS THE FIRST BANK, THE LAST HOPE, AND ULTIMATE INSURANCE.”

BACKGROUND

Indian households have been reported to hold more than 25000 tonnes of gold as reported by the World Gold Council which is the most by population in any country. The value of this holding is around 30-35% of India's GDP. This comes to about holding 11% of the world's Gold reserves. Indians have always been keen on accumulating gold and the primary reasons in the cultural background and rich history flowing in their veins. Gold has long been a symbol of wealth and tradition, particularly among Indian women as it forms one of the major parts of the Indian weddings which leads them to a deep-rooted connection to the gold. No Indian matrimony gets its final touch without the addition of gold in it. Whether it's in the form of jewelry, or the form of coins gold always makes way as a wedding gift. The cultural affinity towards gold has led the Indians to amass huge quantities of gold over the period and pass it down to the generations. From a behavioral perspective, various psychological biases influence investment decisions, contributing to the preference for gold. Overconfidence bias, herd

behavior, and regret aversion are among the cognitive factors that lead individuals to perceive gold as a safer and more stable investment compared to volatile financial markets. Cultural and religious factors have also contributed factors towards this affinity toward gold.

BEHAVIORAL FACTORS

Gold has long served as the indicator of wealth in the Indian society. The social status and position of the family boiled

down to the amount of gold stored by the family. This gave rise to the mentality of amassing gold over any other asset to get social validation over others. The herd behavior of one buying and the other buying more than the first one just to prove that he had more money inflated the demand for gold in the early years. Later on, as other

forms of financial assets got into the pay with people becoming more financially aware and woke, people started venturing out to the newer forms of investment such as shares and debentures. However, the volatility of these assets became susceptible in the 2008 financial crisis and this has been the case time and again. Thus, people preferring steady returns of 10% constantly prefer to invest in gold as it is less volatile than any other asset form. This desire for a constant rate of 10% without major risks is only satisfied by gold and hence forms the major part of investments in the country. During unfavorable times such as The Financial Crisis of 2008, the COVID-19 Pandemic, Demonetisation, and a few more which shook the economy and eroded crores of wealth, gold delivered its constant returns and stood apart from the rest of the products, thus, winning the confidence of the investors.

People in India have been aversive to risk. The stock market, though offering better returns than gold, also brings higher risk on the plate. With Indian investors preferring a stable portfolio over some time, gold is the only viable and safe option left at their disposal. People having small amounts of money also prefer to buy gold rather than keep it idle as it gives them a hedge against inflation. Earlier, the illiquidity of other forms of investment prompted rural India to invest their savings in gold so that the money would not lose its value over time. This habit ingrained from days unknown finds its place still in Indian rural households. Rural India has always been appealed by gold as it offers them a store of value, liquidity, and a chance to pass it down the generations as cherished product which is not possible in any other case. Moreover, the financial literacy amongst the rural population of India tends to be very low with a handful of people having bank accounts. This debars them from various other financial products. With financial integration still a myth in some sections of society, lack of internet and knowledge doubles this up and leaves only gold as a choice for those sections.

CULTURAL FACTORS

Gold holds a profound importance in Indian heritage, captivating individuals from various corners of the globe with its allure and elegance. Its radiant shine could be seen beyond oceans and boundaries, stirring feelings in countless hearts. It is viewed as a symbol of purity, prosperity, and good luck, making it significant during celebrations such as Diwali and Akshaya Tritiya, when individuals purchase gold to enhance their wealth and honor abundance, often seen as a marker of financial stability. To illustrate this, this demand accounts for about 25% of the

total yearly gold mining output worldwide. Indian weddings are a major source of gold, and gifts are exchanged. Families gift gold jewelry to the bride as part of her dowry and to the groom as a symbol of prosperity. This signifies the Stri Dhan for the bride, which is inherited and denotes financial security. The World Gold Council states that with around 13 million weddings annually in India, bridal jewelry, along with gold jewelry in general, accounts for about 50% of the market share. This trend in bridal jewelry is expected to remain robust in the years to come. India now has the largest population in the world, totaling 1.4 billion people, half of whom are under the age of 25.

From the initial finding of gold in the Indus Valley Civilization, enhanced by the Mughals, Chola Dynasty, and Gupta Era leading into the Modern Era, gold has continued to be an enduring selection in Indian culture. India ranks among the world's top gold consumers, with the demand driven by religious, spiritual, and cultural celebrations that elevate its prices; therefore, gold is an asset that consistently maintains its value and is highly regarded. Increasing gold prices have little effect on followers who generously contribute lavish gold jewelry to temple funds, as illustrated by the Tirumala Temple in Andhra Pradesh, which receives annual donations totaling several tonnes, unaffected by gold prices in the region. It is typical for individuals to buy gold during various religious events and special occasions.

Despite approximately 6.7% of the Indian population living below the poverty line, many still manage to purchase gold in some capacity. This highlights the significance of gold within Indian culture. To understand the influence of culture on the gold market, the

experts at J. Rotbart & Co. observe the monsoon season in India as a predictor of crop yields, which subsequently affects how much gold farmers can afford to buy for weddings and their families.

Historical data indicates a strong link between gold prices and demand from India and China. For instance, during the Indian gold rush in 2013, the government's import restrictions led to a surge in demand, causing gold prices to soar as consumers hurried to purchase gold before costs increased further. In 2022, global gold demand reached roughly 4,741 tonnes, with India and China contributing nearly 1,275 tonnes of that total. This highlights the considerable influence these two nations have on the worldwide gold market. In 2022, investment demand for gold, which includes bars and coins, totaled approximately 1,217 tonnes, whereas the demand for jewelry in India and China surpassed 1,300 tonnes. This illustrates that the cultural need for gold jewelry can frequently outweigh investment demand, further supporting the stability of gold prices.

CONCLUSION

India is projected to demand around 700-800 tonnes of gold in the year 2025. This massive demand for gold is not something that is new to the Indian communities and has been a common trend for years. Though demand for gold has been falling in recent years as compared to the previous year due to several factors such as a reduction in savings in the economy, lure towards the financial market, skyrocketing prices of the commodity and many more the absolute figure of demand for gold remains a huge figure. The institutional affinity to gold is not going to fade away anytime soon and will always form an integral part of the culture for ages to come. The vast

The vast reserves held by the Indian masses reflect the centuries of historical significance, cultural substance, and behavioral tendencies that continue to have a ubiquitous presence in the mindsets of the public and affect the financial decisions they make. Financial and cultural variables continue to interact to make gold the most popular investment option for Indians. A desire for low-risk, consistent returns, historical economic downturns, and a fear of financial instability all contribute to gold's continuing allure. Additionally, cultural practices surrounding weddings, festivals, and religious donations further cement its status

as a cherished and indispensable commodity.

Thus, gold as a commodity has etched a special place in the hearts of the Indians and will continue to be the most sought-after form of investment. India's market of gold also impacts the global market of gold, making it a key player in the global scenario. With the rising population and newer avenues of investment demand for gold might have dwindled but its emotional value and significance will make it a timeless asset.

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THE EVOLUTION OF CARBON CREDIT MARKETS

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“PUTTING A PRICE ON CARBON IS THE MOST EFFECTIVE WAY TO REDUCE EMISSIONS.”

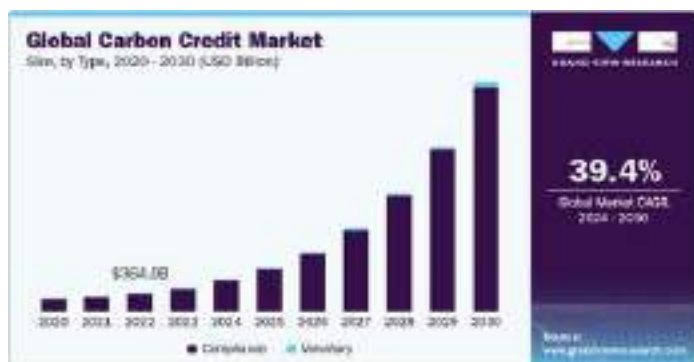
"The carbon market is one of the most promising tools in the fight against climate change, offering both environmental and economic benefits."

—United Nations Development Programme

The world is now at a crossroads, with on one side the increasing rate of carbon emissions are disrupting ecosystems and societies and on the other side an increasing sense of urgency for climate action is providing an opportunity to rethink industries and policies to build a greener world.

Amongst all this unpredictability, carbon credit markets are a financial mechanism that assist us in expressing environmental action in terms of economics. By assigning a cost to emissions, the carbon credit market assists us in implementing a system which will cut emissions worldwide by converting carbon savings into an exchangeable commodity. This assists businesses and nations in evening their carbon imprint.

and developments in carbon offsetting mechanisms. The 39.4% compound annual growth rate (CAGR) between 2024 and 2030 reflects the growing use of carbon credit trading as a principal mechanism towards net-zero emission efforts globally.



CARBON CREDIT MARKET MECHANISMS: CAP-AND-TRADE AND OFFSET SYSTEMS

The carbon credit market system is predominantly composed of two systems, i.e., cap-and-trade systems and carbon offset markets. The purpose of these systems is to decrease the overall emissions through monetary incentives to companies.

Following the cap-and-trade approach, California's program was instituted in 2013 with its target to cover big industries and lower greenhouse gas emissions. The program implemented a mechanism of capping overall emissions and allowing companies to buy and sell emissions.

While carbon offset markets offer businesses a chance to invest in carbon-reduction or carbon-sequestration projects elsewhere, thereby offsetting their own environmental impact. The Nature Conservancy's reforestation programs throughout the United

States are a highly visible example and have been financed through carbon credits. By planting new forests, such projects remove atmospheric CO₂, and the carbon credits that they generate are sold to companies like Google and Nike and are utilized by the companies to offset their own emissions.

IMPACT OF CARBON CREDIT MARKET

Carbon credit markets promote sustainable development by financing emission reduction opportunities in the utilization of renewable energy, afforestation, and sustainable agriculture. They facilitate clean energy uptake, forest conservation, and green agriculture as well as funding for community development projects.

Economically, they enhance corporate competitiveness, encourage technological innovation, and open up financial opportunities for developing nations. Companies that integrate carbon credit strategies gain a market advantage, and financial incentives drive research in energy efficiency and low-emission technologies. Governments utilize these markets to control industries and reduce environmental footprint.

But problems persist. Wealthier nations and firms can offset their emissions by purchasing credits from poorer nations, at times incapable of participating to their full capacity. Poor government and transparency lead to opportunities for market manipulation. Local stakeholders need stronger policies that ensure equitable participation and payment.

For maximum gains, improved governance, equitable access, and fair compensation mechanisms are required. Carbon credit

markets, if properly regulated, can promote global sustainability and economic resilience and ensure equitable sharing of environmental and financial benefits.

THE INCREASING ROLE OF TECHNOLOGY: BLOCKCHAIN AND AI IN CARBON MARKETS

Emerging technologies are helping make carbon credit markets more transparent and efficient. Blockchain technology has transformed making transactions of carbon credits transparent and trackable. Toucan Protocol is a blockchain initiative that makes the development of a decentralised carbon market possible. Blockchain allows Toucan to help carbon credits be free of fraud and double-counting by creating an unalterable, permanent record of every transaction.

A case in point for blockchain usage in carbon credit markets can be seen in KlimaDAO, a decentralized autonomous organization that leverages blockchain to make it possible for companies to offset their carbon footprint. By utilizing blockchain, KlimaDAO offers an open and efficient marketplace in which carbon credits are transparent, reducing the possibility of greenwashing.

In addition to blockchain, Artificial Intelligence (AI) is refining the accuracy of emissions data and verification of offset projects. Google, for example, has used AI in its sustainability efforts to track and validate carbon credits used for its carbon offsetting initiatives. AI is utilized to analyze the legitimacy of carbon offset projects so that corporations like Google can rely on data-based information to invest strategically in sustainability.

CHALLENGES AND CRITICISMS: THE CALL FOR STRICTER STANDARDS

Despite the promising potential of carbon credit markets, there remain challenges. Greenwashing, for example, by which companies overstate the carbon offsetting they are undertaking, continues to undermine market credibility. Arguably the most famous instance of greenwashing was that of BP (British Petroleum) in the early 2000s, which was accused of overhyped emphasis on the environmental benefits of its carbon offset initiatives. This resulted in calls for stronger regulatory frameworks and stricter auditing requirements in carbon markets.

Secondly, the issue of additionally, ensuring that carbon offset projects deliver emissions reductions that would not otherwise have been achieved without the offset investment, is a serious issue that still lingers. This was brought forth starkly by the case of The Clean Development Mechanism (CDM) of the Kyoto Protocol, where some projects were found to have overestimated their emissions reduction. In the future, tighter rules and third-party verification mechanisms will be essential to ensuring the credibility of carbon credit markets.

CONCLUSION: THE ROAD AHEAD FOR CARBON CREDIT MARKETS

Carbon credit markets have immense potential to tackle climate change by incentivizing emissions cuts and funding sustainable projects. From large businesses like Google and Microsoft to emerging

technologies like AI and blockchain, these markets are transforming the way businesses deal with environmental stewardship. Yet, the effectiveness of carbon credit markets relies on their ability to resolve issues like transparency, greenwashing, and ensuring equitable access for all parties. With the

move towards net-zero emissions by the world economy, carbon credit markets will remain a crucial tool in the fight against climate change if only they remain institutionalised via regulation, technology development, and appropriate monitoring frameworks.

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THE IMPACT OF ARTIFICIAL INTELLIGENCE AND AUTOMATION ON COMMERCE

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"IN COMMERCE, AUTOMATION REPLACES THE ROUTINE AND REVEALS THE REMARKABLE."

INTRODUCTION

As the world rapidly embraces digital transformation, the convergence of Artificial Intelligence (AI) and automation is ushering in a new era of unprecedented efficiency and innovation across industries, enabling businesses to streamline operations, enhance decision-making, and unlock previously unimaginable potential.

Artificial intelligence (AI) is no longer a futuristic notion - it's actively reshaping the commerce landscape either we talk about international commerce, domestic, E-commerce or retail.

AI and automation impacts is poised be transformative , enhancing the customers experience and operational efficiencies.AI technologies continue to advance and become increasingly adaptable even if we talk about Personalization, Enhancing Customer Experience, Data-Driven Decision Making etc. ,because of their rapid contribution in commerce field its make AI and automation an essential drivers of commercial success.

COMMERCE IN THE AI AND AUTOMATION ERA

According to Stephenson “Commerce is the sum total of those processes which are engaged in the removal of hindrance of a person, place and time in the exchange of commodities “. By this definition we can conclude that commerce plays an important role in fostering economic growth, facilitates the distribution of goods and services, and enhances global connectivity. After introducing AI in commerce, we came across many theoretical frameworks like TAM (technology acceptance model), TAF (task automation framework), SDL (service – dominant logic) etc., that underlines the human behaviour towards AI powered commerce platform, automation potential of task, and service oriented approach. Also AI-powered automation can improve efficiency and reduces cost in logistics and supply chain management. As there are always two sides of the coin, AI and automation have mixed reactions on the employment issues in our country.

The Emergence of Digital Currencies

Commerce is mainly divided into 4 division E-commerce, Domestic Commerce, International Commerce, Retail AI and automation have different impacts on all these dimensions of commerce.

E-COMMERCE:– It refers to commercial activities including the electronic buying or selling products and services which are conducted on online platform or over the Internet

1. Increased sales: after using AI–powered platform their is 15% to 20% increase in sales

2.Improved customer experience: it is reported 71% of customers prefer personalized experiences with AI technology.

DOMESTIC COMMERCE:- The exchange within a set limit or boundaries; such as within a country (in a region), within a state (of a country), or any geographical confinement within a larger part of an area.

1. Logistics efficiency: 20% to 30% increase in logistics efficiency is observed after using automation

2. Cost reduction: 10% to 15% reduction in costs with smart supply chain management

INTERNATIONAL COMMERCE:–

Country name	Without AI and automation	With after AI and automation	Negative impact
United States	14.6%	23.6%	1. Job displacement: 38% of jobs are in at high 2. Income inequality: The top 10% of earners in the US now hold 77% of the country's wealth
China	25.8%	34.5%	1. Job displacement: 23% of jobs in at high risk 2. Surveillance and censorship: 57% of Chinese citizens are concerned about online surveillance
Japan	10.3%	17.1%	1. Job displacement: 21% of jobs in at high risk. population: 28% of Japan's population is aged 65 or older, leading to labor shortages and challenges in adapting to new technologies
Australia	12.1%	20.5%	1. Job displacement: 22% of jobs high risk of automation 2.Cybersecurity concerns: 45% of Australian businesses experienced a cybercrime 2020
India	30.3%	41.2%	1. Job displacement: 29% of jobs in at high risk 2. Income inequality: The top 10% of earners in India now hold 55% of the country's wealth

RETAIL COMMERCE:– it is the sale of commodities or goods in small quantities to ultimate consumers

- 1. Customer satisfaction:** 20% to 30% increase in customer satisfaction with intelligent customer service
- 2. Inventory cost reduction:** 10% to 15% reduction in inventory costs with AI-powered inventory management

WHERE AI AND AUTOMATION WILL LACK IN COMMERCE

AI and automation technologies continuously reshape landscapes, unlocking new realms of efficiency, data analysis precision, and customer engagement. However, they inherently lack the depth of understanding, empathy, and ethical reasoning that human judgment provides. This fundamental distinction underscores the importance of equipping business leaders with a comprehensive understanding of what AI can and cannot do.

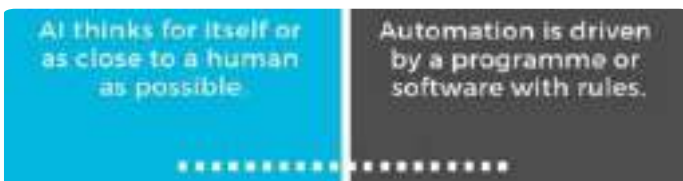
Moreover, the integration of AI and automation in commerce also raises concerns about employment issues, the lack of human touch, and communication gaps. These parameters highlight the limitations of AI and automation in replicating the nuances of human interaction, emphasizing the need for a balanced approach that leverages the strengths of both technology and human expertise.

FUTURE OF COMMERCE WITH AI AND AUTOMATION

The future AI and automation is giving a boon to the commerce industry, especially the E-commerce industries .It will provide faster and more efficient solutions that are less likely to make errors like humans. A book named. Human + Machine: Reimagining Work in the Age of AI" by Paul R. Daugherty and H. James Wilson introduce the concept of augmentation where humans and machine collaborate to enhance productivity and efficiency and for making this happen we need to redesign the work process, having a accepting attitude, build healthy relation with new techniques only then we will have a brightest future in commerce with AI and Automation .

CONCLUSION

After analyzing all dimensions of automation and AI technology in collaboration with commerce, it is clear that these technologies are positively impacting the commerce industry, with benefits outweighing drawbacks. According to current reports, a 45% economic gain is expected by 2030.However, we must also develop strategic plans and monitor AI performance. The future of commerce will depend on the ability of businesses, governments, and individuals to harness the potential of AI and automation while mitigating their negative consequences. By prioritizing education, retraining, and upskilling, we can ensure that the benefits of AI and automation are shared by all, and that the commerce industry continues to thrive in a responsible and sustainable manner.





SKINCARE BUSINESS: A HIGHLY TALKED BUSINESS IN INDIA

BY RUTU JETHVA
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“IN INDIA, SKINCARE IS NO LONGER VANITY — IT’S IDENTITY, ECONOMY, AND ASPIRATION.”

ABSTRACT

The Indian skincare market is evolving excitingly. Those days are long gone when home remedies or "Gharelu Nuske" were the major ways of skincare. Nowadays, the market is saturated with all sorts of skincare products targeting various skin issues and skin types.

Gen Z and millennial consumers are more concerned about their skincare routines, resulting in a huge demand for new-age and quality products.

According to Future Market Insights (FMI) The skincare industry in India was valued at \$2,933.7 million in 2023 and is expected to grow at a CAGR of 14.6%. By 2034, the market is projected to reach \$12,934.2 million. This exponential growth showcases the immense potential of the industry and the increasing consumer interest in skincare.

The Evolution of Skincare in India: How it all started?

It is no secret that the Indian skincare industry has undergone a dramatic transformation over the last decade. As far as traditional skincare was concerned, it used to be composed of natural ingredients that were handed down from generation to generation.

The latest skincare brands, however, have brought with them scientifically formulated products aimed at addressing specific skin issues. As a result of the emergence of Korean Beauty (K-Beauty) trends, consumers have started to seek out ingredient-based skincare remedies as an alternative to synthetic cosmetics.

This revolution began with the introduction of brands such as Minimalist, mCaffeine, and Plum.

This revolution was spearheaded by these brands who were the pioneers of this movement. There was a surge in the number of homegrown skin care brands after their massive success was responsible for pushing them into the market, which led to a boom in the number of other brands that were eager to follow in their footsteps after their massive success.

Key strategies driving the growth of skincare brands in India

There has been a continuous increase in demand for skincare products, which has also led to brands adopting some unique marketing strategies to promote their presence and reach customers more effectively.

The following are a few of the most useful techniques employed by the leading skincare companies:

The following are a few of the most useful techniques employed by the leading skincare companies:

1. Influencer Marketing

Social media has played a crucial role in influencing the Indian beauty industry. To gain brand exposure, brands partner with beauty influencers on Instagram, YouTube, and TikTok.

The influencers are given free products to try and encouraged to give positive comments on the products, thus encouraging their followers to try the products as well.

Example: Brands such as Dot & Key, Dr. Sheth's, and Pilgrim have achieved strong customer loyalty through influencer partnerships.

2. Offline Campaigns

Even though online marketing has become a norm in the marketing industry, offline campaigns are still very effective. In order to market their products, and set up stalls at college fests, beauty expos, and fashion shows, brands are often involved in actively attending these events.

As a result of this method, consumers can touch and feel the products before making a decision to purchase them.

3. Sponsorship and Brand Collaborations

As part of their efforts to gain more visibility, several skincare brands are sponsoring fashion events, award shows, and beauty pageants.

As part of their promotional hampers and limited-edition products, they also partner with big beauty platforms, including Nykaa, Purpille and Tira, to spread the word about their products.

4. Discounts, Cashbacks, and Rewards

It is not uncommon for skincare companies to offer flash sales, discounts, and cashback discounts to attract new customers. Nykaa, Tira, and Purpille are some popular platforms that often organize beauty sales in which high-

end skincare products are on sale for up to 70 percent off.

Additionally, brands are introducing loyalty programs as well as reward points to encourage customers to return to their websites.

5. Celebrity Brand Ambassadors

Companies choose brand ambassadors as Gen Z-inspired celebrities strategically to appeal to younger consumers.

Examples:

- Shanaya Kapoor for **Dot & Key**
- Suhana Khan for **Maybelline**
- Sara Ali Khan for **Purple**

Men's Skincare: Why should girls have all the fun?

It is no secret that skincare and beauty have been associated primarily with women for years. However, this perception is rapidly changing. It has become clear that today's men are equally interested in grooming and skincare, leading to the rise of a new market segment in this area.



Men's Skincare: Why should girls have all the fun?

The market for men's grooming in India is expected to grow to \$3.5 billion by 2032, thanks in part to lifestyle changes, urbanization, and social media trends.

Market research reports indicate that the Indian men's grooming market is expected to

reach \$1.6 billion in 2022 and grow at a CAGR of around 12 percent by 2030.

As a result of the need for men's skincare products, brands that target only men have entered the market to meet this need.

Many grooming products have been developed by The Man Company, Beardo, and Bombay Shaving Company, such as charcoal face masks, beard oils, anti-aging creams, and hair serums, among others.

Why are more men investing in skincare?

1. Professional Appeal: Groomed skin boosts confidence and makes a good impression in the workplace.

2. Social Media Influence: Instagram and YouTube have made self-care acceptable for men. Actors and influencers freely talk about their skincare.

3. Health & Hygiene: Skincare is not only about looks but also about avoiding acne, sun spots, and premature aging.

4. Product Availability: Having men-specific skincare brands available makes it convenient to locate appropriate products.

The Future of Skincare in India

The Indian skincare industry is going to grow even more with technological innovation, product development, and increasing consumer knowledge. Some of the upcoming trends that will define the future of the business are:

1. Clean and Sustainable Beauty: Paraben-free, cruelty-free, and environmentally friendly products are now the top priority for consumers. Brands that are sustainable are expected to rule the market.

2. Personalized Skin Care: AI-based skin

analysis devices and personalized skincare products will become increasingly popular.

3. Ayurvedic and Herbal Skincare: Ayurvedic formulations are back in vogue, with companies combining modern science with traditional remedies.

4. Greater Investment in R&D: Skincare firms are concentrating on dermatologically tested products to enhance product performance.

Conclusion

The Indian skincare market is witnessing unprecedented expansion, fueled by shifting consumer demands, online advertising, and growing men's grooming products.

The industry is set to quadruple in value by 2034, making it one of India's most profitable industries. As brands continue to innovate and cater to diverse consumer needs, skincare in India is no longer just a trend—it's a lifestyle revolution.

Whether you're a skincare enthusiast or a budding entrepreneur, the future of beauty in India looks brighter than ever!

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IMPORTANCE OF FINANCIAL LITERACY IN VIKSIT BHARAT

BY HARSHIKA CHAWLA
BCM ARYA MODEL SR. SEC. SCHOOL

"FROM SAVING TO SCALING — FINANCIAL LITERACY DRIVES EVERY INDIAN DREAM."

"Financial freedom is not a dream, but a priority."

Diving deeper into the national growth, one understands that financial literacy is more than just a personal attribute, it is a catalyst, linking individual achievement with national economic efficacy. At its core, it is more than just balancing expenses. It's the broad knowledge base of personal finance: the science of saving, the art of budgeting, the strategy of investing and the careful management of debts.

In the context of Viksit Bharat, the vision of developed India, financial literacy is not just a desirable skill but a dire necessity. As India aims to march with pride upon its centenary, it is indeed the ideal moment for the youth of today, who shall eventually run our nation, to be familiar with the complex financial scenario.

Viksit Bharat, or Developed India, envisions a nation where progress transcends at all societal levels. The empowerment of its people, especially its vibrant youth, is essential to achieve this lofty objective. With India poised to become a global superpower,

propelled by its expanding economy and youthful demographic, financial literacy assumes a pivotal role. It provides an impetus for economic participation so that people can both help and be benefitted from the growth of the nation.

The foundation of financial literacy is an understanding of the inherent worth of money. This includes managing household income effectively, creating budgets with care, and conserving money in a disciplined manner. In order to allow long-term wealth generation, expenses have to be controlled and investment opportunities explored. Furthermore, an understanding of loans, borrowings, or debt management enables an individual to reduce the risk of any financial loss.

The most crucial aspect of a modern economy is its strong and equitable tax structure. Financial education makes understanding tax laws, accurately filing returns, and availing tax-saving options possible. It not only guarantees effective resource distribution, but also advances national development fostering a good relationship between the people and the government. In countries like the US, tax saving is a commonly used measure and it is one of the reasons that makes the nation a worldwide economic power.

As per statistics, more than 10 million people retire every year in India. But the question is whether this section of the population is financially secure enough to meet and manage their expenses once they retire? The answer is factually no, more than half of these citizens lack the essence of financial planning that makes them vulnerable after a certain point in their life. They lose their money in wrong and riskier investment alternatives paving the way for financial ruin. It is because of their financial illiteracy that makes their family or closed ones usurp their retirement

money and use it for their personal gain. Some even lose their life savings, making them vulnerable to exploitation. Financial education can prevent such crises, ensuring financial independence post-retirement.

But what about those who never retire? 58% of India's workforce depends on agriculture, and many small and medium farmers lack financial awareness. Due to lack of awareness and the fear of paperwork and formalities, they avoid borrowing from banks or other formal institutions but rather prefer large farmers or moneylenders who are exploitative, eventually falling into debt traps. They sometimes even have to work for the lenders against their will.

Financial literacy influences society at large. This protects vulnerable sections of society from falling into debt traps and predatory lenders. It acts as a barricade against financial frauds and scams, thereby helping secure hard earned savings. A financially literate population drives a strong economy, autonomous citizens, and a sustainable society. For a financially secure and sound country, this is absolutely necessary.

While important, driving financial literacy across India poses several challenges. Formal education in finance is often inaccessible in many parts, especially in remote regions and particularly amongst the youth population. A study by the Reserve Bank of India shows a significant lack of financial literacy in the nation, emphasizing the need for immediate action.

These challenges can be addressed through targeted initiatives by both government and Individuals. To achieve this, we must consider financial education as a part of school curriculum. Beginning from the school level, it would develop the interest of students enabling them to make informed decisions with in-depth understanding. Technology can be utilized to spread knowledge and bridge

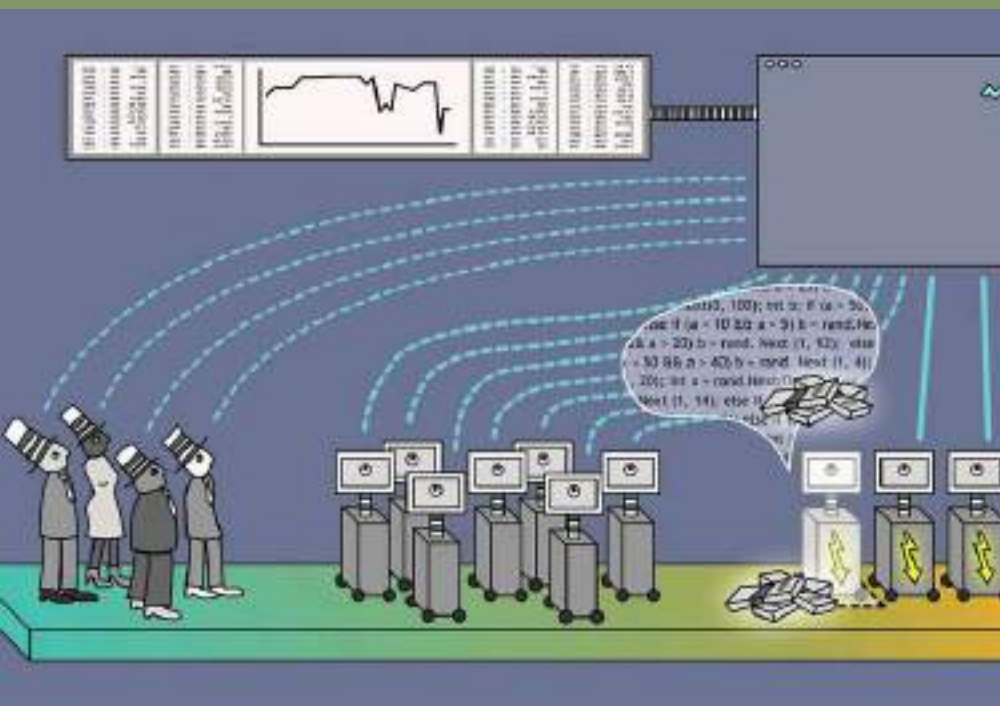
the digital divide. By organizing seminars, every individual prioritizes the safety of their hard earned money but at the same time aims to make it grow. This is where the investment opportunities step in. Stock markets, mutual funds, post office schemes and government bonds are some of the investment options available to retail investors in India, the most diversifying being the mutual fund industry.

Mutual fund is a three tier structure where the investor's money is handled and invested by the Asset Management Company. It allows an individual to invest in small denominations, leaving no pressure for lump sum deposit. Further, the every month investing strategy using SIPs allows the investor to gain benefit from the concept of average costing, also making investment a regular habit. Moreover, the hindrances of detailed analysis of companies and time constraint on the part of individual investors is removed as their money is taken care of by professional fund managers with a research backed team. Though equipped with some kind of market risks, it is the most suitable option for the ones who have just begun their investment journey. The three golden rules for investing are invest early, invest regularly and invest for the long term and not for the short term.

Conclusion

To sum it all up, financial literacy is not merely a personal asset but an asset for the nation as a whole. It lays the foundation on which the future of Viksit Bharat will be built. By empowering our youth with the knowledge and skills to manage their finances effectively, we are investing in the future of our nation. The first step to economic growth, social resilience and prosperous India is financial literacy. So, are we ready to make this first step?





RACING THE TICKER: HOW HIGH-FREQUENCY TRADING IS RESHAPING GLOBAL

BY AYUSHI JAIN
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"THE GLOBAL STOCK MARKET IS NO LONGER A FLOOR — IT'S A BATTLEFIELD OF BOTS, CODED FOR SPEED."

ABSTRACT

The arrival of ultra-fast algorithmic traders, increasingly supplemented by machine learning, can very well be regarded as the next big transformation of the finance market. HFT firms can be seen dominating trading volumes by using millisecond machine-powered decisions to generate consistent returns. Though new regulations are becoming an increasing pain for HFT firms, and the evolving competition an incessant headache, they seem to be here to stay. With advancing market and technology, the role of HFT firms remains a topic of both admiration and concern—raising questions about its long-term impact on market stability and traditional investors.

This paper aims at understanding the growth of HFT firms right from when they entered the market, to where they stand now, to where they seem to be going. It also explores what sentiment is spread when disasters like the 2010 Flash Crash occur and finally evaluates whether the risks of HFT outweigh its contributions to market efficiency.

INTRODUCTION

High-frequency trading is an algorithm-based tool that uses mathematical models and pre-fed market strategies and identifiers to move in and out of stocks in a fraction of a second. These movements occur in a high volume of trade, thereby allowing the profit of even a fraction of a cent to scale to millions of dollars.

It is important to note that HFT firms traditionally compete with other HFT firms and not with long term investors for they operate on opposite extremes of market maturity. While long-term investors focus on fundamental value and long-term growth, HFT strategies aim to maximize small-scale profits through speed and efficiency in short-term trading windows.

HFT firms have received a lot of criticism for their potential to disrupt market stability, notably by placing large, deceptive orders to mislead other traders and overloading exchange systems to delay rival trader's responses. In short, their millisecond decision making is often looked upon as an unfair advantage which allows them to exploit prices before other traders can react.

The Shift

In India, until the early 2000s, manual floor trading using open outcry systems on stock exchange floors was prominent. It was blatantly slow, inefficient, and prone to human error, and practically waiting to be revolutionized by the electronic revolution.

As anticipated, in 1994, the National Stock Exchange (NSE) authorized Electronic Trading, replacing manual floor trading with a screen-based order matching system. This transition significantly reduced execution times and increased trading volumes.

In 2008, SEBI approved Direct Market Access (DMA), which now allowed institutional

investors to place orders directly into exchanges without broker intervention. Finally in 2010, the introduction of co-location services by NSE and BSE head-started HFT firms in India. Co-location allowed institutional traders to place their servers physically closer to exchange servers, reducing latency from milliseconds to microseconds and giving HFT firms a competitive edge.

Role in Market Liquidity

Liquidity and price discovery have been transformed since the entry of HFT into mainstream trading. Since HFT ensures a continuous flow of buying and selling orders, they have transformed liquidity

into a tradable commodity, where those with the fastest execution speeds dictate the efficiency of transactions.

Particularly for large institutional investors and brokerage firms, the tightening of bid-ask spreads by HFT firms reduces the cost of trade, making it cheaper to buy or sell securities. These improve overall market participation by helping investors looking for quick entry and exit points. However, the same becomes unreliable during times of market stress because HFT firms can withdraw their orders just as quickly as they place them.

Hedge funds, asset managers, and proprietary trading firms, all of whom rely on deep liquidity pools to execute large orders have been deeply attracted by HFT firms. But at the same time, retail investors who lack access to the infrastructure often find themselves at the mercy of price swings dictated by algorithmic trading.

Challenges and Risks of High-Frequency Trading

The dis-trust created for HFT in the minds of traditional traders has primarily been due to the following:

1. Market manipulation: This manipulation consists mainly of 2 types of frauds. **A. Quote-stuffing:** Through millisecond computing, HFT firms hold the power to place potentially thousands of orders a second. This has often led to quote-stuffing, the filling of market with fake orders to mislead other traders.

B. Spoofing: It refers to the placing of large buy or sell orders by HFT firms with no intentions of executing them in an attempt to force traders to react to false market signals.

2. Market instability: Since HFT firms are trained to withdraw liquidity during periods of uncertainty, they end up contributing to the amplification of price swings rather than stabilizing them. A notable case of this was seen in the 2010 Flash Crash, where HFT algorithms triggered a rapid market downturn, wiping out billions in minutes.

It is factors such as these that make us question whether HFT firms are truly beneficial to market resilience or merely profit-driven entities that contribute to volatility when it suits them.

Regulation and the Future of High-Frequency Trading

In India, SEBI has introduced several measures to regulate HFT activity. A chronological order of these is underlined below:

1. 2013 Order-to-Trade ratio: In an attempt to put a check on spoofing, SEBI introduced an Order-to-Trade ratio, a sort of penalty system based on the ratio of orders placed to the actual trades executed. If any HFT firm crosses the maximum allowed ratio, they are penalized based on the level of excess activity. While this encouraged firms to focus on executing trades rather than flooding the market with cancellations, it received pushback as well. Firms soon found

workarounds like splitting orders across multiple exchanges, and the OTR began losing the weight with which it was introduced. A need for subsequent regulations soon arose.

2. 2015 Co-location services regulation: Co-location refers to the placing of trading firm servers in close proximity to the exchange's premises, enabling them to gain unfair faster access to market data and order execution. In the light of this, the SEBI increased scrutiny of co-location facilities and mandated protocols such that no single broker could consistently gain early access to trading data.

3. 2018 Speed-Bump Mechanism: To level the playing field between HFT firms and traditional traders, SEBI introduced a speedbump, a minimal delay on specific types of trading activities. This was done to ensure that no participant could exploit speed alone to gain an unfair advantage.

4. 2025 Algorithmic Trading regulations: In February 2025, SEBI mandated that all algorithmic trading providers must be empaneled with stock exchanges to ensure that only verified service providers remain in the market. It also mandated that each algorithm intended for retail investors and any modifications to it must be pre-approved to ensure compliance with SEBI guidelines.

2010 Flash Crash analysis

Between 2:32 PM and 3:08 PM ET on May 6th, 2010, HFT showed its unregulated powers when major U.S. stock indices, including Dow Jones Industrial Average, plummeted about 9% within minutes. Though they recovered most losses shortly thereafter, the disaster to which these few minutes could have led to can only be imagined. Here's how HFT contributed to this Flash Crash:

1. Initial Sell Order: Waddell & Reed, a large mutual fund, initiated a substantial sell order of E Mini S&P 500 futures contracts to hedge its equity position. This order was valued at about \$4.1 Billion and was executed in 20 minutes via an algorithm designed to trade 9% of the trading volume. This strategy was more aggressive as is normally seen within algorithmic markets and caused a rapid influx of sell orders in the futures market.

2. HFT response: HFT firms initially absorbed these sell orders, temporarily taking on long positions. However, to mitigate risk, these firms swiftly offloaded their positions by selling equivalent contracts, thereby amplifying the selling pressure in the market.

3. Liquidity Drain: As the prices declined, HFT firms began withdrawing from the market to manage risk. These rapid withdrawals resulted in a sudden drop in liquidity and fueled price declines, causing some stocks to trade at irrationally low prices.

The 2010 Flash Crash exposes the vulnerabilities of automated trading systems, painting the huge hand that HFT can hold in both stabilizing and destabilizing markets depending on conditions. This event led to global regulatory reforms, including circuit breakers to halt trading during extreme price fluctuations. It also sparked debates on whether HFT is a net positive or a risk to market stability, making it a landmark case in financial history.

HFT: A Boon or a Threat?

It is clear that HFT firms have transformed financial markets and made them faster, more liquid and more efficient than ever thought before. Yet, its influence rightly sparks controversy for as seen in this paper, they tighten bid-ask spreads, enhance price discovery, and increase trading volumes.

the potential to cause extreme volatility and manipulation in the market if left unchecked. The question remains: Do the risks of HFT outweigh its benefits?

On the positive side, HFT-driven arbitrage eliminates price discrepancies over exchanges, ensuring global market consistency. Moreover, they play a crucial role in reducing transaction costs while ensuring prices adjust almost instantly to new information, benefitting those who rely on efficient pricing.

However, the risks of HFT cannot be ignored. Events like the 2010 Flash Crash demonstrate how HFT can amplify times of stress by magnifying price swings rather than dampening them. Not to mention strategies like quote-stuffing and spoofing can cause undue harm to smaller traders.

Though regulatory bodies worldwide continue attempting to curb the downsides of HFT through measures like OTR penalties, speed bumps, etc., HFT firms too constantly evolve their strategies, raising the question as to whether regulations can ever fully level the playing field. Ultimately, HFT is neither inherently good nor bad, but a tool. When properly regulated, it enhances market function and works towards bringing a revolution in the way we so much as look at the

market. The challenge for global markets thus simply boils down to striking the right balance by ensuring that the benefits of HFT amplify the causes of stability, transparency, and fairness.



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THE ASCENT OF DIGITAL CURRENCIES AND THE USE OF AI IN ECONOMICS

BY UPASANA HANDA
B.COM, MCM DAV COLLEGE CHANDIGARH

“WE’RE NOT JUST PROGRAMMING MACHINES — WE’RE REWRITING THE RULES OF MONEY, POWER, AND TRUST.”

ABSTRACT

The advent of digital currency and artificial intelligence is causing a profound shift in the economic landscape. After first being dismissed as a gimmick, digital currency has emerged as a crucial element of the global financial system, enabling quicker, less expensive cross-border transactions and increased adoption in developing nations.

Nevertheless, issues like price volatility and a lack of regulation remain prevalent. AI is additionally needed for the analysis of large data sets in order to find trends, guide investment, and influence economic policy.

AI-powered digital currency increases security by enhancing risk management and fraud prevention, as well as opening the door to more tailored financial services. Even if it seems promise, problems like privacy and regulatory frameworks still need to be resolved. As technology advances, it has the power to completely transform how we make money and spend it.

INTRODUCTION

In recent years, our financial landscape has undergone a remarkable transformation, driven by two groundbreaking forces: digital currencies and artificial intelligence (AI). These advancements are no longer confined to the technology enthusiasts or the economy buffs; they are actually redefining newer types of our existence including how we earn, spend, or even use money. The given article is continuing the story from where the author started to explain how the beginning of the digital currency and the integration of AI is altering the course of the future economy and will definitely affect our lives in the near future.

The Emergence of Digital Currencies

Remember the entire world would craze about Bitcoin? It's one of those things you would expect to see in a sci-fi movie—currency created and duplicated online, without anybody enforcing its production limitations. Leaping a few years forward, it is now becoming a fact that digital currencies are already depicted right at the financial scene. , while other forms of cryptocurrencies like the ethereum among others started as mere novelties, they have become renowned financial assets across the global population, organizations, and persons.

Impact on Financial Systems

Digital currencies are changing how we think about money and transactions. They offer prospects to exploring faster and cheaper ways of transferring funds – a key consideration in cross-border transactions. Perhaps, in order to be used in the money transfer system where one is in a position to transfer the money being used to friends and

families abroad without the hassles of having to bargain with banks and the time it takes. This is especially remarkable for users particularly in the developing countries where, up to the time of this innovation, banking was almost an unthinkable luxury for the common populace. Although crypt currencies are regarded as effective means of financial operations, they appeared to have unsure volatility of the prices and no stable regulation which is of crucial necessity to eliminate.

The Role of AI in Economics

One of the most rapidly progressing topics that no longer suppose to be only a dream of the humans within the future, however has already changed economics significantly is artificial intelligence. Through the analysis of big data, AI can handily identify parameters and patterns that are normally not possible through regular observation. This is a boon in terms of approaching future markets, selecting the right investment approaches to make, and gaining an understanding of consumer behavior.

Applications in Economic Policy

This indicates that, in addition to calculations, AI plays a role in other area. Banks and governments are really beginning to harness the potential of AI in order to check the vital signs of the economy. Deep learning can forecast an unfavorable economic climate, contribute towards the formulation of policies that depend on varied finances, as well as disburse monetary assistance. Let us visualize a world in which payments such as stimulus checks or unemployment benefits would be given in a timely and efficient manner, all according to the current information concerning the state of the economy.

The Convergence of Digital Currencies and AI

This is how the fusion of cryptocurrencies and AI is becoming an interesting future trend. Risk management and identification of fraud are several ways in which AI can help to improve the safety and, in turn, the reliability of digital currencies. For example, when it comes to the blockchain technology, AI can analyze the transactions that are occurring with greater efficiency in an effort to fight fraud in these systems. On one hand, digital currencies can offer fresh opportunities for analysis for AI and help improve the efficiency and clarity of the reality of financial services.

Challenges and Future Direction

Indeed, one can note that this brave new world also has its peculiarities and vices. In my opinion, some of the challenges include; the use of AI to interfere with the digital currency transactions pose a big threat to privacy most especially because the transactions are carried out with financial data. Security of the data and privacy of users has always remained as one of the major matters of concern for continued confidence. Also, the regulators require putting the necessary benchmarks in place so as to ensure that they can match the advances in technology since innovation often precedes any restrictive measures. AI has the capacity to analyze much more than data. Governments and central banks are increasingly using AI to enhance their understanding of economic trends. Through it AI can model economic downturns, develop better policies and even enhance distribution of aid in finance. Just imagine how stimulus checks or unemployment benefits could be

disseminated quickly and accurately based on real time economic information.



AI and Digital Currencies

The intersection between AI and digital currencies leads to various areas that can be developed. By analyzing fraud and managing risk, AI can make digital currencies safer as well as more reliable. For example, block chain transactions can be monitored by an AI to detect suspicious activities while making the systems more robust and accountable for this type of behavior. For people without a traditional banking history, AI may analyze digital currency transactions to establish their credit worthiness. This would imply that more people will have loans, insurance covers among other types of financial assistance being availed to them. It could increase access to personalized financial advice so that people could make better decisions concerning ways.

Conclusion

The terms crypto currencies and artificial intelligence are more than words; they represent powerful tools that have reshaped our economic landscape permanently. In the future these advancements will pave the way for building an efficient and adaptable economy on a scale. Collaboration among

technologist's economists, policymakers and together can lead us through this financial institutions will be imperative as we transformative phase, for the betterment of all. move forward. Embracing this innovation

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US DOLLAR: THE 'CROWN JEWEL' OF THE US EMPIRE AND LESSONS FOR INDIA

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**“THE U.S.
DIDN'T JUST
WIN WARS OR
MARKETS — IT
WON THE
WORLD BY
PRINTING THE
CURRENCY WE
ALL CHASE.”**

ABSTRACT

In 21st-century world politics, one nation that has dominated the world in military power, science and technology, and economic prowess is the mighty United States of America, making it the sole superpower of our times. Experts attribute the USA's success to many aspects, such as a resilient political structure, a constant quest for innovation in science and technology, and a capitalist way of life, among others. But one aspect that has made the USA a formidable force is its currency, the US dollar. The US dollar is the backbone of global trade and commerce.

According to the Bank for International Settlements, the US dollar is involved in 90% of foreign exchange transactions, making it the global currency (Plummer, 2023).

Tracing back to ancient times, trade was conducted through a barter system where goods were exchanged for other goods. However, as economies grew, the barter system became inefficient due to the difficulty of finding someone who both had the desired goods and wanted what you had. This issue, known as the 'double coincidence of wants,'

was resolved with the introduction of coins made from valuable materials such as gold and silver. All goods and services were equated with the fixed value of gold or silver coins, making trade easier. However, as trade volumes increased, carrying large amounts of gold coins became unsafe. This led to the concept of paper money, where a piece of paper representing a fixed amount of gold could be exchanged for gold. This system, also known as fiat currency, still exists today. Governments all over the world issue paper currency through their central banks, which is backed by hard assets such as gold, foreign currencies, etc. (CoinPayments, 2021).

Until World War II, countries traded using their currencies because each currency was convertible to gold, and central banks were obliged to provide an equivalent amount of gold for the currency. For example, if one had five pounds of British Sterling before World War II, they could exchange it for an equivalent amount of gold from the British Central Bank.

This system started to fail during World War II, as the European countries sold all their wealth to buy arms, ammunition, and food supplies. Consequently, the USA, which had become a major defence hub, exported arms, ammunition, and food grains to allied countries and amassed large reserves of gold, thus establishing itself as a major economy and world power. Towards the end of the war, a global financial crisis emerged as countries lost faith in each other's currencies and were unwilling to accept them due to the lack of gold backing. The USA seized this opportunity and convinced all allied powers to use the US dollar as a global currency instead of gold. The US also agreed to peg its currency and make it convertible to a standard amount of gold. This agreement, known as the Bretton Woods Agreement (Ghizoni, 2013), internationalized the US dollar, making it a

global currency. After World War II, the global economy began transitioning to petroleum as the main energy

source. Saudi Arabia and other major oil-producing countries like the UAE and Oman had the largest proven oil reserves but faced challenges with the technology and security needed to extract the oil. The USA, having established itself as a strong military power, struck a deal with Saudi Arabia. In exchange for providing technological assistance and security assurance, Saudi Arabia and other OPEC countries agreed to accept US dollars for their oil exports. This arrangement became known as the Petro Dollar Deal. Both the Bretton Woods Agreement and the Petro Dollar Deal provided significant advantages to the US economy. The OPEC countries, having accumulated US dollars from selling oil worldwide, reinvested these dollars back into the US economy. This led to an influx of investments in US Treasury bonds, stock markets, and other investment avenues. Consequently, the US government could borrow large amounts of capital at low-interest rates, which it invested in cutting-edge defence technologies, scientific research, education, and healthcare. These substantial investments helped the USA become a global leader in various fields (Tun, 2024).

The US dollar is not just a 'crown jewel' for the US empire; it is also its most advanced weapon in countering enemy states (Das, 2018). With its dominance in the global financial system, the dollar has the power to either uplift or devastate a nation's economy within a short time. Whenever a nation acts against US interests, it wields the 'sanctions,' which involve cutting off a country from the global financial system, denying access to the US dollar, and freezing foreign assets held in the US, such as forex reserves. In the past, the US has employed sanctions to pursue its geopolitical ambitions, such as imposing

sanctions on India following its nuclear tests in 1998 and presently on countries like Russia for its invasion of Ukraine, Iran for its support for terrorist outfits and nuclear programs, and Venezuela for its human rights violations, severely impacting their economies.

Strategies for India's Economic Growth

India was renowned as 'Swarna Bhumi' or the 'land of gold' in the past due to the large quantities of gold that it had amassed by exporting goods and services. Indian spices, apparel, and handicrafts were in high demand in the European market. However, due to centuries of colonization and exploitation by colonial powers, India lost its title of 'Swarna Bhumi' and became one of the world's backward regions. In the past seventy-five years, India has fought hard to regain its lost glory of prosperity and is poised to be the world's 5th largest economy.

Now, we have set ourselves an ambitious target of becoming 'Viksit Bharat' or a 'developed nation' by 2047. The next 25 years, popularly known as 'Amrit Kaal,' will primarily focus on research and development, and developing next-generation technologies in semiconductors, automobiles, military

hardware, pharmaceuticals, etc. To achieve these initiatives, we need to work on multiple aspects. One aspect is at the demographic level, where we, the youth of this country, should strive towards developing technologies, work on research and development through startup initiatives, and constantly upskill ourselves to produce competitive goods and services.

At the public level, the government should attract investments. To attract international investment, we can employ the strategy of maximizing the use of the Indian Rupee in the international market as the surplus Indian rupee held by foreign countries would be reinvested back into the Indian economy. Using the neighbourhood-first approach, we need to start using the Indian Rupee with our neighbours, such as Sri Lanka, Nepal, Bangladesh, Maldives, Mauritius, Myanmar, Singapore, and other Southeast Asian countries. The Indian government should negotiate agreements with countries like Iran, Russia, and Venezuela to buy energy with Indian Rupees while also tapping new energy sources apart from petroleum. Hence, the internationalization of the Rupee would be a strong pillar in India's developmental story, making it a 'Kohinoor of Viksit Bharat.'

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A BAG OF SALT

IN TODAY'S DIGITAL AGE, A GRAIN JUST WON'T CUT IT.

BY ADITI JOSHI

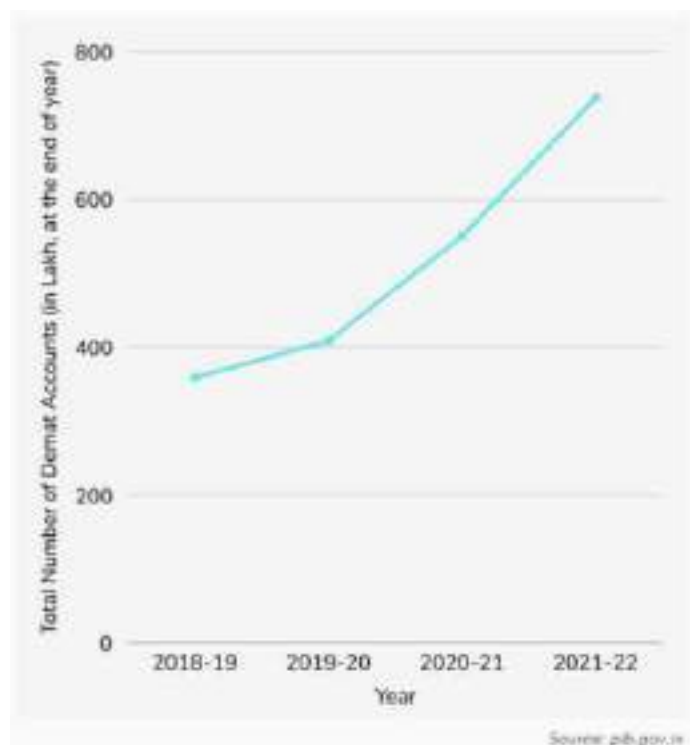
DR. KALMADI SHAMARAO JUNIOR COLLEGE,
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“AS INDIA CHASES TRILLION-DOLLAR DREAMS, MILLIONS ARE TRADING NOT JUST STOCKS — BUT CERTAINTY FOR HOPE.”

ABSTRACT

About a year ago, our country achieved a new milestone when our market capitalization exceeded \$5 trillion, joining the ranks of the US, China, Japan, and Hong Kong. Analysts predict that the stock market could double in value over the next five years. The stock market offers individuals the opportunity to earn money through capital gains and dividends. Prices fluctuate based on what people are willing to pay and are influenced by news, emotions, company performance, and global events. As a result, the stock market is often considered a volatile space with no guaranteed returns. In the excitement of this growth potential, many Indians have rushed to open demat accounts and begun investing in financial markets. The advent of the internet has revolutionized the stock market by making investing more accessible than ever before. With a smartphone and a few taps, anyone can open a Demat account, analyze companies, and begin trading. The number of Demat accounts has more than quadrupled in the last five years, now standing at a record-breaking 185.3 million. User-friendly stock

broker apps like Zerodha, Upstox and Groww provide individuals the accessibility of trading anyplace in India with a stable internet connection. As of August 2024, Groww reported an increase in its NSE active client count to 11.5 million, showing a 4.9% month-over-month rise. But has the increased accessibility to investing improved our ability to make wise investment decisions?



Humanity's collective knowledge is now just a search away. Information on any and every topic is readily available for free on the web. However, much of India remains in the dark regarding knowledge about the financial realm.

A survey by the NCFE Financial Literacy and Inclusion Survey, 2019 shows that only 27% of Indians are financially literate. This is in stark contrast to financial literacy levels in countries such as Europe, the US, and Australia, which are in the region of 55% to 75%. These statistics are evidence of a wide disparity of financial knowledge within the population.



The habit of investing in the financial markets has been thoroughly inculcated in the upper class throughout generations. They can also afford to hire financial planners to foresee wealth creation. A fundamental assumption of capitalism is the existence of a fair and equal playing field and access to complete and accurate information. People who lack access to legacy advice about finances have taken to the internet for guidance. An increasing number of people are taking the initiative to invest based on readily available online advice. However, many gullible investors often fall victim to deceptive information. Economic constraints make people more susceptible to get-rich-quick schemes.



Financial influencers, or finfluencers for short, are a common sighting on the internet. They upload content on platforms such as YouTube shorts, Instagram reels, and Twitter. The popularity of certified advisors on social media has grown because of their ability to break down jargon into easy-to-understand concepts, which allows a larger and more prosaic audience to comprehend the many intricacies of the financial realm and receive education about this topic. However, ultracrepidarian influencers exploit the naivety and herd mentality of investors. They go beyond simple educational enrichment and step into giving unsuspecting followers phony advice. Announcing the opportunity to make a quick profit while we scroll through our FYPs is their surefire way to capture the masses' attention. The income of many notable influencers consists of ad revenue, paid promotions, and course selling. As the famous saying goes, 'If it's free, you are the product.' Vulnerable investors often struggle to discern when the "Finance Gurus" are simply expressing opinions and manipulating them for views.

Over the years, unsuspecting investors have faced numerous scams. Charlatans run mass pump-and-dump schemes on platforms such as Telegram to manipulate the market. Ponzi schemes operate by attracting large groups of people, such as the PACL Ponzi scheme scam in 2014. As of March 24th, 2025, SEBI has taken down 70,000 unregistered financial advisors with the help of Meta and Google. One noteworthy case involves Asmita Patel, who has dubbed herself the "She-Wolf of the Stock Market." The Securities and Exchange Board of India (SEBI) has taken action after receiving complaints from 42 participants who reported trading losses and sought compensation. SEBI is now seeking to seize millions of rupees that Patel and her associates earned from course fees collected

between 2021 and 2024.

YouTube streamers have recently begun leveraging their popularity by engaging in similar schemes. Logan Paul's CryptoZoo project faced significant criticism due to its association with individuals who had questionable backgrounds in the crypto space. It was promoted as a game where players could earn cryptocurrency. The project failed to deliver, resulting in significant losses for investors, including one who reported a \$67,000 loss. A class-action lawsuit alleges fraud, breach of contract, and unjust enrichment against Paul and his team. IShowSpeed, another popular streamer, promoted Paradox Metaverse. He subsequently issued a public apology, stating he had no ill intentions. These incidents highlight the significant power influencers possess to sway public opinion, even without any qualifications.

There is a thin line between financial education and financial advice. When an influencer makes the switch to the latter, it is our responsibility to check if the advice originates from a trusted source. SEBI maintains a public list of registered advisors, which can be easily accessed through its official website. It includes approximately 950 registered investment advisors and 1,400 financial advisors. A certified financial advisor will share their registration number or direct you to their profile on SEBI's portal. In the age of Artificial Intelligence, a new concern has arisen revolving around deepfakes. Popular social media influencers' faces and voices are used in AI models to create scam promotion videos, without the person's knowledge. Unequivocally, new legislation should be brought to counter the looming dangers of Artificial Intelligence. Without verification, blind faith in online advice can lead to severe financial losses. Misplaced trust leads to real and often devastating consequences.

Investors fall into debt traps and people around them also have to weather through the repercussions of these actions. Disillusionment and despair are common among those who have been taken advantage of.

As the youth, we are the decision-makers of tomorrow, hence we must understand when to filter out the noise. Ideally, educational institutions should incorporate financial literacy into the curricula. However, instead of waiting for systemic changes to occur, we can take the initiative to educate ourselves using government-approved public resources. The government has launched many investor protection and training schemes. One such scheme is the SEBI Investor Awareness program, which is an all-around structured course to understand the financial market. The Saarthi App serves as a learning tool, providing educational videos, training on how to spot a scam, financial health checkers, and financial calculators. Financial literacy serves as a powerful tool, empowering diverse segments of society by equipping individuals with the knowledge and skills necessary to navigate the complexities of personal finance.

This newfound understanding fosters a sense of financial independence, allowing individuals to make informed decisions about their money and investments. Moreover, it plays a crucial role in breaking the cycle of financial struggles that often span generations, paving the way for a brighter, more secure future for families and communities alike.

It is paramount to exercise discretion while following financial advice. In this day and age, skepticism is our greatest weapon. After all, in finance, if it sounds too good to be true, it probably is. Everyone's goals and risk-bearing capacity vary. With sound financial knowledge, you can understand your objectives better and obtain the skills to achieve them. So, the next time an overzealous influencer preaches the sermon of overnight wealth on your routine doom scroll, take their words with a grain of salt or better yet, a whole bag.

“

Investment in securities market are subject to market risks.
Read all the related documents carefully before investing

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FROM TRASH TO TROUBLE: THE ECONOMIC FALLOUT OF POOR WASTE MANAGEMENT

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**“IN THE ECONOMY
OF TOMORROW, A
NATION’S WEALTH
WON’T JUST BE
MEASURED BY
WHAT IT
PRODUCES, BUT
BY WHAT IT
THROWS AWAY.”**

INTRODUCTION

Waste management is a critical yet often overlooked aspect of economic policy. As global populations grow and urbanization accelerates, waste generation has reached unprecedented levels. The mismanagement of garbage not only poses environmental and health risks but also imposes a significant economic burden on nations. This article delves into the economic implications of waste management, exploring how inefficient systems drain national resources, the hidden costs of waste, and potential solutions to mitigate these challenges.

THE SCALE OF PROBLEM

According to the World Bank, global waste generation is expected to increase by 70% by 2050, rising from 2.01 billion tonnes in 2016 to 3.40 billion tonnes. This surge is driven by rapid urbanization, population growth, and changing consumption patterns. Developing countries face a dual challenge: increasing waste generation and inadequate waste management infrastructure.

In India, for instance, the Central Pollution Control Board (CPCB) reported that the country generated 62 million tonnes of municipal solid waste (MSW) in 2020, with only 70% being collected and a mere 20% being treated. The remaining waste often ends up in landfills, rivers, or open dumps, leading to severe environmental degradation and public health issues.



THE ECONOMIC COSTS OF WASTE MISMANAGEMENT

1. HEALTHCARE COSTS

Improper waste management directly and indirectly impacts public health. Open dumping and burning of waste release toxic pollutants into the air, water, and soil, leading to respiratory diseases, cancers, and other illnesses. The World Health Organization (WHO) estimates that air pollution, exacerbated by waste burning, causes 7 million premature deaths annually worldwide. Economically, the healthcare costs associated with waste-related illnesses are substantial.

A study by the Global Alliance on Health and Pollution (GAHP) found that pollution, including waste pollution, costs low- and middle-income countries up to 2% of their GDP annually. For India, this translates to approximately \$36 billion per year.





2. ENVIRONMENTAL DEGRADATION

The environmental costs of waste mismanagement are staggering. Landfills and open dumps emit methane, a potent greenhouse gas that contributes to climate change.

The Intergovernmental Panel on Climate Change (IPCC) estimates that waste management accounts for 3-5% of global greenhouse gas emissions. Plastic waste, a significant portion of municipal waste, has devastating effects on marine ecosystems. The United Nations Environment Programme (UNEP) reports that marine plastic pollution costs the global economy \$13 billion annually, affecting fisheries, tourism, and marine biodiversity.

3. LOSS OF VALUABLE RESOURCES

Waste represents missed economic opportunities. Many discarded materials, such as plastics, metals, and organic matter, have significant economic value if recycled or reused. The Ellen MacArthur Foundation estimates that 95% of the material value of plastic packaging, worth \$80-120 billion annually, is lost to the economy after a single use.

In developing countries, the informal sector plays a crucial role in recovering valuable materials from waste. However, the lack of formal recycling infrastructure results in the loss of potential economic value. In India, only 30% of plastic waste is recycled, with the rest ending up in landfills or the environment.

4. INFRASTRUCTURE AND OPERATIONAL COSTS

The financial burden of waste management on municipal budgets is substantial. Collecting, transporting, and disposing of waste requires significant investment in infrastructure, vehicles, and personnel. In many cities, waste management accounts for 20-50% of municipal budgets, diverting resources from other critical areas such as education, healthcare, and infrastructure development.

Long-term costs of maintaining and expanding landfill sites are often underestimated. Landfills require continuous monitoring and management to prevent environmental contamination. Once they reach capacity, new sites must be developed, often at great expense.



CASE STUDIES: THE ECONOMIC IMPACT OF WASTE MISMANAGEMENT

1. THE GHAZIPUR LANDFILL COLLAPSE (INDIA)

In 2017, the Ghazipur landfill in Delhi, one of India's largest, collapsed after reaching a height of 65 meters, killing two people and causing widespread damage. The landfill, which receives over 2,000 tonnes of waste daily, has been a source of environmental and health hazards for years. The collapse highlighted the dangers of over-reliance on landfills and the urgent need for alternative waste management solutions.

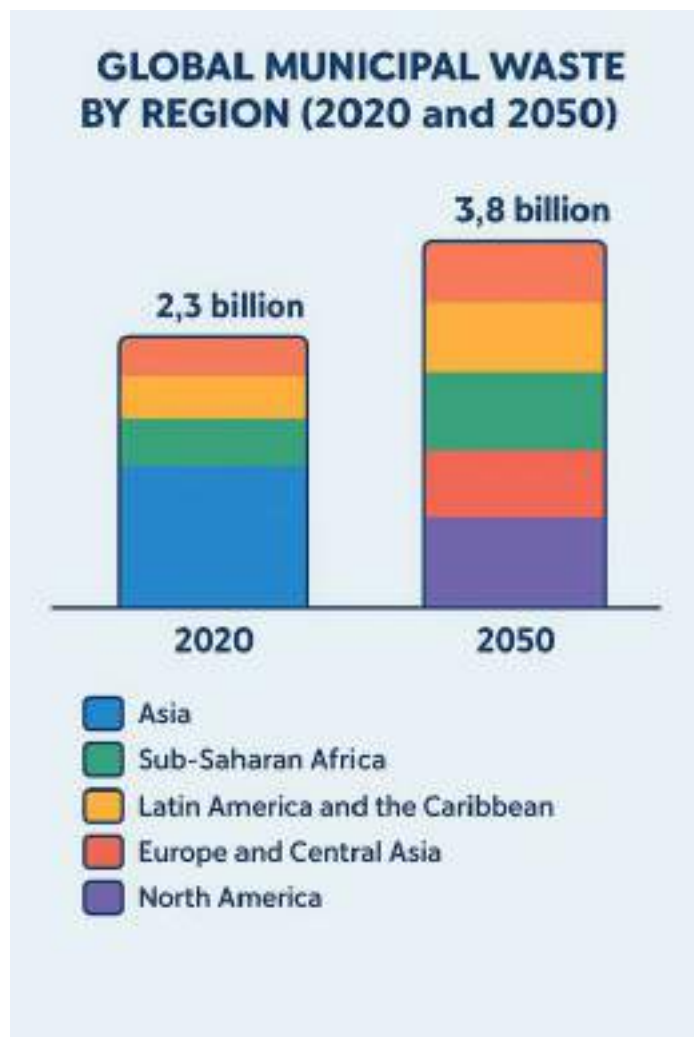
The economic impact of the Ghazipur landfill extends beyond the immediate costs of the collapse. It has contaminated groundwater, reduced property values in the surrounding area, and increased healthcare costs for residents. The Delhi government has spent millions of dollars on remediation efforts, but the long-term economic and environmental costs are much higher.

2. The Cost of Plastic Pollution in Southeast Asia

Southeast Asia is heavily affected by plastic pollution, with countries like Indonesia, the Philippines, and Vietnam among the top contributors to marine plastic waste. The economic impact of plastic pollution in the region affects tourism, fisheries, and public health.

A study by the Asia-Pacific Economic Cooperation (APEC) estimated that plastic pollution costs the region's tourism industry \$622 million annually due to reduced visitor numbers and cleanup costs. Additionally, the

fishing industry suffers from reduced catches and damage to fishing gear, with losses estimated at \$1.3 billion per year.



Potential Solutions and Economic Opportunities

1. WASTE-TO-ENERGY TECHNOLOGIES

Waste-to-energy (WTE) technologies convert waste into electricity or heat, offering a dual benefit: reducing landfill waste and generating renewable energy. According to the International Renewable Energy Agency (IRENA), WTE technologies could provide up to 20% of global electricity demand by 2050, creating significant economic opportunities.

2. Circular Economy Models

The circular economy minimizes waste and maximizes resource efficiency by designing products for reuse, recycling, and remanufacturing. The European Union has promoted the circular economy through initiatives like the Circular Economy Action Plan and the European Green Deal. India has also launched the Swachh Bharat Mission and the Plastic Waste Management Rules to encourage recycling and sustainable practices.

3. Extended Producer Responsibility (EPR)

EPR policies hold manufacturers accountable for the end-of-life management of their products, encouraging sustainable design and reducing waste. Countries like Japan, South Korea, and Canada have successfully implemented EPR programs, leading to higher recycling rates and reduced waste generation. India has introduced EPR guidelines for plastic waste, but enforcement remains a challenge.

4. Public-Private Partnerships (PPPs)

PPPs can improve waste management infrastructure and services by leveraging private sector expertise and investment. In the Philippines, the city of Cebu has implemented a PPP model for waste management, leading to improved waste collection, reduced landfill use, and increased recycling rates.

Potential Solutions

1

Waste-to-Energy Technologies

Could provide up to 20% of global electricity demand by 2050



2

Circular Economy Models

Initiatives in the EU and India promote recycling and sustainability



3

Extended Producer Responsibility

Implemented in Japan, South Korea, and Canada



4

Public-Private Partnerships

Leveraged for waste management in Cebu, Philippines



CONCLUSION

The economic burden of waste is a pressing issue that requires urgent attention from policymakers, businesses, and individuals. The costs of waste mismanagement—ranging from healthcare expenses and environmental degradation to lost economic opportunities—are too significant to ignore. However, with the right policies, technologies, and investments, waste can be transformed from a liability into an asset.

By adopting waste-to-energy technologies, embracing circular economy models, implementing EPR policies, and fostering public-private partnerships, nations can reduce the economic burden of waste and create a more sustainable future. The challenge is immense, but the opportunities are equally significant. It is time to rethink our approach to waste and recognize its true economic value.

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FRAMING *Memories*





COMSoc



BIZSTREET' 25



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The National Commerce Olympiad (NCO) was an esteemed nationwide competition organized by The Commerce Society on 5th January 2025, aimed at high school students across India. It challenges participants in commerce-related concepts, analytical skills, and problem-solving, offering them an opportunity to showcase their knowledge and aptitude in commerce. NCO aspires to ignite excellence among young minds and prepare them for future academic and professional endeavors.

The world of podcasting is ever-changing and full of new and exciting content. In February of 2023, The Commerce Society of SRCC also came up with a brand new podcast, 'The Bigger Picture' which is dedicated to exploring the neoteric trends around the globe. This podcast offers insightful conversations and engaging stories. We discuss topics such as finance education, new technologies, and the intersection of commerce and business. We guarantee to bring you fresh insights, inspiring stories, and thought-provoking conversations.



BizStreet 25, the biggest undergraduate commerce festival, explored several national-level competitions, meticulously designed to test analytical, interpretational, finance and managerial skills and ignite one's competitive spirit. Perfect for all those who excel in marketing, finance, or strategic thinking, and to assist them in showcasing their potential to the fullest! Ranging from 4 different dynamic case competitions across varying fields to insightful and captivating speaker sessions, Bizstreet came along with a whirlwind of learning opportunities.

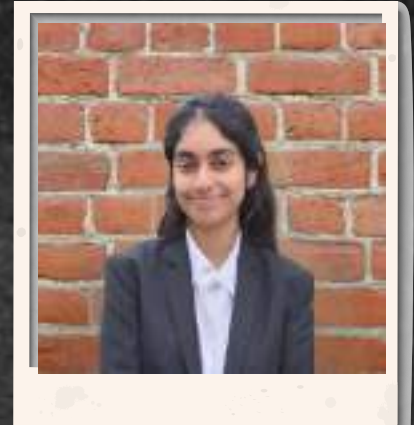
The Commerce Society of SRCC launched its latest project, "Parichay," on April 12th, at the Shri Ram campus in Delhi. The initiative aims to make a difference in the lives of underprivileged children through a wholesome exchange. Parichay transcends commerce boundaries, aiming to create positive change and make society a better place for everyone. The society pledges a portion of its earnings to support child development NGOs, helping them pave their path to a brighter future. This project aims to make a difference in the lives of those who may not have access to opportunities.



This year, the Commerce Society spearheaded impactful live projects with industry leaders including Tata Capital, Frost & Sullivan, Havish M Consulting, Toastd, and YouMat. From devising investment scoring frameworks and go-to-market strategies to building advanced HR dashboards and conducting primary market research, each project delivered data-driven insights across sectors like fintech, automotive innovation, D2C, and mental health, enabling informed strategic decisions.

Journey

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