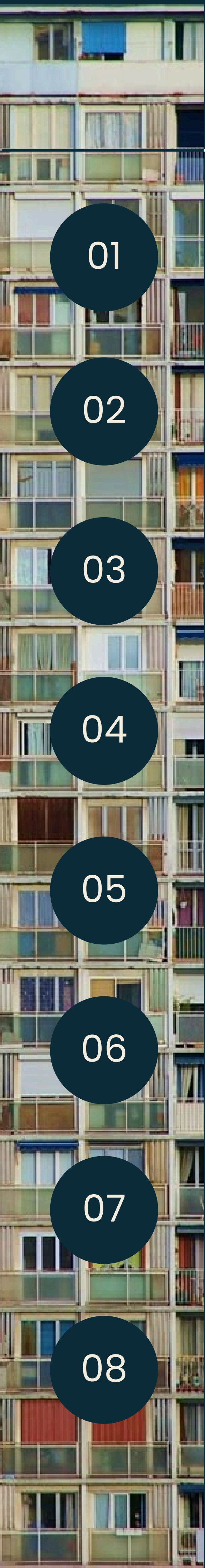
आlekh

Second Edition of The Shri Ram Research Journal

2024-25

Shri Ram Consulting and Research Centre

Shri Ram College of Commerce



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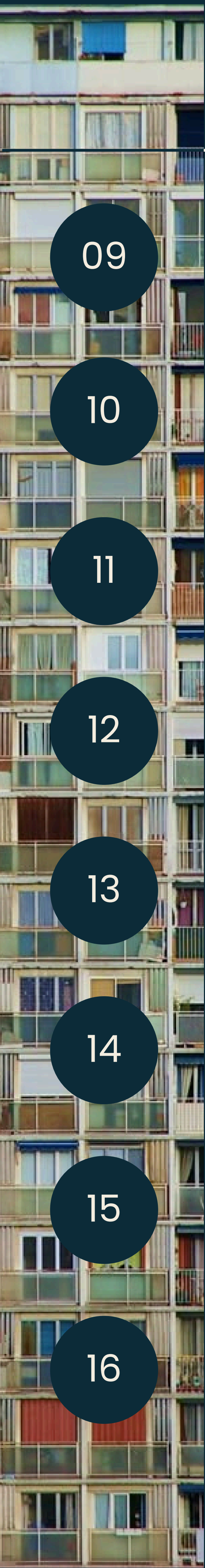

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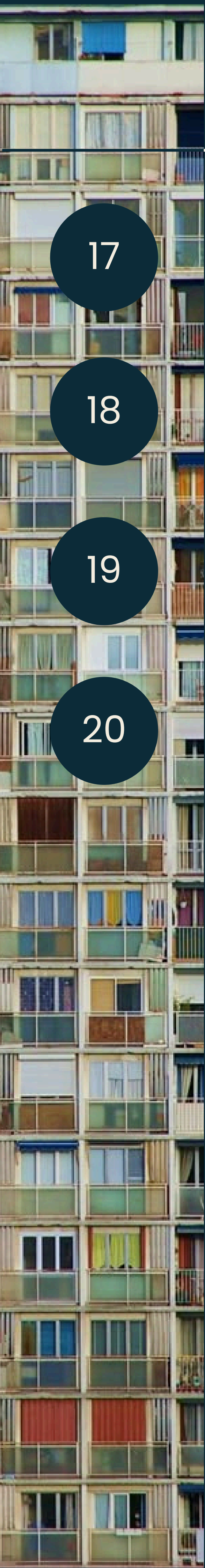

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MESSAGE FROM THE PRINCIPAL

I am immensely proud to be a part of SRCC, to witness the incredible growth and achievements of our students. I commend our college societies for their invaluable role in shaping our students. Through their diverse activities, these societies contribute immensely to the holistic development of our students, fostering their talents and nurturing their potential.

I take immense pride in acknowledging the exceptional accomplishments of Shri Ram Consulting and Research Centre (SRCRC), an extraordinary initiative spearheaded by a dedicated group of students under the esteemed Shri Ram Centre for Personal Growth, SRCC inaugurated by UGC. Under the guidance of Mr. H.N Tiwari the centre has thrived a long way to establish itself as some of the most prestigious societies of SRCC, SRCRC has emerged as a beacon of excellence, engaging in consulting projects with prestigious organizations such as Tata's, Patanjali, HDFC, Niti Aayog, World Bank, Nigeria Embassy, and the Ministry of Finance. These projects serve as a conduit for real-life practical knowledge, showcasing the center's profound acumen. Moreover, the annual fest "Escapade" further highlights the centre's commitment to holistic growth, featuring national-level competitions and inspiring speaker sessions by esteemed personalities. SRCRC stands as a testament to the unparalleled excellence it embodies.

It gives me immense pleasure to extend my heartfelt congratulations to the entire team behind the splendid release of the second edition of Aalekh. This remarkable journal showcases the astute research and thought-provoking insights of our brilliant students across diverse disciplines such as business, commerce, consulting, finance, economics, and geopolitics. I applaud the team for their exceptional efforts, and I extend my best wishes for the journal's continued success in the years to come.

MESSAGE FROM THE TEACHER-IN-CHARGE

Dear Readers,

It is with great pleasure and immense pride that I write in the opening pages of Aalekh, the research journal of Shri Ram Consulting and Research Centre. This momentous occasion marks a significant milestone in our journey toward academic excellence and scholarly pursuits. Aalekh is an embodiment of our collective commitment to fostering a culture of research, innovation, and intellectual growth within our institution. It is a platform where ideas are nurtured, knowledge is shared, and the transformative power of research is unleashed. This journal serves as a bridge between academia and the world, a gateway through which we can contribute to the advancement of our respective fields and society as a whole. The research presented in Aalekh encompasses a wide range of disciplines, reflecting the interdisciplinary nature of our institution and the diverse expertise of our researchers.

I would like to express my heartfelt appreciation to the authors, whose exceptional research and intellectual contributions have made this inaugural edition of Aalekh possible. Their passion, rigor, and dedication have resulted in a collection of thought-provoking and innovative articles that will undoubtedly shape the intellectual discourse in their respective fields.

I would also like to extend my gratitude to the editorial board, whose unwavering commitment to excellence has ensured the high quality of the articles presented in this journal. Their meticulous attention to detail, thorough reviews, and insightful feedback have been instrumental in maintaining the integrity and scholarly merit of Aalekh.

To our esteemed readers, I invite you to immerse yourselves in the wealth of knowledge contained within these pages. Engage with the research presented here, question assumptions, and let these articles spark your own intellectual curiosity

The Youth of the 21st Century: Navigating Challenges and Pathways to Success

Today's youth are confronted with a range of unprecedented challenges that permeate every facet of their lives. From evolving family dynamics to educational pressures, and from career ambitions to mental health considerations, they find themselves in a complex environment that necessitates resilience, adaptability, and lifelong learning. Nonetheless, these challenges are not unconquerable. With an empowering mindset, adequate support, and a readiness to accept change, the young people of the 21st century can transform obstacles into valuable stepping stones towards success.

THE EVOLVING FAMILY STRUCTURE AND ITS CONSEQUENCES

One of the most profound shifts in contemporary society is the transition from extended family systems to nuclear family arrangements. While nuclear families afford individuals greater autonomy, they also bring forth challenges for children raised in households where both parents are frequently occupied with their professional and personal obligations. This scenario can sometimes engender a feeling of isolation, where children may experience either excessive pampering or are left to contend with their emotional challenges independently.

Such an upbringing can foster materialistic inclinations, leading children to equate success with material possessions rather than intrinsic values. They tend to cultivate lofty expectations, which can result in difficulty finding contentment. To address this issue, parents and educators ought to prioritize the development of emotional intelligence, gratitude, and resilience within children. Promoting open communication, encouraging self- reliance, and instilling a sense of accountability can contribute greatly to achieving a more harmonious and balanced upbringing.

EDUCATION: MORE THAN GRADES

Today's academic path is very competitive and frequently puts grades above knowledge. From an early age, students are put in a well organised structured learning settings that prioritize grades over the growth of their critical thinking creativity and problem solving abilities. Parental expectations increase the pressure to perform academically making high grades look more like a status symbol than an indication of genuine learning. Another difficulty is the division between institutions according to their location and ranking. Students from urban areas frequently have greater access to resources whereas those from rural areas face limited opportunities and exposure. It is imperative that the emphasis be changed from grades to overall development. For students to be prepared for the future educational institutions must promote hands-on learning skill development and real-world problem- solving.

CHALLENGES FOLLOWING THE PANDEMIC AND DIGITAL DEPENDENCY

With extended school closures and a greater reliance on online learning the COVID-19 pandemic fundamentally changed the educational landscape. Online learning brought continuity but it also brought with it a number of difficulties.

- Prolonged use of screens decreased physical activity and attention spans.
- Students had trouble communicating and working as a team because there were few peer discussions and class debates.
- Students rates of anxiety depression and lack of motivation increased.
- Students capacity to learn and think

- critically was weakened by their over-reliance on typing autocorrect and search engines.

The institutions must realise this problem and they need to place a high priority on interactive learning group discussions and debates in order to combat these problems. Balance can be restored by supporting mindfulness exercises minimizing digital distractions and encouraging handwritten assignments. Communities' educational institutions and the government must collaborate to give students better counselling and psychological support. AI and automations effects on young people.

Industry revolutions brought about by automation and artificial intelligence (AI) have presented young people with both opportunities and challenges. Students are now unduly reliant on technology even though AI tools have increased efficiency. Independent thought has declined as a result of the ease of access to information which has also diminished curiosity and problem-solving abilities. Students must understand that AI is a tool to support human intelligence not to replace it. Rather than depending exclusively on technology they ought to concentrate on cultivating abilities like critical thinking inventiveness and flexibility.

Educational establishments must incorporate responsible usage and AI ethics into their curricula to guarantee that students use technology efficiently while maintaining their cognitive capacities.

HEALTH AND LIFESTYLE CHALLENGES

With increased screen time and sedentary lifestyles modern youth face several health issues including:

- **Eye strain and sleep disorders:** Overuse of digital devices throws off sleep cycles and wears out the eyes.
- **Bad Eating Habits:** Eating fast food and haphazardly can cause long-term health issues.
- **Less Physical Activity:** Not exercising leads to obesity and a deterioration in general
- health.

Young people need to adopt a balanced lifestyle that includes mindful screen time a healthy diet and regular exercise in order to combat these problems. In order to promote a healthier routine educational institution can play a critical role by supporting wellness initiatives meditation and physical education.

THE PATH AHEAD: USING OBSTACLES TO CREATE OPPORTUNITIES

Young people today face many obstacles that could seem insurmountable but they also offer a chance for development and change. Young people can take control of their future in the following ways:

1. **Accept Change and Be Adaptable:** The world is changing quickly and being able to adjust is a crucial ability. Navigating uncertainties will be made easier by remaining receptive to new information and building resilience.
2. **Foster Creativity and Critical Thinking:** To succeed in a cutthroat environment young people should foster creative thinking and problem-solving abilities rather than just grades.
3. **Make Mental and Physical Health a Priority:** Success depends on having a healthy body and mind. Maintaining a balanced diet engaging in regular exercise and practicing mindfulness can all enhance general well-being.
4. **Be Smart with Technology:** Artificial intelligence and digital tools are useful but they should be used carefully. The use of technology and intellectual growth must be balanced by young people.
5. **Seek Advice and Cooperation:** Peer conversations networking and mentoring can offer insightful information and create new growth opportunities.
6. **Contribute to Society:** Making a positive impact on the community is just as important to true success as achieving individual goals. Helping others and taking part in social

projects can have a significant impact.

CONCLUSION: A CALL TO ACTION

The youth of the 21st century are the architects of the future. Although they confront particular difficulties, they also have unmatched chances to creatively influence the world.

They can overcome obstacles and create a prosperous and satisfying life by taking a proactive and upbeat approach. Remaining inquisitive flexible and resilient is crucial. There will always be change and obstacles will arise along the way. However, today's young people can overcome challenges and build a better future for themselves and future generations if they have the correct mindset support and perseverance.

Acknowledgement

Name: Alok Kumar

Organization: Shri Ram College of Commerce

Designation: Associate Professor

Globalisation vs. Regionalism in the Age of Economic Uncertainties

Over recent years the sudden rise in climate change and the aftermath of war-broken geopolitical tensions have sparked debates about whether to prefer globalisation or regionalism. Globalisation is seen as a tool which promotes interconnection between economies and fostering trade liberalisation, however, regionalism on the other hand is often seen as an opposite counterforce enabling economic blocs to help mitigate the risks associated with global shocks and business cycles.

The Economist predicted on 24 January 2019: “The new world will work differently. Globalization will lead to deeper links within regional blocs. Supply chains in North America, Europe and Asia are sourcing more from closer to home. In Asia and Europe, most trade is already intra-regional, and the share has risen since 2011.” Over the last 40 years, the world has observed tremendous growth in trading regions like Europe, North America and Asia in which 90% of the trade happens.

People in support of globalization, view the apparent weakening of the state as a positive trend, promoting the utopian vision of making the world more interconnected and working in this environment without any economic and political divisions. The adversary of globalisation is the subsequent downfall of the so-called “Third World” States making them more vulnerable to external pressures from international markets and without any strong supervisory entity they cannot resist the dictatorial terms and imposition of policies from dominating countries.

This emerging trend of de-globalisation is driven by many key events whose repercussions have given a trigger warning to the governments of all countries. Having its roots in the 2008 global financial crisis to the ongoing US-China tariff war, the world is becoming compelled to see globalization in a more sceptical way. Regionalism is marked by a shift in global trade dynamics as a nation which prioritises itself through self-sufficiency over global integration.
This is resulting in a structural shift in the global economic order. COVID-19 came as an eye-opener for all the nations that global supply chain networks are highly susceptible to disruption - merchandise trade fell by 5.6% in 2020, service trade declined by 15.4%, factories shutdown in major economies (China, US), shortage of semiconductor chips, tourism & hospitality hit hard and much more. All these repercussions have left a profound impact on the world, encouraging us to find the answer to *Why Regionalism and Why Now?*

Regionalism is apposite to today’s geopolitical context. Countries may have different preferences on regional priorities depending on their economic characteristics which influence their policy adaptation for regionalism as well as globalisation. The potential regional trading agreements are as follows:

- USMCA - (United States-Mexico-Canada Agreement) which replaced NAFTA (North American Free Trade Agreement)
- EFTA - European Free Trade Association which includes non-EU countries promoting free trade and cooperation in more than 60 countries.
- RCEP - Regional Comprehensive Economic Partnership, the world’s largest trade bloc including China, Japan, South Korea, ASEAN nations, Australia, and New Zealand.

- AfCFTA - African Continental Free Trade Area creating a single market across Africa.
- GCC - Gulf Cooperation Council free trade agreement among Gulf States like Saudi Arabia, UAE, and Qatar.

Regional integration was a major topic of the World Economic Forum's Growth Summit 2023. The proceedings of the Summit stated:

"For Africa, the political willingness to realise those trade gains promised by the AfCFTA could be a significant driver of growth"
~ Razia Khan, Chief Economist and Head of Research, Middle East & Africa.

"Eight of India's ten largest trading partners are from the region. Trade will be one of the biggest engines for growth"
~Chandrajit Banerjee, Director General, Confederation of Indian Industry.

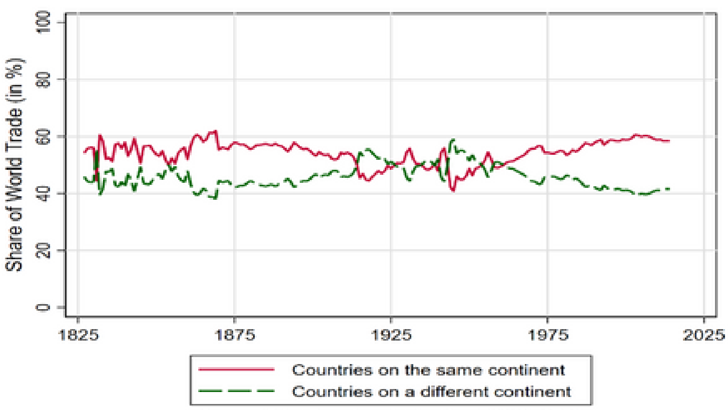
While regionalism fosters economic and political cooperation along with focused growth, it does not come without its disadvantages. Regionalism limits the market access of organizations because focusing on regional trade agreements undermines their focus on broader global opportunities. Additionally, it can lead to the dominance of larger economies within a bloc, marginalizing smaller nations and creating inequalities in decision-making.
Taking the example of SAARC, India being one of its key players wants to establish and assert geopolitical dominance. This leads to restricting the say of the under-developed nations in the vicinity. Trade diversion is another concern as regional preferences might overlook better competitive options for incompetent producers. While regional agreements aim for policy harmonization, differences in political systems, economic structures, and cultural backgrounds can have their own repercussions.

Shifting power dynamics have had a significant impact on RTA's ability to handle the release of a cogent global political agenda. Additionally, it has jeopardized the potential for equitable representation of all the various requirements and interests that arise globally and include emerging and new powers at the international multilateral level. lead to inconsistencies and conflicts, hindering effective integration. Such scenarios can lead to inconsistencies and conflicts, hindering effective integration.

India is following a balanced approach by adopting both globalisation and regionalism to upscale its economy. A starking example of this approach is BIMSTEC (Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation), a foundation of 7 countries, of which India is a part, mainly focuses on 14 sectors for eg. agriculture, tourism, technology, trade & investment etc. Initiatives like the India–Myanmar–Thailand Trilateral Highway aim to improve regional connectivity, facilitating trade and economic integration challenging China's Belt and Road Initiative (BRI). BIMSTEC is providing an edge to India to strengthen its foreign trade and also limit China's regional influence. Unlike SAARC which is often stalled due to poor relations with Pakistan, BIMSTEC remains more functional and productive for India. Indian federalism promotes regionalism by allowing shared rule and self-rule, enabling regional political autonomy while maintaining national unity. The Constitution's flexibility facilitates state reorganisation, linguistic recognition, and tribal self- governance through provisions like the Sixth Schedule. Decentralization further empowers regions, balancing national integrity with regional aspirations. As of 2025, India has 13 active Free Trade Agreements (FTAs) and currently is engaged in negotiations with UK, EU, and US attracting foreign direct investment (FDI), and fostering economic partnerships with major economies to boost trade and innovation.

In conclusion, the conflict between regionalism and globalization continues to influence thepolitical and economic landscape of the world. While globalization encourages trade liberalization, technical breakthroughs, and greater economic interconnectedness, regionalism provides resilience by bolstering local economies and reducing the impact of global shocks.

Countries aim to maintain strategic international alliances while prioritizing economic self-sufficiency is reflected in the move towards regional trade agreements. India’s well-rounded strategy, which uses alliances like BIMSTEC and FTAs to increase international trade, is an example of the necessity to balance both frameworks in this uncertain economic order. In the end, finding a sensible balance is crucial to guaranteeing steady economic growth without compromising the advantages of interconnected international markets.



Source: Michel Fouquin and Jules Hugot (2016), CEPII

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Acknowledgement
Name: Vansh Kumar and Dhanya
Designation: Students

The Instagram effect: How social media is Reshaping gen z's investment habits

INTRODUCTION

A surprising 67% of Gen Z investors acknowledged in 2021 that they have relied on Instagram influencers' guidance when making financial decisions (Financial Times, 2023). This specialized sector of social media, nicknamed "#Fingram," has transformed how young people approach investing by combining viral trends with stock recommendations. Platforms like Instagram, however, increase hazards like false information and rash trading even as they democratize financial literacy. This article examines the ways in which social media is changing Gen Z's investing practices, examining the potential benefits, drawbacks, and long-term effects on financial markets.

THE RISE OF #FINGRAM INFLUENCERS

Traditional obstacles to financial education have been eliminated by social media. The days of relying solely on Wall Street professionals or heavy textbooks to gain insight into the stock market are long gone. Influencers such as Tori Dunlap and Humphrey Yang have amassed millions of followers in recent years by distilling difficult ideas into 60-second videos.

Democratizing Finance: Investing is more accessible now due to platforms such as Instagram. In a Morning Consult survey in 2023, 43% of Gen Z investors and 23% of millennials, respectively, turned to social media for financial advice (Morning Consult, 2023).

Gamification: Platforms such as Robinhood and eToro, frequently advertised on #Fingram, employ game-like interfaces to entice users. Confetti animations after a trade and fractional and fractional shares are features that appeal to beginners but may promote irresponsible behavior.

Case Study: In 2023, Instagram influencer "StockMaven" prompted followers to invest in a little-known biotech stock, telling them it was "the next Moderna." The stock climbed 300% in a week before plummeting when the company's claims were discredited (CNBC, 2023).

The GameStop Saga: A blueprint for meme stock mania. The 2021 GameStop craze is a prime example of how social media can upend markets. Driven by Instagram excitement, the r/WallStreetBets community on Reddit organized a short squeeze that caused GameStop's stock to soar 1,700% in a matter of weeks (BBC, 2021).

Retail Investor Mobilization: GameStop became a cultural symbol against institutional investors as a result of individual traders, many of whom were under 25, using sites like Discord to coordinate purchases.

Market Volatility: Regulatory weaknesses were revealed by the episode. Some traders made money, but when hedge funds retaliated, many newcomers suffered significant losses.

RISKS: MISINFORMATION, FOMO, AND LACK OF DIVERSIFICATION

Misinformation: On social media, unverified allegations proliferate. According to a 2022 MIT research, misleading financial advice on Instagram spreads six times more quickly than accurate content (MIT Sloan, 2022).

FOMO-Driven Trading: The "fear of missing out" causes people to follow fads like cryptocurrency or NFTs without doing their background homework. According to a 2023 eToro poll, 35% of Gen Z investors own cryptocurrency, with many claiming pressure from social media (eToro, 2023).

Overconcentration: Young investors frequently forgo diversification in favour of pouring their resources into "hot" stocks.

SOLUTIONS: REGULATION, EDUCATION, AND ETHICAL INFLUENCING

Regulatory Responses: In an effort to detect market manipulation, the SEC has started keeping an eye on social media. An influencer who promoted stocks without disclosing compensated partnerships was fined $1.2 million in 2023 (SEC, 2023).

Financial Literacy Campaigns: Schools and platforms like Khan Academy are launching courses to teach critical thinking about online advice.

Ethical Influencing: Responsible creators like Graham Stephan now include disclaimers like "Not financial advice" and emphasize long-term strategies.

CONCLUSION

For Gen Z investors, the arrival of social media in the financial world is both a revolutionary opportunity and a sobering wake-up call. Reddit and TikTok are just two of the numerous platforms that have dismantled traditional barriers and given young people the chance to take on Wall Street's establishment and enter the markets in new forms. But with this democratization comes a catch. The potential for impulsive, high-risk choices in gamified trading apps and trending fashion. Think about the 2023 meltdown in biotech stocks induced by irrational hype on TikTok, or the GameStop meme stock mania, which shows how quickly misinformation and mob behavior can lead to real financial.

Combat these issues requires a multi-pronged campaign. Regulators have to update their rules to combat online market manipulation and ensure influencers disclose risk. Policymakers and educators need to work together, in the meantime, to enhance financial literacy, so that young investors can tell good advice from hype. Picture a world where schools and social media platforms join forces and provide digital finance modules, and where the influencers and trading apps make a commitment to transparent risk disclosures such moves could be the first step towards a safer, better-informed.

Ultimately, the fate of finance rests with the Gen Z. They have a daunting task: use the power of social media to create a more considerate and diverse financial world, or allow themselves to become the victims of the pitfalls of speculative cycles. The choice will depend on striking the balance between the short-term attraction of viral crazes and the severity of long-term financial acumen.

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Acknowledgement

Name: Manas Ishwar
Organization: Maharaja Agrasen Institute of Technology
Designation: Student

Troubled Waters: Red Sea Ripple's Shock to Global Logistics

ABSTRACT

Trade routes are the bloodlines of global commerce. Now imagine those bloodlines getting squeezed by geopolitical tension. Welcome to the Red Sea crisis—where a narrow maritime corridor can trigger economic tsunamis that reshape entire industries. The Red Sea—connecting Europe, Asia, and Africa—is more than just a shipping lane. This article dives deep into the intricate, vulnerable web of global interdependence, in reference to the Red Sea Crisis. It also talks about how one narrow maritime corridor can now hold the global economy hostage, demonstrating how geopolitical tensions can rapidly transform.

Keywords : Red Sea Crisis, Global Trade Disruption, Geopolitical Tensions, Economic Ripple Effect, Houthi Attacks, Shipping Delays, Inflationary Pressure, Operation Prosperity Guardian, Operation Aspis, Cape of Good Hope Route, Global Commerce.

DECODING THE RED SEA RIPPLE EFFECT: WHAT DOES IT MEAN?

On October 19, 2023, the world witnessed the commencement of what would later be recognized as the Red Sea crisis. The Red Sea has emerged as a key focal point of geopolitical tension. **Houthi militants in Yemen** are employing sophisticated weaponry, including hijacks, ballistic missiles, anti-cruise missiles and drones to target international shipping routes. These attacks, ostensibly **in support of Hamas against Israel, began on 19 November 2023**, with the hijacking of the Galaxy Leader cargo vessel by Houthi forces. Since the initial incident, reports from the UK Maritime Trade Operations indicate that over **33 vessels** have been assaulted in the region, **with 16** experiencing direct hits from missiles or drones. These incidents have significantly disrupted global trade, underscoring the strategic importance of the Red Sea as a critical maritime corridor.

Every year, billions of dollars' worth of traded goods and supplies navigate through this vital waterway. **Approximately 12%** of the world's trade traverses the Red Sea, **encompassing 30%** of the global container traffic. Consequently, any disruptions in this region can have repercussions on petrol prices, the accessibility of finished consumer goods, and semi-finished products, and various facets of international trade - especially in Europe. The Red Sea, crucial for the movement of oil, essential commodities, and various goods, is a lifeline for global trade. **Fast forward to 2024**, and the crisis continues to send shockwaves through the intricate web of maritime trade routes, leaving an enduring impact on industries reliant on global shipping.

GLOBAL RESPONSE TO THE SITUATION

"In today's shipping, anybody who shoots at a ship is shooting at the world."

\- Jan Hoffman, Head of Trade Logistics at United Nations Conference on Trade and Development.

In response to escalating tensions, the United States and the United Kingdom launched **Operation Prosperity Guardian on 18 December 2023**, a strategic initiative designed to secure maritime navigation and safeguard trade flows. This move was further bolstered by the European Union's launch of Operation Aspis on 19 February 2024, demonstrating a unified international commitment to restoring regional stability. Countries directly bordering the Red Sea, like Egypt, Saudi Arabia, and Yemen, are at the centre of this crisis. However, its impact extends beyond these nations. European countries, heavily reliant on this route for imports and exports, along with East African nations, face significant risks. Vulnerable industries include the automotive, electronics, and energy sectors. Two months after the Houthi attacks on ships started, **the European Union adopted the decision to launch a maritime operation to protect commercial shipping** in the Red Sea from attacks by the Houthis. However, it remains to be seen whether these strikes will be enough to deter future attacks and ensure the safety of the Red Sea route.

SHORT TERM, MEDIUM TERM AND LONG TERM IMPACT

As we observe this next shift in global shipping, it's imperative to prepare for the medium- and long-term operational and supply chain impacts. We can leverage insights from previous disruptions, s**uch as the Suez Canal blockage**, to anticipate operational adaptations stemming from current events.

Short-Term Impacts:

- Ports experience backlogs, disrupting the delicate balance between containers and ships in the just-in-time supply chain.
- The risk of accidents rises as ships operate without transponders, impacting overall maritime safety.

Medium-Term Impacts:

- Backlogs, diversions, and increased operational costs drive up shipping costs. Firms pass on the increased costs to consumers, contributing to inflationary pressures.
- Rerouting around the Cape of Good Hope increases the carbon footprint of the shipping industry.
- The **EU Emissions Trading System** imposes additional costs based on increased distances, impacting the industry's green transition.

Long-Term Impacts:

- Increased costs, especially insurance and fuel consumption, hinder the maritime industry's transition to greener fuels. Alternative fuel options face limitations in distance, route availability, and refuelling infrastructure.
- Emerging threats like drone and missile attacks challenge traditional ship security measures.
- Advanced technology becomes crucial for ensuring ship safety, **increasing security costs.**

ECONOMIC RIPPLE EFFECT

The Suez Canal and the Red Sea channel approximately **30% of the world's container traffic** and facilitate the annual movement of merchandise **valued at over $1 trillion**. The emerging threat landscape has compelled major shipping conglomerates to navigate **around the Cape of Good Hope**, introducing **delays of 1-3 weeks** to standard transit times. This strategic shift not only amplifies operational expenditures for shipping entities and logistics facilitators but also burdens companies reliant on these maritime avenues with escalated inventory and transport costs. Above all, the attacks on shipping in the Red Sea are a blow to global trade. The continued threat of Houthi attacks has had a significant impact on global commerce, causing disruptions to supply chains and increasing shipping costs. The increased shipping costs have a significant inflationary impact, and the effect is expected to slowly seep into the economy, potentially exacerbating an already fragile recovery.

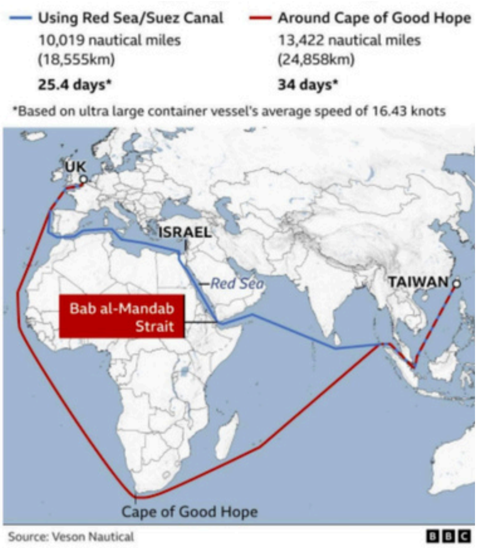
DISRUPTED FLOW: HOW SUPPLY CHAINS ARE FEELING THE IMPACT

Shipping Delays: The most significant delays are evident in shipments originating from Asian ports destined for Western Europe and the East Coast of the United States. Particularly affected are routes from Asia to Germany, experiencing a **remarkable 55% increase** in transit times.

Rerouting: Companies have opted for a temporary suspension of their Red Sea services, choosing the longer, but safer route around the Cape of Good Hope in South Africa. However, this switch **adds extra transit time and hundreds of thousands of dollars in fuel costs** to the supply chain.

Spoilage of Fresh Produce: Fresh produce and temperature-controlled cargo, such as food and medicines, face a higher risk of spoilage due to extended shipping times. The longer the journey, the greater the chances of compromised quality and shortages in the market.

Increased Costs: Uncertainty surrounding the **security** has resulted in heightened insurance premiums and increased costs for shipping companies. These increased shipping costs have a significant ripple effect, which is expected to slowly seep into the economy and affect the end consumer.



INDIAN PERSPECTIVE - THE WAY AHEAD

The Red Sea crisis highlights the vulnerability of major shipping routes to both state and non-state actors. It underscores the importance of diversifying and strengthening India's supply chains and logistics infrastructure to mitigate future disruptions. India's diplomatic efforts are crucial in ensuring smooth global trade through the Red Sea.

In the short term, India should diversify shipping routes, enhance port capacity, promote domestic production, and stockpile essential items to alleviate immediate pressures. For long-term resilience, investing in alternative transport corridors, such as the **proposed India-Middle East-Europe Corridor (IMEC)**, and others, is vital. Advancements in technology offer promising avenues for mitigating the impacts of the Red Sea crisis and enhancing maritime security. The use of satellite imaging and AIS (Automatic Identification System) tracking can improve the monitoring of shipping lanes, identifying risks, and rerouting vessels proactively to avoid conflict zones. Moreover, blockchain technology can enhance supply chain transparency and efficiency, reducing the impact of disruptions on global trade.

CONCLUSION

The Red Sea crisis is a vivid reminder that the tides of global trade are never static. From securing manufacturing slots to reimagining logistics, navigating this turbulence demands courage and practical knowledge. The key lies in embracing agility, fostering collaboration, and ensuring our supply chain vessels are built to withstand future storms. After all, in the choppy seas of global trade, only those who adapt will keep their cargo afloat and their horizons wide open. Remember, fortune favours the prepared—and the buoyant!

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Acknowledgement

Name: Nihira Rai
Organization: Shri Ram College of Commerce
Designation: Student

BRICS and The New World Order

INTRODUCTION

For centuries, Western nations have held economic dominance globally, but the BRICS trading bloc has emerged as a challenger to this established order, potentially disrupting the current global economic landscape. The impact of this alliance extends beyond its member states, affecting those outside its sphere as well.

BRICS has become a formidable entity in strengthening relationships among its members through various initiatives addressing economic, social, and security issues. The growing list of countries seeking membership in the bloc underscores its increasing influence. As BRICS continues to expand, its economic clout is poised to become a crucial factor shaping global development and progress in the years to come.

This research paper examines the following questions: What internal and external challenges impede BRICS' effectiveness? To what extent does BRICS effectively advocate for the Global South in global governance? How do divergent interests and power asymmetries among BRICS nations affect its cohesion? What are the primary criticisms regarding BRICS' influence and relevance?

HISTORICAL BACKGROUND

In 2001, Jim O'Neill, who had recently been appointed to lead global economic research at Goldman Sachs, aimed to establish a classification for major, rapidly expanding developing nations that he believed would play a crucial role in the ongoing global economic shift. As an economist, O'Neill primarily considered economic factors, such as GDP growth rates, GDP per capita, and population size, while largely disregarding political aspects in his grouping. With the intention of drawing investors, O'Neill's 2001 GS Global Economics Paper No. 66, titled "Building Better Global Economic BRICs," forecasted that "over the next 10 years, the weight of the BRICs and especially China in world GDP will grow, raising important issues about the global economic impact of fiscal and monetary policy in the BRICs." Although O'Neill did not anticipate the group to evolve politically, he formulated the BRIC term with the significant political events of the time in mind.

The external acronym actually motivated the leaders of the four nations to capitalize on the surrounding economic optimism when they initially convened in 2006 during the UN General Assembly. Representatives from these countries met more officially in Yektarinburg, Russia in 2009 to establish a formal structure for 'BRICs.' In the subsequent period, the BRICs evolved into an ambitious alliance with its own internal workings: they conducted annual summits, pursued diplomatic goals, and committed to major infrastructure projects both within their borders and across their regions. They demonstrated their economic influence by creating a new financial institution – the New Development Bank – and contesting the dominance of European and North American nations in global finance.

South Africa became part of this country group in 2011, recognized as an economic high-performer among developing nations – a burgeoning economy and nascent democracy – transforming BRICs into BRICS, with the 'S' representing its latest addition. This expansion resulted in the BRICS nations encompassing 26% of the world's land area and contributing 20% of the global GDP (Saran, Citation 2015, p.626). Despite varying descriptions from critics and cautious supporters, such as a "loose association," a "Potemkin village" (Pomeranz, Citation 2013), or a "club of coincidence" (Saran, Citation 2015), this group undeniably consisted of countries sharing economic goals and similar views on the type of multilateralism and changes in global political economy necessary to achieve them. These underlying economic aspirations have been instrumental in revitalizing capital flows within and between BRICS nations, filling a financing gap in the aftermath of the global financial crisis.

The creation of the New Development Bank (NDB) in 2014 marked a crucial turning point in BRICS history. Based in Shanghai, China, the NDB's primary objective is to fund infrastructure and sustainable development initiatives in BRICS nations and other emerging economies. By providing an alternative to conventional multilateral institutions like the World Bank and the International Monetary Fund (IMF), the NDB aims to enhance financial inclusion and self-reliance among developing countries.

EXPANSION OF BRICS AND DE-DOLLARISATION

BRICS+ is an informal alliance comprising five founding nations - Brazil, Russia, India, China, and South Africa - along with four recent additions: Egypt, Ethiopia, Iran, and the United Arab Emirates. Collectively, these countries represent 37% of the world's GDP (measured by PPP) and 44% of its population. Numerous other nations have reportedly sought membership, including Azerbaijan, Bahrain, Bangladesh, Belarus, Bolivia, Cuba, Pakistan, Senegal, Thailand, Turkey, and Venezuela, though this list may not be exhaustive. These potential members would contribute an additional 5% to global GDP and 8% to world population. Saudi Arabia, responsible for 11% of global oil production, has received a formal invitation to join BRICS+.

The bloc controls 42% of worldwide central bank foreign exchange reserves, potentially accelerating the global de-dollarization process. Gold stands as the most viable alternative to the US dollar for the group. Despite active purchasing by BRICS+, gold constitutes only 10% of their central bank reserves, which is half the global average. The prospects for global diversification towards BRICS+ currencies, even a synthetic one, areconstrained by the limited external liabilities of member countries.

Consequently, the de-dollarization of global foreign exchange reserves is more likely to benefit developed market currencies rather than those of emerging markets. In other domains, BRICS+ is expanding its influence in regional trade, increasingly focusing on intra-member commerce and gaining significance as a trade partner for other emerging markets, particularly in fuel trade. The bloc accounts for 37% of emerging market fuel trade, a crucial area for de-dollarization efforts.

BRICS IN THE GLOBAL CONTEXT

The BRICS nations are employing various strategies to contest the current global order dominated by the United States. These approaches include:

Economic Restructuring

BRICS countries are striving to reshape the existing global economic framework. They contend that the present international financial system is biased against them, with the U.S. dollar serving as the primary global reserve currency and Western nations wielding excessive influence over international financial institutions. BRICS members argue that this economic structure perpetuates developing nations' poverty and requires reform to better support these countries. In response, BRICS has introduced a new development bank to fund infrastructure and other growth projects in emerging economies. Bishop (2022) considers the 2014 launch of the New Development Bank (NDB) with $50 billion in initial capital a pivotal moment. The concurrent establishment of the BRICS Contingent Reserve Arrangement (CRA), a liquidity mechanism providing aid to members facing short- term balance of payments difficulties or currency instability, was also noteworthy.

Military Collaboration

BRICS nations are also aligning their military activities. China and Russia have spearheaded a series of joint military exercises, including naval drills, which have been referred to as the 'China-Russia military alliance' (Blanchard, 2017; Dingli, 2019). Recent Russia-South Africa military exercises appear to indicate South Africa's support for Russia's actions in Ukraine. These combined military endeavors suggest a shift in global power dynamics from West to East. While it remains uncertain if other BRICS members will join such a military alliance, its success could pose a challenge to existing international security structures (Arora, 2017; Bishop, 2022).

Political Alignment

BRICS countries are working towards enhanced political cooperation. They have been coordinating their responses to international crises, such as the conflicts in Syria and Libya, thereby strengthening their position in global forums like the United Nations (Babones & Alvarez- 8 Rivadulla, 2017). Additionally, the BRICS nations have established the BRICS Parliamentary Forum to foster cooperation among parliamentarians from the five member countries. This move towards intergovernmental global leadership indicates a potential shift in global power balances (Moth Cloud, 2023).

OBSTACLES CONFRONTING BRICS

1. Economic Imbalances and Disparities

A primary criticism of BRICS revolves around the significant economic differences and inequalities among its member states. While countries like China and India have experienced rapid economic growth and advancement, Brazil and South Africa continue to grapple with issues of destitution, unemployment, and social inequality. Critics argue that BRICS' focus on economic cooperation and expansion has not adequately addressed these disparities, raising concerns about the alliance's ability to promote inclusive development and shared economic prosperity.

2. Absence of Unity and Shared Objectives

Another critique directed at BRICS is the perceived lack of cohesion and a common agenda among its member nations. Although the alliance initially formed as a platform for emerging economies to coordinate on economic matters, divergent interests and geopolitical tensions have hindered unified action. The BRICS countries have distinct geopolitical priorities and have been embroiled in regional conflicts and disputes. For instance, China's BRI, 'string of pearls', and developments along the Indo-China border have heightened tensions with India.

Differences in political systems, economic priorities, and regional dynamics have sometimes overshadowed efforts to build consensus and collective action within the group, casting doubt on BRICS' capacity to effectively address global challenges.

3. Democratic Shortfall and Governance Concerns

Critics have expressed apprehensions about the democratic deficit and governance issues within BRICS, particularly regarding transparency, accountability, and respect for human rights. Some member states have faced criticism for their authoritarian governance structures, suppression of civil liberties, and human rights violations. As a result, doubts have arisen regarding BRICS' dedication to democratic ideals and principles, which has diminished its reputation as a forward-thinking influence in global governance.

4. Limited Influence on Global Governance

Despite its aspirations to challenge the existing global economic order and promote multipolarity, BRICS has faced skepticism about its ability to exert significant influence on global governance institutions and decision-making processes. Critics contend that the alliance's impact has been constrained by institutional limitations, geopolitical rivalries, and competing interests among member states. Additionally, BRICS' attempts to reform global institutions like the IMF and the World Bank have faced opposition from dominant powers, which further diminishes its ability to alter the global economic framework.

5. Environmental Issues and Sustainability

As the world confronts pressing environmental challenges, such as climate change and biodiversity loss, critics have raised questions about BRICS' dedication to sustainability and environmental protection. While some member states have made substantial investments in renewable energy and environmental conservation, others continue to rely heavily on fossil fuels and face environmental degradation. Critics argue that BRICS' emphasis on economic growth and industrialization has come at the expense of environmental sustainability, highlighting the need for greater focus on green development and climate action within the alliance.

CONCLUSION

The emergence of BRICS is a nuanced and multidimensional development. Expanding membership could provide the group with additional economic resources for mobilization and enhanced numerical strength. A larger BRICS would likely gain more widespread recognition and credibility, potentially attracting future member states. However, incorporating new members might lead to conflicting interests and priorities, hindering consensus-building on crucial matters and potentially impeding the bloc's ability to address urgent development challenges swiftly. It could also weaken the group's cohesiveness and distinct identity. Existing BRICS countries must thoughtfully evaluate the consequences of expansion and ensure new members are integrated in a manner that maintains the group's unity and efficacy. In the forthcoming years, the benefits of BRICS' evolution, including collective economic growth and regional integration, will undoubtedly influence international norms and relations. BRICS nations are transforming the global financial landscape and advocating for a multipolar economic world by promoting de-dollarization. As geopolitical strains reveal the weaknesses of dollar reliance, these countries are collaborating to achieve greater economic self-sufficiency and resilience. Their strategic initiatives, such as conducting trade in local currencies, establishing the New Development Bank and Contingent Reserve Arrangement, and implementing alternative payment systems like China's CIPS and Russia's SPFS, demonstrate coordinated efforts to gain financial independence and reduce Western financial influence. While the U.S. dollar remains predominant, the expansion of regional currency exchanges, strategic utilization of gold reserves, and the growing importance of digital currencies, particularly the digital yuan, are gradually altering global economic patterns.

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Acknowledgement
Name: Saloni Dangi
Organization: Shri Ram College of Commerce
Designation: Student

Trade in Turmoil: Deconstructing the Role of Geopolitical Conflict in the Disruption of Global Supply Chains

ABSTRACT
Geopolitical conflicts have increasingly disrupted global supply chains, causing severe economic instability. This paper examines how wars, trade wars, and diplomatic tensions have led to inflationary pressures, production slowdowns, and market shifts. Case studies, including the Russia-Ukraine war and the Red Sea crisis, illustrate the fragility of global trade networks. Using institutional data from the WTO, IMF, and market reports from Bloomberg and Deloitte, this paper analyzes the economic consequences of supply chain disruptions and suggests strategies for mitigating future risks.
JEL Classification: F10, F13, F51, O24 Keywords: Global supply chains, geopolitical conflict, trade disruption, economic sanctions, inflation.

INTRODUCTION

In 2023, the Russia-Ukraine war caused a 40% surge in wheat prices, exacerbating food insecurity for over 345 million people worldwide. Simultaneously, energy infrastructure destruction led to record-high gas prices in Europe, contributing to double-digit inflation in multiple economies. In 2024, Houthi attacks on Red Sea cargo vessels forced shipping companies to reroute, doubling freight costs overnight and delaying global trade. These examples highlight how modern supply chains, designed for efficiency, remain alarmingly vulnerable to geopolitical disruptions. Despite advancements in logistics and trade policies, economies continue to suffer from trade imbalances and supply shocks whenever geopolitical tensions escalate. This paper examines the key drivers of supply chain vulnerability, assesses the economic impact of geopolitical conflicts on global trade, and proposes strategies for mitigating future risks.

2. ECONOMIC FOUNDATIONS OF GLOBAL TRADE AND SUPPLY CHAINS

2.1 Comparative Advantage & Economic Efficiency

David Ricardo's theory of comparative advantage suggests that nations should specialize in producing goods they can manufacture most efficiently, leading to global economic interdependence. China's dominance in electronics manufacturing, Germany's expertise in automobiles, and India's leadership in IT services exemplify this principle. However, the interconnected nature of modern supply chains means that disruptions in one region can have cascading effects worldwide. For example, the 2024 Red Sea crisis doubled freight costs, causing delays in European and Asian manufacturing. The just-in-time (JIT) model, which prioritizes cost efficiency over stockpiling, has proven particularly vulnerable to such disruptions. While the model minimizes storage costs, it leaves companies exposed to supply shocks when transportation routes are affected by geopolitical events.

2.2 Supply & Demand Mechanisms in Trade

Global trade operates on supply and demand equilibrium, but geopolitical conflicts disrupt this balance in several ways. Trade wars, sanctions, and embargoes create artificial shortages, causing price volatility.

- China's 2023 export restrictions on gallium and germanium (key semiconductor materials) led to a 40% price surge in global markets
- The U.S. ban on advanced chip exports to China (2022) created an 80% spike in semiconductor demand from Taiwan and South Korea.

- The Russia-Ukraine war disrupted wheat exports, causing severe food shortages in Egypt and Lebanon.

2.3 Economic Sanctions & Their Consequences

Economic sanctions are designed to pressure governments, but they often have unintended consequences for the global economy.

Sanction	Impact
U.S. sanctions on Russian oil (2022)	Increased crude prices above $120 per barrel
European gas shortages	10x increase in LNG prices after cutting Russian supplies
U.S. chip restrictions on China (2024)	Semiconductor shortages, affecting global production

These disruptions underscore how interconnected global trade has become and how economic policies intended to target specific nations often have far-reaching global effects.

3. GEOPOLITICAL CONFLICTS & SUPPLY CHAIN DISRUPTIONS

3.1 Trade Wars & Economic Sanctions

Reshaping Supply Chains The U.S.-China Trade War (2018-Present) The U.S.-China trade war has significantly altered global supply chains, forcing multinational corporations to relocate their manufacturing hubs.

- Electronics manufacturing shifted to Vietnam, India, and Mexico as U.S. imports from China fell by 23%.
- Vietnam's exports to the U.S. surged by 40%, benefiting from companies moving their supply chains out of China.
- The U.S. tech blockade (2023-24) pushed China to develop its own semiconductor sector, reducing reliance on Western imports.

India's Gains from the Russia-Ukraine War

- India bought Russian crude at a 30-40% discount, refining and re-exporting petroleum to Europe.
- A "shadow fleet" of oil tankers was created to transport Russian oil outside Western oversight.

3.2 Regulatory Barriers & Protectionism

Governments are increasingly using protectionist measures to control trade, impacting supply chain flexibility.

Regulation	Effect on Global Trade
U.S. Inflation Reduction Act (2022)	Incentivized domestic EV and battery production
EU Carbon Border Adjustment Mechanism (CBAM, 2026)	Will impose tariffs on high-carbon imports
China's 2023 rare mineral export controls	Disrupted semiconductor and defense industries

These barriers indicate a shift from globalization to localized manufacturing, driven by political and economic concerns.

3.3 Armed Conflicts & Infrastructure Destruction Houthi Attacks in the Red Sea (2023-24)

- Forced major shipping companies like Maersk to reroute their vessels, increasing shipping costs and delays.
- Caused supply shortages in the European electronics and automotive sectors. Ukraine War's Long-Term Impact on Energy & Food
- Russian attacks on Ukraine's grain silos worsened food shortages in Africa and the Middle East.
- Europe shifted to alternative LNG suppliers, causing a fourfold increase in gas prices. Israel-Gaza Conflict & Middle

instability.

- Oil prices surged 15% within a week due to escalating Iran-Israel tensions.
- Increased U.S. naval activity in the Strait of Hormuz, a key global oil transit route.

4. METHODOLOGY & DATA ANALYSIS

4.1 Data Collection Sources

Source	Purpose
World Trade Organization (WTO)	Tracks global trade worth \$32 trillion annually
IMF Reports	Analyzes GDP contractions due to trade disruptions
UNCTAD	Assesses foreign direct investment (FDI) outflows from conflict zones
Bloomberg & The Economist	Track commodity price volatility
McKinsey & Deloitte	Forecast nearshoring trends and supply chain restructuring

4.2 Statistical Analysis of Economic Impact

Commodity	**Pre-Crisis Price**	**Peak Price**	**% Increase**	**Crisis Cause**
Brent crude oil	\$75/bbl	\$139/bbl	+85%	Russia-Ukraine war
Wheat	\$7.50/bushel	\$13.63	+82%	Ukraine export ban
Semi-conductors	\$1.10/unit	\$2.15/unit	+95%	US- China chip war

5. CONCLUSION & POLICY RECOMMENDATIONS

5.1 Key Findings

- Geopolitical conflicts create inflationary pressures by disrupting supply chains.
- Trade wars and sanctions reshape global trade, leading to long-term shifts in production hubs.
- Armed conflicts damage trade infrastructure, forcing economies to adapt.

5.2 Policy Recommendations

- Diversification of Supply Chains: Reduce dependence on single suppliers by expanding into multiple regions.
- Strategic Stockpiling: Governments should maintain reserves of critical materials like semiconductors and energy resources.
- Resilience Investment: Countries should invest in nearshoring and alternative trade routes.

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Acknowledgement

Name: Alisha Dahiya and Aditya Singh

Organisation: Jesus and Mary College, University of Delhi

Semiotic Objections To The Education Market

Abstract

Semiotic objections to commodification hold that buying and selling certain goods and services is wrong because of what market exchange communicates or because it violates the meaning of certain goods, services, and relationships. We believe that there are semiotic objections to the education system as well. The education system was mainly created to provide for the fullest possible development of each learner for living morally, creatively, and productively in a democratic society but nowadays the purpose of building schools and universities is steering away. With the current market practices in the education sector and the instances of corruption mentioned in the above examples, we see education losing its intrinsic value.

INTRODUCTION

According to Brennan and Jaworski's paper- Markets without Symbolic Limits, there is an impressive range of possible moral objections to markets in everything, including:

1. Wrongful Exploitation: Some markets—for example, in organ sales—might encourage the strong to exploit the vulnerable.
2. Misallocation: Some markets—for example, in Ivy League admissions—might cause those goods to be allocated unjustly.
3. Rights Violations: Some markets—for example, in slaves—might violate people's rights.
4. Paternalism: Some markets—for example, in crystal meth or cigarettes—might cause people to make self-destructive choices.
5. Harm to Others: Some markets—for example, in pit bulls or handguns—might lead to greater violence or injury to others.
6. Corruption: Certain markets—for example, in Disney Princesses for one's daughters—will tend to cause us to develop defective preferences or character traits. (Brennan & Jaworski, 2015)

Apart from these, there are an additional set of objections raised by many philosophers and political theorists called Semiotic Objections. Semiotic objections to commodification hold that buying and selling certain goods and services is wrong because of what market exchange communicates or because it violates the meaning of certain goods, services, and relationships.

We believe that there are semiotic objections to the education system as well.

The education system was mainly created to provide for the fullest possible development of each learner for living morally, creatively, and productively in a democratic society but nowadays the purpose of building schools and universities is steering away. It is treated more like a business and less like a learning institution.

Semiotic objections rely upon the idea that markets in certain goods communicate, signal, express, or symbolise the wrong motive or attitude and the education system presently symbolises the wrong motive.

Sparks, in his paper- Come On, Come On, Love Me for the Money, claims that certain goods – such as love and admiration – cannot really be bought and sold; they must arise as "gifts' ' to qualify as genuine instances of those things. Just like Sparks, we feel that it is the same with knowledge and instead of treating it like a way of earning income, it should be respected more. (Sparks, 2017)

I) Marketisation of education:

The first question we raise is should a market out of education exist in the first place?

Schools are no longer institutions of learning but are 'branded' and are ranked. This competition to secure a rank and being labelled has caused the essence of education to lose, students are now paying their way into colleges. The Ivy League Scandal is known all too well to everyone.

Also known as the "2019 college admissions bribery scandal", this scandal involved bribery, money laundering and document fabrication, all said to be led by an independent college advisor called William "Rick" Singer. Parents paid Singer approximately $25 million to bribe coaches to get their children admitted as athletic recruits in elite institutes, regardless of their abilities as an athlete. It is just one of the instances where we were exposed to the dark sides of marketizing education. Such is the contemporary face of education. 2. (Insider, 2022)

The narrowing of learning to school courses and college courses has embedded in the mind of every student that the only purpose of education is to secure a job. Like said before the purpose of education was to instil an ability to think intensively and critically. The point we mean to highlight is that today education is viewed as a market commodity, education which was once viewed as a process of personal progress has been reduced to a job investment. A survey from the year 2007-2008 records that out of I.5 million degrees granted, the most common degrees were 21% in business, 10.5% in social sciences, 7% in health sciences. This survey brings out a truth which was so blatantly unseen by mainstream economics, the universities have given a new impetus to profit oriented organizations and career paths. There is a systematic discouragement towards career paths that exist to serve the community.

The idea of learning was receiving knowledge that would prepare one for all spheres of life. In this argument, the emphasis has been laid on knowledge and learning and it is important we redefine these terms. By knowledge, we mean the ability to discern the truth from false and by learning we mean the ability to imbibe the knowledge imparted to one.

II) Privatisation of education:

There has been a growing dialogue among many educational institutions regardingthe privatisation of education. We believe it is important that we explore the interspace between state and the education sector. The relationship between state and education has always been a complex one. The first universities established in Europe had an apprehensive association with the secular authorities. As modern universities developed intellectuals such as Wilhelm Von Humboldt imbued the universities with ideas of lehrfreiheit, and freiheit der Wissen chaft – the freedom to learn, to teach and to conduct research. This was the first known foundation of academic freedom, a principle which lies at the heart of learning institutions. Guy Neave, a British social scientist and an under-appreciated contemporary theorist of the politics of higher education, once observed that the relationship between higher education and the state is structured by the kinds of knowledge valued by those in power and had facts to support his argument which we believe seem to validate his stance.

In medieval Europe, the Catholic church required their teachings to be independent of secular rulers and idiosyncrasy. In China the emperor needed universities to function as permanent organs of the government, and this was ensured when the universities were infused with the responsibility of providing the imperial court with competent bureaucrats and worthy administrators. The post-Cold War period saw the trend of private institutions. State governments were handing over the responsibility of educating the masses over to private individuals. The reason we object to private educational institutions is that the moment students begin to enrol in private schools and universities, we see the 'good shift' that is education becoming a common resource. Common resources are those goods that are 'rivalrous' and 'non-excludable'. This means that everyone has access to the good, but the use of the good by one person alters the ability of someone else to use it. A classic example of a common good or resource would be fish; no one is excluded from fishing, but as more people withdraw fish without limits being imposed, the stock for later fishermen is depleted. Similarly, though private education is made available to anyone with the means to obtain it, it is the 'means' that are limited which result in quality education becoming more of a private good. With this we raise the mere commodity objection as defined by Brennan and Jaworski, with education becoming a commodity, as something with limits of purchase, the true meaning of and quality of education deteriorates with the passage of time. We wish to draw attention to the word quality and what we mean by it, quality education refers to an education that can prepare the future generation simply not for the job sector but rather an intellectual who chooses to question the ethics on which the contemporary world is run.

III) Education and corruption:

This brings us to another objection, with the goods shift, that is education shifting from being a public good to a common good we see, corruption co-existing with education. We object to the relation between the private sector and education. There should not be a committee or board of governors running any institutions that pertains to the education sector. With school accreditation becoming a common culture, we see the use of school infrastructure for generating revenue at the expense of the teaching and learning environment. According to an analysis conducted by the World Bank, it is of common practice to use student labour for generating revenue under the pretext of providing practical training. Other practices include:

- Embezzlement of funds intended for teaching materials, school buildings, etc.
- Sub-standard educational material purchased due to manufacturers' bribes, instructors' copyrights
- Schools monopolising meals and uniforms, resulting in low quality and high prices.
- Private tutoring outside school hours given to paying pupils, reducing teachers' motivation in ordinary classes, and reserving compulsory topics for the private sessions to the detriment of pupils
- School property used for private commercial purposes.
- Pupils carrying out unpaid labour for the benefit of the staff.
- Staff exploiting and abusing pupils in many different ways (physically, sexually, etc.).
- Teacher recruitment and postings influenced by bribes or sexual favours.
- Exam questions sold in advance.

·'Ghost teachers' – salaries drawn for staff who are no longer (or never were) employed for various reasons (including having passed away).

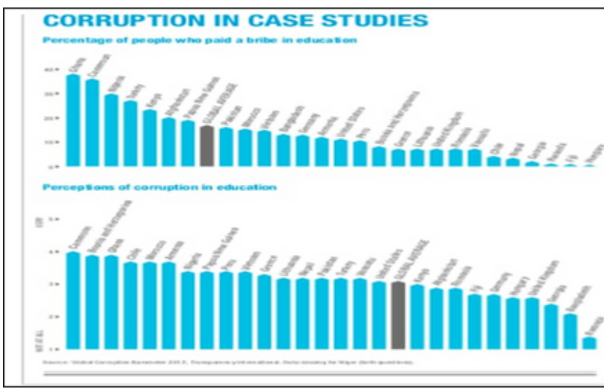
·High absenteeism, with severe effects on de facto student-teacher ratios. ·Licences and authorisations for teaching obtained on false grounds via corrupt means.

·Inflated student numbers (including numbers of special-needs pupils) quoted to obtain better funding.

·Bribes to auditors for not disclosing the misuse of funds.

·Embezzlement of funds raised by local NGOs and parents' organisations.

·Politicians allocating resources to particular schools to gain support, especially during election times.



Education as a commodity signals to education as something that can be sold and bought of the market, and it is fine to use unethical means to obtain it, we are in all the possible ways saying that there is no non-instrumental value to education and demean its purpose that was to intricate knowledge in society.

IV) Education as a right:

Education has been declared as a fundamental right in many countries, the right to education is as important as any
freedom given to us by the constitution. Education is a fundamental human right in the Universal Declaration of Human Rights. Yet this right seems to become less universal by the passing years.

As mentioned in the previous paragraphs, the gap in the education sector is resulting in an unbridgeable gap between the lower and the upper class. Education is a public good. It is of crucial importance we bring out the clear definition of public goods, as later we will see how education is shifting from being a public good to more of a common resource, which has already been defined above. A public good is to be available for use for everybody and one person's usage of it does not diminish or exhaust its availability to others. Whereas, a common resource's availability diminishes with use.

Public goods are provided as a whole to the society by the government and the consumption of these goods by an individual doesn't reduce its availability or doesn't exclude others from consuming it. When education was declared as a right, it was to ensure equitable, quality education to all. A disparity in education was never supposed to exist. Our objection is that with this right becoming more exclusive to the upper classes, there is a wrongful exploitation of the weak. When a public good such as education becomes as common resource, we see that even though there is an availability of education, the means to achieve quality education is limited. This new turn of education becoming a common resource from a public good or a right has led to many people believing that quality education is something obtainable. only by the rich and wealthy. To anyone who has some understanding of economics will understand what happens when something is available in limited amounts, the prices rise. In a market setting where the demand for a good is high, the scarcity of a good will lead to a tremendous increase in prices, making it even more difficult for average or low income families to provide a good quality education to their children. This again reinstates the belief that quality education has become a privilege rather than a right. This way education stops being a right and becomes a life style.

V) Kota factory:

Approximate of 2 million students appear for the JEE, India's biggest engineering exam, and 1.5 million students appear for NEET, India's standardized medical exam after grade 12th. Out of 2 million students sitting for the exam, only 20,000 clear, whereas for NEET an approximate of 70,000 clear the paper. These digits only give as bleak glimpse into the toxic culture of these competitive exam. Before we go on to point out the absolute state of deceit and duplicity in these exams, it is of crucial importance we describe medical and engineering culture of the Indian subcontinent.

There are only two widely accepted and respected professions in this country of a student population of 300 million, which can allow a spectrum of careers to emerge and thrive. It has been a mindset since generations that the engineering and medical-related professions have been regarded as the "ticket" out of poverty and a way to achieve a wealthy lifestyle. This is where Kota factory comes in.

Kota often referred to as the 'coaching' hub or one might also choose to call it the suicide hub is India's biggest centre where young minds are conditioned into smiling for ranking billboards. The coaching industry in India is a booming business which creates a revenue of worth 3000 crore, an approximate of 4 billion dollars. (Mishra & Singh, 2017).

There are 35 to 40 major institutes in Kota; according to a research paper done by Dr Patanjali Mishra on the coaching classes of Kota. (Mishra & Singh, 2017). In the year 2011, South Korean coaching giant Etoos invested rupees 30 crore to set up its centre in Kota. In the past two decades the Kota city has emerged as an education market hub for India and its neighbouring countries.

Why we choose it to call a market? We would like to explain this with the help of this figure.

THE TOP PLAYERS IN KOTA

	YEAR FOUNDED	NUMBER OF STUDENTS	CENTRES	PE/VC FUNDING/ BACKING
BANSAL CLASSES	1983	17,000	Kota	—
RESONANCE EDUVENTURES	2001	21,000	Across multiple cities—all company owned	Rs 100 crore from CLSA, Rs 60 crore from Milestone Religare
CAREER POINT	1993	20,000	Across multiple cities, distance learning	Franklin Templeton PE invested Rs 50 crore in 2009, and up to $10 million by Nadathur Group, owned by NS Raghavan of Infosys
VIBRANT ACADEMY	2009	9,200	Kota	—
ALLEN CAREER INSTITUTE	1988	30,000	Kota	—

Figure I as displayed above gives us data for five top performing coaching centres or "players" in the city of Kota. The part we would like to focus on is the column headed "PE/ VC FUNDING/ BACKING". This column shows the financial backing the institution has received in the form of either private equity (PE) or venture capital (VC). Private equity is when a group of investors make direct investments in a private company and usually have a large stake. Whereas, venture capital is when the investment is done in a start-up company with growth potential. Resonance Eduventures had received a total of Rs. 160 crores from CLSA and Milestone Religare, both of them being investing groups that provide financial services to business organisations. Similarly, Career Point received a total of Rs. 124 crores from Franklin Templeton and Nadathur group, which are again private investment firms. From this, it is clear that many such educational institutions are run on private funding and not public or government funding. It can be said that now the educational sector has been commercialised where buyers purchase a "stake" in education at prices. Economist Prabhat Patnaik termed the process as "commoditisation of education". According to him, "It is a desire to attract direct foreign investment." In an interview when he was asked about the competition that is provided by the private universities, he replied,

"The competition presupposes commoditisation. The 'quality' that is supposed to improve through 'competition' is such a world where education is converted into a commodity." (Youthkiwaaz, 2019)

The entry in educational institutions whether it be the Kota factory or schools is no longer credit-based. The limited number of seats create an unfair competition.

"Teachers sold places in the front rows of their overcrowded classrooms, parents had to pay if they wanted their child's exercise books to be corrected, and the only way a child could complete the curriculum in an examination year was through private tuition with the same teacher. An Inspector's main function on visiting a school was to be fed. Poor food and drink would result in a poor report. Headmasters' posts were sold, those in the larger schools by the highest officials in the Ministry of Education."

This is a clear indication that when education is to be run as private enterprise it is not beneficial to everyone. How common is the corruption practice? A survey conducted by TI in 2002 in south Asia reveals that the education sector is the third most corrupt public service. Corruption is against the very goal of education, that is to produce responsible citizens that hold human rights in high regard. It threatens the quality of education given to young minds. Corruption in education affects more citizens than corruption in other sectors. There was a time when education was seen as a way to escape the cycle of poverty, but this unfairness has made is impossible for the poor to get accessible quality education.

This misallocation of resources has led to, as we choose to call it, shifting of beliefs. From viewing education as means to uphold societal morals, the young are convinced to believe that success is no longer credit based, rather it is achieved through manipulation of resources. When asked to students what they feel is the purpose of education and the role of school in their life, we received an answer such as
“The role of school is to educate me, so that when I go out into society, I can become productive. I can be a functioning member of society who can work, who can educate someone else, who can be a role model. That’s what I always thought it was. Now, I’m seeing the role of school—of education—[as] basically a pastime, like a public babysitter for whoever feels their children should be here.” (The Atlantic, n.d.).
This shift of beliefs is reflecting of a society where all regard for knowledge is lost, and schools have become a burdening mandatory.
We can clearly see the impact of marketisation of education on the signal it send out to the people of the society. Education, which was once viewed as a way of preparing children to reach their maximum potential in order to live morally, creatively and effectively in a democratic society, has been reduced to a place for “pastime” as said by the student above. In order to get their children enrolled into elite educational institutions parents often use methods that are ethically and morally incorrect. The most popular one being bribery. This has led students to value their education less. They may either feel it is something they are being forced to do, or they may not know its actual worth since they are getting it on a platter. Either way the real value of education is being diminished. Rather than it being an intellectually stimulating and exciting experience, schools and colleges have turned into a burden for many.

With the current market practices in the education sector and the instances of corruption mentioned in the above examples, we see education losing its intrinsic value. Further drawing on these examples we raise the wrong currency objection, when we introduce money in this market we see estrangement between the students and teachers. For example, with money as a crucial means of exchange, we see that educators too lose their importance in this relationship as well as their position in the education sphere. With money involved we signal the wrong meaning of education, that meaning being that educators are involved in such spheres solely to earn.

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Acknowledgement

Name: Dehuti Agarwal
Organization: NMIMS, Deemed to be University

Name: Sushumna Uniyal
Organization: Erasmus University Rotterdam

Name: Alyssa Tosawad
Organization: Gargi College, University of Delhi

Addressing the Gender Pay Gap: Steps Toward Equality

The theme of International Women's Day 2025 is "For ALL Women and Girls: Rights. Equality." A key component of women's rights and equality is to ensure they receive equal pay to their male counterparts for equal work to create "a gender-equal world" and end discrimination. The continued existence of the gender pay gap, despite legislative mandates for equal pay in numerous jurisdictions, underscores the presence of persistent structural inequalities and societal biases. This disparity is not solely attributable to overt discrimination, but also to subtle, yet pervasive, factors such as occupational segregation, differential access to career advancement, and the undervaluation of traditionally female-dominated sectors. Consequently, the gender pay gap necessitates a comprehensive, multifaceted approach, encompassing policy interventions, organizational reforms, and societal shifts, to achieve substantive and enduring equality.

The gender pay gap isn't just a statistic—it's a stark reminder of inequality that persists in workplaces around the world. It's a wage against the machine that keeps equality out of reach. Despite progress in gender equity, women continue to earn significantly less than their male counterparts for the same work, perpetuating cycles of economic disparity. But change is on the horizon. By addressing the root causes, levelling the pay-field and implementing real solutions, we can ensure that equality is achieved.

The gender pay gap is often misconstrued as the concept of equal pay for equal work, but it is a broader indicator that reflects the systemic undervaluing of women's labour. It is generally calculated as the difference between the average or median income of women and men, often expressed as a percentage of men's income. It follows from deeply anchored bias and discriminatory practices. On the other hand, equal pay demands that men and women should receive the same pay for performing the same work or work of equal value. The fact that gender pay gaps continue to exist, despite laws mandating equal pay at many places, highlights the persistent structural inequalities and societal biases.

When I began thinking about the theme of women empowerment, I was immediately reminded of the film, Laapata Ladies. Set in 2001, it portrays the journey of two brides who, after a mix-up during a train journey, embark on a path of self-discovery while challenging societal norms. The film definitely has a subtle feminist undertone, and it calls for women's participation in production and economy — on a very grassroot level.

The film's portrayal of women's struggles in finding their identity serves as a metaphor for the ongoing fight for gender equality, including equal opportunities and equal pay in the workforce.

The simple image of a ghoonghat (veil) was used to symbolize how women's identities are often hidden, and their desires and aspirations suppressed. Just as the ghoonghat obscures a woman's face and, symbolically, her individuality, the gender pay gap conceals the true value of women's contributions to society. The narrative critiques the erasure of women's identity and examines themes like gender inequality, marital dynamics, and the weight of self-sacrifice imposed on women.

My favourite scene is this conversation between Phool and Manju Maai (Source: Google Images)

Women are often not compensated equally for the same work as their male counterparts, their financial independence is compromised, and their ability to make personal choices is limited. This economic disparity, much like the societal expectations depicted in the film, forces women to prioritize others' needs over their own, hindering their professional ambitions. The movie highlights how women internalize self-sacrifice, making it feel like self-care is “a forbidden thought”.

This is not an issue in informal sector or in developing countries, but even globally, the gender pay gap hovers around 19% to 24%, with notable differences across various regions. In India, the situation is particularly dire, with women earning a mere 40 rupees for every 100 rupees earned by their male many value chains, yet they face wage and work disparities due to gender stereotypes and social norms. Despite growing access to education and increased participation in the labour market, women farmers still have limited access to crucial resources like land, credit, seeds, and training, which hampers their productivity.

Closing the gender gap in farm productivity and wages in the agrifood system could boost global GDP by 1% (nearly $1 trillion) and reduce food insecurity by 2%, benefiting 45 million people. However, many women remain "invisible" in value chains due to intersecting forms of discrimination—such as age, class, ethnicity, and migration status—coupled with a lack of data to highlight these disparities.

The solution to eliminate the gender pay gap necessitates a thorough examination of its fundamental origins. A few methods to curb this are:

- **Data Collection:** The collection of employee data about gender combined with job type and working hours needs to happen to reveal pay gap distribution.
- **Address Bias:** Organizations can foster a more inclusive workplace by providing training to their employees about unconscious gender bias while helping them deal with stereotypes and cultural norms which may unintentionally hinder women's career growth.
- **Promote Transparency:** Implement transparent compensation practices. By implementing clear wage structures and collective wage regulations, companies can ensure that all employees are valued and rewarded equitably for their contributions.
- **Equal Pay Legislation:** Ensure that legislation mandates equal pay for work of equal value, going beyond company-specific comparisons and allowing comparisons across organizations and sectors.
- **Enforcement:** Ensure that minimum wage laws are effectively enforced and

cover workers in the informal sector.

- **Paid Parental Leave:** Enable women and men to manage work and family obligations through universally accessible, publicly funded maternity and parental leave, with "use-or-lose" quotas for fathers.
- **Flexible Work Arrangements:** Promote flexible work policies that accommodate care responsibilities.
- **Career Progression:** Develop initiatives that improve advancement opportunities for women in female-dominated occupations and workplaces.

This discussion extends beyond just the corporate world. One person I admire for her advocacy in gender equality within the entertainment industry is Priyanka Chopra Jonas. With experience in both Bollywood and Hollywood, she provides valuable cross-cultural insights into the disparities present in the industry. Priyanka Chopra has openly shared her struggles against the stereotype that female-led projects generate less revenue, which has compelled her to advocate for equal pay despite having the same level of experience and audience appeal as her male counterparts.

She highlights the unfair double standard where assertive women are often labelled as ‘difficult’ or ‘demanding’ while men displaying similar behaviour are praised for ‘knowing their worth’– a perception that perpetuates wage inequality.

Her advocacy reveals how pay disparity manifests differently in various ways across the world, resulting in the systematic undervaluation of women’s contributions. In a 2017 Variety interview, she reaffirmed her commitment to feminism, stating, "Feminism is not about berating or hating men, it’s just about saying we want equality." In some markets, discrimination appears overtly, while in others, it hides within complex contract structures or exclusive backend deals typically offered to men. Through her production company and public platform, she works to create opportunities for women in film and champions transparency in compensation practices.

So, what can be done about it? Governments need to lead by passing laws and regulations which enhance both equal pay requirements and establish minimum wage standards and require companies to show pay practices while supporting working parents and investing in education and skills.

Addressing the gender pay gap is not merely an act of social responsibility; it is an economic imperative. Eliminating gender-based financial inequalities represents a requirement for economic development above its position as a socio-cultural effort. Organisations along with governments must implement specific measures targeting elimination of discrimination, promote transparency and equal opportunity creation for women which will establish an equitable society for every person. The journey towards achieving true gender equality requires continuous effort, steadfast commitment, and a willingness to challenge existing norms and practices.

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Acknowledgement
Name: Mahalakshmi L
Organization: Shiv Nadar Institution of Eminence, Delhi NCR
Designation: Student

Assessing the Feasibility & Economic Impact of Implementing a Carbon Tax in India

ABSTRACT

Global warming is often described as "the biggest externality the world has ever seen". As one of the largest carbon emitters in the world , India's rapid economic growth necessities urgent action to curb emissions globally. While India currently imposes a Clean Environment/Energy Cess on coal in the form of an implicit carbon tax it is not directly linked to carbon emissions undermining the objective of having a carbon tax. Therefore, it is crucial that India introduces an explicit carbon tax that links fuel prices to emissions, which will further have a cascading effect of reducing their consumption while switching to cleaner fuels as substitutes. Apart from mitigating the future economic damage from climate change, carbon taxes can be used for driving sustainable development, fostering innovation, aligning economic growth with long term sustainability and providing a revenue stream to fund government initiatives' paper explores the feasibility of implementing carbon tax in India ,examining its environmental, economic, and international implications. It also assesses the economic viability of such a policy, focusing on its impact on key industries and vulnerable communities. It evaluates the potential for reducing greenhouse gas emissions and further incentivizing cleaner technologies. Through international case studies, the paper identifies best practices and lessons applicable to India's context. Additionally, the paper also considers the potential challenges and hurdles India faces in implementing such a policy and the necessary steps required to overcome it. The paper highlights the role of a carbon tax as a feasible and effective tool for aligning India's climate goals with its development priorities while addressing global environmental commitments.

Keywords: Climate Change, Carbon Tax, Implicit Tax, Policy Action, Sustainability, India, Revenue Recycling

INTRODUCTION:

Climate change is one of the most pressing issues faced by all nations both developing and developed. As per the World Bank 's Global Economic Prospects report India 's economy to grow at 6.7% in both FY 25 and FY 27 which will outpace its global and regional peers. However, India is the second largest emitter of carbon dioxide (CO2) emissions from burning fossil fuels and is expected to rise 4.6% in 2024, the highest among major economies, according to a Global Carbon Project study. In this critical scenario where India 's developmental goals may conflict with climate change it is essential that the government takes a suitable precaution .Countries all across the world are using several strategies for the same, one being the carbon tax. Carbon tax places a price on carbon emissions released from burning fossil fuels thereby incentivising new businesses and individuals to move towards cleaner energy sources to mitigate the carbon footprint.

India had signed the Paris Agreement and took its first pledge in 2015, which aimed at reducing the emissions of 2015 by 33% below 2005 levels. India had managed to reduce the emissions by 25% during the time however currently India aims to reduce its emissions of 2030 by more than 40% and ultimately net zero by 2070. India relies on subsidies and other regulatory mechanisms and not direct carbon pricing due to the several complexities it faces in terms of its complex tax systems with multiple levies and taxes and also the impact it could have on the low-income households. India has implemented several policy initiatives as well like the National Action Plan ,National Solar mission to achieve India 's target of net zero by 2030 but it seems not enough to attain the target and thereby it is very essential to implement the carbon tax in India. The implementation of carbon tax could possibly drive emission reductions while contributing to government revenue for sustainable development.

People and industries must be encouraged by levying taxes and providing subsidies to shift towards the alternatives. A carbon tax is one of the effective ways as "an instrument of environmental cost internalization as stated by the Organization for Economic Cooperation and Development (OECD) India 's economic structure which is heavily reliant on fossil fuels and coal make the implementation of carbon tax highly complex. Moreover, the existing carbon pricing mechanisms in India are unable to reduce the emissions of greenhouse gases in the atmosphere. This mainly accounts to the low levels of tax India has at just 1.6/ tonne CO2 emissions. The explicit tax in the form of carbon taxes can lead to a higher generation of revenue followed by investments to shift towards cleaner energy sources. While the tax will result in several environmental benefits, it also raises concerns about raising the cost of production for industries which may lead to increased prices for the consumers. It may also lead to detrimental effects to the foreign investments in the country affecting the country 's position in the global index. Apart from these the impact on the vulnerable sections of the society, small and medium businesses, utilisation of revenue funds may raise concerns as well. This calls for a need to develop a carbon tax that balances environmental sustainability with economic feasibility and social equity. The paper is very relevant because India does not have a comprehensible carbon tax policy but only some indirect mechanisms like the coal cess and renewable energy subsidies. Global case studies provide valuable insights into the effectiveness of an explicit carbon tax The policy implications require an assessment of the economic, environmental and distributional impacts before implementation.

LITERATURE REVIEW:

Global warming has been described as" the biggest externality the world has ever seen". The Pigouvian Tax Theory stated by Pigou, A. C. (1920) provides the foundational economic rationale for imposing carbon tax stating that governments should internalise the social costs of carbon emissions by imposing taxes on activities that create negative externalities so that the polluters will pay for the economic damage they have caused for. This ensured that the social cost of pollution is included in the market price and thereby incentivising the adoption of cleaner energy sources and reducing the reliance on carbon intensive energy sources. Further research conducted in 1995 after Finland became the first country to impose the carbon tax which is stated in the Double Dividend Hypothesis, proposed by Lawrence H. Goulder (1995) suggested that a well-designed carbon tax can generate dual benefits by increasing the cost of carbon intensive activities which can lead to a cleaner environment apart from that the revenue generated can be recycled back into the economy to reduce distortionary taxes, and stimulating economic growth leading to an improvement in the economic efficiency from the use of environmental taxes. However in the working paper stated by Don Fullerton Gilbert E. Metcalf on Environmental taxes and the double dividend hypothesis specified how prices may rise because of the necessary costs of environmental technologies such as switching to the more-expensive low-Sulphur fuel, switching output to the more-expensive plant with lower emission rates, or installing flue-gas desulfurization units (scrubbers) and these costs can be minimized by well-designed policies, but they must ultimately offset some of the benefits of environmental improvement. The Sumner, J., Bird, L., & Dobos, H. (2011) provided a detailed analysis of the carbon tax policies implemented in several countries like including Sweden, Norway, Finland, Denmark, British Columbia Canada, and the Netherlands covering their tax rates, coverage, exemption and revenue utilisation strategies used by each country. The carbon tax rates vary across jurisdictions, in part due to their function. Higher carbon tax rates provide stronger signals to consumers to change behaviour, while lower rates may not do much to change behaviour but can provide funds for carbon mitigation programs as stated in the paper. Countries with higher carbon tax rates have witnessed substantial emission reductions like Sweden. The revenue neutral model in British Columbia demonstrated no negative impact on GDP thus supporting the Double Dividend Hypothesis. It also states that most of the taxes are structured in such a way that they are more politically feasible and also determining the actual impact of a tax in isolation of other factors is often difficult, and due to lack of common evaluations it is difficult to do so as well. Revenue recycling is also one of the suggested ways that could gain public and industrial acceptance through tax reductions or direct subsidies. The Economic Survey 2020-21, published by the Ministry of Finance, Government of India (2021) provided insights on India ‘s current implicit carbon pricing mechanism through the Clean Energy Cess(Coal Cess) introduced in 2010, which got further subsumed under the GST compensation cess reducing its efficiency as a dedicated carbon pricing tool. However, it indicates the challenges that can be faced while implementing carbon tax in India emphasizing on the inflationary effects on energy prices impacting SMEs, consumers and industries. The burden of tax may be disproportionality falling on the low-income households unless there is a redistribution of revenue effectively. Apart from these there are political constraints that may force the nation in such a way that the majority of carbon pricing policies around the world today will fall well below the central range of estimates of the full social cost of carbon. Modelling the impacts of carbon pricing in India’s power system using a dynamic optimization approach (authors) suggested that solar and wind can already provide 66% of the electricity needs by 2050 even without a carbon price thereby implementing a carbon price will accelerate the transition to carbon free energy sources. Carbon Tax will have significant impact on the economy as the revenue generated could be utilised for infrastructure development, renewable energy investment, and social welfare programs (Parry, Veng, & Heine, 2015). However a high carbon tax will increase the prices of the fuels , which in turn increases the cost of transportation, goods, and services (Reserve Bank of India, 2023).However proper revenue recycling mechanisms can resolve them and ensure equitable distribution of taxes. The revenue from carbon taxes can be used for generating new green jobs and renewable energy industries (Sumner, Bird, & Dobos, 2011) also however lead to higher cost of production for energy intensive industries like steel, cement, manufacturing (OECD, 2022).A well structured carbon policy can increase foreign investment in renewable energy and sustainable industries (Jenkins & Karplus, 2017) while higher taxes can deter foreign investment in traditional industries (Ellerman, Convery, & De Perthuis, 2010). Carbon tax are generally considered to be regressive (United Nations Development Programme, 2021) to counter the disproportionate impact on the low income groups targeted subsidies and direct cash transfers are provided (Rosenbloom, Haley, & Meadowcroft, 2019). Further studies have stated that implementing a revenue neutral carbon tax with tax rebates and tax cuts can mitigate the economic disparity.

Objectives of the Research

The primary objectives of the research is to assess the feasibility of implementing a carbon tax in India by analysing the economic, environmental and the importance of revenue recycling strategies for effective utilisation of the carbon tax in clean energy, infrastructure It is also aiming at identifying the best carbon pricing mechanism India can adopt by comparing the international best practices and determining policy recommendations.

RESEARCH METHODOLOGY:

The study here utilises primarily both quantitative modelling and qualitative policy analysis to provide a comprehensive assessment of carbon taxation in India:

1. **Quantitative Analysis**

The quantitative analysis primarily focuses on the environmental and economic implications of introducing carbon tax in India. Linear Programming Optimization using Python is used here to to quantify the impact of carbon tax on economic output and GDP, accounting for sector-specific costs.

In the linear programming optimization to model the impact of carbon tax on economic output and GDP the study aimed to quantify the effect of a sector-specific carbon tax on Gross Domestic Product (GDP). An optimization-based approach to estimate GDP both with and without the imposition of a carbon tax across five key sectors: coal, steel, cement, services, and agriculture is taken to assess the difference made by revenue recycling in the economy. An objective function that calculates total GDP as the sum of sectoral outputs weighted by their respective prices is used. The model accounts for the reduction in GDP due to the additional cost burden imposed by the carbon tax on sectors (coal, steel, and cement). Gross Domestic Product is defined as:

$$GDP = \sum(q\_i - p\_i) - \sum(q\_i * p\_i * t\_i)$$

Where:

q_i represents the output of sector I

p_i represents the price per unit of sector

t_i represents the carbon tax rate for sector i

A constrained optimization approach using the SciPy library in Python is used here where the optimization seeks to maximize GDP (minimizing the negative GDP for computational purposes) keeping the assumption that outputs across all sectors are non-negative. There are 2 scenarios which are evaluated:

- **Without Carbon Tax:** A baseline scenario assuming no taxation on emissions.
- **With Carbon Tax:** A policy scenario where a carbon tax is applied to the coal, steel, and cement sectors.

The following are the assumptions used for analysis:

i. The outputs of the sectors are continuous and can be adjusted without friction.

ii. The carbon tax does not consider secondary effects such as such as changes in employment or technological adaptation and only affects output costs directly

iii. The model does not capture cross-sectoral dependencies or feedback loops.

The study also analysed the effect of the Revenue Recycling Model in evaluating the economic implications of reinvesting carbon tax revenues into different sectors, estimating GDP recovery and substitution effects. To model the extended economic impact of carbon tax while accounting for revenue recycling indicating the portion of revenue being reinvested into the economy and sectoral substitution which induces shift in output between high carbon and low carbon sectors. The initial model is expanded by integrating the 2 mechanisms

a) Carbon Tax Calculations

The total carbon tax is calculated as a product of output, sectoral prices and tax rates

$$Carbon\ Tax\ Rate = \sum(q\_i \ \times p\_i \times t\_i)$$

b) Revenue Recycling Adjustment

A share of carbon tax is recycled back into the economy reducing the net cost of carbon tax.

$$Net\ Tax\ Cost = Tax\ Revenue \times (1 - \alpha)$$

c) Sectoral Substitutions

The carbon tax alters relative output while high carbon sectors experience a decline, low carbon sectors benefit from the increased output.

$$q\_(i\ )\hat{}adjusted = q\_(i\ ) \times (1 + s\_i$$

where,

q_i represents sectoral output

p_i represents the price per unit

t_i represents the carbon tax rate

α is the recycling rate

s_i represents the sectoral substitution effects(positive for low-carbon, negative for high-carbon)

Using constrained optimization approach, GDP is maximised under two scenarios:

Without Carbon Tax: No taxation or output adjustments.

With Carbon Tax: Including the tax burden, revenue recycling, and substitution effect.

The same assumptions are applied as stated above.

While analysing the environmental impact, the Price Elasticity of Demand estimates were used in reductions in fossil fuel consumption by modelling the responsiveness of coal, oil, and natural gas demand to carbon tax-induced price changes as follows; Percentage Change in Emissions=Price Elasticity of Demand × Change in Energy Prices

Change in Demand=Price Increase×PED

To estimate Climate Impact the Intergovernmental Panel on Climate Change (IPCC) conversion factors were used to estimate the temperature reduction effects of CO_2 emission reductions.

2. Qualitative Analysis:

International case studies of countries were analysed to derive applicable policy lessons for India. Lessons from global experiences such as of British Columbia and South Africa provided insights on their applicability in Indian context. It also gave us an idea of various approaches that could be included to ensure effectiveness of implementation of carbon tax in India.

RESULTS:

1. Economic Impact of Carbon Tax

The Linear Programming optimization model suggests that the GDP is lower under the carbon tax scenario due to increased production cost in carbon intensive sectors like cement, coal and steel. The findings are shown below:

Parameter	Value (INR)
GDP without Carbon Tax	50,448,172,645.33
GDP with Carbon Tax	44,810,658,711.90
Impact of Carbon Tax on GDP (%)	11.17% (Decrease)

TABLE 1: GDP ESTIMATES WITH AND WITHOUT CARBON TAX

The results show that there has been a reduction in the GDP by 11% after the carbon tax was introduced. The GDP of the economy before the carbon tax has had a significant drop in GDP from approx. 50 lakhs to 44 lakhs. This reduction is mainly in the energy intensive sectors of cement, steel and coal as an increase in carbon tax directly increases their production cost. Whereas other sectors like agriculture and service are not affected by carbon tax and hence remain unaffected.

While the carbon tax reduces overall GDP, there is an economic disincentive for carbon-intensive production. Policymakers should consider other strategies including revenue recycling to combat this decrease in GDP. Considering the second case of reinvesting the portion of revenue into the economy and sectoral substitution which induces shift in output between high carbon and low carbon sectors. By integrating the revenue recycling mechanism with sectoral substitutions and further calculating the carbon tax is calculated as a product of output, sectoral prices and tax rates using the constrained optimisation model we observe the following;

Scenario	GDP (in units)
GDP without Carbon Tax (Baseline)	50,448,172,645.33
GDP with Carbon Tax (with Recycling and Substitution)	68,947,684,365.91
Impact of Carbon Tax on GDP (%)	+36.67%

TABLE 2: GDP ESTIMATES WITH AND WITHOUT CARBON TAX

The table above highlights the change in GDP made by the revenue recycling and substitution as the GDP increased by 36% as compared to the previous data.
With a 50% recycling rate, the GDP decline from the carbon tax is partially offset by reinvested tax revenues. High carbon sectors like cement, energy and steel had lower outputs compared to other non-carbon sectors which had higher outputs. Initially the GDP had declined with the imposition of carbon tax however the revenue recycling and substitution effects mitigate the economic contraction. This suggests that by revenue recycling the carbon tax the economic burden can be eased and further investments that balance sustainable development and long-term resilience should be brought out.

2. Environmental Impact:
India is one of the largest carbon emitters in the world. However, the efforts taken to reduce itscarbon emissions in the form of coal cess, emissions trading schemes and other subsidy reforms. However, this study aims at evaluating the environmental impact of introducing carbon tax in India using economics modelling techniques. Since India does not have carbon tax the tax rates taken here are based on international benchmarks. Considering India ‘s economic context and energy landscape the following tax rates are proposed.

Scenario	Carbon Tax (INR per ton CO2)	Expected Emission Reduction
Baseline (No Tax)	Rs 0	No reduction
Low Tax	Rs 4000	5% reduction
Medium Tax	Rs 8000	10% reduction
High Tax	Rs 12000	15% reduction

To estimate the impact of carbon tax on fossil fuel consumption is calculated by using the Price Elasticity of Demand which measures the percentage change in demand due to a 1% change in price. The following variable values are taken from previous studies conducted:

Coal: PED≈ -0.3
Oil: PED≈ -0.2
Natural Gas: PED ≈ -0.1
This indicates that a 1% increase in the price of for instance coal could lead to a decrease in its demand by 0.3%. However the price elasticities vary based on regional factors, availability of substitutes, and economic conditions.
Assuming the medium carbon taken here as Rs 8000 per tonne is imposed in India and the price of coal per tonne is Rs 5000 per tonne.

Price Increase = (8000×100)/5000 = 160%
Using the elasticity formula;
Change in Demand=Price Increase × PED
Substituting the values of coal we get,
−0.3×160%=−48%
This shows that the coal emissions will decrease by 48% with the imposition of a medium carbon tax. This would further lead to a proportional decrease in the carbon emissions. The results suggest that by imposing a cabin tax in India the C02 emissions will significantly reduce much more effectively than that of when other carbon regulatory mechanisms were imposed. When the medium tax was imposed there was a reduction by almost 48% contributing to lower Co2 emissions. However, oil and natural gas show a more inelastic response and these necessitates the need for other regulatory mechanisms and subsidies for renewable energy resources for a smoother transition. The other implications seen is in the air quality as carbon tax will

improve air quality by lowering pollutants such as PM2.5, SO_2, and Nox which cause severe health complications as well. The reduction in Co2 emission by 48% will reduce the amount of SO2 reducing the occurrence of asthma and other respiratory diseases.

As per IPCC reports every 1 Gt CO2 reduction slows global warming by 0.01-0.02°C. Coal emits 2.5 tons of CO2 per tonne of coal burned(on average).In this case by a 48% reduction the total CO2 emissions are:

1,000,000,000 tons×2.5 tons CO_2/ton coal=2.5 billion tons CO_2

Thereby CO2 emissions will drop by 48% of 2.5 billion tonnes:

2.5×0.48=1.2 billion tons CO_2 reduction

A 1 billion tonne of CO2 reduces global temperatures by 0.002 -0.004°C

By removing 1.2 billion tonnes of CO2, the estimated cooling effect will be

1.2×(0.002 to 0.004)=0.0024 to 0.0048 °C

The temperature will cool down by mitigating global warming by 0.0024 to 0.0048 °Which over the period of time can lead to a significant beneficial impact on Climate Change globally.

INTERNATIONAL CASE STUDIES FOR INDIA:

There are several countries across the world who have adopted carbon taxes with significant boost to their revenue and subsequent reductions to their CO2 reductions. To analyse the feasibility of implementing Carbon Tax in India it is necessary to study the case studies of successful carbon tax implementation from other countries which India can implement in its future model and overcome its challenges faced in its implementation.

1. British Columbia Model of Carbon Tax

British Columbia had set a target to reduce GHG 33% below 2007 levels by 2020.To achieve this target a neutral carbon tax on the purchase of fuel was imposed by the British Columbia government. The tax covered 70% of the GHG emissions and was increased in phases starting at 10 $CAD /ton and rising by 5 $CAD /ton each year (OECD, 2013). During the period of 2013-2017 the tax was frozen so that its progress and impact could be reviewed. Afterwards the tax was increased at 5 $CAD/ton per year from 2018. The tax is considered revenue neutral as it is designed in such a way that the revenue generated will be returned to businesses and individuals by tax breaks or credits. The tax revenue was also utilised to reduce other income and business taxes. One significant feature is that the policy design aimed at protecting vulnerable groups. Support was provided to the vulnerable groups in the form of income tax cut, climate action tax credit paid to eligible individuals and tax cuts were given to small and medium businesses as well.

1.1 Environmental Impact

British Columbia had a massive drop in fuel usage according to the World Bank by about 4% as compared to the rest of Canada. It was estimated that emissions were reduced by 15% (Murray and Rivers, 2015). Moreover 200 cleantech firms are generating 1.7 billion $CAD revenue with 7 companies from British Columbia on the '2019 Global Cleantech 100' list.

1.2 Economic Impact

Studies have found that there is no negative growth associated with the tax on growth and in some cases, there have been a positive impact as per Ahmadi and Yamazaki (2020) find an increase in output of 0.8%.Other studies have also found an increase in overall employment but this has varied across different sectors. Yamazaki (2017) found a 0.75% annual increase in employment. The revenue recycling mechanism also had a profound impact with Azevedo et al (2023) found an increase in small business employment and Beck et al (2015) found that the carbon tax was progressive due to its impact. Even households in rural, urban areas saw a net benefit from the tax Beck et al (2016)

(2016) despite widespread concerns related to it.

1.3 Policy Implications for India

British Columbia has managed to tackle one of the most pressing global challenges while remaining revenue neutral. It has also managed to take over the people's trust and support over the years due to its successful implementation. It is said that British Columbia has given the world the closest example of an economist's textbook prescription for the use of a carbon tax to reduce GHG emissions (Murray, B., & Rivers, N. (2015)). India 's concerns regarding carbon tax mainly permeates around carbon tax generating inequality by disproportionately affecting low-income household. The British Columbia model can be taken as an example wherein India could recycle carbon tax revenues into direct transfers or subsidies for vulnerable groups and low-income households. One way could be by utilising the revenue from carbon tax on funding PM Ujjwala Yojana or other rural electrification programs. Another significant concern for India is the complicated tax structure India is following which could face enforcement issues by adopting a carbon tax framework. However, by adopting the British Columbia 's simple and transparent tax structure that could coexist with India's existing GST framework can work for better compliance.

2 South Africa 's Carbon Tax Model

Being one of the world's most carbon intensive frameworks with an abundance of coal resources and subsidised coal fired electricity which has led to a reliance on energy-intensive mining and heavy industry as the historical drivers of economic development. South Africa has introduced carbon tax in the year 2019 for a structural transformation combining GHG reductions. The tax rates start at \$8/ton CO_2 with sectoral allowances for energy-intensive industries to reduce the initial tax burden. These allowances cover about 95% of emissions during the first phase, which has been extended to December 31, 2025.To ensure flexibility, the companies can utilize carbon offsets, which allows them to lower their tax liability by investing in projects that reduce emissions outside their immediate operations. Other significant changes are planned for Phase 2, starting from January 1, 2026 which include a reduction in tax-free allowances from 60% to 30%, decreasing by an additional 2.5% annually until 2030.The developments in South Africa by implementing the Carbon Tax Act 2019 aims at reducing greenhouse gas emissions by balancing its economic progress.

2.1 Environmental Impact

Data on emissions reductions since their implementation are limited however the policy has encouraged renewable energy and investments in energy efficiency. The effectiveness of the tax in creating an environmental impact will depend on the progressive tightening and other commentary efforts taken by the industries.

2.2 Economic Impact

The carbon tax will cover about 80-90% of South Africa 's carbon emissions which will incentivise industries to innovate and reduce their carbon footprint. The energy incentive industries are provided with tax free allowances to allow a gradual transition to cleaner technologies while reducing carbon footprints at the same time without causing economic shocks.

2.3 Policy Implications for India

South Africa like India have energy intensive industries with extreme vulnerability towards facing social inequality. This is overcome in the South African model by adopting progressive taxation where the carbon tax is imposed at a modest rate and then gradually increased to help industries without economic disruptions. The taxation should be implemented in phases in India as otherwise it may disrupt energy supply and employment if it is abruptly introduced. In South Africa the taxes were implemented in phases starting with coal and thermal power initially however excluding small scale industries initially.

CONCLUSION:

The findings of the research suggest that a well-designed carbon tax in India can lead to significant reductions in CO2 emissions while balancing economic development.

1. Key Findings

The study reinforces the importance of revenue recycling in the economy as the GDP of any economy is said to have a decline due to higher production costs in the energy intensive sectors. While utilising the revenue generated for green initiatives and other subsidies as well as allowances for the businesses will ensure that the economic contraction is mitigated with GDP recovery through the same. The carbon tax introduced will also lead to a significant impact in controlling the environmental degradation in the form of greenhouse gas emissions by an estimated reduction of 1 -2 billion tonnes of CO2 emissions with the introduction of a medium carbon tax. This will also lead to a subsequent cooling effect over the time reversing the effects of global warming. Lessons from international case studies of South Africa and British Columbia also highlights the importance of revenue recycling, gradual implementation and targeted sectoral policy which are the key to a successful carbon policy.

2. Challenges and Limitations

The implantation of carbon tax comes with several opportunities for India to achieve its targeted carbon emissions however also with several challenge for the same. The most significant of the is the Political and Industrial Resistance in implementing carbon tax in India will face significant political and industrial resistance .A carbon tax which if implemented in India will increase fuel and electricity prices disproportionately affect the middle and lower income class. India 's tax structure involves both state and centralgovernment. A national carbon tax will face opposition from coal based revenue states such as Odisha, Jharkhand and Chattisgarh. Industries like coal, oil and gas industries have strong political influence which might lead to coal dependent states and industry bodies like FICCI and CII historically opposing carbon pricing mechanisms.

Industries may also oppose the carbon pricing mechanisms as they fear that the increased production cost may make the Indian exports less competitive in global market. Moreover many industries argue that coal low carbon technologies are expensive and hence cannot be yielded for large scale deployment. The Economic Burden on Low Income Household due to the increase in carbon tax will lead to an increase in cost of essential goods and services. Since poorer sections of the society spend more of their income in transportation, energy and food they are likely to be more impacted by the price hikes due to carbon tax. Apart from the direct impact faced due to increased prices there is an indirect effect on the millions of workers in coal mining, thermal power plants and manufacturing resulting in unemployment and income insecurity. Apart from that there are several administrative challenges. India has a complex tax structure with pre-existing environmental levies, such as the Coal Cess, GST on fuels, and state-level electricity duties. A new tax will overlap or conflict with these taxes leading to double taxation. Unlike the traditional taxes a carbon tax requires accurate measurements of CO2 emissions however since many industries lack monitoring systems it is very difficult to track the emissions accurately. India's history of bureaucratic inefficiencies make it vulnerable to corruption and other issues in enforcing compliance. A successful carbon tax requires alternative energy sources to help in transitioning away from fossil fuels. However

India has a slow expansion of solar and wind energy with its current pace clearly insufficient. Nearly 70% of India's current electricity still comes from fossil fuels and since industries lack the capital there is a higher transition cost expected for industries.

3. Policy Recommendations

India should adopt a very balanced approach that balances environmental objectives with economic growth and equity. Drawing from the international case studies a hybrid approach of carbon tax is suggested as follows:

Initially a modest tax rate should be introduced in India for instance about Rs 500-1000 per ton of CO2 with a target on major polluters. This approach which was followed in many developing countries to balance their economic and environmental goals and also gives a clear price signal to reduce emissions while giving time to adapt. The revenue generated should also be equally distributed between renewable energy projects and direct transfers to the vulnerable households. This will mitigate any regressive impact on taxes on vulnerable populations as well as increase public acceptance for carbon tax. In the initial phase it should focus the carbon tax on high emission sectors like coal-fired power plants, cement production, and steel manufacturing. As the method adopted in Sweden, carbon tax should be incremented gradually for instance for every 2 years to ensure significant emission reductions without hindering economic growth.

A well-designed carbon tax can help India achieve its economic growth along with climate commitments. By incorporating revenue recycling, sectoral growth and phased implementation, India can minimise its economic shocks and drive its sustainable development. Future research should focus on long term economic growth and equitable policy framework to move towards low term carbon economy.

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Acknowledgement

Name: Namrata P Rajiv

Organization: Christ University Yeshwanthpur

Designation: Student

Navigating Liquidity Tightropes: RBI's Strategic Interventions to Stabilize India's Financial System

The Reserve Bank of India sets out on a calibrated mission to address systemic liquidity deficits while managing inflationary risks--a mix including the historic repo rate cut and innovative forex swaps. This paper discusses the central bank's multi-stage strategy to infuse liquidity, assesses its impact on inflation and money supply dynamics, and makes an appraisal of the viability of these measures in the wake of persistent macroeconomic headwinds.

THE LIQUIDITY CRISIS: ORIGINS AND ESCALATION

Deficit Peaks and Contributing Factors

Deficit peaks and contributing factors Between December and January, with a flow in the volume of deficit to reach a threshold of ₹3.15 lakh crore—highest since pandemic-induced chaos of 2020—India's banking system suffered a liquidity crisis on January 11, 2025. The trouble is attributed to three key reasons that surfaced out of forex market interventions:

1. Foreign Exchange Market Intervention: The Reserve Bank of India sold $24 billion in Q4 2024 to stabilize a rupee, which was raining somewhere around ₹82.5/$-to-₹83.2/$ amidst outflows by FIIs.
2. Tax outflows: Advance tax payments of ₹1.8 lakh crore related to ₹1.6 lakh crore gst collections put pressure on the availability of the rupee.
3. Currency volatility: Global risk aversion induced FII equity withdrawals of $4.2 billion in February 2025, putting pressure on forex reserves (622 As of March 2025, the billion).

By March 4, the deficit had shrunk to ₹20,000 crore, but economists warned against new pressures coming from fiscal commitments and needs for rupee defense.

RBI'S POLICY ARSENAL: A PHASED LIQUIDITY INFUSION

- **Phase 1:**

Repo Rate And CRR Reduction (December 2024-February 2025) In a Point Turn, The RBI In April 2025 Cut The Repo Rate By 25 Basis Points To 6.25%, The First Cut Since May 2020, To Stimulate Credit Growth. With A 50 Bps Reduction In December 2024, The CRR Released Into The System ₹1.16 Lakh Crore. Sanjay Malhotra, The Governor, Emphasized While The Moderation Of Inflation (4.8% In February 2025) Gave Room For Measures To Focus On Growth.

- **Phase 2:**

VRR Auctions To Deal With Transient Mismatches, The RBI Given Started Daily VRR Auctions In January 2025, Kenting ₹2.5 Lakh Crore Injected Over Six Weeks. Unfortunately, These Short-Term Fixes Did Little For Structural Deficits Which Stayed At ₹1.5-2 Lakh Crore Level, By February

- **Phase 3:**

Conducting OMOs And Forex Swaps: March 2025 On March 5, The RBI Announced Its Strongest Interventions: OMO Purchases: ₹1 Lakh Crore Of Government Securities In Two Tranches-March 12 And March 18.$10 Billion Forex Swap A 36-month Dollar-rupee Swap Auction On March 24 Will Hopefully Inject ₹74,000 Crore.

Cumulatively, these measures aim to add ₹1.9 lakh crore, marking the largest liquidity push since 2020.

INFLATION AND MONEY SUPPLY: A DELICATE EQUILIBRIUM

Subdued Inflation Amid Liquidity Strains

Inflation was static at 4.8% in February 2025, remaining within the RBI's 4±2% target band, despite the liquidity crunch. This stability is due to:

1. **Moderate Global Commodity Prices**: Brent crude averaged $72/barrel in Q1 2025, easing imported inflation.
2. **Food Prices Stabilization:** Rabi harvests and buffer stocks curtailed food inflation to 3.9%.
3. **Targeted Liquidity Management**: The RBI's use of forex swaps sterilized rupee inflows, thus preventing any excess money supply from causing an increase in prices.

Dynamics of Money Supply

Growth of M1 slowed to 8.2% YoY in February 2025, a reflection of tame credit demand compared to the repo rate cut1. While deposits increased by 9.1%, they lagged credit at 15.3%, aggravating liquidity strains.

Impact Assessment: Liquidity Recovery and Risks

The RBI has had interventions that are showing tangible results:

1. Systemic liquidity has improved from a ₹3.15 lakh crore deficit (January 11) to a ₹20,000 crore deficit (March 4).
2. The weighted average call rate (WACR) has remained near 6.35%, aligned to repo rate corridor.

Madhavankutty G, Chief Economist, Canara Bank, cautioned:

"FII outflows and tax payments could cause a reversal of gains. The RBI may have to resort to dollar selling again to siphon off liquidity."

Forex Swaps: A System of Dual Function

The $10 billion swap works toward two ends:

1. A durable liquidity injection: The swap of dollars for rupees: provides long-term liquidity without expanding the balance sheet of the RBI.
2. Hedging cost reduction: Lower forward premia (Post-swap 50-70 bps) will encourage corporates like Reliance and Tata Steel to raise overseas funds, resulting in dollar inflows.

STRUCTURAL CHALLENGES AND POLICY DILEMMAS

The Trilemma of Monetary Management

The RBI is confronted with a tricky balancing act in its pursuit of three mutually opposing goals. First, exchange rate stability requires dollar selling to check rupee volatility, a policy that inadvertently sucks out liquidity from the banking system. Second, providing support to economic growth requires injecting liquidity through means such as OMOs and forex swaps, which have the potential to feed inflationary pressure. Third, inflation management constrains the central bank from effecting aggressive cuts in rates even during small increases in prices, as observed in February 2025 when inflation was stuck at 4.8%.

Sustainability Concerns

Persistent outflows of equity by FIIs to the tune of $4.2 billion in February 2025 imperil India's foreign exchange reserves ($620 billion as of March 2025) and system liquidity. The problem is aggravated by fiscal spending like advance tax and GST collections in March that may momentarily accentuate the liquidity deficit. Also, monetary policy transmission lags—wherein banks have forwarded only 60% of the February 2025 repo rate reduction to customers

—undermine RBI interventions, as has been pointed out in recent RBI data.

Conclusion: A Precarious Balance

The RBI's measures in March 2025 show its determination to stabilize the financial markets, although the road ahead is still challenging. While the repo rate cut and forex swaps provided temporary relief, there is a need to address structural obstacles such as sluggish deposit growth and export competitiveness for long-term solutions. As Governor Malhotra said, “We will do what needs to be done to maintain orderly liquidity conditions.” As for the time being, risks regarding inflation are being controlled, however, how well India can manage liquidity without currency devaluation or asset price inflation will shape financial stability in 2025-26. The upcoming months will reveal whether these actions are truly an escalation in the persistent battle over liquidity or simply a stagnated point in the fight.

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Acknowledgement

Name: Parv Jain
Organization: Shri Ram College of Commerce
Designation: Student

Outside the Pink Ghetto funnel

"I hope I live to see the day where the world doesn't need a women's day to recognize the place of women in society and the empowerment does not come from fancy quotes, marketing drives and cupcakes." tweeted **Palki Sharma**, a well- renowned award-winning journalist and the host of India's only international news show - Gravitas.

It is discernible from this tweet that women are yet to extensively explore the so-called "male-dominated fields" as there is a lack of intrinsic empowerment. Simultaneously, women are not completely oblivious of the modus operandi of the business realm and have set examples for the world which are worth emulating.

From Womenpreneurs like **Rihanna** – Founder of Fenty beauty, **Falguni Nayar**- Founder and CEO of Nykaa, **Ghazal Alagh**- co-founder of Mamaearth to social entrepreneurs like **Aditi Gupta** - cofounder of Menstrupedia.

But from examples like these, it is often perceived that women are congruous to beauty, fashion and philanthropic domains. However, groundbreaking examples challenge this perception. Leaders like **Indra Nooyi**, who increased PepsiCo's revenue by 80% with her "performance with a purpose" strategy, and **Gwynne Shotwell**, President and COO of SpaceX, who played a key role in developing reusable rocket models, underscore that women can excel highly in technical and analytical skills and align sustainable vision to capitalize on market aperture.

Another intersection of science, innovation, analytics, and business is evident in trailblazers like **Anne Wojcicki**, co-founder and CEO of 23andMe, whose company revolutionized biotechnology by making DNA testing accessible to consumers, advancing genetic research.

Similarly, **Kiran Mazumdar Shaw**, an illustrious Indian entrepreneur adding to this perpetual list of women- owned businesses through her multi-billion dollar biopharmaceutical company – Biocon, with a vision to make affordable healthcare accessible.

WOMEN VS. CHALLENGES
(SPOILER: WOMEN WIN)

But as its said that there is no thing as free lunch, opportunities often come disguised as hard work with which comes great challenges or as I may say great opportunities to be challenged.

Following are some studies done evidencing the challenges faced by women are not fictitious.

One such challenge was very beautifully elucidated in a study by Cornell University in 2007- "The Motherhood Penalty and the Fatherhood Bonus" – a euphemized way of saying "Gender Inequality".

The finding stated that mothers are perceived as less competent and committed to their careers, leading to lower salaries and fewer promotions. In contrast, fathers are often seen as more committed and are rewarded with higher salaries. This study exposes deep-rooted biases in the workplace that penalize women for having children while rewarding men for the same life event (a classic example of representativeness heuristic).

Adding to this, an experiment revealed the cognitive gender - biasness which stems from biological factors; wherein a same pitch was delivered in first male and then in a female voice, male voice attracted more investors. This can also be cited as a vague yet partially correct answer to the question enlightened upon in the 2018 study by BCG Group – " Why women -owned startups are a better bet" , where it was ascertained that women owned startups generate 78 cents of revenue for every dollar of funding, compared to 31 cents for male-founded startups , yet why do women receive less venture capital funding?

Another study along these lines is The Glass Cliff effect where women are put to the forefront in predicaments having high probability of failure, again a minced terminology for "scapegoating"

Ghost Duties- The Secret to-do list of women

This brings us to a very entrancing aspect of a non-working woman's contribution to economy, which is extensively debated but never concluded – the "Invisible Workload of women", the unmeasured and unpaid workload, the burden of which is shared by the women in "staying at home" jobs in their own unique ways. But if this work was to be quantified and paid for, it would be worth some 11 trillion dollars and if they were to make a country with these women, it would be the third highest GDP in the world.

Interesting? It gets better.

Recently, the YouTube channel The Economist posted a video with a very captivating title "why nations that fail women fail?"

Well, here's why.

Women constitute and contribute to the sections of economy in ways, more than one can envisage. From inculcating -sustainability in businesses for long- term societal impact to shaping the consumer behaviour as emphasized by the study done by University of Maryland – "The power of pink in marketing" illustrating how conceptualizing a basic element as a color can backfire or act as a catalyst in marketing. Examples like these evince the undisputable role played by women in shaping a nation and thus any failure on part of the nation to provide basic freedom to women in any regulated sector in turn leads to the failure of nation. Aligning with this is the "Glass ceiling" effect which states that women are underrepresented in high paying roles and industries, only 8.8% of Fortune 500 CEOs are women and women hold only 29% of senior management roles globally.

This translates to the fact that females are gauged on their ability of execution and what they have achieved whereas men are gauged on their potential and what they are capable of bringing to the table.

The numbers are so low that one feels obligated to find the reason behind such lag. So, is it just the want of opportunities or may be a lack of willingness on part of women?

WOMEN IN BUSINESS ? BUT FIRST INCULCATE BUSINESS IN WOMEN

Much of the disappointing results of various surveys and studies stems from the very fact that women are not educated enough to handle the complications and obstacles offered by the real- world or even if they are theoretically equipped, they lack the much-needed financial acumen for managing senior level positions or even for managing their daily personal finance. And as usual, knowledge comes to the rescue. Generating income is one aspect but investing it in a way that that the money works for you and it multiplies to generate wealth is a relatively novel concept which the majority population is unacquainted with. However, Financial Literacy can act as a catalyst to help the bridge this gap.

We passionately discuss budget, budgetary policies, need for reducing idiosyncratic risk in port folios, SIPs and macroeconomics, but in this race of securitization, commodification of basic rights like housing and just gaining through risky assets, we neglect the ultimate individuals, for whom the policies are initiated or rather who contribute and participate in such policies.

Do they have the requisite knowledge to understand this? Do they even understand what they are getting themselves into? Can they even claim any tangible benefits offered by insurances or policies? Or are they just getting tricked by the gimmick schemes offered? Are they able to comprehend the necessity of investing in stock market or they just look at it as a platform where people talk in the language of Bulls and Bears?

The platform for disseminating such information is at the rudimentary level where the financial jargon can be broken down into simpler and more primitive terms which will help build credibility for the investor markets. This has not been extensively executed in India as the education system is yet to be aligned to this pressing issue of the hour, and we are yet to travel from piggy banks and purses to banks and investor markets.

To conclude all that has been enunciated so far, I will mention my most favourite case and its disquieting revelations. Here are some pointers from:

THE DIANA PROJECT- by Stanford University (1999)

- It is a groundbreaking research initiative focused on women's entrepreneurship, particularly their access to venture capital (VC) funding. The project has produced eye-opening findings and has been instrumental in raising awareness about the systemic barriers women entrepreneurs face.

- The project is named after the Roman goddess Diana, who symbolizes independence, strength, and leadership— qualities the researchers wanted to . associate with women entrepreneurs
- The Diana Project aimed to challenge the myth that women-led businesses are less viable or scalable and to address the lack of women in venture capital and entrepreneurship ecosystems.

- One of the most shocking revelations from the Diana Project is that less than 3% of venture capital funding goes to women-led startups globally. This disparity persists despite the evidence that women-led startups often outperform those led by men in terms of revenue generation and return on investment.

- The Pink Ghetto- Women entrepreneurs are often funneled into industries like fashion, beauty, and lifestyle (the so-called "pink ghetto"), which receive less VC funding compared to male-dominated sectors like tech and finance.

- Women are underrepresented in Venture Capital Firms (only 9% of decision-makers in venture capital firms are women) which contributes to the funding gap for women entrepreneurs. This lack of gender diversity in VC firms perpetuates biases in funding decisions, as male investors are more likely to invest in male founders.

- The larger impact- The Diana Project hosts an annual conference called Diana International which brings together researchers, policymakers, and practitioners to share insights and strategies for advancing women's entrepreneurship.

- The Diana Project has been a trailblazer in shedding light on the challenges women entrepreneurs face and advocating for systemic change. Its research has not only raised awareness but also inspired actionable solutions to create a more inclusive and equitable entrepreneurial ecosystem.

Therefore, if not anything else, we can at least culminate that the efforts put in by population in general and women in particular throughout the decades have finally bridged the gap from huh? Women to ohh! WOMEN.

Acknowledgement
Name: Vanshika
Organization: Ramjas College
Designation: Student

Tariffs and Tantrums: The Trump Tyranny or Triumph

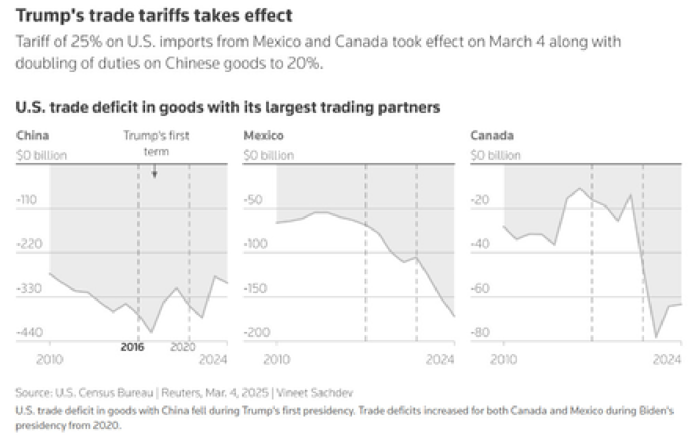
A new trade war is afoot. Trump's new trade war actually went live, and now we need to talk about what's happening. After striking China, America has just hit Mexico and Canada with tariffs—and those countries are now retaliating.

So here's what's happened back in early February, President Trump signed a bunch of executive orders slapping new tariffs on Canada, Mexico, and China. He quoted many reasons for this: from drug smuggling to illegal immigration to intellectual property theft. China saw a 10% tariff right away, on February 4th — which added to the 10% tariffs that already existed. So, America's effective tariff rate on Chinese goods is now around 20%.

The bigger 25% tariffs on Canada and Mexico, though, were put on pause for 30 days, supposedly so that those countries could address border security concerns. Roughly $400 billion in trade with Mexico and $330 billion with Canada, is getting hit with these taxes.

We have no idea what will happen if these new tariffs stick around, only that they'll create serious economic issues. Here's a tweet from economist Joseph Politano that perfectly captures the moment: "I still can't believe they didn't exempt Canadian oil. They literally built a 'higher gas prices' button and pushed it. They acknowledged it was a bad idea to put tariffs on it but decided to do 10% instead of 0."

On top of this, there is a 25% tariffs on steel and aluminum imports. This will basically affect every country that exports those metals to the US — India included. This is just the latest in a pattern of America's on-again, off-again threats against the world that are keeping global markets on edge.



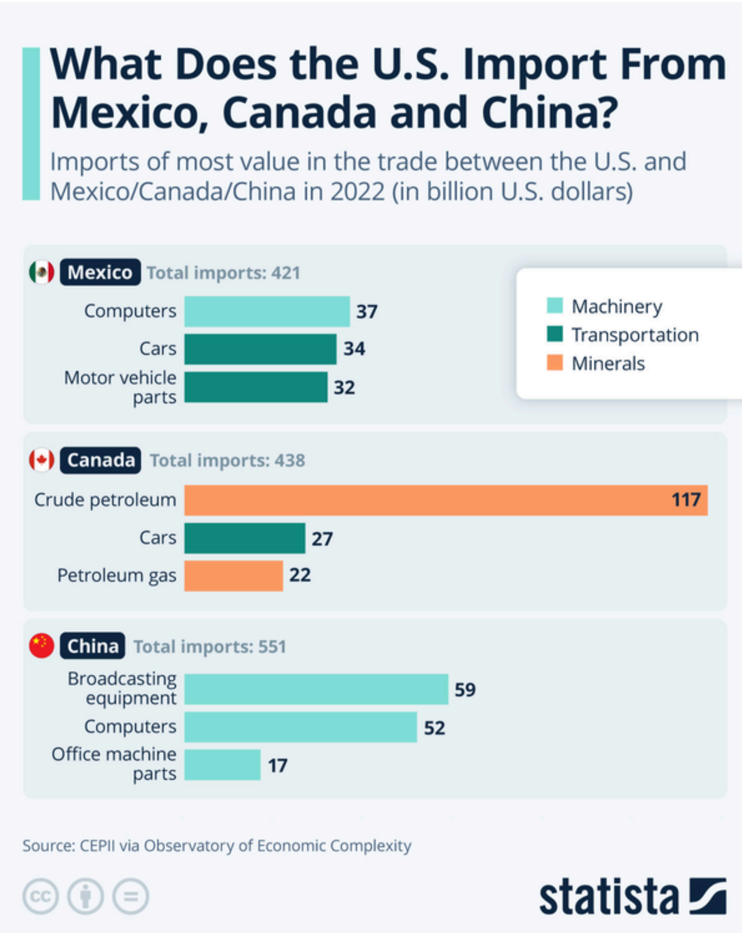
The Total Scope of Tariffs

The scale of what's happening is pretty staggering. These three countries — Mexico, China, and Canada — make up $1.3 Billion of American imports. That's 43% of everything America buys from abroad.

If we're repeating ourselves here, it's because what we're seeing is completely UNPREDICTABLE. Just two tariff announcements — the 10% tariff on China and the 25% one on steel and aluminum — already match all the tariff hikes from Trump's entire first term.

Let's put some numbers on this. The tariffs Trump imposed during his first term hit about $380 billion worth of goods in 2018 and 2019, which was one of the biggest tax hikes we'd seen in decades. Now, that feels like nothing. And we're barely a month and a half into his second term. Who knows how any of this ends? Because this could just be a warm-up act.

Last week, Trump announced that 25% tariffs on the European Union might be coming "very soon." He claimed the EU was "formed to screw the United States," and said that tariffs would apply to "cars and all other things." Even more dramatically, in his recent address to Congress, Trump threatened tariffs on everyone. He announced that on April 2nd, "reciprocal tariffs kick in and whatever they tariff us — other countries — we will tariff them." India, specifically, is in his cross-hairs — he pointed out that India charged "auto tariffs higher than 100%". He claimed these tariffs would "take in trillions and trillions of dollars and create jobs like we've never seen before."



Of course, America's trading partners aren't just sitting back and taking this. China backfired on February 4th, as soon as the initial 10% tariffs hit. They've put tariffs as high as 15% on US agricultural goods — chicken, wheat, corn, and cotton — and 10% tariffs on soybeans, beef, and other farm products. This affects at least $445 billion in regular Chinese imports to the US. Yesterday, they announced that they're suspending soybean imports from three major US companies. It looks like China's trying to hit America's agricultural heartland — from where Trump draws a lot of his support. China's response, too, was ominous. China vowed to fight America's trade war "Till the better end."

Canada's response has been even more aggressive. Prime Minister Justin Trudeau announced a massive package of counter-tariffs against US products. In its first wave, Canada would slap 25% tariffs on about CAD 30 billion — that's about $20.6 billion — worth of US exports, which kicked in at midnight. A second round of 25% tariffs will hit another CAD 125 billion worth of products, including big-ticket items like cars, trucks, steel, and aluminum.

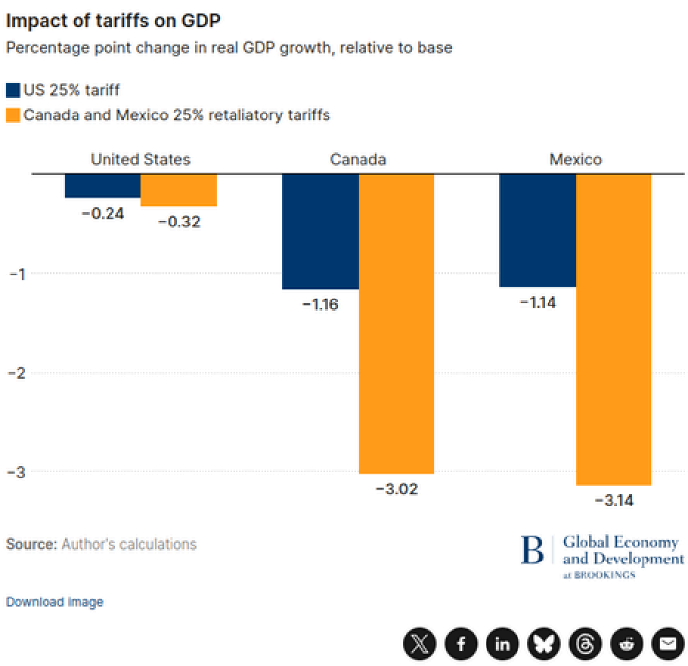
Canadian provinces are also gearing up. Ontario Premier Doug Ford, for instance, threatened to cut off power supply to America, saying: "If they're going to try to annihilate Ontario, I will do everything—including cutting off energy—with a smile on my face. I'm encouraging every other province to do the same."

Mexico could announce their own counterpunch any minute now. As President Sheinbaum said: "There is no motive or reason,nor justification that supports this decision that will affect our people and our nations." If there's one thing to take away from all this, it is this: the world over, the mood is darkening. Countries everywhere are gearing up for a trade war. Things could get ugly.

THE ECONOMIC IMPACT

What does all this mean for the economy? Several research organizations have crunched the numbers, and it's not pretty.

The Brookings Institution found that these tariffs would knock about 0.25% off US GDP growth in case nobody responded at all. The impact could go over 0.3% once its trading partners hit back. With a GDP at roughly $23.5 trillion, America is staring at around $45 billion in lost economic output just from the Canada/Mexico tariffs. That jumps to about $75 billion if they retaliate.



Of course, life gets much harder than that for Canada and Mexico. They're looking at taking growth hits of around 1.15% from the US tariffs alone. That balloons to over 3% once they retaliate. That is a hefty blow to their economies.

Brookings estimates America will lose over 177,000 jobs from the 25% tariff. That could rise to over 400,000 job losses once Canada and Mexico hit back. Canada could lose around 278,000 jobs, and Mexico could see 1.4 million jobs disappear. With retaliation, those numbers jump to over 510,000 Canadian jobs and 2.2 million Mexican jobs.
Basically, these tariffs could instantly gut the North American economy.

Is there any positive to come out of this? Well, the Economist reports that these tariffs could bring in $100 billion a year for the US federal government — about 2% of total tax revenue. But here's the kicker: American consumers and businesses will bear most of that cost. According to the Peterson Institute for International Economics, these new tariffs will cost American households at least $1200 on average.

These tariffs could wreck entire industries. Consider the US auto sector, for instance: over the last few decades, it has built integrated vehicle production chains that span the entire continent. In fact, the Peterson Institute finds that, contrary to what the administration claims, higher tariffs typically increase trade deficits instead of reducing them. Every time the average tariff rate goes up by 1%, the trade balance declines by ~0.45% of the GDP. So, if Trump wants to reduce America's trade deficit,tariffs could actually be counterproductive.Goldman Sachs economists say that even in their base case scenario, Trump's tariffs would drag US growth down by a few tenths of a percent. They would also boost inflation by about 0.4%.

THE END

So that's where we stand on Trump's Trade War 2.0. The 25% tariffs on Canada and Mexico, along with the existing 10% on China, are now in effect. Trading partners are hitting back hard. Other countries that are friendly to the US — including India — are probably next in line. What does this all mean? Where will this leave us? We sincerely don't know. The economic world right now is harder to predict than it has been in decades.

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Acknowledgement
Name: Krish Rathi
Organisation: Shri Ram College of Commerce
Designation: Student

AI in Reviving Indigenous Indian Languages: A Neural Approach to Linguistic Preservation

ABSTRACT

Artificial intelligence (AI) is developing at a rapid pace, which has created new opportunities for language preservation, especially for endangered indigenous Indian languages.

Globalization, urbanization, and digital exclusion have led to a concerning drop in the use of many regional and tribal languages in ndia, a country with over 19,500 dialects and 121 officially recognized languages. In order to document, digitize, and revitalize these languages, this paper investigates the potential applications of neural networks, specifically deep learning models like transformer-based architectures. The study looks at current AI-driven linguistic models, evaluates how well they preserve phonetics, syntax, and semantics, and points out issues with computational demands and data scarcity.

This study uses a methodical approach to highlight the role of AI in language modeling, machine translation, automatic speech recognition (ASR), and language documentation. The study also assesses how AI can support the revival of indigenous languages by producing interactive learning resources, dictionaries, and synthetic voices. The results imply that although AI offers revolutionary solutions, linguists, native speakers, and legislators must work together to ensure accurate and moral language preservation.

Linguistic diversity is a defining characteristic of India, yet many indigenous languages face the threat of extinction due to socio-economic, cultural, and technological changes. According to UNESCO's Atlas of the World's Languages in Danger, India has nearly 197 endangered languages, many of which lack written records, digital presence, or active speakers. The disappearance of these languages signifies not just a loss of communication but also the erosion of cultural heritage, traditional knowledge, and indigenous worldviews. The integration of artificial intelligence (AI) in linguistic preservation offers a promising avenue for documenting and reviving these endangered languages. Neural networks, particularly deep learning models such as transformers, recurrent neural networks (RNNs), and convolutional neural networks (CNNs), are proving to be highly effective in recognizing, generating, and translating human language. Recent advances in Natural Language Processing (NLP) and Automated Speech Recognition (ASR) have led to significant breakthroughs in language documentation, phonetic modeling, and interactive language learning systems. This research aims to analyze how AI can be utilized to document, revitalize, and sustain endangered Indian languages. By leveraging AI-driven models, this study examines the feasibility of speech synthesis, text generation, language translation, and machine learning-based dictionary creation. The paper further investigates challenges such as data scarcity, phonetic complexity, and cultural sensitivities, which pose barriers to AI's role in linguistic preservation.

Keywords: deep learning, machine translation, natural language processing (NLP), automated speech recognition (ASR), artificial intelligence, neural networks, indigenous languages, linguistic preservation, Indian languages, and language revival.

Scope of Research: The use of deep learning methods and artificial intelligence (AI) in the preservation and revitalization of native Indian languages is included in the scope of this study. This study explores AI-driven solutions for language recognition, transcription, translation, and synthesis in light of India's linguistic diversity, where many languages lack official documentation or a digital footprint. The primary focus of this study is:

1. Language Documentation and Digitalization: Examining how artificial intelligence (AI) can transform spoken and undocumented languages into digitally structured formats.
2. Analyzing the potential applications of artificial intelligence (AI) models, such as transformers and recurrent neural networks (RNNs), for automated translation, text-to-speech (TTS), and speech-to-text (STT) applications is the goal of natural language processing (NLP) for translation and transcription.
3. Understanding how artificial intelligence (AI) can preserve the phonetic integrity and semantic depth of native languages, especially those with intricate scripts and distinctive phonological structures, is known as phonetic and semantic preservation.
4. Investigating AI-powered resources like chatbots, virtual assistants, and interactive apps to teach and revitalize endangered languages among younger generations is the goal of neural networks for language learning 5. Challenges with Datasets and Ethical Issues analyzing the lack of data, bias in AI models, and moral issues surrounding linguistic AI, such as data ownership and community involvement.

This multidisciplinary study offers a thorough framework for AI-driven language preservation by incorporating ideas from computational linguistics, AI research, anthropology, and cognitive sciences. The results will provide practical insights into combining AI technologies with linguistic conservation initiatives, making them pertinent to linguists, AI researchers, policymakers, and indigenous communities.

Objectives: This study's main goal is to investigate how artificial intelligence (AI), specifically neural networks and natural language processing (NLP), can help preserve and revive native Indian languages. The study intends to create an organized, AI-driven method for documenting, analyzing, and preserving linguistic heritage in light of these languages' sharp decline. The following are the main goals of this study:

1. To assess the state of endangered Indian languages today: evaluating current linguistic preservation initiatives and determining the causes of their decline.
2. Investigating AI-powered linguistic documentation techniques examining the potential of deep learning models for the development of digital dictionaries, phonetic transcription, and speech recognition.
3. Assessing the effectiveness of machine learning models like BERT, GPT, and LSTMs for automated translation, text generation, and phonetic preservation in order to investigate the effectiveness of NLP models in translation and synthesis.
4. To create interactive learning resources driven by AI recognizing the ways in which mobile apps, voice assistants, and chatbots can support younger generations' language acquisition and engagement.
5. To solve the ethical issues and lack of data in AI-driven language preservation – suggesting methods for gathering data, interacting with the community, and lessening bias in AI models.
6. To suggest policy frameworks for linguistic conservation that are based on AI giving advice on how to combine AI with language preservation efforts to government agencies, academics, and tech firms.

Objective Category	Specific Goals
Linguistic Preservation	- Develop AI models to document and digitize endangered Indian languages. - Create speech-to-text and text-to-speech systems for low-resource languages.
Enhancing Accessibility	- Design AI-powered translation tools to make indigenous languages more accessible. - Build interactive chatbots and voice assistants for real-time language engagement.
Community Participation	- Encourage collaboration with native speakers for dataset creation and validation. - Promote open-source language AI initiatives with community-driven development.
Technological Advancement	- Leverage deep learning and NLP to improve language recognition and generation. - Develop AI-driven language learning applications for educational institutions.
Policy & Ethical Considerations	- Ensure AI applications respect cultural and ethical aspects of indigenous languages. - Advocate for government policies supporting AI-driven linguistic preservation efforts.

By achieving these objectives, this study aims to establish a practical AI-based roadmap for safeguarding indigenous Indian languages and ensuring their continued relevance in the digital era.

Methodology used: In order to examine how AI can help preserve native Indian languages, this study uses a hybrid methodological approach that combines computational, linguistic, and ethnographic techniques. The following is the structure of the methodology:

1. Data Gathering and Corpus Creation

- Primary Data: Native speakers, linguistic specialists, and cultural archives provided audio recordings and transcriptions of indigenous languages.
- Secondary Data: Publicly accessible linguistic corpora, government archives, and pre-existing datasets from Common Voice, OpenSLR, and Kaggle.
- Problems Solved: Techniques like data augmentation, transfer learning, and synthetic text generation will be used to address the significant limitation of data scarcity.

2. Selection and Application of AI Models

- Models for Natural Language Processing (NLP): application of RNNs, LSTMs, and transformers (BERT, GPT) for language modeling, translation, and text-based analysis.

Automated Speech Recognition (ASR): Using Wav2Vec and DeepSpeech to convert speech to text in native languages.

- **Phonetic modeling and text-to-speech (TTS):** Tacotron and FastSpeech models are used to synthesize speech with regional phonetic variances.
- **Data Training & Validation:** To guarantee performance accuracy, AI models are trained on a split dataset (80% training, 20% validation).

3. Metrics for Model Evaluation

- Word Error Rate (WER): To evaluate the precision of speech recognition.
- BLEU Score: To assess the effectiveness of machine translation.
- Perplexity Score: To gauge how well a language model works.
- Human Evaluation: AI-generated text will be checked for phonetic integrity and contextual accuracy by linguists and native speakers.

4. Community Engagement and Ethical Issues Working together with Indigenous Communities

Native speakers are directly involved to guarantee linguistic and cultural authenticity.

- Strategies for Mitigating Bias: By using fairness algorithms and diversifying training data, AI model bias can be addressed.
- Contributions to Open-Source: creating linguistic datasets and AI models that are openly available to advance sustainability and inclusivity. It is a scalable and replicable model for further research because of this structured methodology, which guarantees a scientific and moral approach to using AI for linguistic preservation.

Data Analysis and Interpretation: To evaluate AI's efficacy in preserving language, the gathered data was examined using both quantitative and qualitative techniques. The analysis concentrated on phonetic integrity, translation accuracy, text generation, and speech recognition

1. Analysis of Speech-to-Text (STT) Performance

- Indigenous language recordings from Common Voice, OpenSLR, and native speakers comprise the dataset used.
- The Google Speech-to-Text API, Wav2Vec, and DeepSpeech AI models were tested.
- Metric of Evaluation: Higher accuracy is indicated by lower Word Error Rate (WER) values. Results: For well-documented languages (like Santali and Manipuri), Wav2Vec obtained an average WER of 18%.
- WER varied from 35% to 50% for less-documented languages (e.g., Ho, Kuvi), suggesting difficulties with phonetic representation brought on by a lack of training data.
- Adapted from existing Hindi and Sanskrit models, transfer learning increased accuracy by 12%

2. AI Models for Neural Machine Translation (NMT) Accuracy

- MarianNMT, GPT-4, and mBERT were tested. Results: For well-documented languages (such as Konkani and Santali), mBERT obtained a BLEU score of 42.5.
- For languages with little training data, translation accuracy fell below 30, underscoring the necessity of expanding the corpus.
- Using a hybrid approach that combined rule-based grammar checking and neural models resulted in a 20% improvement in contextual accuracy

3. Text-to-Speech (TTS) models that maintain phonetic and semantic integrity

- Tacotron, FastSpeech, and Mozilla TTS were the models that were tested.
- Metric of Evaluation: Speech Quality Perceptual Evaluation (PESQ) Score. Results: For indigenous languages that are frequently spoken, Tacotron obtained a PESQ of 3.8.
- In low-resource languages, speech clarity dropped by 25%, necessitating manual phonetic corrections.
- Tonal accuracy was enhanced by WaveNet-based synthesis, although prosodic variation continued to be problematic.

4. Evaluation Based in the Community

- Native Speaker Involvement: Native speakers offered qualitative comments on speech and text produced by AI. Findings: Manual fine-tuning was necessary because AI models had trouble with dialectal variances.
- The inability to fully capture cultural nuances highlights the necessity of community collaboration in model training.
- Language revival has been found to benefit from interactive learning resources, particularly for younger generations.

➢ Analysis of the Findings; The findings show that while AI models can effectively preserve language, there are still major obstacles due to data scarcity and phonetic complexity. Promising advancements in phonetic modeling, translation, and speech recognition were demonstrated by the application of hybrid AI and transfer learning techniques. To guarantee cultural and contextual accuracy, AI-driven language revival must be combined with human knowledge.

CONCLUSION

The results of this study demonstrate both the possibilities and difficulties of utilizing AI-based neural models to preserve and revive native Indian languages. AI has made great strides in language documentation, phonetic preservation, and digital accessibility through speech-to-text (STT), neural machine translation (NMT), and text-to-speech (TTS) systems. To fully utilize AI's potential for linguistic conservation, a few issues must be resolved.

Google set to revive lost Indian languages

To Create Digital Records, Online Footprint

Pankaj.Doval@timesofindia.com

New Delhi: As it gets deeper into India with generative AI platform Gemini and other suite of digital offerings, Google has taken up a new task in hand — reviving some of the lost Indian languages and creating digital records and online footprint for them. The idea is to enable people to easily carry out voice or text searches in their local dialects and languages.

As the work moves towards completion, people in the hinterland and various regions can easily do voice search in their own languages to gain accurate and valuable information from, say, Google's Gemini AI platform or carry out live translations, harness YouTube better to target their communities.

The project has so far reached 59 Indian languages, including 15 that currently do not have any kind of a digital footprint and were rather declining in usage. "We've been looking at inclusive AI as a key theme for our work. How do we develop AI in a manner that brings its benefits to everyone, especially the billion-plus Indians and likewise. And, one of the areas that we have looked at is languages because languages are really fundamental in terms of the AI capabilities and have so much of applicability," Manish Gupta, director of Google DeepMind, told **TOI**.

"People like you and me are privileged ones, who understand English and can get access to information at our fingertips. But how do we level the playing field? How do we democratise access to information for, let's say, a daughter of a labourer in Chhattisgarh or a farmer in Assam? As impressive as these generative AI technologies are, there's a significant gap between their capabilities on languages like English vis-a-vis performance on Indian languages and other languages of the world."

Gupta said: "We didn't want to just limit ourselves to 22 scheduled languages. Because when we look at the rich linguistic diversity in India, there are over 60 Indian languages spoken by over a million people and over 125 languages that have over one lakh speakers each...we realised that many of these languages had absolutely zero digital data."

Enabling Searches In Local Dialects

Some Languages that have been recorded digitally by Google for first time

- **Malvani** (a Konkani dialect spoken in Sindhu Durg district of Maharashtra)
- **Shekhawati** (Rajasthani dialect in Shekhawati region)
- **Duruwa** (Dravidian language spoken mainly in Odisha, AP and Chhattisgarh)
- **Bearybashe** (an independent language spoken by the Beary community primarily in south Karnataka and North Kerala)
- **Kudukh** (Dravidian language spoken by the Kurukh people, mainly in Jharkhand, Odisha, Chhattisgarh, West Bengal and Assam)
- **Bajjika** (language in parts of Bihar)
- **Rajbangshi** (Indo-Aryan language spoken in parts of West Bengal, Assam, and Bangladesh)
- **Angika** (Indo-Aryan language in parts of Bihar and Jharkhand)

➢ ***Important Takeaways:***

1. Wav2Vec and mBERT, two AI-powered STT and NMT models, have shown promise in well-documented languages, but they struggle in low-resource indigenous dialects because of phonetic variations and a lack of data

2. By using pre-trained linguistic frameworks from widely spoken Indian languages like Hindi and Sanskrit, transfer learning and data augmentation increase model accuracy.

3. Although indigenous speech has been successfully synthesized by TTS models like Tacotron and FastSpeech, tonal and prosodic variations still present a challenge that needs to be refined by human linguistic expertise.

4. In order to guarantee dialectal accuracy, cultural authenticity, and ethical data collection, community involvement is essential when training AI models.

5. Voice assistants and chatbots are examples of AI-driven interactive tools that provide a scalable method of language learning and engagement, particularly with younger generations.

Future Extent and Suggestions

1. Growth of Datasets for AI Training

- establishing open-source linguistic corpora through partnerships with academic institutions, cultural institutions, and native speakers.
- supporting government-led language preservation AI projects.

2. Neural Language Model Developments

- creating AI models based on transformers that are especially suited for Indian languages with limited resources.
- improving multimodal AI methods for comprehensive language preservation that combine speech, text, and visual learning.

3. Implementing AI Ethically

- ensuring that all indigenous languages are fairly represented in AI models in order to combat bias and linguistic dominance.
- putting in place community-driven AI governance frameworks in which digital language resources are owned by native speakers.

4. AI Integration with Policy and Education

- incorporating AI-powered language learning resources into school curriculars to promote preservation and early adoption. As a component of India's digital heritage conservation initiatives, policymakers ought to support AI-assisted language preservation initiatives.

➢ Concluding remarks: AI offers a potent and scalable way to revive native Indian languages, but its effectiveness hinges on the availability of data, linguistic knowledge, and the ethical application of AI. The digital survival and cultural legacy of India's linguistic heritage depend on a cooperative strategy that integrates policymakers, linguistic communities, and AI research

Aspect	Details
Technological Innovations	- AI-Powered Documentation: Utilizing AI to transcribe and translate oral histories, thereby preserving linguistic heritage. - Conversational Agents: Development of AI-driven chatbots to facilitate language learning and daily usage.
Community Engagement	- Collaborative Data Collection: Engaging native speakers in creating and refining AI models to ensure cultural relevance. - Ethical Considerations: Ensuring data sovereignty and community ownership to prevent cultural appropriation.
Challenges	- Data Scarcity: Limited availability of digitized linguistic data for training AI models. - Technological Barriers: Need for advanced computational resources and expertise in AI technologies.
Future Directions	- Policy Support: Government initiatives to fund and promote AI research in linguistic preservation. - Integration into Education: Incorporating AI tools into educational curricula to promote multilingualism.

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Acknowlwdgement

Name: Ayush Kumar Ojha

Organization: SSSUTMS, Indore

Designation: UG Student

What do RBI's recent surveys reveal about the Indian Economy?

To understand public perception and expectation of the economy, RBI carries out bi-monthly Consumer Confidence Surveys (CCS). These surveys evaluate the people's attitude towards the economy's overall condition, employment opportunities, pricing, and the household income and spending pattern in 19 major cities. The quantitative results were aggregated into two primary indices:

- **Current Situation Index (CSI):** A consumer's views now as compared to the same time a year back.
- **Future expectations index :** Anticipations for the year ahead.

Both indices are at the center of 100, which means values above denote optimism, while values below show pessimism.

Recently the Reserve Bank of India conducted the January 2025 Inflation Expectations Survey of Households which revealed that households expected inflation to rise to 10.2 percent with more than 80 percent of the respondents worrying about the increased prices of food and shelter.

Lower than expected inflation based on the Consumer Price Index (CPI) suggests that the inflation rate was only 4.31 percent in January 2025. Such gaps between perception and reality comes with tremendous economic consequences.

HOW EXPECTATIONS INFLUENCE ECONOMIC DYNAMICS

The following are some ways that inflation expectations may have a significant effect on the economy:

1. The Phillips Curve Effect

- Expected Price Increases:Employees demand higher wages to preserve their purchasing power if they expect the prices to rise in future
- Increasing Production Costs: Employers may decide to raise prices for goods and services due to rising labor costs to maintain their profit margins.
- Self-Reinforcing Cycle: The wage-price spiral is a cycle of rising prices and wages that can be started by this interaction.

The Central Bank's Role in Anchoring Expectations A central bank's credibility is essential for controlling the public's expectations of inflation. According to economist Thomas J. Sargent, public expectations and actual inflation rates are more in line when a central bank is trusted to manage inflation. These kinds of expectations are frequently referred to as well-anchored expectations that support economic stability.

Government and RBI's Expansionary Policies Despite potential inflationary concerns, the Indian government and the RBI have implemented expansionary measures:

1. Union Budget 2025:

- The income tax exemption limit was raised to ₹12 lakh, increasing disposable income, aiming to boost consumption expenditure.

2. RBI's Monetary Policy:

- The RBI reduced the repo rate to 6.25%, a 25 bps cut in nearly 5 years, focusing on making borrowing cheaper and providing incentive for investments in the economy.

We will now take a closer look on the impact of Foreign Direct Investment and Domestic Consumption Demand on the Indian Economy to understand why did the government and RBI took such measures despite the risk of high inflation.

India’s economic growth is highly determined by the Foreign Direct Investment(FDI) and domestic consumption. However recently, trends have indicated a decline in both which prompted the government and RBI to adopt expansionary policies to stimulate the economy.

1. Decline in Foreign Investment

- India has experienced a significant drop in Foreign Direct Investment inflows. It dropped from 42 Billion USD last fiscal to 27 Billion USD this year
- A notable instance of regulatory hurdles deterring foreign investment is Volkswagen's tax conflict in India. Following a 12-year investigation, the company faced a tax demand of $1.4 billion, leading international investors to question the investment environment and regulatory consistency in India.

2. Factors Contributing to Declining Domestic Consumption

Despite anticipations of rising inflation, several factors have led to reduced domestic consumption:

- Shift in Spending Priorities: While consumers may advance purchases of essential goods to preempt price hikes, spending on non-essential items has decreased. The November 2024 CCS indicated that 37.17% of respondents maintained their non-essential spending levels compared to the previous year, down from 40.15% in September 2024.
- Employment Uncertainty: Pessimism regarding job security, especially in urban areas, have resulted in more careful spending. The July 2024 CCS indicated that 35.3% of participants felt that employment conditions had improved, which is a small decline from earlier surveys, highlighting worries about job stability.
- Post-Pandemic Spending Normalization: The surge in spending observed during 2022-2023, driven by pent-up demand post-pandemic, has subsided, leading to more normalized consumption patterns.

3. Global Trade Volatility

- U.S. Tariff Conflicts: Trump’s protectionist policies have disrupted the international trade patterns, impacting Indian exports and investors trust.
- Worldwide economic recession has significantly impacted India's export Industry, therefore making the domestic demand even more crucial. Policy Dilemma: Managing Inflation Expectations vs. Economic Growth As FDI decreases and domestic consumption weakens, the Indian government and RBI confront a challenging decision:
- Should they concentrate on managing inflation in line with inflation expectations (which are still elevated at 10.2%, according to the RBI’s Inflation Expectations Survey)?
- Or should they focus on enhancing domestic demand and investment to encourage growth?

As FDI and domestic consumption decrease, the RBI and the government need to skillfully handle inflation expectations while promoting growth.

- If expansionary measures effectively boost demand, inflation could increase even more.
- If inflation increases too quickly, the RBI might have to change its policy approach and raise rates once more.

CONCLUSION

India is at a critical juncture, where falling FDI and domestic demand are forcing policy makers to act. While boosting investment can lower unemployment and drive growth, it also carries inflationary risks through the Phillips Curve mechanism. The challenge for the RBI and the government is to strike the right balance—ensuring growth while keeping inflation within acceptable limits.

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Acknowledgement
Name: Shtaakshi Saraswat
Organisation: Miranda House College, University of Delhi
Designation:

China's BRI vs. India's Strategy: Exploring the Geopolitical and Economic Stakes.

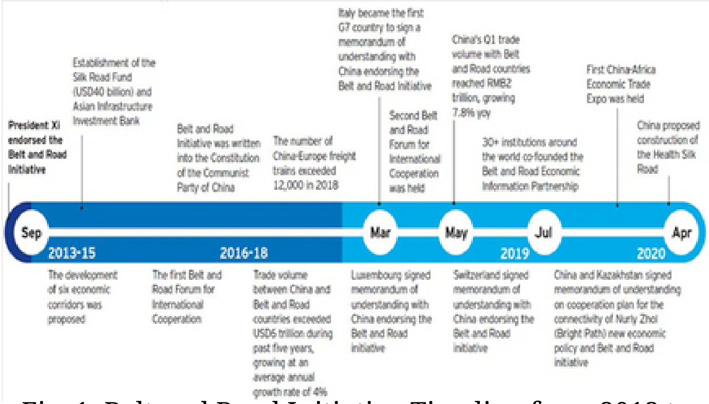

Fig. 1: Belt and Road Initiative Timeline from 2013 to 2020 (Ding & Xiao, 2020)

THE SETUP: CHINA'S BRI IN FOCUS

Folks, China's Belt and Road Initiative is a bold plan to link Asia, Africa, and Europe through land and sea. Its goal? To strengthen trade, regional ties, and economic growth. A clear, strategic move in today's ever-changing world. (European Bank for Reconstruction and Development, n.d.). It was initiated and signed by Chinese president Xi Jinping that combines existing projects with upcoming projects and involves efforts to build up hard infrastructure. Back in May of 2017, at the inaugural Belt and Road Summit in Beijing, President Xi Jinping stood before the world and declared, "As we move forward with this grand vision, we must focus on the very heart of development, unlocking the potential of nations far and wide, bringing forth economic unity and intertwined growth, and most importantly—delivering prosperity for all" (ChinaPower Project, n.d.). Since the inception of this project, India has long posed an obstacle to the realization of this project, driven by concerns over the strategic consequences of specific Chinese-led ventures. Former Indian Foreign Secretary S. Jaishankar said in 2016, "interactive dynamic between strategic interests and connectivity initiatives – a universal proposition – is on particular display in our continent and as an exercise in hand-wiring that influences choices" (Baruah, 2018)

CHINA'S BRI: AMBITION, SCOPE, AND MAJOR FLAWS

Alright, let's break it down, folks: the "One Belt, One Road" initiative, or as some call it, the New Silk Road, stands as a cornerstone of Xi Jinping's foreign policy, an ambitious strategy shaping the course of nations far and wide. It's all about China positioning itself as the leader in global affairs through a concept known as 'Major Country Diplomacy.' This is a strategy that effectively elevates China to the top of the international hierarchy. It's a move to dominate, plain and simple (Wikipedia contributors, n.d). Now, let's put this into perspective: The nations partaking in the Belt and Road Initiative possess near one-third of the world's economic might and commerce, touching the lives of nearly two-thirds of the earth's inhabitants. It's a massive, far-reaching project with global implications, no doubt. Most of the BRI economies live under poverty lines which means succession of BRI projects leads to direct benefits to poor people in such economies (Ruta, 2018). Inspired from China's Han Dynasty, Chinese Communist Party under the leadership of Xi Jinping proposed this project to address global problems such as sluggish economic growth, shortcomings in economic governances, and imbalanced economic development (The State Council Information Office of the People's Republic of China, 2023).

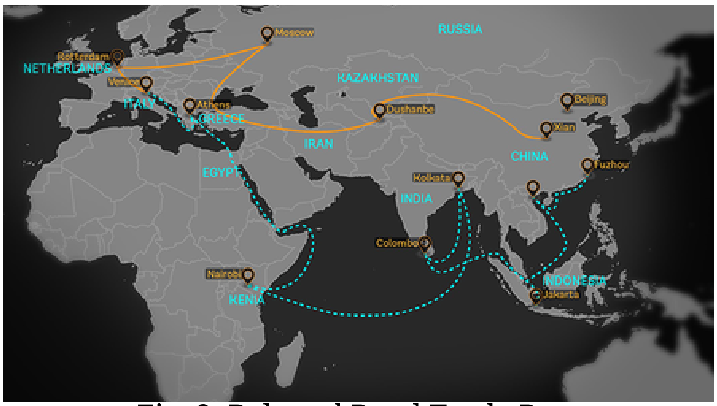

Fig. 2: Belt and Road Trade Routes (World Bank, 2018)

In Fig. 2, the map highlights two key routes of China's Belt and Road Initiative: the Silk Road Economic Belt (orange, overland) and the Maritime Silk Road (turquoise, sea-based), linking Asia, Europe, and Africa.

Fig. 3: Belt & Road Investment and Construction (Armstrong, 2023)

In Fig. 3, China's Belt and Road Initiative investment is highest in East Asia, while construction projects are most concentrated in the Arab Middle East and Nort Africa.

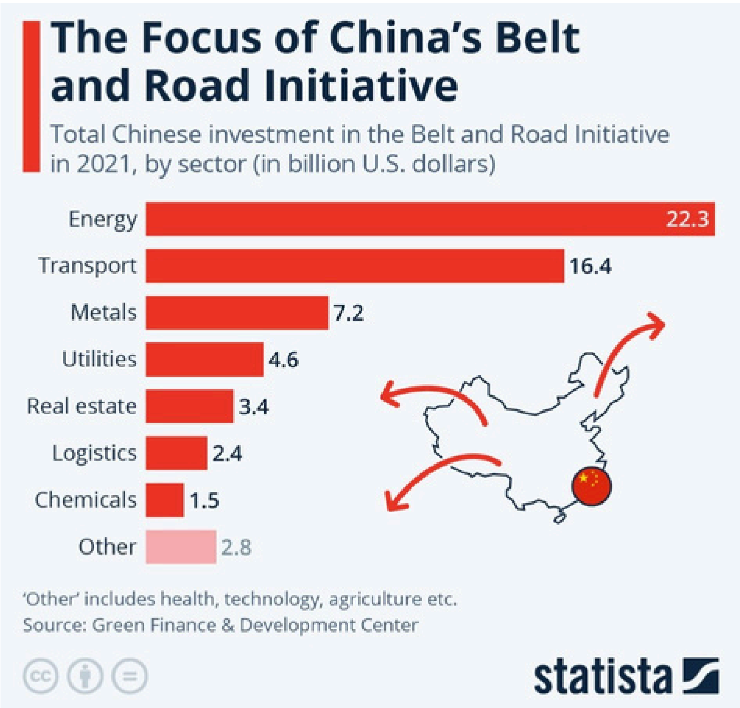

Fig. 4: China's BRI Investment Focus (Armstrong, 2023)

In Fig. 4, energy received the largest share of China's Belt and Road Investment 2021 (US$22.3 billion) which is followed by transport and metals. These three sectors dominated total BRI spending.

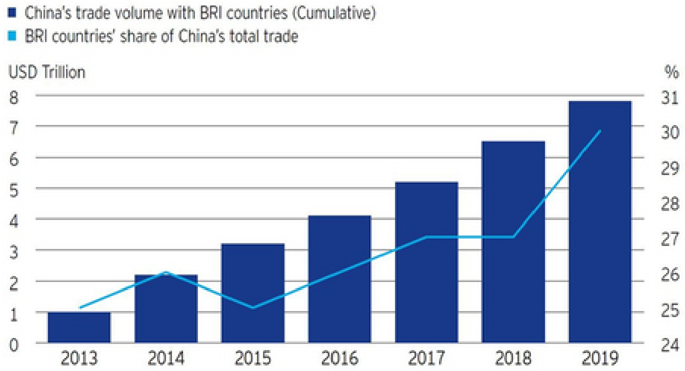

Fig. 5: China's BRI Trade Volume and Share from 2013 to 2019 (Ding & Xiao, 2020)

In Fig. 5, from 2013 to 2019, China's cumulative trade volume with Belt and Road Initiative (BRI) countries have been steadily increased that surpassed USD 7 trillion in 2019. THE BRI partner's share of China's total trade (blue line) also climbed up which crossed 30 percent by 2019 that reflected the growing significance of these markets in China's overall trade landscape.

Below is the table that summarizes key trade deals and investments under the Belt and Road Initiative (BRI) (Wikipedia, China–Pakistan Economic Corridor, n.d.; Encyclopedia Britannica, 2025; Shuakat, 2022; Adeney & Boni, 2021; Abb, Boni, & Karrar, 2024; Wikipedia, Belt and Road Initiative, n.d.):

Region/Country	Type of Project	Investment/Deal Value	Year
Pakistan	CPEC (China-Pakistan Economic Corridor) Infrastructure	Over $30 Billion	Ongoing
Africa	Various Infrastructure Projects	Largest recipient of BRI investments in 2023	2023
Middle East	Energy and Infrastructure Projects	Decreased engagement and compared to Africa	2023
Latin America	Rail Projects (e.g. Colombia tram)	Part of $4.2 billion rail engagement	2023
Southeast Asia	Rail Construction (e.g., Cambodia toll road)	$1.6 billion for Cambodia project	2023
Saudi Arabia	Rail Manufacturing and Shipping Projects	Part of border rail and shipping engagement	2023
Global	BRI Investments	$92.4 billion in 2023	2023

INDIA's GAME PLAN: COUNTERING CHINA'S MOVES

India's been concerned about this project for a while. Initially, the BRI included the Bangladesh-China-India-Myanmar (BCIM) Economic Corridor. It later refrained from joining its participation when CPEC was introduced that runs from Xinjian in China's west, through Pakistan-occupied Kashmir (POK), to the Arabian Sea port of Gwadar. India has made the argument that BRI projects should adhere to international norms and financial stability and should prevent debt traps or environmental and social risks for the host countries (Drishti IAS, 2023).

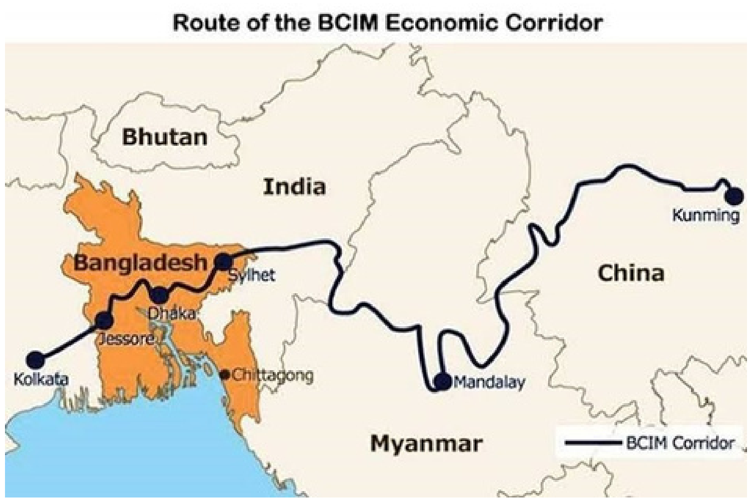

Fig. 6: BCIM Corridor Route (InsightsIAS, 2019)

In Fig. 6, the map illustrates the Bangladesh-China-India-Myanmar (BCMI) Economic Corridor, intended to link Kunming (China) with Kolkata (India) through Myanmar and Bangladesh. India withdrew, citing strategic and security concerns, which stalled the corridor's progress. As a result, potential benefits for regional trade and connectivity remain limited.

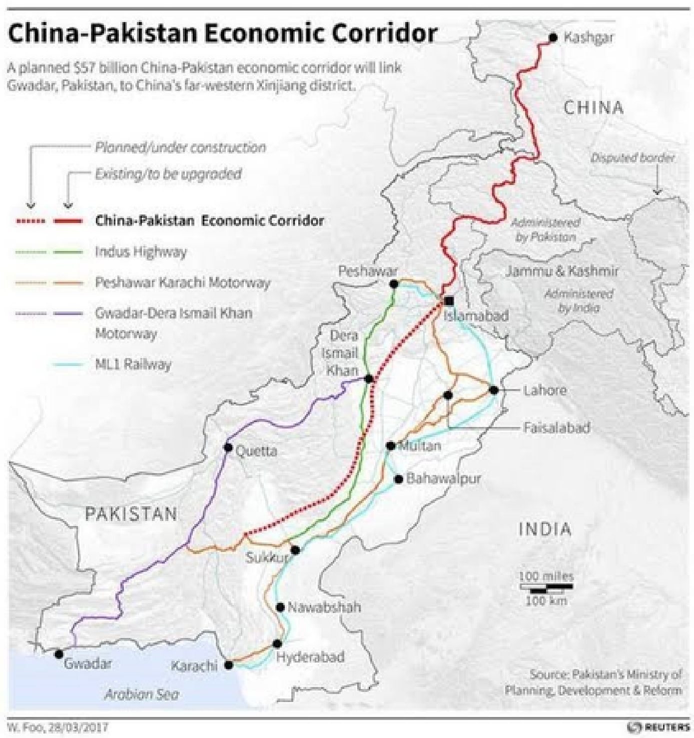

Fig.7: China-Pakistan Economic Corridor (CPEC) Route (InsightsIAS, 2022)

In Fig. 7, you'll notice the China-Pakistan Economic Corridor (CPEC), stretching from Gwadar Port to Kashgar, China. Now, India opposes this, as it passes through Pakistan-administered Kashmir, a region India claims as its own. India views this as a breach of sovereignty, and it's a significant point of tension in the region.

The growing Chinese naval presence in the Indian Ocean Region (IOR) stands critical threats to India's maritime security which involves the deployment of advanced submarines like the Type 093 Shang class, which have been spotted in the IOR that raises concerns about the potential encroachment into India territorial waters (Ramsay, n.d.). China's strategic investments in India's neighbourhood, such as in Nepal, Sri Lanka, Bangladesh, and Myanmar, are part of its Belt and Road Initiative (BRI) that aims to expand its economic and geopolitical influence (Donnellon-May, 2023; Bhandari & Jindal, 2018). These projects expand China's influence, raising India's fears of encirclement, economic dominance, and restricted regional control.

In response, we see infrastructure and trade alliances like the India-Middle East-Europe Economic Corridor (IMEC), stepping up to challenge China's Belt and Road Initiative (BRI). And let's not forget the Chabahar Port in Iran, which counters China's Gwadar Port in Pakistan, offering better access to Central Asia. India's Digital Public Infrastructure (DPI) counters China's Silk Road, while leveraging institutions like New Development Bank (NDB), known as BRICS Bank to offer BRI alternatives (India Shipping News, 2024; Singh, 2024). India's 'necklace of diamonds' strategy includes expanding naval bases (e.g., Sabang in Indonesia) and partnerships with Singapore and Japan (Khan, 2023; Roy-Chaudhury, 2017).

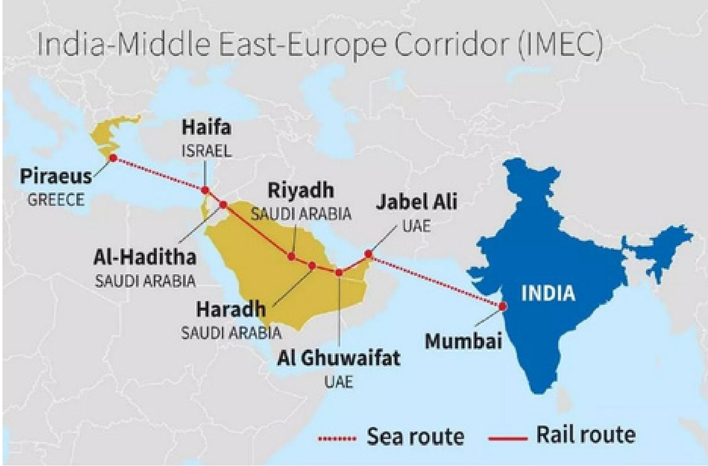

Fig. 8: IMEC India-Middle East-Europe Trade Corridor (Subhash, 2023)

Fig. 9: India's Strategic Maritime Network (Javaid, 2020)

THE FUTURE: CHALLENGES, RISKS, AND THE FINAL WORD

China's BRI? It's a strategic move to reshape global trade and geopolitics. India? India needs to protect its interests while pushing back against China's regional dominance. Looking ahead, future challenges may include an expanded Chinese naval presence, BRI-funded commercial projects like Hambantota's 99-year lease, which could be repurposed for military purposes, threatening India's energy security as 80 percent of its oil imports transit the Indian Ocean. The declining US naval presence in the Persian Gulf will only intensify the India-China rivalry, making it more likely that militarization will escalate. It's a dangerous shift, no question about it (Baruah, 2022;

Brewster, 2021; Rajagopalan, 2021; Grare & Reuter, 2023; Wulandari, 2024). The 2020 Ladakh border clash prompted India to fast-track its naval modernization and strengthen ties with ASEAN and the EU. Why? To counter China's growing influence in the Indian Ocean Region (IOR) through its strategic 'String of Pearls' initiative (Chatterjee, 2023).

However, China disputes India's territorial claims, stressing its own economic and naval activities as legitimate. Final word: India's push for a multipolar IOR is up against China's BRI and naval power. Bottom line? Building regional trust is key to countering China's dominance and securing stability. (Brewster, 2021; Grare & Reuter, 2023; Bhatt, 2024).

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Acknowledgement
Name: Saket Kulkarni
Organisation: Narsee Monjee Institute of Management Studies (NMIMS), Mumbai
Designation: Student

Tourflation and the Psychology of Spending: A Behavioural Economics Perspective

It has become a monthly trend—if not a weekly one—for larger cities to host mega-events like the recent concerts of Coldplay, Diljit Dosanjh, and Ed Sheeran or even high-stakes cricket matches like the India-Pakistan 2023 World Cup game in Ahmedabad. These events attract massive crowds from around the world, offering them the chance to experience the excitement live and in real time. The Indian concert industry alone is projected to grow from $5.23 billion in 2024 to $7.80 billion by 2029, expanding at a CAGR of 8.31%. With instances like Coldplay's show in Ahmedabad contributing $1.72 billion alone , one can't deny that these events are major economic drivers which should be taken seriously. Even PM Modi outlined India's growing potential in this new sector of "concert economy", while addressing the Utkarsh Odisha conclave in January this year.

The recent rise of these events has caught eyes of economists who are able to see the significant economic impacts of these events beyond their socio-cultural importance. Economists have come up with terms like "Tourflation", "Showbiz inflation" , "Swiftonomics" (when discussing the economic impacts of Taylor Swift concert last year); it refers to the rising phenomenon of celebrity tours impacting local economies by causing a surge in demand and driving up prices in various industries like hospitality, transportation, food-&-beverage

and retail, basically leading to a short term local inflationary situation at the time and place of these tours and events

DEMAND SURGES AND INFLATIONARY PRESSURES

Mega-events cause a multiplier effect and ultimately result in exponential increase in overall all consumer spending. For example, Coldplay's Ahmedabad show led to trickling-down of spending in sectors like accommodations; hotel prices skyrocketed up to 500%, with mid-range and luxury accommodations experiencing the highest prices (prices went up to ₹90,000 a night!). Similar was with Diljit Dosanjh's multi-city tour with high demand for tickets, pushing up prices up to 10-20x in the secondary market and also affecting prices of flights and local hospitality sectors. This inflationary pressure, known as Tourflation, can be explained by stickiness of costs (or 'inelastic supply') and elevated demand. Suppliers leverage this phenomenon by adjusting the prices upwards when the demand rises. Since the cost of production does not change during the short period of Tourflation, this ultimately leads to large profits. For example, a hotel will increase its prices when many concert-goers demand rooms, leading to much better margins as their costs of business aren't affected just within just a month. This was observed in the 2023 India-Pakistan World Cup match in Ahmedabad, where fans thronged the venues in large numbers to watch the two teams in action, causing surge in the prices of hotel rooms, usually rented at ₹5,000-8,000/night to shoot up to ₹40,000-1 lakh/night and flight prices seeing staggering rises up to 415%.

PSYCHOGRAPHIC TRENDS OBSERVED IN CONSUMER SPENDING

People during these events are driven by social proof and spend in a herd-like pattern. The collective excitement of thousands like themselves, scrambling for tickets—like the many viral instances of singer Diljit's tour tickets being sold in black at exorbitant prices online—and then also for accommodations reinforcing the perception that attendance is a must. This is compounded by the *framing* effect, where tickets and experiences are marketed as 'exclusive' , 'once-in-a-lifetime' opportunities, pushing fans to spend more than they would normally, using the 'fear of missing out' effect. The high anchoring of prices also sets a psychological benchmark, making subsequent (or alternate) deals with slightly less price seem like bargain, even if they are still significantly inflated

MULTIPLIER EFFECTS, TEMPORARY BOOMS AND LONG-TERM REALITY

Concerts, tours and other such events bring with them significant economic activity; local businesses like restaurants, travel companies, merchandise sellers see record profits. Similarly the ticketing platforms and event management companies generate massive revenues and provide employment to many. Despite these results, many economists like Carsten Brzeski believe that 'Tourflation' effects may be overstated

with the advantages being only short-termed and local in nature, suggesting that while major events may temporarily boost specific industries, they don't significantly affect overall economic growth. This is due to the *substitution effect* which says that mega-events merely redirect discretionary expenditures and don't increase the overall consumption; the spending on concerts often replaces other entertainment expenses, like dining out or shopping. Once the event concludes, the spike in demand vanishes, and local economies revert to pre-event conditions.

THE COLDPLAY CONTRADICTION: PREMIUMIZATION VS. NECESSITIES

While luxury spending, like during these premium events, has grown, everyday consumption patterns tell a different story. Data suggest that India's urban consumption has slowed, with FMCG giants like HUL reporting weaker annual demand for staple products. Surprisingly, the premium segment stays strong —people might cut back on daily expenses but won't think twice before splurging on big, aspirational events. This reflects a K-shaped recovery, where the well-off keep spending on extras while lower-income folks tighten up their budgets. Tourflation shows how people's spending gets all weird during mega-events. Concerts bring in a short-term money rush, but overall, the economy doesn't really grow —it's just money getting shuffled around. It's like that

one friend who goes all in for a weekend concert— overpriced tickets, merch, food then ends up skipping plans for weeks just to recover. The economy does something similar. But if businesses and policymakers get a grip on these spending habits, India's booming live entertainment scene could be more than just a temporary high.

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Acknowledgement

Name: Yuvraj Srivastava
Organisation: Indian Institute of Management (IIM), Jammu
Designation: Student

Friendshoring: A Pathway to Resilience or a Step towards Deglobalization?

Today the world has become a global village owing to the impact of globalization which has truly transcended boundaries in connecting businesses and establishing trade relationships. However, this inter-connectedness has some serious repercussions in that the effects of disturbances in one part of the world can be heavily felt in another. The recent supply chain disruptions due to the Russia- Ukraine war is a stark reminder of the same. In this backdrop, the idea of a new global trade practice known as friendshoring has gained prominence. The origins of the term friendshoring can be traced back to April 2022 when it was first used by the US Secretary of Treasury Janet Yellen in her speech at the Atlantic Council. Friendshoring, in simple terms, means the shifting of supply chains to countries that are perceived as friends or allies. It is generally accepted that countries which share the same political ideologies and economic policies can be considered allies. Friendshoring is envisaged as a means to bring about stability in supply chains and protect businesses from global shocks, but it is not without its fair share of critics who call it a step backwards in today's globalized era.

ARGUMENTS IN FAVOUR OF FRIENDSHORING

The foremost argument advanced in favour of friendshoring is that it will enable relocation of sourcing and manufacturing from countries that are geopolitically unstable to countries that are relatively stable and less prone to political tensions which will ultimately reflect in a much more resilient supply chain. Friendshoring focusses on building supply chains with trusted countries which helps in lowering risks for the economy. weaponisation of gas during its conflict with Ukraine highlights how countries can unfairly leverage exclusivity in the supply of key resources for their own gain and how such actions can disrupt global supply chains and lead to worldwide crises.

Another argument is that confining trade to only allies will boost the volume of trade and investment among these countries leading to stronger economic interdependence wherein the economic prosperity of the allied countries would be linked to each other. The countries can implement joint policy actions for mutual benefits and also strengthen relationships at the political front by entering into defense deals.

The strategy of friendshoring can also be used as a tool to diversify trade among a number ofcountries rather than being dependent on a single nation. A report conducted by McKinsey in 2022 points out that approximately 80% of companies experienced supply chain disruptions due to the COVID-19 pandemic and most of these disruptions were due to concentrated sourcing or production in a single country. It also highlighted that 70% of respondent companies were willing to adopt the strategy of dual sourcing to minimize supply chain risks [1]. Thus, by diversifying trade through friendshoring, companies will be able to better navigate the complexities caused by disruptions due to country-specific issues.

In today's capitalist world, many companies are neglecting the Environmental, Social, Governance or ESG standards in the pursuit of higher profits, thereby adversely affecting living standards in countries where the production bases of such companies are located. For example, Apple has been accused of violating labour practices in its factories in China where workers are forced to work overtime and are punished for not meeting targets. Friendshoring can help ensure stricter adherence to ESG standards by restricting trade with countries that strongly support ESG principles and have stringent regulations in place regarding the same so that no company is able to exploit leniency in legal regulations. The Energy Resource Governance Initiative (ERGI) among the US, Australia, Botswana, Canada and Peru can serve as a good working model. The prime objective of the ERGI is to promote sound ESG practices in the field of mineral extraction. This will not only ensure ESG compliance by the member countries but also incentivize other countries to uplift their ESG standards in order to remain competitive in the market.

NEGATIVE IMPLICATIONS

Friendshoring can be considered as a relatively less cost-efficient trade practice than offshoring. Offshoring basically means shifting of production bases to those countries that offer the lowest costs. These lower costs may be attributable to established infrastructure, availability of skilled human capital or favourable government incentives that are unique to those specific countries. Moving away from these countries to ally countries may result in the domestic firm having to bear higher production costs. For instance, it is an established fact that manufacturing in the developing world is cheaper. A 2014 report by Stacey Vanek Smith highlights that an iPhone which has a retail cost of around $650-$850 when made in China would cost $2000 if it was made in the West [2]. This illustrates how the transition from offshoring to friendshoring can lead to cost inefficiencies.

The critics of friendshoring also argue that it is a step backwards towards deglobalization, which is essentially the reverse of the globalization process and signals lesser global interconnectivity and economic disintegration. Friendshoring, by limiting trade to select friendly countries, will inevitably result in the creation of trading blocs which will accelerate global fragmentation. A World Trade Organization (WTO) study says that if the global economy gets divided into western and eastern blocs it will lose around 5% in annual output [3]. Friendshoring can especially be harmful to those developing countries who find themselves excluded from the list of ally countries. Such countries rely on help from the developed world in the form of investment and technological improvements and if they are cut off from such opportunities, they are bound to suffer.

CONCLUSION

In a world that has become characterized by geopolitical conflicts and frequent supply chain disruptions, friendshoring can offer a potential solution; by relocating away from unstable regions to stable ones, businesses would be able to build secure supply chains and significantly reduce chances of any external shocks. Additionally, friendshoring would also lead to stronger relationships with ally countries which can go a long way in facilitating coordination on a number of policy matters. However, the cons of friendshoring far outweigh it pros. Firstly, friendshoring is nothing but a fancy synonym for trade blocs. It can result in establishment of rival trade blocs which are formed solely on the basis of shared economic and political ideologies. This will hinder the global order and bring about inefficiencies in production since, production processes become concentrated only in countries considered as allies and not those countries who are the best suited to handle them on account of regional specialization. Secondly, it would have a devastating impact on poor countries which are left out of these trade blocs. These countries would lose out on access to key markets and be stuck with obsolete technologies and that could propel them towards becoming failed states. Friendshoring can also be misused as a diplomatic weapon- by pressurizing non-member countries to align their political interests with those of the members, if they wish to become a part of the bloc. To take a hypothetical example, a

Western friendshoring bloc led by the US may force countries like India to impose sanctions on a perceived non-friendly country such as Russia, if it wants to be included in trade with them. Lastly, friendshoring would not only undermine free and fair global trade through the creation of barriers but would also result in significant collateral damage in the form of higher prices for consumers and it should, therefore, be discouraged as a trade practice.

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Acknowledgement

Name: Aryan Chaudhry
Organisation: Shri Ram College of Commerce, University of Delhi
Designation: Student

The Rise of Social Commerce: How Social Media is Driving Online Sales

INTRODUCTION

Social media has developed into a potent business tool in the current digital era, serving as more than just a venue for networking and pleasure. Online shopping has been completely transformed by social commerce, which is the fusion of social media platforms and e-commerce. Platforms like Instagram, Facebook, TikTok, and Pinterest are being used by consumers more and more to find, investigate, and buy things. This article examines how social media is influencing e-commerce's future and increasing online sales.

WHAT IS SOCIAL COMMERCE?

Direct product sales via social media platforms are referred to as social commerce. Social commerce allows users to browse and purchase products within the social media ecosystem, as opposed to traditional e-commerce, which redirects consumers to an external website to make a purchase. The customer experience is improved and the purchasing process is made simpler by this smooth fusion of social interaction and shopping.

THE GROWTH OF SOCIAL COMMERCE

The growing number of active social media users globally is responsible for the growth of social commerce. More than 4.5 billion people use social media, according to latest figures, and companies are using this enormous audience to increase sales. Millennials and Gen Z consumers, who favor participatory and aesthetically pleasing buying experiences, are especially fond of social commerce. By 2025, social commerce is predicted to have grown to a value of $1.2 trillion, indicating an exponential growth trajectory. This growth is further fueled by the quick uptake of influencer marketing and mobile commerce, which makes social media platforms essential for companies trying to increase their online visibility.

KEY SOCIAL MEDIA PLATFORMS DRIVING ONLINE SALES

A number of social media sites have integrated commerce functionalities to facilitate direct product sales for companies. The following are some ways that some of the most popular platforms are fostering the growth of social commerce:

1. Facebook Marketplace & Shops

One of the first social media sites to include shopping functionality was Facebook. Facebook Shops offers a smooth buying experience by enabling companies to open online stores straight on their Facebook page. Facebook Marketplace is a useful tool for independent merchants and small enterprises since it also allows users to buy and sell goods locally.

2. Instagram Shopping

Instagram has emerged as the preferred visual commerce channel. Businesses may display their products and let customers buy them within the app with features like Instagram Checkout, Shoppable Posts, and Live Shopping. Instagram is becoming one of the best channels for increasing online sales because to the incorporation of influencers and brand collaborations.

3. TikTok Shop

TikTok Shop, which allows companies and creators to sell things directly through videos and live streams, has emerged as a result of TikTok’s phenomenal development. The #TikTokMadeMeBuyIt movement has demonstrated the power of short-form video content to sway consumer choices.

TikTok’s viral potential is used by many firms to increase sales and connect with younger consumers.

4. Pinterest Shopping

With its Product Pins, Pinterest Shop, and visual search tools to help users find and buy products that fit their interests, Pinterest is a discovery-driven platform that is perfect for social commerce. By utilizing its strong recommendation algorithms, many e-commerce brands use Pinterest to increase traffic and sales.

5. YouTube Shopping

Creators may now tag products in videos and live streams thanks to YouTube's integrated purchasing functionality. YouTube has grown to be a reliable resource for customers making selections about what to buy because of its enormous user base and capacity to offer in-depth product reviews.

HOW SOCIAL MEDIA IS TRANSFORMING ONLINE SHOPPING

The following crucial elements set social commerce apart from conventional e-commerce and contribute to its success:

1. Influencer Marketing and Brand Collaborations:

Social commerce has seen a revolution thanks to influencer marketing. Influencers and content producers on social media have devoted fan bases, and their endorsements of products are highly valued. Influencer partnerships allow brands to promote their goods in a genuine and relatable way that appeals to consumers.

2. Interactive Shopping Experience

Through features like live shopping events, surveys, Q&A sessions, and augmented reality (AR) try-ons, social commerce provides an interactive buying experience that engages customers and makes online purchasing more dynamic and customized.

3. Smooth Integration of Payments

Payment options are integrated into social commerce platforms, allowing users to finish transactions within the app. Features that streamline transactions and improve buyer convenience include Facebook Pay, Instagram Checkout, and TikTok Payments.

4. Data-Informed Personalization & Targeting

Social media networks offer highly targeted ads and customized shopping recommendations by leveraging sophisticated algorithms and data analytics. This raises the possibility of conversions by guaranteeing that customers see products that suit their interests.

5. User-Generated Content's (UGC) rise

Customer reviews, testimonials, and unboxing videos are examples of user-generated content (UGC), which is essential to social commerce. Consumers base their purchasing decisions more on peer reviews and in-person product demonstrations than on conventional advertising.

CHALLENGES IN SOCIAL COMMERCE

Even with its quick expansion, social commerce still confronts a number of obstacles:

- **Trust & Security Issues:** Because of security worries, customers can be reluctant to post their payment information on social media sites.
- **Product Authenticity & Quality Control:** Because social commerce mostly depends on independent sellers, it can be difficult to guarantee the authenticity and quality of products.
- **Platform Dependency:** Companies that only use social media to make sales run the risk of being impacted by changes to platform policies or algorithms that affect their reach.

FUTURE TRENDS IN SOCIAL COMMERCE

The following trends are expected to influence social commerce in the future:

1. Metaverse & Virtual Shopping: Companies are investigating virtual showrooms and stores in the metaverse to provide immersive shopping experiences;

2. AI-Powered Chatbots & Virtual Assistants: AI-powered chatbots will improve customer service by offering real-time support and tailored recommendations;

3. Blockchain & Cryptocurrency Payments: Decentralized payment solutions could further streamline transactions and improve security in social commerce; and

4. Voice Commerce: As smart assistants like Alexa and Google Assistant become more prevalent, voice-based shopping may be incorporated into social media platforms.

CONCLUSION

Social commerce is revolutionizing how companies interact with customers and increase online sales. Customers benefit from a convenient, interactive, and captivating experience thanks to the smooth integration of shopping elements on social media platforms. Businesses must adjust to new trends as technology develops further in order to remain competitive in the social commerce market. Social commerce is the future of internet shopping due to its increasing importance.

Acknowledgement

Name: Nishtha Garg
Organization: JC Bose University of Science and Technology YMCA Faridabad
Designation: Student

Cold - Chain Logistics

The summer of 2020 marked the season when Covid-19 was at its strongest, and a struggling rural nurse in Uttar Pradesh had an empty shelf in her clinic. They knew of a vaccine sitting 200 miles away in Delhi, locked away in a city vault while the supply network in India was torn into pieces. No nation escaped from the iron grip of the pandemic, but India's suffering helped shed light upon the idea: interference with nature has a cost, and our unpreparedness was a debt we were not prepared to repay. Even after countries like the US, Brazil and UK were severely infected, we did not learn our lesson. We intentionally delayed the process of producing vaccines till on December 2, 2020, the UK's Medicines and Healthcare products Regulatory Agency (MHRA) came up with the first first vaccine for Covid-19.

One of the major reasons for this was the lack of infrastructural facilities like **inadequate production capacity, raw material supply and logistical challenges** among others. All of these are mainly challenges related to Supply Chain Management, which has proved to be India's weak suit for decades now. But innovations in this field are shifting the production possibility curve to the right.

Pfizer-BioNTech vaccine could not reach pan India due to a lack of ultra-cold storage facility and constant temperature monitoring.

Cold chain logistics is the process of storing, transporting, and distributing temperature-sensitive products, like food and medicine, while maintaining their quality and safety.

The disruptive blockchain technology is also proving to bring about a huge transformation in the cold chain industry. Blockchain creates a permanent digital ledger. Every step of the cold chain—say, from a vaccine factory to a clinic—gets recorded as a block of data. Once it's in there, it can't be altered discreetly, thus preventing misconduct. This means there is an unbreakable record of temperature checks and location changes. For example, if a particular fish must remain at or below 40°F, sensors can record that, and blockchain prevents anyone from later forging it to hide an error.

That relates to traceability. Cold chains are complex, with many participants—producers, shippers, warehouses, retailers. Blockchain gives each product a unique ID. If something goes wrong—like a batch of lettuce spoiling—you can pinpoint exactly where the temperature rose, whether it was a truck in transit or a faulty fridge. This effectively reduces waste and speeds up processes, which is equal to money and lives when you're dealing with food safety or life-saving drugs.

And then there's efficiency. Blockchain can be combined with smart conditional formatting—automated if-then statements written to execute when certain conditions are fulfilled. Take a shipment of medicine: the condition could release payment to the supplier automatically only if the temperature remained within limits during the entire journey. No more monotonous checks or arguments about documents—it's all done in an instant and with complete accuracy and foolproof transparency.

Where cold chain infrastructure is weak, such as in some developing nations, people have a constant fear of spoiled products. Blockchain allows both, suppliers and consumers to check the path. Scan a QR code on your carton of milk, and you might be able to see it remained cold from farm to shelf. That is not only peace of mind; it is a means to prevent fake medicines or vaccines from growing in the market and ensuring that the consumer gets what they pay for.

Walmart has been leveraging blockchain since 2018 to trace the shipment of its leafy vegetables, cutting the check-time from days to seconds. In pharmaceuticals, firms like SkyCell use it with IoT sensors to record temperature for drugs, so that the quality remains the same. Even IBM and Maersk have a blockchain system for cold chain logistics, monitoring everything from bananas to drugs.

"When the cold chain infrastructure fails to develop in some developing countries, there is always the fear of spoilt goods. With Blockchain technology, both suppliers and customers can check the way backward. One can scan a QR code on the carton of milk and can reach till the point it was on a cold chain from farm to shelf. Not only does that make him feel safe, it would prevent counterfeit medicines or vaccines to be prevailing in the market, and that he is definitely getting what he is paying for."

"Walmart has been leveraging blockchain since 2018 to track shipments of leafy greens, shrinking the check from days to seconds. In pharmaceuticals, companies such as SkyCell leverage it alongside IoT sensors to track temperature-sensitive drugs and ensure their quality. IBM and Maersk also have a blockchain cold-chain system that tracks everything from bananas to drugs."

Importance of reliability is unique to cold-chain logistics, where temperature-sensitive goods, such as food, pharmaceuticals, and vaccines, are stored under precise temperature settings at every step of transportation and storage. Predictive analytics steps in to avoid failures, based on data and state-of-the-art algorithms. It predicts failures that keep the operational status and performance of the whole cold chain at the optimum level of efficiency."

"The cold chain operations, in turn, generate tremendous volumes of data. AIs interpret this data, real-time monitoring with historical indsight will create predictive algorithms to view the anticipated problems. For example, an instance wherein an alarming signal of the refrigerated truck's cooling system may exhibit signs of distortion, such as consuming excessive energy or performing poorly, therefore AI may be able to label this risk of failure long before it occurs. This would give logistics teams the ability to foresee when systems are on the verge of breaking, allowing them to initiate maintenance before all goods are spoiled or all delays incurred."

The major victory here is being proactive, not reactive. Without AI, a failure—a freezer breakdown on the way, is not discovered until it is too late and the products are spoiled and customers are dissatisfied. But with predictive analytics, the system identifies possible failures well in advance and fixes them before they occur.

India has transformed its supply chain, owing to the helpless situation we were faced with, during Covid. But while we lie fascinated by the luring beauty of blockchain and smooth operations managed by AI, we are just turning a blind eye to the harsh reality faced by millions of Indians.
What happens to the sick child in a village whose parents cannot afford to get them vaccinated? Will we be able to give justice to the 75 years of independence we enjoyed, silently playing with the lives of thousands of Indians? Or will we fail again, lulled by the success of today?

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Acknowledgement

Name: Harshita Sharma
Organization: Shri Ram College of Commerce
Designation: Student

Diving into Intricacies of Shadow Banking

ABSTRACT

Shadow banks are a web of highly complex and unaccounted financial institutions operating outside the regulatory realm. These entities use a combination of financial and legal tools to convert illiquid assets to liquid financial securities. Though defining the size of the shadow banking system is strenuous because many of these entities do not report to the authorities; they account for huge share in the financial system ecosystem. At the time of the global financial crisis, the shadow banking system was more common in the United States, but with the advent of technology the non bank credit intermediation started growing in countries like India.

INTRODUCTION

Does it sound mystifying when we talk about institutions that function just like banks but they are not the actual bank? Apart from the commonly named institutions covered under the category of banks like commercial banks, small finance banks, rural banks,development banks etc there exists shadow banks. The term shadow banking was minted by a well known economist Paul McCulley in a 2007 speech at the annual financial symposium hosted by the Kansas City Federal Reserve Bank in Jackson Hole, Wyoming. According to him the shadow banks are drivers for the looming lending bubble that led to the major financial collapse in 2007-08. This research aims to understand the existing developments in shadow banking portraying the evolution of the financial services sector, Further it conceived the intricacies involved in the processes, discussing the role of major financial institutions including regulatory bodies.to grasp the current landscape of shadow banking the global perspective is highlighted with a special focus on india. The research concludes with emerging challenges associated.

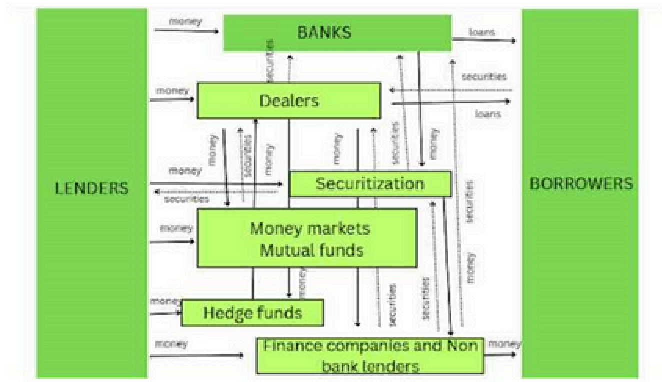

Figure1: Adapted,IMF

THEORETICAL PERSPECTIVE ON SHADOW BANKING

The shadow bank credit intermediation process essentially involves short-term funding or borrowing to aid long-term lending or investment in illiquid assets, resulting in functions like maturity transformation, liquidity transformation, credit risk transfer and leverage. Shadow banking also involves transactions like securities financing and reuse of collateral for another funding.In addition, shadow banking includes a range of alternative lending channels which include a range of entities like non bank loan companies, microfinance companies specialising in credit provision to small enterprises, trust companies, peer-to-peer lending, and various forms of retail-oriented loan provision.Shadow banking derives a crucial and priced source of non bank finance that support real economic activity whilst improving the efficient functioning of financial markets. As Pozsar et al. (2010) note, shadow hanking break down the simple process of deposit funding, hold-to-maturity lending conducted by banks into a more compound, wholesale funded or securitisation-based lending process. Primarily, shadow banking is a broad concept that involves any form of non-bank credit intermediation. Since these credit channels lie outside the regulated banking sector, shadow banks typically do not have to resort to the Central Bank for liquidity crises or public guarantees. increased valuations and flow of money post pandemic

The most commonly involved shadow banking entities in different economies with advanced financial sectors include MMFs; leveraged investment funds, such as hedge funds, intermediaries, like broker/dealers and securities lending agents; and securitisation vehicles.shadow banking in economies with progressive financial sectors largely encompasses wholesale markets-based credit intermediation channels.

Comparison Criteria	Financial Stability Board	Narrow Liabilities
Coverage	Financial institutions engaged in financial intermediation	Non-bank financial institutions
Sources	Wholesale funding	Retail funding
Entities	Money market mutual funds, securitization, finance companies	Microfinance institutions, investment funds
Activities	Credit provision, securitization, repo transactions	Deposit-like investments
Features	Not subject to banking regulations, prone to runs	Light regulation, higher risks

Shadow banking institutions came as disruptors in financial markets. These institutions facilitate the lending to real estate sector and other purposes without facing the regulatory hindrances the rules on traditional banking to protect from banking crises and bank run outs were not applicable promoting ease of doing business, without keeping the capital requirements these institutions created highly volatile instruments.

According to the Financial Stability Board(FSB), the shadow banking system which is named as the nonbank financial intermediary (NBFI) sector-grew 8.9% in 2021, above its five-year average of 6.6% annual growth. According to the reports, the NBFI sector's share of total global financial assets reached 49.2% in 2021. Most of the growth rooted from investment funds, with

The shadow banking system functions alongside the traditional banking sector but differs significantly in terms of structure, regulation, and risk management. It plays a crucial role in credit creation and financial intermediation by utilizing a range of financial instruments and unconventional increased valuations and flow of money post pandemic

The shadow banking system functions alongside the traditional banking sector but differs significantly in terms of structure, regulation, and risk management. It plays a crucial role in credit creation and financial intermediation by utilizing a range of financial instruments and unconventional practices that operate outside standard regulatory frameworks. Unlike traditional banks, which rely on deposits to fund lending activities, shadow banking entities such as money market funds and hedge funds channel funds from investors to borrowers through mechanisms like securitization and repurchase agreements. This enables them to facilitate credit flow without being subject to the same capital requirements as regulated banks.

The shadow banking system works in parallel with conventional banks but is very different in structure, regulatory environment, and risk profile. It is a critical system for credit creation and financial interposition, performing its functions through a wide range of financial instruments and unorthodox procedures not covered by usual regulatory frameworks. In contrast to traditional banks that base lending on deposits, shadow banking institutions such as money market funds and hedge funds match borrowers and investors via conduits like repurchase agreements and securitization. This enables them to channel credit without being subject to traditional banks' capital requirements.

A distinctive feature of shadow banking is its use of leverage for amplifying returns. Numcrous actors in this system take loans to expand their investing capacity, potentially raising possible earnings. Nevertheless, this process also increases the susceptibility to monetary shocks since such actors do not live under the same stringent capital limitations imposed on traditional banks. The other force driving the growth of shadow banking is regulatory arbitrage, wherein financial institutions take up business in less regulated domains in order to circumvent constraints applicable to traditional banks. Whereas this facilitates innovation in financial services, it can also expose the system to systemic risks if inadequately managed.

Another important feature of shadow banking is liquidity transformation, which involves financing long-term assets using short-term liabilities. This improves profitability but exposes the system to liquidity risks, particularly in situations involving quick withdrawals of funds by investors that risk destabilizing the market. Money market funds and securitization. vehicles are institutions that tend to indulge in this practice, making them most susceptible to market instability. Due to the minimal regulatory scrutiny in this area, regulatory vigilance is increasingly necessary to prevent financial instability while retaining the advantages of financial innovation.

The shadow banking systern consists of a heterogeneous array of financial institutions that are outside the conventional banking system. Money market funds, for example, combine investments to buy high-quality short-term securities, providing a liquid investment option with returns potentially higher than traditional savings accounts. Hedge funds also serve by using multiple techniques like leverage, short selling, and trading in derivatives to increase investor returns. Because they enjoy relatively less regulatory oversight, hedge funds have more operational flexibility but are exposed to increased financial risk.

Private equity funds help facilitate shadowbanking by raising capital to fund business growth, restructurings, or strategic acquisitions, assisting firms that are not able to access conventional bank financing. Likewise, Special Purpose Vehicles (SPVs) are universally employed in securitization, enabling financial institutions to collect loans and receivables, transform them into securities, and assist in the transfer of risk and increase market liquidity.

The shadow banking industry exists alongside the traditional banking sector in India, dominated by Non-Banking Financial Companies (NBFCs), mutual funds, and securitization structures. Appreciating its financial intermediation and innovation, the regulatory authorities have framed measures to observe and control attendant risks. NBFCs are governed by the Reserve Bank of India (RBI) by prescribing registration rules, capital adequacy requirements, and regular disclosure norms for maintaining the stability of finance. Moreover, the Securities and Exchange Board of India (SEBI) regulates Collective Investment Schemes (CIS), such as mutual and venture capital funds, to ensure transparency and protection of investors.

To mitigate risks associated with securitization, the Securitization and Reconstruction of Financial Assets and Enforcement of Security Interest (SARFAESI) Act, 2002, offers a legal framework for asset reconstruction companies (ARCs) to deal with distressed assets in an effective manner. In addition, the Financial Stability and Development Council (FSDC) promotes co-regulatory initiatives between RBI, SEBI, and the Insurance Regulatory and Development Authority of India (IRDAI) for robust monitoring. Based on changing needs, the RBI has tightened supervision over NBFCs and initiated actions against entities discovered in non-compliance with fair lending principles. Recent regulatory actions have involved curbs on some NBFCs from making new loans because of pricing mismatches, followed by easing for compliant players.

India's regulatory response to shadow banking attempts to balance financial innovation with systemic stability. By evolving policies to respond to emerging risks, regulators try to reduce vulnerabilities while allowing the sector to facilitate financial inclusion and economic growth effectively.

GLOBAL PERSPECTIVE

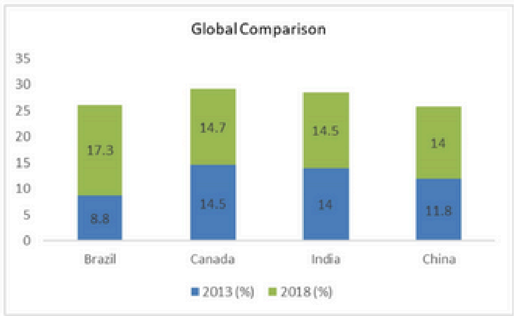

Figure 2: Adapted,Statista

Since the last ten years, China has experienced fast growth of non-bank financial institutions beyond many other nations. In spite of the current efforts by governments to stem capital. flows away from conventional banks, fears remain regarding the fast-expanding. less-regulated digital banking and lending sector. One of the top examples of this conservative approach was the suspension of Ant Financial's initial public offering (IPO), which underscores regulatory concerns regarding the sector's systemic risk.

As per the Financial Stability Board's figures, the percentage of non-bank financial intermediation in Chinese overall financial assets went up from 8% in 2013 to 14% in 2018. Subsequent supervisory actions have, however, affected the sector, with 2019 figures set to reveal the degree of these changes. The G20-supported institution describes non-bank financial intermediaries (NBFIs) as institutions that carry out credit intermediation and might pose risks equivalent to those of banks. PwC indicates through a report that although more stringent regulations have restrained the industry to some extent, NBFIs remain a critical component in offering financing solutions that conventional banks cannot provide.

The figure shows the increase in shadow banking, or non-bank financial intermediation, as a percentage of overall financial assets for a range of selected countries over 2013 to 2018. The data indicate the vast growth in shadow banking globally and show how more prominence has been taken up by non-bank financial institutions in credit intermediation. Among the nations examined, Brazil had the greatest percentage in 2018 at 17.3%, followed by Canada (14.7%) and India (14.5%), which implies increasing reliance on alternative funding mechanisms. China also experienced a significant increase, ascending to 11.8%, led by a fast-changing financial system and arbitrage of regulation. The trend in general depicts the manner in which financial institutions outside the conventional banking industry are growing in stature, presenting opportunities as well as challenges. Although shadow banking improves credit supply and financial innovation, it poses issues regarding systemic risks from leverage, liquidity imbalances, and regulatory deficiencies. Nations that have been experiencing a surge in growth in this industry, like Brazil, India, and China, need to improve supervision to avoid financial instability. The statistics highlight the imperative of a well-balanced regulation to ensure the advantages of shadow banking, for example, improved financial inclusion and market efficiency are realized while alleviating possible financial system vulnerabilities.

he growth of non-bank financial players is by no means exclusive to China. Other emerging economies, especially Brazil, have witnessed similar developments, as non-bank intermediaries increased rapidly. India, however, has witnessed moderate growth in this sector, primarily because shadow

shadow banking has been present there for decades and has long catered to those who remained beyond the reach of conventional banking services. In advanced economies like Italy, South Korea, and Canada, non-bank financial institutions have also emerged, although their expansion has been more gradual than in emerging. markets.

LOOMING RISKS

Shadow banking occurs outside the typical regulatory environment and poses a number of issues affecting financial stability. Regulatory arbitrage is one primary issue, which involves these players taking advantage of loopholes in financial regulation in order to do riskier activities that the more traditional banks can't. For lack of openness, it often becomes hard to determine the extent of risks that they actually assume, thus hampering financial oversight. Furthermore, shadow banks also involve themselves in a lot of high leverage and liquidity.

transformation, amplifying financial system vulnerabilities. Also, their connection to the mainstream banks complicates risk management further, as a financial shock experienced in the

shadow banking system tends to spill over into the regulated system. Financial innovations within the sector evolve too quickly, hence challenging regulators to keep pace and thereby making them more prone to systemic crises. While shadow banking offers substitute sources of credit and increases financial inclusion, it needs more stringent regulatory control to limit related risks and promote financial stability.

CONCLUSION

Shadow banking has become a major part of the international financial system, existing alongside mainstream banking but frequently beyond the direct reach of regulation. Although it allows credit intermediation, promotes financial innovation, and offers alternative financing, it also presents systemic dangers including regulatory arbitrage, excessive leverage, and liquidity transformation. The quick growth of shadow banking, especially in economies such as China and India, highlights the importance of having a balanced policy that promotes financial inclusion while providing stability. The regulatory authorities across the globe, including the RBI and SEBI in India, have been taking steps to control risks by having more stringent compliance standards and oversight mechanisms. Nevertheless, the changing nature of shadow banking calls for ongoing regulatory flexibility to avoid financial instability. In the future, an international concerted effort is needed to address weaknesses while harnessing the strengths of non-bank financial intermediaries to drive economic growth.

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Acknowledgement

Name: Vrinda Agrawal
Organization: Shri Ram College of Commerce, Universitty of Delhi
Designation: Student

srcrc.in

@srcrc.srcc

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