Thou art Light, Fill me with thy light

DEPARTMENT OF ECONOMICS
Jesus and Mary College

THE CONTRARIAN
COLOURS OF THE ECONOMY

ISSUE 2024

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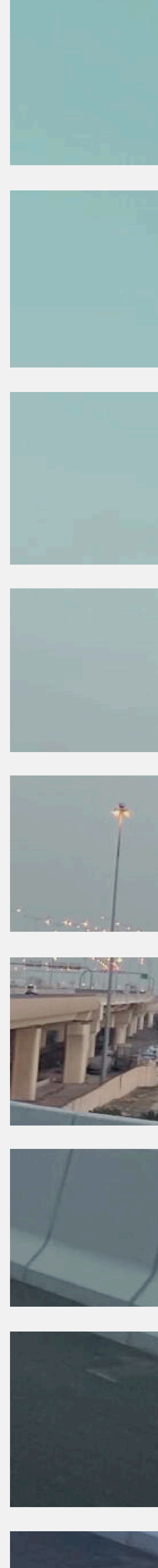
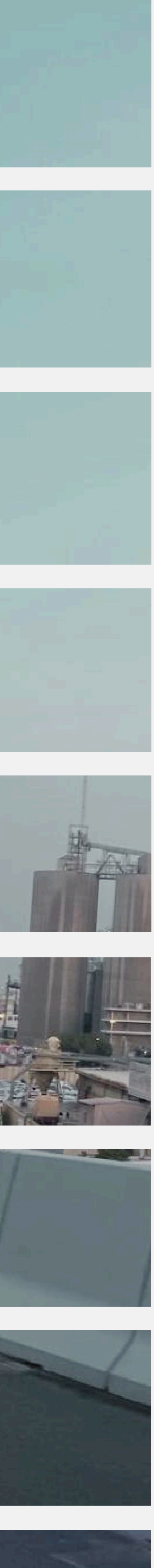




FROM THE CREATIVE DESK:

GUEST ENTRIES:

"We have the power to change the narrative.
Let's rewrite the story of our planet and ensure that it's a tale
of resilience, sustainability, and hope."
— Jamie Margolin

FOREWORD

Ms. Shalini Srivastava

Associate Professor
Teacher-in-Charge
Department of Economics

Color-based economies refer to the economic activities and dynamics influenced by the perception, symbolism, and use of specific colors in various industries and markets. Each of these color-based economies reflects different sectors, priorities, challenges, and opportunities, contributing to the diversity and complexity of global economic dynamics. It's interesting to see how these economies can interact.

Synergies in Sustainable Development:
Green economies can collaborate with blue economies to promote sustainable practices in ocean conservation, renewable energy, and eco-tourism. White economies can contribute expertise in technology and innovation to support green and blue initiatives, such as developing smart solutions for environmental monitoring or sustainable urban planning.

Cultural and Economic Exchange:
Yellow and silver economies can interact through cultural exchanges, promoting tourism, creative collaborations, and cross-border trade in cultural products and services. This interaction can also lead to economic opportunities, such as joint ventures in the entertainment industry, art exhibitions, or cultural festivals that attract international visitors.

Resource Management and Trade Networks:
Brown economies, focused on resource extraction and heavy industries, can engage in trade partnerships with green and blue economies for sustainable resource management. Blue economies, reliant on maritime trade, can facilitate global trade networks that connect various economies, facilitating the exchange of goods, services, and ideas.

Policy and Governance Collaboration:
Red and white economies, with differing economic systems and governance structures, can engage in policy dialogues and knowledge sharing to address common challenges. Gray economies, characterized by informal sectors, can benefit from collaboration with white economies to improve regulatory frameworks, social protections, and formalization efforts.

Innovation and Technology Transfer:
White economies, leaders in technology and innovation, can collaborate with brown and black economies to transfer clean technologies and best practices for sustainable development. This collaboration can also extend to silver economies, focusing on age-friendly technologies and healthcare innovations, benefiting from expertise and investments from white and green economies

Market Opportunities and Investment Flows:
Yellow economies, thriving in creative industries, can attract investments and partnerships from white, green, and blue economies interested in cultural tourism, digital content, and creative collaborations. Investment flows can also benefit silver economies, providing funding for age-friendly infrastructure, healthcare innovations, and retirement solutions.

Global Challenges and Collective Action:
All color-based economies can come together to address global challenges such as climate change, economic inequality, and public health crises through collective action, international agreements, and shared responsibilities. Initiatives like sustainable development goals (SDGs) can provide a framework for collaboration and coordination among diverse economies towards common objectives.

In summary, the interaction of color-based economies reflects the interconnectedness of global systems and the diversity of human experiences, aspirations, and values. By embracing collaboration, innovation, and inclusive growth, stakeholders across color-based economies can work together to address common challenges and build a more prosperous, equitable, and sustainable future for all.

NOTE FROM THE FACULTY ADVISORS

Dr. Ruchi Bhalla & Ms. Divya Devassy

Assistant Professors
Department of Economics

The theme for the 2024 edition of 'The Contrarian' Magazine is based around "Colours of the Economy. Different colours represents different sectors for a developing economy. On one hand the theme explores various kinds of transformations in a form of sustainable economy which is helping Indian Economy to grow faster, on the other, the development in certain specific sectors such as care economy, green economy etc needs much more attention and concern regarding the state of the Indian labour market.

Issue 2024 throws light on these different colours and challenges regarding the transformation. India being on the edge of becoming the world's most populous country, needs to carefully analyse different aspects of sustainable growth and development.

Formulation of well- planned strategies is needed to ensure that human resources are utilized effectively and efficiently.

This edition throws an important light on what kind of transformation Indian economy is going through and what is needed to attain the goals and objectives of the sustainable economy. Furthermore, it's vital to remember that as we strive for growth, we should prioritize inclusivity and equity, ensuring that everyone has the opportunity to contribute to and reap the rewards of our nation's advancement.

In this edition of The Contrarian, our contributors engage in thorough analysis and meaningful discussions, illuminating the path toward a future where economic success goes hand in hand with the well-being of our society and environment.
Let's keep these values at the forefront as we navigate the complexities of India's evolving economy. This edition of The Contrarian has contributions from students of different Departments and Universities across India.

MESSAGE FROM THE EDITORS

Shilpa Ann Thomas

Editor-in-Chief

2023-24

Dear Readers,

At the beginning of the twenty-first century, we witnessed profound shifts globally that present both formidable challenges and boundless opportunities. Against the backdrop of rapid globalisation, industrialisation, and the pursuit of technological developments, nations across the globe navigate a landscape marked by unprecedented advancements. This era of scientific and technological renaissance has propelled societies into uncharted territories, where burgeoning populations and expanding knowledge frontiers demand innovative solutions. Amidst these transformations, the concept of sustainable development emerges as a guiding beacon, encapsulating the imperative to harmonise economic progress, social equity, and environmental stewardship. As countries grapple with the importance of sustaining growth while safeguarding the well-being of future generations, the pursuit of a balanced, multi-dimensional approach to development becomes paramount.

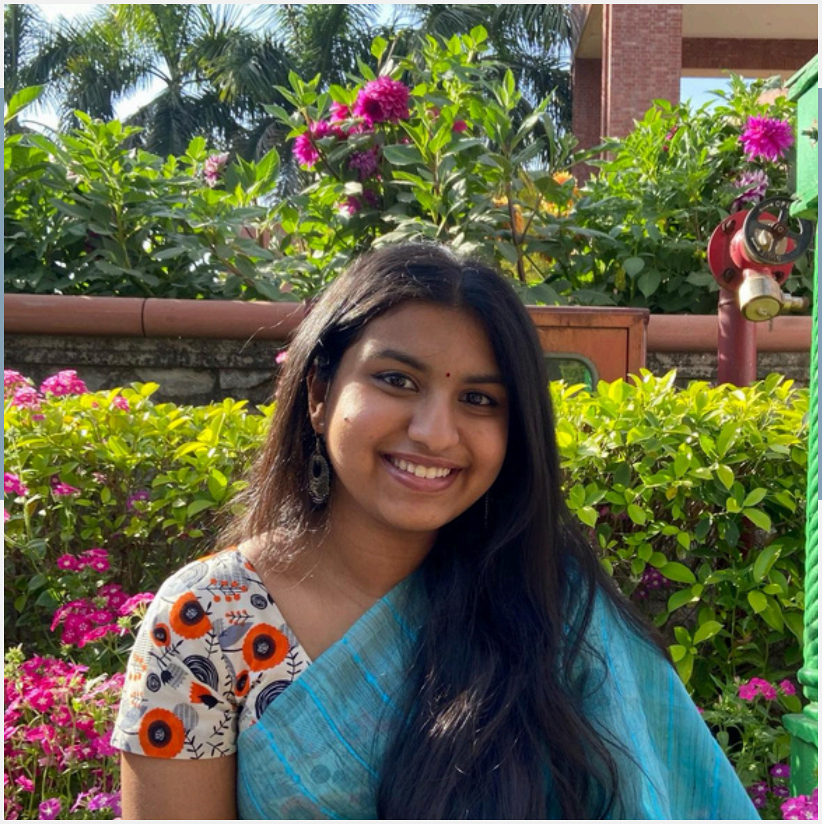
In this context, our magazine explores the theme "Colours of the Economy," shedding light on the kaleidoscope of economic hues that shape our global landscape.

Our members have meticulously crafted research articles, captivating photo essays, and thought-provoking cartoons, offering multifaceted insights into a spectrum of economic paradigms, each distinguished by its own shade and essence.

In the spirit of fostering diverse perspectives, we are delighted to feature guest entries that enrich our discourse with fresh insights and novel viewpoints. Through collaborative efforts, we aim to paint a comprehensive portrait of the economic panorama, embracing the complexities and contradictions inherent in our globalised world.

As stewards of contrarian thought, we invite you to immerse yourselves in the vibrant palette of economic innovation and evolution showcased in these pages. May this issue ignite curiosity, spark dialogue, and inspire action as we navigate the ever-changing currents of the global economy.

MESSAGE FROM THE EDITORS



Hima Mary Jacob
Deputy Editor-in-Chief
2023-24

"We live in a rainbow of chaos"
– Paul Cézanne

Dear Readers,

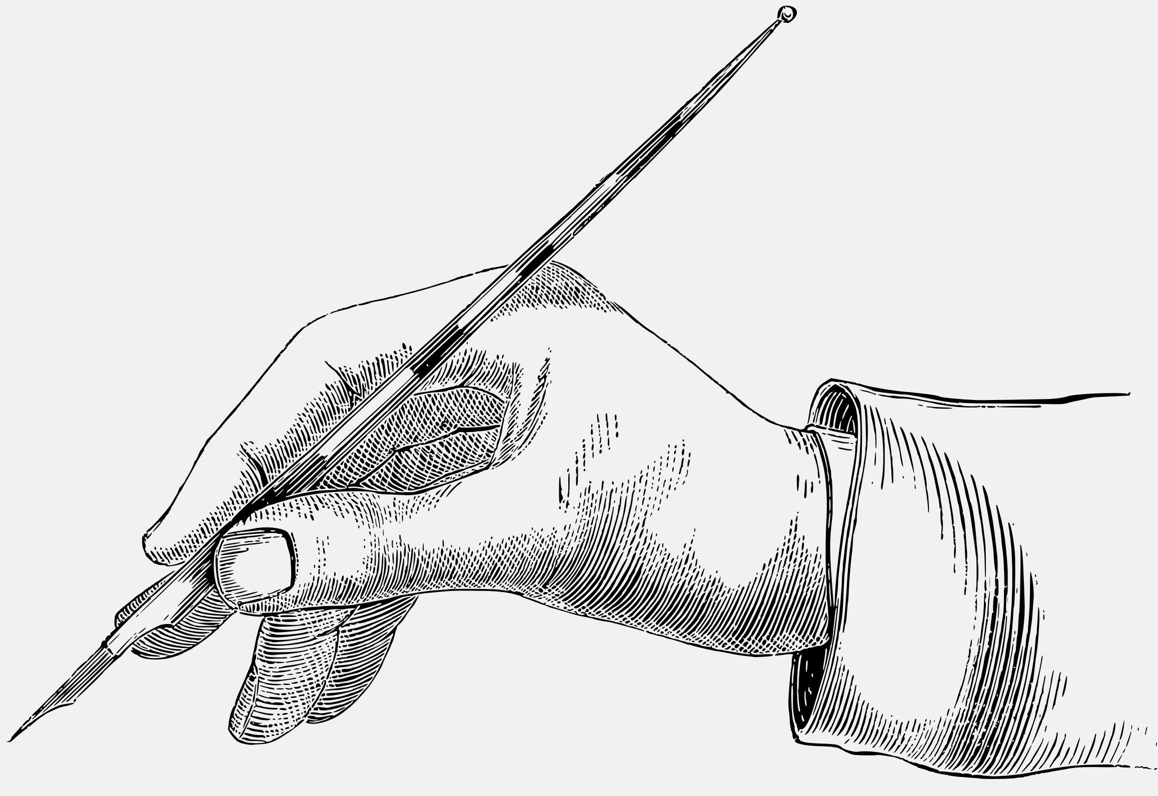
Colours have a lot of power to convey the subtleties of life. Colour symbolism is used to decipher emotions, qualities and even extended to the world of economics. Each colour draws parallel to a different aspect of the economy. A nation can only truly walk down the path of development when each of the colour is incorporated. This metaphor highlights the spectrum of activities that shape the developmental landscape of a nation. It aids us to navigate the dynamic economic environment with a deeper understanding of its complexities.

In this issue, we embark on a journey to explore our theme through various creative expressions.

During this journey, we realised an intrinsic truth that a single colour cannot dictate the affairs of a nation. Rather, it is influenced by a blend of several colours. Different elements of the economy are intertwined just like how colours can blend to create new shades. This offers an opportunity to explore the intricate interactions and interdependencies within the economic system. *We truly live in a rainbow of chaos!*

Our members have tried to imbibe this truth and enrich the readers with unique insights. As Contrarians, we aim to promulgate these ideologies through our team's synergic efforts. We hope that our readers can indulge and reflect while flipping the pages of this magazine.

Editorial Desk

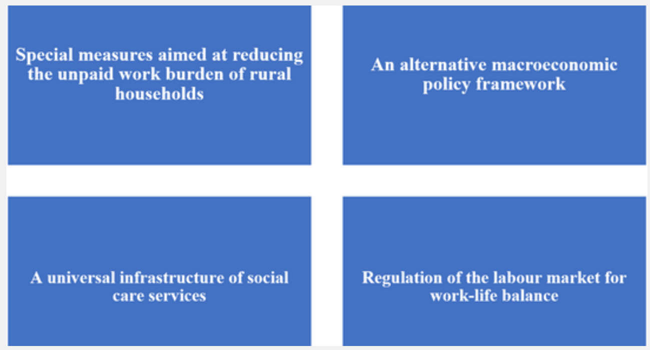


Roadmap for making Uttar Pradesh 1Trillion Economy complementing The Purple Economy

DR. RUCHI BHALLA

As capitalism ages into the 21st century, it also poses increasing challenges to a sustainable economic system of production and reproduction. These challenges are in a form of intertwined crises of global scale such as deepening economic crisis and rising global unemployment. Not only this, the economy is also facing a longstanding environmental crisis, inequalities and to some extent the female crisis of care. The purple economy refers to an economic order organised around sustainability of caring labour through a redistributive internalisation of the costs of care into the workings of the system, "This is an urgent question of political will and power. Without intervention, people may be less willing and able to fulfill caring norms, which may thereby be eroded. Those who assume caring responsibilities despite such pressures, will pay a higher price for doing so and may have less influence on policy than those conforming more to less caring dominant norms. Not to adopt a generous strategy for caring now will shift power away from those who continue to care, erode caring norms, and make it more difficult to adopt a more caring strategy in the future. Without such a strategy, standards and availability of care will fall, and with a high cost to society as a whole, and in particular to those who continue to care" (Himmelweit, 2008). Purple economy as the colour symbolises was adopted by feminist movements in some countries around the world. Professor İpek İlkkaracan was the first female economist to coin the term *'Purple Economy'*. The term was formulated as an economic framework that recognises the importance of care work in all aspects of life. It also states the disadvantages that women face due to unpaid care forced onto them by society, such as the employment gap, gender wage gap, and job segregation.

The purple economy aimed at the *recognising, reducing* and *redistributing unpaid care work.*
Four pillars of Purple Economy are:



Source:: IWRAW, ASIA PACIFIC, WORLD ECONOMIC FORUM (2018)

Uttar Pradesh Roadmap for transformation through OPOD Scheme

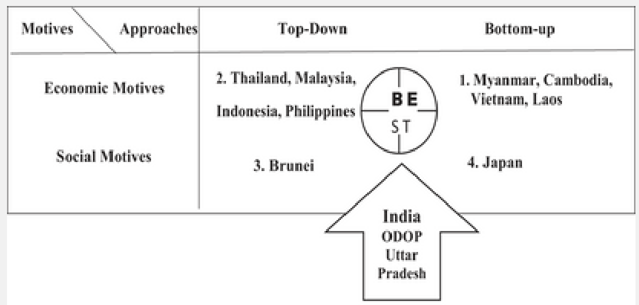
One Village One Product (OVOP) originated in the 1980s in Oita, Japan started from a group of women producing homemade biscuits in a nearby local market. Slowly the biscuits started gaining importance and had a huge demand in the market. The women who were producing biscuits also started acquiring different skills such as book-keeping, marketing, packaging etc. Increasing market, gained demand which eventually improved the quality and packaging of the product and also it increased the awareness of the product. Increasing demand helped the group to improve the overall quality of the product as per the expectations of the customers (UNDP, 2017). This practice gave them empowerment and helped them to emerge as a successful entrepreneur. This experience of the group of women helped Japan to come up with one of the successful policies, i.e. OVOP. It promoted competitive and staple product of an identified village to increase sales and thus improved the standard of living of the villagers. The revitalisation programme of OVOP helped local population not only in generating funds and credit from local banks but also contributed to the creation of employment and modern facilities in their respective villages (UNDP, 2017). Being successful and improving the empowerment of women, helping them to gain importance in the labour market, the policy has been adopted by many developed and developing countries. The scheme has helped many countries in revisiting failures in terms of labour market (Ndione and Suzuki, 2018).

Uttar Pradesh, the largest state of India having 75 districts, envisioned and implemented the coveted programme of One District One Product (ODOP) in 2018, which followed the validated and experienced global idea of Japanese's OVOP. The state has implemented ODOP programme with the objective of achieving the goal of 1 Trillion economy through the way of transforming every district of the state into an export hub. The economy has identified quality of products which have export prospects, also the state has worked on eliminating the tailbacks in the process of improving the exporting the products. Industries are set up which help in scaling up the manufacturing of products at local levels, and also finding its potential buyers across the boundaries of the nation. The aim of the programme is to help in identifying products district wise by improving the quality of the traditionally famous product/craft of respective districts, and also ensuring the generation of employment especially female employment at district level. The upliftment of the districts will help in contributing towards the economic development of respective districts, state and eventually the nation. A demand-driven approach to promote industrial development and job creation is needed to make Uttar Pradesh 1 trillion economy. As per the existing literature, infrastructure and economic growth are positively related (Estache (2006); Sahoo and Dash (2008)). Even studies show that investment in infrastructure will lead to fourfold increase in the growth rate of Uttar Pradesh economy. District wise analysis reflects that just by 1% investment in physical infrastructure which includes sectors such as power, railway, road, telecommunication, net irrigation facilities etc. will increase about 4-5% in growth of the economy (Dash & Sahoo, 2010; Kumari & Sharma, 2016). But the question here includes what kind of infrastructure is needed to increase growth? Investment in MSME or labour-intensive industry as UP is rich in labour can be one of the best ways to improve the growth of economy. The best aspect of this is that the input cost is low, and social distribution of the economy is high due to which there is a qualitative change in the purchasing power of society. Such possibilities not only increase aggregate demand but also build a harmonious and progressive society. Ultimately, they become a strong vehicle for stimulating investment and growth. The growth of micro and small industries of UP and boom in exports is the result of this. In terms of its economy, the state ranks second after Maharashtra, having a share of 8.79 percent of India's GDP at current prices in the year 2018-19, and is recording upward trend in the recent years (Ministry of Statistics and Programme Implementation, 2020). Micro Small and Medium Enterprises (MSME) sector plays a very significant role in the economy of Uttar Pradesh with nearly 9 million (90 Lakhs) MSME units, enriching the state to secure first position in the country. MSME is the largest contributor to employment after agriculture not only for the state but also the entire country. For example, in the last five years in the MSME sector, investment of about Rs 2.5 trillion came from abroad as a part of foreign direct investment. Naturally, at least this much domestic investment must have taken place. This means a gross investment of about Rs 5 trillion (Rahee Singh, 2022). The state's connectivity, infrastructure, law and order and business friendly environment will create new capabilities for quantitative and qualitative growth in the economy. UP's export potential will enhance due to the balance between availability of skilled labour and productivity at low input cost and create favourable prospects.

Rapid growth in manufacturing and construction would lead to considerable employment creation given their relatively high employment elasticity. The additional annual investment required under BIS would range from `0.9 trillion ($13.5 billion) in 2018/19 to `15.3 trillion ($168.9 billion) in 2032/33 (ADB 2022). Example of China plans to increase spending on "new infrastructure" almost fivefold by 2030, including investment in 5G networks, the industrial Internet of Things, artificial intelligence, data centres and electric vehicles. By 2030, the nation's digital economy will contribute half of GDP, up from 35% today. The state government has come up with specific policies for 20+ sectors and accorded the highest priority to preserving, reviving and popularising local arts and crafts by formulating a landmark programme of 'One District, One Product' (ODOP) scheme.

ODOP acquires further significance and relevance in the context of the pioneering campaign launched by India's Prime Minister called the "Aatma Nirbhar Bharat Abhiyan" aiming to strengthen the domestic industries and making India self-reliant. The MSMEs proudly contributed to 80 percent of exports of Uttar Pradesh valued at Rs 1.14 trillion in 2018-19. The share of Uttar Pradesh in total exports from India is 4.73 percent which may further be increased via ODOP. Role and contribution of MSMEs and the challenges faced by this sector offer great opportunity and scope for ODOP to revitalise the economy. Considering these facts and prevalent problem of unemployment at the level of districts, the ODOP has been implemented with the following key objectives (Department of MSME and Export Promotion, 2020b):

- Preserving and developing local crafts and skills along with promotion of the art.
- Increasing the income of workforce and generating employment at local level (for ensuring decline in migration of workforce for employment).
- Improving the quality of products and development of requisite set of skills.
- Transforming the products in an artistic way (by branding and packaging).
- To link the production/products with tourism.
- To eliminate the problem of economic differences and regional imbalances owing to income disparity.
- After successful implementation of ODOP at state level, extending this concept to national and international level.



Source: Basic Matrix adapted from Dipta (2014, pp.27-28)

Conclusion

OPOD has helped Uttar Pradesh economy in boosting the industrial growth. Local artisans and craftsmen have been able to specialise in different skills. The scheme has improved the employment which led the government of Uttar Pradesh to come up with a more strategic and well-planned strategy. The scheme has also helped in alleviating poverty, controlling the roaring rate of urbanisation, restoring the lost identity of local artisans and crafts, thereby ensuring balanced and inclusive economic development. The initial results of ODOP in the state are quite encouraging. Notwithstanding the sincere efforts of the government of Uttar Pradesh in positioning ODOP strategy as a well-thought idea committed to ensure inclusive economic growth, it is actually the faith, involvement and active participation of local community (artisans and craftsmen) from each district that will determine the fate of ODOP scheme in the long run.

References

Asian News International (ANI) (2020), "One District One Product Scheme given boost to traditional industries: UP Govt", 8 November, Business World, available at: http://www.businessworld.in/article/-One-District-One-Product-scheme-given-boost-to-traditional-industries-UP-govt/08-11-2020-340673/ (accessed 14 January 2021).

Bardach, E. and Patashnik, E.M. (2019), A Practical Guide for Policy Analysis: The Eightfold Path to More Effective Problem Solving, CQ Press, Washington, D.C.

Claymone, Y. and Jaiborisudhi, W. (2011), "A study on one village one product project (OVOP) in Japan and Thailand as an alternative of community development in Indonesia", Thai Journal of East Asian Studies, Vol. 16 No. 1, pp. 51-60.

Denpaiboon, C. and Amatasawatdee, K. (2012), "Similarity and difference of One Village One Product (OVOP) for rural development strategy in Japan and Thailand", Japanese Studies Journal, Special Issue: Regional Cooperation for Sustainable Future in Asia, Vol. 29 No. 1, pp. 52-62.

Department of MSME and Export Promotion (2020a), "Success Stories", One District One Product, Uttar Pradesh, available at: http://odopup.in/en/page/-success-stories (accessed 17 October 2020).

Department of MSME and Export Promotion (2020b), "Frequently Asked Questions", One District One Product, Uttar Pradesh, available at: http://odopup.in/en/page/frequently-asked-questions-(faqs) (accessed 26 February 2021).

Department of MSME and Export Promotion (2021), "Achievements", One District One Product, Uttar Pradesh, available at: http://odopup.in/en/page/achievements (accessed 17 October 2020).

Dinis, A. (2006), "Marketing and innovation: useful tools for competitiveness in rural and peripheral areas", European Planning Studies, Vol. 14 No. 1, pp. 9-22.

Dipta, I.W. (2014), Improvement Rural Living Condition Through One Village One Product (OVOP) Movement, ASEAN Cooperation Project No. IND/SME/11/003/REG, Ministry of Cooperatives and SME, Republic of Indonesia, Jakarta.

Directorate of Economics and Statistics, Government of Uttar Pradesh (2020), "State DomesticProduct", http://updes.up.nic.in/esd/STATE_ACC_STATISTICS/State_Domestic_Product/23-2-21/3GSDP_2019_20_current_prices.pdf (accessed 16 February 2021).

International Monetary Fund (IMF) (2020), "World economic outlook, April 2021", available at: https://www.imf.org/external/datamapper/datasets/WEO (accessed 17 January 2021).

Issa, F.O. (2014), "One Village One Product (OVOP): a tool for sustainable rural transformation in Nigeria", Nigerian Journal of Rural Sociology, Vol. 14 No. 2, pp. 48-60.

Jabbra, J.G. and Dwivedi, O.P. (2004), "Globalization, governance, and administrative culture", International Journal of Public Administration, Vol. 27 No. 13-14, pp. 1101-1127.

Jreisat, J.E. (2005), "Comparative public administration is back in, prudently", Public Administration Review, Vol. 65 No.2, pp. 231-242.

Mambula, C.J. (2004), "Relating external support, business growth and creating strategies for survival: a comparative case study analyses of manufacturing firms and entrepreneurs", Small Business Economics, Vol. 22 No. 2, pp. 83-109.

Ministry of Commerce and Industry, Government of India (2020), "One District One Product concept for encouraging domestic manufacturing", available at: https://pib.gov.in/PressReleasePage.aspx?PRID=1656130 (accessed 6 February 2021).

Ministry of Commerce and Industry, Government of India (2021), "One District One Product Scheme", available at: https://pib.gov.in/PressReleasePage.aspx?PRID=1694805 (accessed 14 February 2021).

Ministry of Statistics and Programme Implementation (2020), "Indian States by GDP", available at: https://statisticstimes.com/economy/india/indian-states-gdp.php (accessed 14 January 2021).

Natsuda, K.I. (2011), "One Village One Product - rural development strategy in Asia: the case of OTOP in Thailand", RCAPS Working Paper, No. 11-3, Ritsumeikan Center for Asia Pacific Studies (RCAPS), Ritsumeikan Asia Pacific University, Oita, Japan.

Ndione, J.S. and Suzuki, K. (2018), "The OVOP as a tool to develop Small and Medium-Sized enterprises: insights from OVOP entrepreneurial experience in Senegal", International Journal of Education and Research, Vol. 6 No. 3, pp. 95-112.

Ndione, J.S. and Suzuki, K. (2019), "Beyond the One Village One Product (OVOP) concept through design thinking approach", International Journal of Education and Research, Vol. 7 No. 4, pp. 143-156.

Oxfam International (2018), "India: extreme inequality in numbers", available at: https://www.oxfam.org/en/india-extreme-inequality-numbers (accessed 4 February 2021).

Pradhan, K.C. (2013), "Unacknowledged urbanization: new census towns of India", Economic and Political Weekly, Vol. 48 No. 36, pp. 43-51.

Radiah, A.K. (2009), "Success factors for small rural entrepreneurs under the One District One Industry

Programme in Malaysia", Contemporary Management Research, Vol. 5 No. 2, pp. 147-162.

Rehman, A. (2020), "Despite lockdown impact, UP govt hopeful of growth momentum in export revenue", The Indian Express, 7 September. available at https://indianexpress.com/article/business/economy/despite-lockdown-impact-up-govt-hopeful-of-growth-momentum-in-export-revenue-6585935/(accessed 18 January 2021).

Reserve Bank of India (2020), "Handbook of statistics on Indian States", available at: https://m.rbi.org.in/Scripts/AnnualPublications.aspx head=Handbook+of+Statistics+on+Indian+States, (accessed 18 January 2021).

Robinson, M. (2007), "The politics of successful governance reforms: lessons of design and implementation", Commonwealth and Comparative Politics, Vol. 45 No. 4, pp. 521-548.

DUMPSTER DYSTOPIA : Exploring the dynamics of Global Waste Trade

SHILPA ANN THOMAS & HIMA MARY JACOB

Historical Overview

'Western' Colonialism spawned around the 1500s wherein the European Nations conquered and exploited regions around the globe for geopolitical dominance. While Colonialism has ostensibly ceased to exist in the contemporary world yet it is still deeply ingrained in our world in a myriad of other forms.

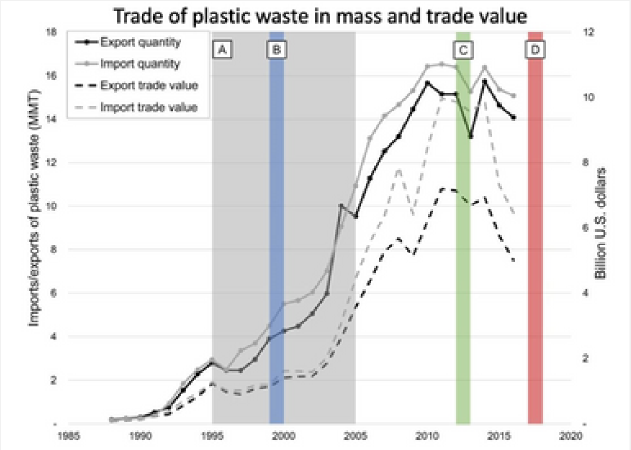
One such evolved form of colonisation describes the pollution poorer countries incur when the richer countries ship millions of tonnes of plastic, clothing and e-waste to global south, known as 'Waste Colonialism'. The term was coined at 1989 during the discussions at the United Nations Environmental Programme Basel Convention working group. It emerged as a consequence of the apprehensions raised by the African nations about the disposal of hazardous wastes by high GDP countries into low GDP countries. These toxic wastes not only contain and disrupt the ecosystem but also sever the cultural, spiritual and physical relationship people have with their land. Previously colonised countries are not free from colonial powers even though they may be independent today.

This is true and apparent in case of Ghana, a former British Crown Colony from 1821 till its independence in 1957. The second-hand clothing trade in Ghana initiated while it was still a British colony. The global north remains as the exporter and Ghana as the importer even after 65 years of independence, maintaining the power dynamics. Ghana's largest second-hand market, The Kantamanto Market sees 15 million garments per week of which 40% will never be fit for resale and end up polluting the environment and fueling the landfill fires (Longdon & Gawande, 2024). Colonialism has not only played a pivotal role in geopolitics but also shaped the waste trade for decades.

Global Waste Trade

The transportation of waste is a significant component of the enormous global waste trade. This was perceived as a means for developing nations to stimulate their economy and generate income. The global waste trade has now reached US $2 trillion and is predicted to reach US $2.3 trillion in 2027 (Huang, 2024).

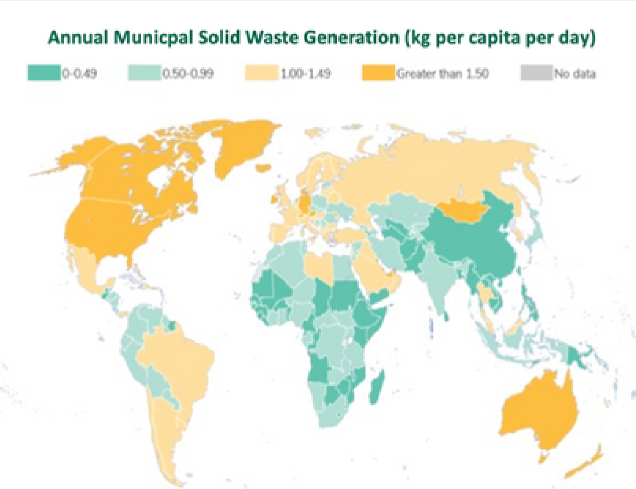
Global waste management system's capacity has enhanced through the participation in waste trade. The global waste trade from 1988 to 2016 was valued at approximately US $98.3 billion for importing countries (George, 2021). From 1993 onwards, the Global annual waste trade experienced a rapid growth which continued to expand exponentially in 2016. The trade grew by 723% in 1993 while in 2016 it increased by 817% (George, 2021). [1]China was the largest importer of waste while the largest exporter of waste was [2] EU28 during this period.



Source: UN Comtrade; Advances in Municipal Recovery Facility (MRF) technology resulting in expansion of commingled recycling, especially single-stream recycling in the United States (1995–2005)

1.Including Hong Kong
2.When considered collectively

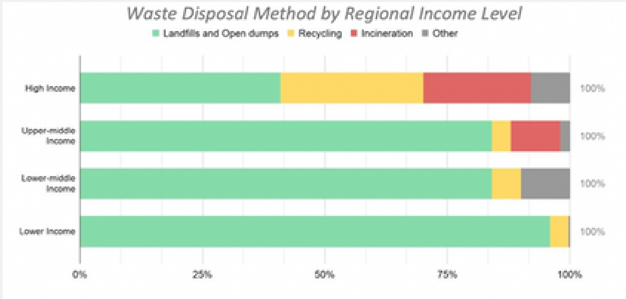
According to the World Bank, income levels and urbanisation is generally correlated with waste generation rather than population. This suggests that higher income countries produce more waste than lower income countries. Despite lower-income countries accounting for 9% of the world's population and generating 5% of its waste, high-income countries, with 16% of the population, produce 34% of the waste. (George, 2021).



Source: What a Waste 2.0: A Global Snapshot of Solid Waste Management to 2050

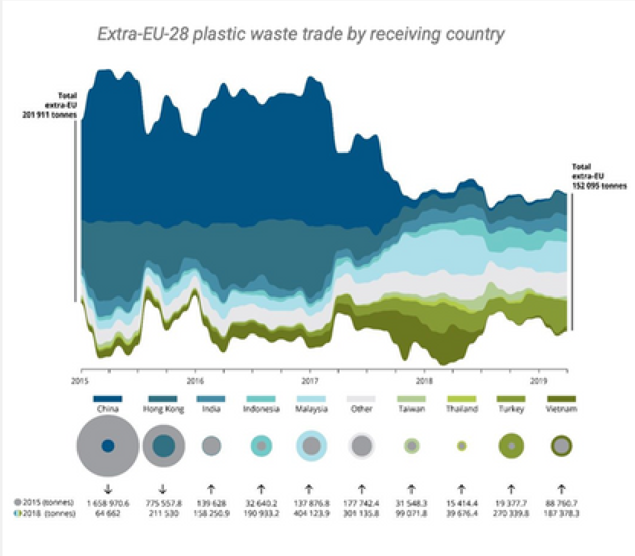
The major motive that drives developed countries to export waste is the relatively higher cost of waste treatment and more stringent legislations on waste management at home. Shifting the landscape, importing countries benefit economically from accepting waste from wealthier countries. Hence, these countries do not hold strict laws.

The situation is further aggravated due to the fact that most importing countries lack the adequate infrastructure and capital to manage their own waste let alone that which is imported. As a consequence, the proportion of waste that fills open dumps in lower-middle and low-income countries is proportionately high. Imported waste further overburdens the landfills and consequently ends up in oceans.



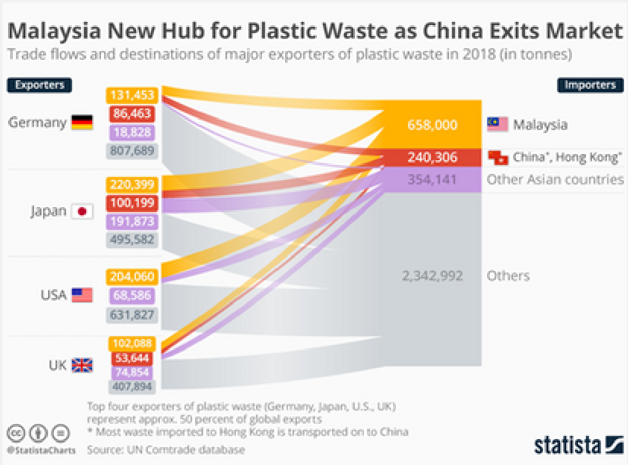
Source: World Bank – What a Waste 2.0: A Global Snapshot of Solid Waste Management to 2050

South East Asian countries shoulder a huge burden when it comes to plastic waste. China was the main importing country of plastic waste with annual imports of 8.88 million which triggered a series of environmental problems (Wen et al., 2021). China's 'Green Fence' regulation mandated a ban on import of 24 types solid waste including plastic waste in 2017 to mitigate this situation. This drastically reduced the amount of waste flowing from Europe to Asia and significantly disrupted the balance of trade. In the start of 2015, more than 250,000 tones were exported from Europe to Asian which plunged to 150,000 tonnes in early to mid 2018 (Geroge, 2021). The numbers estimated here are accounted for after South East Asian countries stepping up following China's ban.



Source: George, M. (2021, November 14). Global Waste Trade and its Effects on Landfills in Developing Countries - Global Waste Cleaning Network. Global Waste Cleaning Network -. https://gwcnweb.org/2021/11/14/global-waste-trade-and-its-effects-on-landfills-in-developing-countries/

Nevertheless, countries like Malaysia were forced to pick up the slack after China's ban was introduced. In 2018, It grappled with 650,000 metric tonnes of plastic waste (Buchholz, 2019). Indonesia was also inundated with additional 350,000 tonnes of plastic from Germany, Australia and the US in 2018 (Longdon & Gawande, 2024).



Source: Buchholz, K. (2019, June 20). INFOGRAPHIC: Malaysia new hub for plastic waste as China exits market. Statista Daily Data. https://www.statista.com/chart/18451/trade-flows-of-major-exporters-of-plastic-waste/

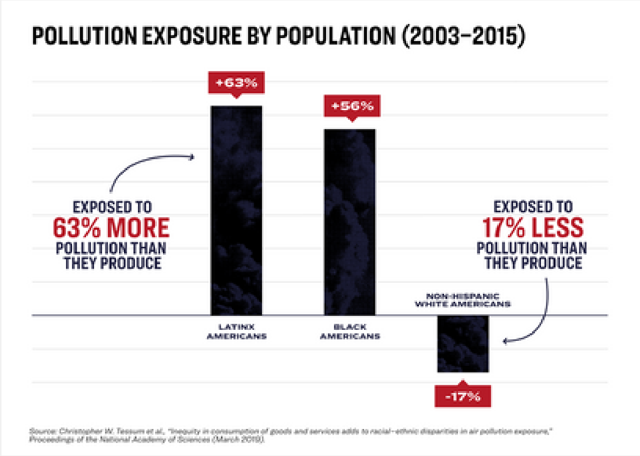
South East Asian countries are regarded as the worst polluters in the world. Yet, it is often ignored that these countries are the world's dumping ground. Waste colonisation not only burdens the Global South with waste but also makes them the assailants for a crime they never committed.

Environmental Racism and Justice

'Environmental Justice' essentially means that everyone has the same right to environmental benefits and protections regardless of race, colour, nationality or income as well as meaningful involvement in the policies that shape their communities. But rarely this has been the reality for people of colour and those with low income. This might be due to that fact that Environmental Injustice is formed by the same patterns of racism and inequality that have existed in the world and influence every aspect of our society.

The term 'Environmental Racism' was first introduced by civil rights leader Dr. Benjamin F. Chavis Jr. He defined it as intentionally polluting in communities of colour and low-income groups. Many studies suggest that these communities are disproportionately posed to fumes, ash, soot and other pollutants from such hazardous facilities located in their midst. As a result, they face increased risk of health hazards.

Race is often a more reliable indicator of proximity to pollution even though many of these problems are faced by low-income communities as well. A landmark study by Dr. Robert Bullard found "race to be more important than socioeconomic status in predicting the location of the nation's commercial hazardous waste facilities". In this study, he proved that African American children were five times more likely to have lead poisoning from proximity to waste than Caucasian children. Even black Americans earning $50,000-60,000 annually were more likely to live in a polluted area than their white counterparts earning $10,000. Meanwhile, in the UK, a government report found that black British children are exposed to up to 30% more air pollution than white children. (What Is Environmental Racism and How Can We Fight It?, 2021)



Source: Fighting for justice as we combat the climate crisis | Elizabeth Warren. (n.d.) https://elizabethwarren.com/plans/environmental-justice

Racism that is deeply ingrained in our society reflects and extends to waste trade as well. The Global North creates majority of the waste in the world exports it to global south which ultimately harms their people's lives and environment while constantly being their scapegoat. It is ironical that these low-income countries do have to means to adequately manage the waste efficiently which further aggravates the issue.

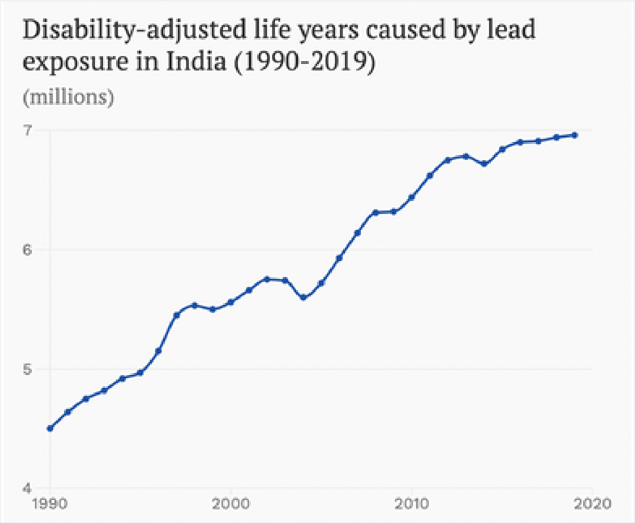
This can be seen in the case of India's battery recycling situation. The global lead acid battery market is projected to reach USD 52.5 billion by 2021 from estimated USD 41.6 Billion in 2019 (Upadhyay, 2022). This huge demand has created a thriving and large informal economy in south Asia around the disposal of lead acid batteries. According to a study by Toxics Link, in 2017-2018, 1.2 million tonnes of batteries entered India's recycling industry and 90% of which was processed informally.

The Delhi Master Plan 2021 prohibits manufacturing with lead and the recovery of lead from waste in India's capital. However, a report by Toxics Link on the impact of lead battery recycling indicates that this prohibition has resulted in illegal recycling units relocating to nearby towns like Murad Nagar.

Lead gradually accumulates in the body over time. Numerous health problems arise due to the exposure to the heavy metal which particularly damages the brain and central nervous systems. Lead poisoning is responsible for 900,000 deaths annually, accounting 1.5% of global deaths (Upadhyay, 2022). The World Health Organization (WHO) says there is no safe level of lead in our blood.

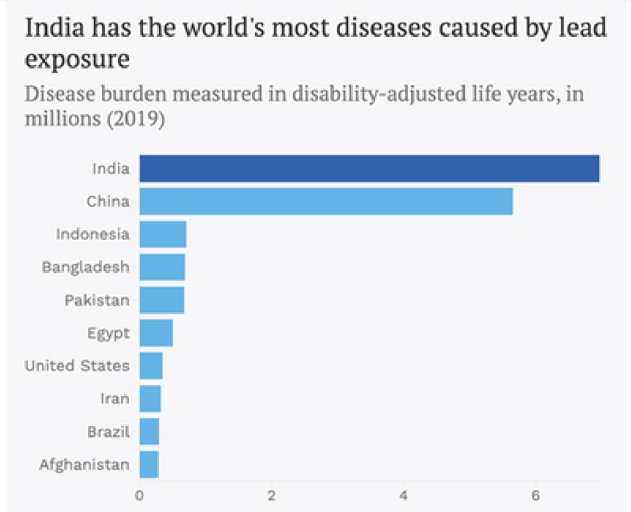
Despite it harmful effects, lead is the key component in batteries, paints and various other industrial applicants. It has also clawed its way into spices and cosmetics. A significant source of lead exposure is the recycling of lead acid batteries in middle-income and low-income countries.

The informal nature of battery recycling in South Asia makes it challenging to obtain authoritative data on the scale and quantities involved. However, morbidity data indicates the severity of the issue. According to the Global Alliance on Health and Pollution (GAHP), lead pollution is estimated to cause approximately 233,000 premature deaths in India annually. In Bangladesh and Nepal, the estimated numbers are around 30,800 and 3,760 premature deaths, respectively (Upadhyay, 2022).



Source: IHME, Global Burden of Disease, via Our World in Data
Picture Source: Upadhyay, M. (2022, February 14). South Asia's toxic battery recycling problem. The Third Pole. https://www.thethirdpole.net/en/pollution/south-asias-toxic-battery-recycling-problem-2-2-2/

Lead poisoning not only results in fatalities but also causes illnesses and disrupts our ability to lead normal lives. It has irreversible effects on children's development, potentially leading to severe behavioural impacts.



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Picture Source: Upadhyay, M. (2022, February 14). South Asia's toxic battery recycling problem. The Third Pole. https://www.thethirdpole.net/en/pollution/south-asias-toxic-battery-recycling-problem-2-2-2/

According to the World Health Organization (WHO), approximately 21.7 million years of healthy lives (disability-adjusted life years, or DALYs) are lost worldwide due to the long-term effects of lead poisoning, with the highest numbers observed in low- and middle-income countries.

This illustrates how the Global North views developing countries as convenient dumping grounds for their waste, transferring the associated health and ecological impacts while simultaneously placing blame on these countries for the world's environmental degradation. Racism has assumed its position in environment also in the modern world.

Corporate Responsibility and Waste Colonialism

A large number of multinational companies (MNCs) are actively tackling waste plastic through voluntary corporate social responsibility (CSR) initiatives, especially the petrochemical and consumer goods industries. Although this points to a trend in the direction of corporate sustainability, it also begs the issue of how well CSR programmes work given how much MNCs contribute to the global plastics pollution problem. (Vandenberg, 2024)

The majority of these CSR activities centre on "end-of-life" solutions, like forming alliances to improve plastics recycling or funding campaigns to clean up marine pollution. Yet, there have been very few attempts to stop the creation of plastics at the source level. CSR has spread to encompass waste management through public-private collaborations with governments and even to the establishment of national legislative action plans, therefore placing multinational corporations (MNCs) in charge of formulating national plastics policies.

This type of corporate participation is sometimes referred to as "political CSR" (Scherer et al. 2016). MNCs have the ability and significant power to spearhead the international reforms required to address the challenge of plastic pollution. It is important to recognise, nevertheless, that MNCs' principal goals, which are focused on market development and economic growth, frequently conflict with practical solutions to this problem. Multinational corporations (MNCs) place a high priority on the continuing manufacture of plastics, which creates a conflict between their economic goals and the drastic measures needed to address the plastics pollution disaster. (Levy and Newell 2005).

Case Study: Coca-Cola's World Without Waste Initiative

Coca-Cola is not alone among fast-moving consumer goods businesses that have high standards for waste reduction and that run corporate social responsibility programmes related to plastic waste. Coca-Cola has the power to quickly change a market and its effects on the environment. Above all, Coca-Cola is the world's biggest plastic garbage generator. Since public-private partnerships are a fundamental component of the Coca-Cola Company's "connected capitalism" business model, which was first presented by former CEO Neville Isdell, the company strongly supports corporate social responsibility.

The continuing partnership between Coca-Cola and WWF, which was started in 2007 and focuses on water conservation, climate action, and plastics reduction, is one noteworthy example. Through this relationship, Coca-Cola can improve the sustainability of its supply chain while supporting WWF's large-scale conservation programmes. But there has been a lot of criticism directed at this collaboration. Communities around Coca-Cola bottling facilities continue to face water shortages, and the corporation is still a significant source of plastic pollution.

Additionally, Coca-Cola received criticism for providing sponsorship to COP27, which led to a petition signed by more than 240,000 individuals requesting that the Egyptian government, which is hosting COP27, ban the company from being a corporate sponsor (Vandenberg, J. 2024). Critics contend that without addressing their own harmful industrial practices, corporations are able to link their brands with sustainability and participate in ecologically benign activities thanks to these corporate-state relationships. In 2018, the WWW project was started in response to the pressing problem of plastic pollution. Millions of plastic bottles, wrappers, sachets, lids, and bags are among the waste products that enter the environment every year, which was framed as a result of poor waste management infrastructure. The project, however, does not directly address the primary problem, which is the excessive production of wasteful and hazardous plastics. The WWW campaign uses discourses to shift focus away from industrial accountability for the issue of plastic waste and onto people. Coca-Cola is shown using language that evokes a sense of shared vulnerability as a communal victim of the issue. Individual consumers are portrayed as the primary source of plastic garbage, making them the focus of regulatory initiatives. The problem of plastic trash is presented as one that concerns all people. Coca-Cola distances itself from its responsibilities and its position as a source of the problem by framing it in this communal way.

These depictions oversimplify complicated environmental concerns and draw attention away from the systemic injustices connected to the use of plastics and the disposal of garbage. They make the incredibly unrealistic assumption that everyone has access to comprehensive safe waste disposal facilities.

It is imperative to prioritise equitable collaboration in addressing the plastics issue, taking into account the substantial power and capacity of multinational corporations (MNCs) in global environmental governance. Understanding the inherent conflict between the transformative strategies required to address plastics pollution and the primary interests of multinational corporations (MNCs), which are focused on economic growth and market expansion, highlights the larger role that political and economic structures play in influencing corporate behaviour (Levy and Newell 2005).

Policy frameworks and governance

Nowadays, effective waste management is one of the main concerns for nations all over the world. Incorrect disposal of plastics, batteries, electronics, construction and demolition trash, and chemicals can have detrimental effects on both the environment and human health. The effects include permanent harm to marine life and benthic plants, accumulation of hazardous substances in the food chain, air pollution from burning waste, contamination of freshwater from landfill leachate, and an increase in the amount of microplastics found in soil, freshwater, and marine water. Apart from the negative effects on the environment, human health, and human rights, the trading of plastic garbage can impede development in certain nations by exacerbating poverty, organised crime, and corruption. (Farrelly T, 2023)

Most developed nations have strict laws governing the handling and disposal of garbage inside their borders because of the harm they do to natural systems.

These nations utilise a variety of rules, including mandatory in situ segregation, bottle deposits, extended producer responsibility, recycling/incineration facilities, and disposal facilities. The waste trade has been hailed as a net positive since it allows industrialised nations to manage their garbage more affordably, create new employment and businesses, and use waste (particularly electronic waste, or "e-waste" and metal scraps) as raw materials. To the disadvantage of the local populace, industrialised nations have a tendency to export to nations with laxer labour laws and environmental controls. (Sridhar L., et al 2019)

Basel Convention:
Adopted by signatories in 1989, the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal entered into force in 1992. Its foundational idea is that "wastes, including hazardous wastes, should be disposed of in the State where they were generated, to the extent that it is compatible with environmentally sound and efficient management." Furthermore, it acknowledges that transboundary movement of hazardous and other wastes should only occur under certain circumstances, with the importing nation's "prior informed consent," that do not endanger public health or the environment, and that adhere to Basel Convention regulations.

It has been argued that the Basel Convention is both unenforceable or ineffectual. First, the issue of power disparities between nations is not addressed by the Convention's "prior informed consent" norm. The Convention allows low-income nations to import toxic waste because it does not explicitly forbid the export of certain categories of toxic waste. This is because less developed nations are more likely to give their consent, even in the face of environmental and health risks, as waste imports would enable them to earn more foreign exchange.

Second, it has been argued that the Convention is ineffectual since there is no comprehensive non-compliance mechanism with punitive consequences (although it is possible that the presence of punitive measures would have discouraged certain nations from signing the Convention in the first place because of concerns about sovereignty).

Third, a number of waste categories have been left out of its purview. Fourth, the United States of America, one of the largest waste traders in the world, has not ratified the Convention. Lastly, even though the Convention mandates that the exporting nation confirm that the importing nation has the infrastructure necessary to properly dispose of the waste, this obligation is typically ignored. It is challenging to identify a single factor that contributed to the Convention's failure, but it's possible that the relative financial advantages of sending garbage to developing nations and the incapacity of many low-income nations to impose import prohibitions did so. The Convention is still crucial to the public conversation about waste colonialism despite its flaws.

The influence of import restrictions on waste recycling in India

Hazardous waste such as waste oil, PCBs, and asbestos continued to flow into India despite the country's June 24, 1992, ratification of the Basel Convention and the Ministry of Environment and Forests' domestic regulation, due to the fact that import norms had not been updated. As late as 1998, there had not been a single request for "prior informed consent," and until the Supreme Court ordered the Central Government to apply the Rules in 1997, many ports were not even aware that the Convention had been in place. India's import and waste management laws are more strict when it comes to plastics and generally comply with the Basel Convention.

The majority of waste management and pollution control laws are implemented under the framework of the Environment (Protection) Act of 1986. The Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 regulate the import and export of waste, including plastics and e-waste, among other waste categories.

The China Ban

Prior to its oversupply, China was the world's largest importer of post-consumer plastics (Wang et al., 2020). According to estimates made by Brooks et al. (2018, p. 3), in 2016 China's imports of plastic garbage added 10.8% to the country's domestic waste production.

The Chinese government took a bold step on January 1, 2018, banning the import of 24 types of waste for recycling. The reason given was the industry's negative environmental effects as well as the issue of incorrectly sorted waste leading to rising expenses for the nation. Then, the restriction was expanded to include 32 other waste types, such as titanium, stainless steel trash, and hardware. The decision had an impact on the whole Western world, but mainly on the United States, the United Kingdom, and Germany, as these nations shipped a large portion of their electronic, metal, and plastic trash to China for recycling. Following the prohibition, local governments hurried to implement further regulations. The cost of discarded plastic crashed.

The majority of affluent nations have not yet implemented any firm, long-term strategy in response to the prohibition. It was projected that almost 37 million tonnes of plastic will be "homeless" in the USA alone (Daley J,2018). In response to the Chinese policy, several US jurisdictions lifted the prohibition on plastic trash in landfills, while others stopped gathering plastic for recycling. In the meantime, recycling companies and UK authorities reported increasing amounts of plastic garbage with no end in sight.

For its part, the Chinese government has made it clear that it intends to expand the prohibition to cover other waste types and has reaffirmed its commitment to upholding the present regulations. Rather, these nations have turned to looking for other nations willing to take their garbage. Some nations, like Malaysia and Vietnam, have recorded huge increases in garbage and are considering their own bans.

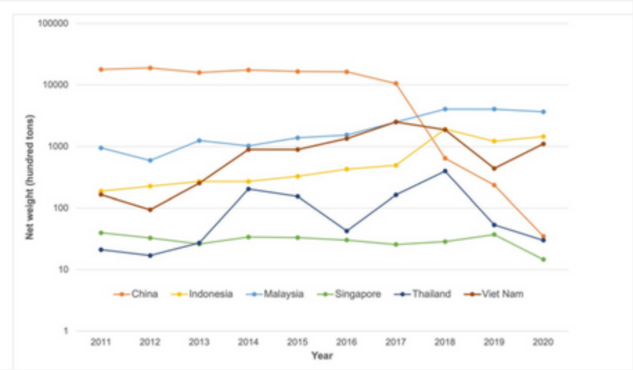
The regulatory tangle outlined above makes it evident that a number of issues, including inadequate domestic collection and segregation, and the timing of the China ban, effectively opened the door for massive amounts of plastic waste to enter a nation with low recycling rates to begin with. Furthermore, it is evident that industrialised nations are unable to handle their trash internally and are only looking to export to nations who have not yet prohibited its import, which is why the prohibition could not have arrived at a better time.

Therefore, rather than depending on developed nations to manage their own garbage locally or on any international treaties, developing countries' sole option to regulate waste import is to severely restrict plastic imports and implement rules domestically.

Challenges and future ahead

One of the most detrimental issues of the twenty-first century is the export of waste from wealthy nations with high consumption habits to developing nations, which encourages a new kind of neo-colonialism in the waste management industry. It is an unsustainable waste management practice to export plastic garbage without taking the recipient countries' needs into account. It is actually a "tragedy of the commons," when choices made out of self-interest hurt other people and the environment.

The trade depends on using the least expensive workforce and providing cheap transportation. The harm caused by waste is cheaply and readily placed on others, generally the weaker, poorer, and more vulnerable people, by "distancing the waste" in order to conceal the effects of overconsumption. Because of the delicate nature of the issue and its possible geopolitical repercussions, transboundary trash movement is rarely given the attention it deserves and isn't always accurately labelled as a type of neo-colonialism.



Source: IHME, Global Burden of Disease, via Our World in Data Picture credit: Taylor, N. (2022, February 25). South Asia's toxic battery recycling problem. The Third Pole. https://www.thethirdpole.net/en/pollution/south-asias-toxic-battery-recycling-problem-2-2-2/

Years after it was signed, the Basel Convention, an international agreement managing the transboundary flow of garbage, is still sadly inadequate in addressing the waste colonialism and several other problems resulting from these waste exports.

The international legal framework must be sufficiently strengthened in order to combat waste colonialism. In addition, domestic waste management laws in both developed and developing nations must be enhanced and more effectively implemented in order to encourage the appropriate collection, segregation, and disposal of waste within each nation's borders.

It is imperative that international conventions, domestic waste management policies, waste import laws, waste data collection and monitoring systems, and international cooperation and technology transfer for waste management be strengthened in order to ffectively address this global issue. (Sridhar L and Kumar P., 2019). Future waste shipments must be directed towards a just circular economy transition in light of the complex relationships between the various actors, policies, nations, societies, and the environment in the recycling value chain, as well as the intended and unintended effects on people, societies, and the environment.

References

Brooks, A., Wang, S., & Jambeck, J. (2018). The Chinese import ban and its impact on global plastic waste trade. Science Advances, 4(6). https://doi.org/10.1126/sciadv.aat0131

Buchholz, K. (2019, June 20). INFOGRAPHIC: Malaysia new hub for plastic waste as China exits market. Statista Daily Data. https://www.statista.com/chart/18451/trade-flows-of-major-exporters-of-plastic-waste/

Daley, J. (2018, June 21). China's Plastic Ban Will Flood Us With Trash. Smithsonian Magazine. https://www.smithsonianmag.com/smart-news/chinas-plastic-ban-will-flood-ustrash-180969423/

Farrelly, T., & Chitaka, T. Y. (2023). Policy implications for gaps in traditional plastic waste material flow analysis: Palmerston North, New Zealand. Frontiers in Sustainability, 4. https://doi.org/10.3389/frsus.2023.982357

Fighting for justice as we combat the climate crisis | Elizabeth Warren. (n.d.). https://elizabethwarren.com/plans/environmental-justice

George, M. (2021, November 14). Global Waste Trade and its Effects on Landfills in Developing Countries - Global Waste Cleaning Network. Global Waste Cleaning Network -. https://gwcnweb.org/2021/11/14/global-waste-trade-and-its-effects-on-landfills-in-developing-countries/

Huang, C. (2024, January 22). What Is Waste Colonization? — Remake. Remake. https://remake.world/stories/what-is-waste-colonization/

Longdon, J., & Gawande, W. (2024, March 27). What is Waste Colonialism? Shado Magazine. https://shado-mag.com/know/what-is-waste-colonialism/#:~:text=The%20term%20waste%20colonialism%20was,countries%20into%20low%20GDP%20countries.%E2%80%9D

Monitoring extreme poverty. (2016). In The World Bank eBooks (pp. 5–98). https://doi.org/10.1596/978-1-4648-0961-3_ch1

Round Table on End of use Lead Acid Battery Waste | Toxics link. (2019). https://toxicslink.org/publications/workshop/round-table-on-end-of-use-lead-acid-battery-waste

Scherer, A. G., Rasche, A., Palazzo, G., & Spicer, A. (2016). Managing for Political Corporate Social Responsibility: New challenges and directions for PCSR 2.0. Journal of Management Studies, 53(3), 273–298. https://doi.org/10.1111/joms.12203

Seven, Z. (2023, May 18). Understanding environmental racism. Verywell Mind. https://www.verywellmind.com/what-is-environmental-racism-5225959

Sharma, S. (2023, June 30). Climate change & fashion waste colonialism. The Carbon Literacy Project. https://carbonliteracy.com/climate-change-fashion-waste-colonialism/#:~:text=The%20term%20'waste%20colonialism'%2C,group%20through%20waste%20and%20pollution

Sridhar, L., & Kumar, P. (2019). The New Face of Waste Colonialism: A Review of Legal Regulations Governing the Import of Waste into India. Socio-Legal Review. https://repository.nls.ac.in/slr/vol15/iss2/1/

R. Thapa, K., Vermeulen, W. J., De Waal, M. M., Deutz, P., & Nguyễn, H. Q. (2024). Towards a Just Circular Economy Transition: the Case of European Plastic Waste Trade to Vietnam for Recycling. Circular Economy and Sustainability/Circular Economy and Sustainability. https://doi.org/10.1007/s43615-023-00330-w

The business of global environmental governance. (2003). In Levy, D. L., & P. J. Newell (Eds.), The MIT Press eBooks. https://doi.org/10.7551/mitpress/1705.001.0001

The environmental justice movement. (2024, February 7). https://www.nrdc.org/stories/environmental-justice-movement

This is what the world's waste does to people in poorer countries. (2022, May 20). World Economic Forum. https://www.weforum.org/agenda/2019/05/this-is-what-the-world-s-waste-does-to-people-in-poorer-countries/

Upadhyay, M. (2022, February 14). South Asia's toxic battery recycling problem. The Third Pole. https://www.thethirdpole.net/en/pollution/south-asias-toxic-battery-recycling-problem-2-2-2/

Upadhyay, M. (2022, February 14).
South Asia's toxic battery recycling problem. The Third Pole. https://www.thethirdpole.net/en/pollution/south-asias-toxic-battery-recycling-problem-2-2-2/

Vandenberg, J. (n.d.). *Plastic Politics of Delay: How political corporate social responsibility discourses produce and reinforce inequality in plastic waste governance.* https://www.muse.jhu.edu/article/922572.

Veidis, E., LaBeaud, A. D., Phillips, A. A., & Barry, M. (2022).
Tackling the ubiquity of plastic waste for human and planetary health. The American Journal of Tropical Medicine and Hygiene, 106(1), 12–14. https://doi.org/10.4269/ajtmh.21-0968

Wang, C., Bai, X. L., Lim, M. K., Chen, W., & Sutherland, J. W. (2020).
Structure of the global plastic waste trade network and the impact of China's import Ban. Resources, Conservation and Recycling, 153, 104591. https://doi.org/10.1016/j.resconrec.2019.104591

Wen, Z., Xie, Y., Chen, M., & Dinga, C. D. (2021). *China's plastic import ban increases prospects of environmental impact mitigation of plastic waste trade flow worldwide. Nature Communications, 12(1).* https://doi.org/10.1038/s41467-020-20741-9

What is environmental racism? (2024, March 26). https://www.nrdc.org/stories/what-environmental-racism

What is Environmental Racism And How Can We Fight It? (2021, September 1). World Economic Forum. https://www.weforum.org/agenda/2020/07/what-is-environmental-racism-pollution-covid-systemic/

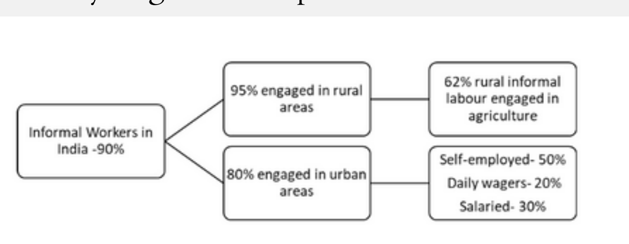
Why plastic waste is a problem? | Crowd For Impact. (n.d.). https://crowdforimpact.com/news/plastic-waste

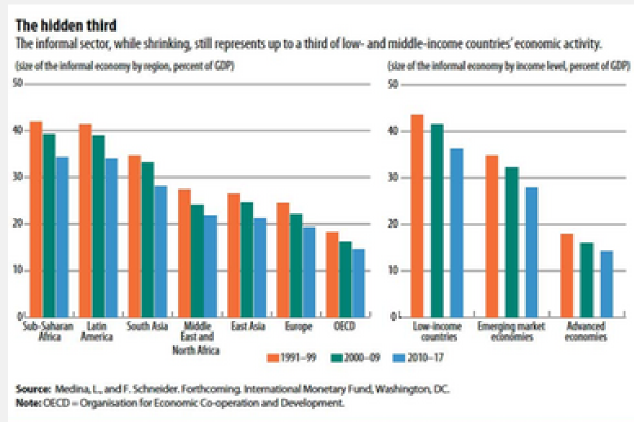
UNSEEN STRENGTH :
Women Driving India's Informal Economy

ANANYA RASTOGI

Informal Sector

The informal economy, also known as the grey economy, is a prevalent global occurrence encompassing activities with market value that would contribute to tax revenue and GDP if officially documented(IMF). According to the International Labour Organisation approximately 60 per cent of the world's population participates in the informal sector. Although it is mostly prevalent in the developing and emerging economies, it is also an important part of advanced economies. In developing countries like India, a large share of the population typically depends on the informal economy. The economic growth and development in general and livelihood and wages in particular of the vast majority of workers in India crucially depends on the economic viability of the informal sectors. According to the Periodic Labour Force Survey over 90 per cent of workers in India are informal workers (419 million in absolute numbers). Out of these, 95 per cent (298 million) workers are engaged in rural areas whereas 80 per cent (121 million) workers are engaged in urban areas. This is primarily because a large number of informal workers are engaged in farm or agricultural activities that is approximately 62 per cent rural informal labour is involved in agriculture. Those in urban areas are involved primarily in manufacturing, trade, hotel and restaurant, construction, transport, storage and communications etc. Among the urban informal workers, 50 per cent are self-employed, 20 per cent are daily wagers and 30 per cent are salaried.



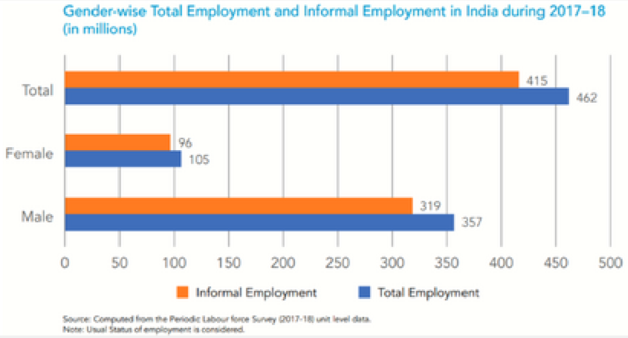


Source: What is the Informal Economy? (2020b, December 1). IMF. https://www.imf.org/en/Publications/fandd/issues/2020/12/what-is-the-informal-economy-basics

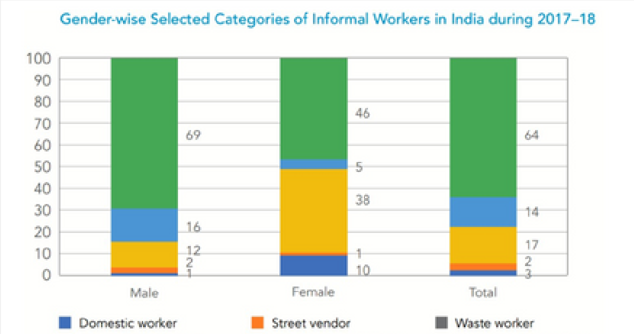
In the graph above we see that the size of the informal sector slowly decreases as economies develop, but with wide variations across regions and countries. Currently, the informal sector continues to represent approximately one-third of economic activity in low-and middle-income countries, while constituting 15 percent of economic activity in advanced economies.

Women in the Informal Sector

Working in the informal, or grey economy, as it's sometimes called, leaves women often without any protection of labour laws, social benefits such as pension, health insurance or paid sick leave. They frequently labour for reduced pay and in hazardous environments, which may include the threat of sexual harassment. The absence of social safeguards has enduring repercussions for women. This is evident in global pension statistics, where fewer women are beneficiaries, leading to a rise in elderly women experiencing poverty. Even in developed economies, such as in France, Germany, Greece and Italy, women's average pension is more than 30 per cent lower than men's.(Monitoring Extreme Poverty, 2016b)



Source: Deshpande , A., Chakraborty , S., Chen , M. A., Hart , K., & Raveendran , G. (2021). Women in the Indian informal economy - indiaspend. Women in the Indian Informal Economy . https://www.indiaspend.com/uploads/2021/03/26/file_upload-446784.pdf



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Gender discrimination is more pronounced in the informal labor market compared to the formal sector, and this bias does not diminish as income levels rise. According to the data from Periodic Labour Force Survey (2017-18), women working informally earn less than half of the wages earned by their male counterparts, and the wage gap varies across social groups. Informal female workers often find themselves concentrated in lower-paying roles within the informal occupational spectrum, contributing to the larger gender pay gaps prevalent in the informal sector compared to the formal one.

Sectors dominated by women typically offer lower remuneration; for instance, home-based workers and domestic workers receive less than half the pay of workers in male-dominated sectors like construction. Even within specific sectors, wage disparities persist due to a gendered division of tasks. In India, for instance, male garment workers commonly receive a fixed monthly salary for garment production, while female garment workers are often paid on a piece-rate basis, which tends to be lower (Kinyanjui, M. N., 2014). Similarly, female domestic workers are frequently concentrated in roles related to cleaning and care services, while male domestic workers tend to secure better-paid positions in private households, such as security guards, drivers, or gardeners(ILO, 2013).

Problems/ Challenges faced by women in the Informal Economy

The majority of informal sector workers experience wage reduction due to childbearing, as they typically lack protection under the Maternity Benefit (Amendment) Act of 2017, which applies to workplaces with fewer than 10 employees. Although state building and other construction workers (BOCW) welfare boards offer financial assistance to pregnant construction workers, there is no equivalent board to support other female workers, such as domestic workers, home-based workers, waste pickers, street vendors, and others.

1. A significant challenge faced by women in the informal sector is the lack of job security. In contrast to formal employment, informal workers typically lack contracts with employers, and there are no established procedures for hiring and termination. Employers in the informal sector often hire or let go of workers based on immediate needs. For example, the impact of the pandemic had a disproportionately high effect on women's employment.

Three out of five women engaged in informal work lost their means of livelihood during the pandemic. In comparison, 61% of men remained employed during this period, while only 19% of women were able to retain their employment. A notable 47% of women experienced permanent job loss amid the global pandemic. (Chakraborty, 2021)

2. Another significant challenge faced by women in informal employment is the absence of social security benefits. Due to the absence of a universal social security scheme in India, millions of informal women workers lack the safety nets and financial security that social security traditionally provides. Social security encompasses essential aspects such as access to insurance, healthcare benefits, retirement benefits, pensions, and maternity benefits. The absence of these benefits places informal women workers in a precarious position, leading to higher out-of-pocket expenses for healthcare, hospitalization, maternity care, and other needs for both themselves and their families. This financial strain diminishes their savings and limits their capacity to allocate funds for critical expenses such as education, home repairs, and more. The lack of financial security during retirement exacerbates the challenges faced by elderly women, making it difficult for them to maintain a decent standard of living.

3. Women engaged in informal employment encounter a significant challenge due to subpar working conditions. The absence of adequate regulatory frameworks, the inability to form unions, limited negotiating capacities, and the often invisible nature of their work contribute to women in informal sectors working in unpleasant, unsafe, and unhygienic environments. For instance, a prevalent issue is the lack of access to proper toilets for a substantial number of women in informal employment, negatively impacting their health and overall well-being.

4. Women employed in the informal sector often face heightened levels of abuse, violence, and harassment. Their lack of visibility in the workforce, absence of legal provisions for establishing anti-sexual harassment committees, and the lack of union representation leave them with limited avenues to report instances of harassment or abuse and seek protection. According to a National Crime Records Bureau (NCRB) based study, the 8-percentage point decline in the female labor force participation rate aligns with the overall increase in crimes against women and girls. This figure tripled, reaching 57.9% between 2011-12 and 2017-18. It leads us to an observation that a more detailed examination of the states with the lowest female labour force participation rates during this period reinforces the correlation between violence and crimes against women and their engagement in the labour force.

5. Undoubtedly, there is a shortage of policies specifically designed to tackle the challenges encountered by women in informal employment. The inconspicuous nature of their work poses numerous difficulties in recognizing gaps and implementing legislation to enhance the situation of women workers in the informal sector.

COVID-19 and Women in Informal Sector in India

The Institute of Social Studies Trust (ISST) conducted two Rapid Assessment Surveys to understand the impact of the COVID-19 lockdown on women informal workers in Delhi across various sectors: domestic work, street vending, waste picking, home-based work, and construction work. The surveys, conducted in April and October-November 2020, employed a mixed-method approach, combining telephonic quantitative surveys with women respondents and qualitative interviews with key informants and workers. In the initial survey (Phase-I), conducted between April 23 and 30, 2020, 176 women were interviewed. Six months later, in the second survey, 316 women were surveyed, accompanied by 36 qualitative interviews in the same sectors.

Phase-I findings revealed that 66% of respondents reported an increase in domestic chores, with 36% facing a heavier burden of child and elderly care. The closure of schools and daycare centers contributed to the rise in household responsibilities.

Additionally, 83% experienced a significant drop in income. Specific sector results highlighted distinct patterns, such as construction workers losing paid work and 97% of street vendors reporting no income during the lockdown.

Qualitative interviews unveiled challenges faced by home-based workers due to factory closures, supply chain disruptions, and delayed payments. Waste pickers encountered difficulties in collecting and selling waste, while domestic workers experienced a relatively lesser impact on income during the initial phase.

In the ongoing follow-up study, researchers aim to explore gendered challenges in returning to employment, workplace difficulties, household burdens, access to social infrastructure, and coping mechanisms post-lockdown. Preliminary data analysis indicates that 64% of respondents lost their means of work, 18% experienced a significant income decline post-lockdown, and only 8% found new employment. Negative coping strategies, such as distress asset sales and high-interest loans, were reported. Almost 90% admitted increased mental stress, with fear of lost livelihoods outweighing concerns about contracting the virus. The COVID-19 pandemic's repercussions in India were profound, with disproportionate effects felt across society. Women working in the nation's vast informal economy bore a heavier brunt, facing heightened vulnerability as millions of livelihoods became increasingly precarious or vanished altogether.

Conclusion

Women workers lack the option to choose whether or not to work due to urgent financial needs. The opportunities accessible to them primarily consist of low-paying, low-status positions in the informal sector, offering no prospects for improvement, advancement, or skill development that could facilitate transitioning to better jobs in the future.

Amidst widespread unemployment and limited opportunities, women are relegated to a secondary status compared to men in the pursuit of employment. Discrimination based on gender exists in terms of wages, types of work, and job availability. Employers typically hold the bargaining power, leading to the exploitation of these marginalized workers. Originating from socially, economically, and traditionally disadvantaged backgrounds, these individuals belong to segments of society that rely on work for sustenance and face considerable social and economic challenges.

Society must confront this challenge, albeit a difficult task. However, it is imperative for the nation's welfare. The national income encompasses the earnings of all individuals, and when half of the workforce earns significantly less than the other half, the economy suffers as a whole. Many women workers express that with assistance from the government, such as financial aid, training programs, or access to machinery, they could lead more dignified lives. There is a glimmer of hope in the form of Self Help Groups, some of which operate in this domain. Notably, the Self Employed Women Association (SEWA) stands out, dedicated to organizing self-employed women from impoverished backgrounds with the aim of achieving full employment for them.

It is highly advised that merely formulating policies and Acts may not suffice. Action needs to be taken at the grassroots level, supported by a robust feedback mechanism, to ensure that policies advocating for equal treatment yield tangible outcomes. Priority should be given to extending social protection, particularly focusing on old-age pensions and healthcare, including addressing occupational health concerns across all sectors, especially those where women are predominant but often overlooked.

Additionally, facilitating skill development programs can empower women to attain higher earnings. Encouraging the formation of unions or associations among informal women workers can serve as an effective strategy for collective bargaining and advocating for their rights and interests. Investment in gender-responsive infrastructure such as women's toilets, childcare facilities, and public transportation is crucial for supporting women's participation in the workforce. It is imperative to acknowledge that neglecting these women workers means overlooking significant contributors to the national income of the country so it is highly recommended to broaden job opportunities as well as enhance working conditions in the informal sector.

References

*Deshpande , A., Chakraborty , S., Chen , M. A., Hart , K., & Raveendran , G. (2021).
Women in the Indian informal economy - indiaspend. Women in the Indian Informal Economy .
https://www.indiaspend.com/uploads/2021/03/26/file_upload-446784.pdf*

*Kinyanjui, M. N. (2014).
Women and the informal economy in urban Africa: From the margins to the centre. Bloomsbury Publishing.*

*Press Trust of India & Business Standard. (2023, March7).
Women in Indian informal sector ready for lower wages for health benefits. www.business-standard.com.
https://www.business-standard.com/article/current-affairs/women-in-indian-informal-sector-ready-for-lower-wages-for-health-benefits-123030700587_1.html*

*Reuters & Institute of Social Studies Trust. (2021). Women informal workers: falling through the cracks in the pandemic [Report].
http://164.52.210.154:8080/jspui/bitstream/123456789/1816/1/Women%20Informal%20Workers_%20Falling%20Through%20the%20Cracks%20in%20the%20Pandemic.pdf*

*Sharma, L. (2021, October 16).
India's Informal Economy: Challenges and solutions – explained, pointwise. Free UPSC IAS Preparation For Aspirants. https://blog.forumias.com/indias-informal-economy-challenges-and-solutions-explained-pointwise/*

UN Women, Progress of the World's Women 2015-2016. Chapter 3, p. 147.

*What is the Informal Economy? (2020, December 1) IMF.
https://www.imf.org/en/Publications/fandd/issues/2020/12/what-is-the-informal-economy-basics*

Illustration by Tesa Joby

CHOKING ON SUCCESS: How India's Development Strategy is Harming Its People and Planet

CHRISTEENA SABU

Introduction

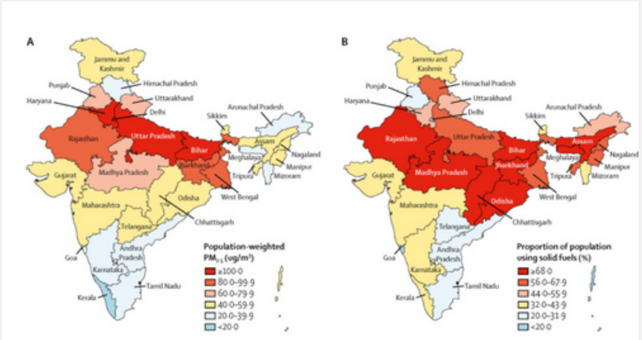
In his book ‘The Change Oracle’, Richard Matthews defined a brown economy as 'one in which economic growth depends heavily on environmentally damaging forms of activity, especially fossil fuels like coal, oil, and gas.'

Being a developing country, India follows a traditional model of economic growth that involves industrialisation, mineral extraction, and exports of manufactured goods and minerals, all promoted by fossil fuels, low levels of environmental taxes and regulation, and low-cost labour. Hence, it is the destination hub for people who want to set up their industries in a country with easy environmental laws. But this brown economy approach comes with its pitfalls.According to the International Energy Agency (IEA), as of 2023, India is the world's third-largest emitter of greenhouse gasses (GHG) after China and the United States. Its global share of emissions accounts for more than 7%. Thus it faces a challenging trade-off between reducing its carbon emissions and raising the living standards of its vast population.

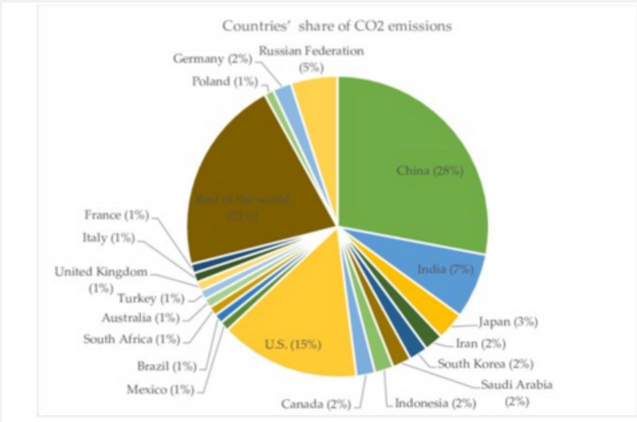
India's weather has become more unpredictable, with temperatures regularly exceeding 50°C in some parts. The impact varies by state and negatively affects weather-dependant industries like agriculture and transportation (Hasna, Hatton, Mohaddes, & Spray, Forthcoming). Climate change and pollution are also negatively impacting health outcomes. It also contributes to local pollution, thereby impacting health.

In 2019, pollution in India cost US$28.8 billion in premature deaths and $8 billion in morbidity, disproportionately affecting the poorest (Pandey et al., 2021; Kopas et al., Forthcoming; Xue et al., 2001). According to the National Institute of Health, Climate change is projected to cause approximately 250,000 deaths annually between

Every day, 1.62 billion litres of untreated sewage pouring into the Indian rivers, which millions rely on for drinking water, washing, and crop irrigation. Soil contamination and degradation endanger food supply, floodplains, and biodiversity (Lancet Planetary Health, 2018).



Source: Balakrishnan, K., Dey, S. ... Dandona, L. (2019). The impact of air pollution on deaths and disease burden in India: Global Burden of Disease Study 2017. The Lancet Planetary Health, 3(1), e26–e39.



Source: (PDF) Forecasting the CO2 emissions at the global level: A multilayer artificial neural network modelling. (2022,April1).ResearchGate.

Overview of Government Policies 1

According to the IMF, India's greenhouse gas emissions are increasing due to power generation (37%), agriculture (21%), manufacturing (17%), and transportation (9%). Combating the environmental challenges as a repercussion of meeting the needs of a vast population requires a transformation across all sectors. Therefore the government of India introduced various policies to pave the way for a transition from a brown to a green economy. In this subsection, we examine the current condition of greenhouse gas emissions generated by India's developing sectors and its government's efforts to promote clean energy and lessen its environmental footprint.

- The government implemented initiatives such as the 'National Action Plan on Climate Change' and the 'Green Open Access Policy' to reduce emissions. It focuses on reducing the emissions intensity of current and new coal-fired power plants, which will help save emissions by 15-20 percent.
- The budget for 2022-23 has committed INR 195 billion towards manufacturing solar panels through the Production Linked Incentives (PLI) scheme.
- Additionally, research is being conducted to find sustainable alternatives for lithium-ion batteries.
- The Ministry of MSMEs provides subsidies for investing in the latest technologies and obtaining certifications for national and international efficiency standards.
- India has various programmes to improve energy consumers' efficiency, such as the Perform Achieve and Trade (PAT) mechanism and the Energy Efficiency Services Limited (EESL) Company. These programmes stimulate the supply of high-efficiency motors and allow large energy purchasers to trade excess energy savings certificates.
- Focus has been improved on green transportation and has implemented programmes like passenger car emission regulations and fuel-economy standards. The National Policy on Biofuels aims to reduce fuel usage in gasoline-powered cars by producing ethanol from damaged cereal grains.
- The state is solarising agriculture to reduce the financial burden on distribution companies, provide day irrigation for farmers, and ensure round-the-clock access to electricity for green hydrogen generation through renewable energy banking
- The National Hydrogen Energy Mission (NHM) aims to establish India as a global hub for hydrogen technology manufacturing and develop an outline for green hydrogen produced from electrolysis powered by renewables. The Biogas programme was introduced to reduce greenhouse gas emissions by providing clean cooking fuel, lighting, and meeting consumers' thermal and minor power demands.
- India has also created a Cooling Action Plan (ICAP) to offer viable cooling and thermal comfort for everyone while providing environmental and economic benefits. The recently enacted Energy Conservation Bill (2022) authorises the federal government to establish an energy conservation guideline for residential buildings. These are only many of the few policies India has implemented or aims to expand.

Challenges and Limitations

Although India is taking effective measures and has some world-leading legislation on climate, renewable energy, and poverty reduction, the impact and speed of the mission aren't as large as required.

India ranked 169th of 180 countries in the Environmental Performance Index, indicating it still lags in green growth. Surprisingly, China, which has a larger carbon footprint than India, has surpassed it in the Environmental Performance Index. This might be due to various reasons. For example, China has implemented stricter regulations than India to combat air pollution. Moreover, not only are they a global leader in renewable energy production, but they have undertaken significant afforestation efforts in recent decades, aiming to combat desertification and improve air quality. Thus India needs to improve its focus in the formulation and implementation of its environmental policies.

Any more delays in fully transitioning into green energy will prove expensive for India due to upcoming significant investments in coal-powered plants having high fixed costs and long life. If the country closes these facilities abruptly, the transition will be costly. Scaling up renewable energy involves tackling challenges such as irregularities, storage spaces, and grid connectivity. The Parliamentary Standing Committee on Energy has highlighted that India's renewable energy investment is half of what is required to meet the 2030 target of 500GW renewable energy installation. To ensure a fair shift, the IMF proposes retraining workers in diminishing industries, assistance in seeking employment, and providing income tax deductions as a safety net and stimulus for readmission into the labour market. It also has financial constraints like Indian banks not offering flexible funding policies for renewable projects.

India is not part of the Global Methane Pledge due to the agriculture sector's lack of resilience and adaptability, despite being a major emitter of methane. According to a recent study, authorities struggle to encourage farmers to contribute to solar agriculture, despite the prospect of free or subsidised power. However, without farmer contributions, the model's viability is greatly restricted.

India has the second highest number of registered Clean Development Mechanism (CDM) projects among emerging economies. However, the government neither promotes nor prohibits their implementation (Benecke 2009). According to Urpelainen (2012), this "laissez-faire system" attitude prevents India from capitalising on its full growth potential.

The power and industrial sectors are the largest contributors to greenhouse gas emissions. Being on the path of development, expanding the industrial sector implies further emissions, pollution, and land degradation that is already on the rise. It highlights the dire need to reduce these emissions, which can be done by investing in renewable energy alternatives, green technology, and market-based mechanisms. However, there are challenges in achieving carbon neutrality, especially in the power sector, where distribution companies' financial instability and reliance on coal are significant. Similarly, the residential and transport sectors face challenges due to the expected rise in demand for electricity, vehicles, and air travel. Furthermore, inadequate regional policies and improper legal supervision undermine the effectiveness of policy actions. To achieve our net-zero carbon emissions 2070 target, we need to increase investments in renewable energy, consider various fiscal instruments, and leverage technology transfer and international finance.

Recommendations

Strengthening the Grid for Renewable Integration and Accelerating the Shift to Electric Vehicles

Better coordination with DISCOMS is required to transfer energy from areas with excess energy supply to areas with its lack thereof. It would ensure the judicious usage of energy supplied by fossil fuels until India can completely adapt to renewable energy. Allowing private sector investment within the infrastructure will allow more efficiency and effectiveness.It will remove disparities faced due to corruption and bureaucracy loopholes.

India's transportation system is largely oil-dependant. Thus major investments in EV infrastructure and its accessibility to the general public are required since vehicle purchases are increasing with the increase in population and real income.

Incentivising Green Energy Transition and Supporting Workers During the Transition

A combination of coal excise tax and subsidies for renewable power can incentivise green energy and discourage coal production. These taxes collected can fund the subsidies, reducing the additional costs generated.

More than 13 million people work in coal mining, transportation, power, sponge iron steel, and brick manufacturing (National Foundation for India, 2021).

It creates challenges in transitioning into green energy. Training programmes can enhance the abilities of displaced workers, preparing them to work in modern fields. Secondly, support with job search can lessen matching frictions. An earned-income tax credit can help lower-income workers return to work by reducing their tax burden.

Employment informality can be addressed by complementing the earned income tax credit with targeted cash transfers to support individuals who work informally (IMF, 2022).

Fostering Innovation and Investment in Renewables And Promoting Sustainable Consumption Habits

Government support, such as specific funding and low-cost financing, can benefit renewable energy projects. Government intervention can attract investments from private firms.

They should prioritise investing in research and development by allocating appropriate funding and five-year plans. High-income individuals and corporations often have a more significant environmental footprint due to their consumption habits and business operations affecting the whole country.

Oxfam and the Stockholm Environment Institute's 2020 report found that the world's wealthiest 10% accounted for roughly half of global emissions in 2015. The top 1% alone accounted for 15% of emissions, almost double the amount of the poorest 50% (7%). However, they will face the consequences of climate change despite being the least responsible. The traditional methods of consumption and saving by typical middle-class Indian households are some of the most sustainable practises as they involve minimal wastage, maximum reuse, and recycling of products. Instead of trying to mimic the Western world, these practises should be promoted further among the citizens. Some of the most sustainable and minimal-cost practises can be found within the country. In many rural areas and some urban areas, people still use 'matka' i.e. earthen pots to store cool water instead of a refrigerator, thus reducing electricity consumption. Similarly, contrary to practises in developing countries, a majority of the Indian population air drys their clothes instead of depending on an electric dryer.

The burden of transforming the country from a brown to a green economy lies not only in the hands of the policymakers but also in the hands of the citizens.

Conclusion

In its pursuit of economic progress, India has been ingrained in a brown economy paradigm, mainly reliant on environmentally harmful activities such as fossil fuel usage. This development paradigm has had serious consequences, such as increased greenhouse gas emissions and negative effects on human health and the environment. Despite admirable attempts by the Indian government to transition to a green economy, obstacles and limitations exist. Inadequate investment in renewable energy, opposition to change in conventional businesses, and regulatory deficiencies all present substantial challenges to reaching sustainability goals. A collaborative effort between the government, the private sector, and civil society is required to overcome these problems and accelerate the transition to a green economy.

Finally, a shift from a brown to a green economy requires a significant change in attitude, behaviour, and economic structure. By adopting sustainable behaviours, investing in renewable energy, and encouraging innovation, India can pave the way for a brighter, cleaner, and more prosperous future for its people and even for the world.

References

Adhikari, A., & Ganguly, S. (2017).
A Comparative Analysis between Green Industrial Policies of India and China: Review and Implications. In Springer eBooks (pp. 1–17). https://doi.org/10.1007/978-981-10-3964-5_7-1

Balakrishnan, K., Dey, S., Gupta, T., Dhaliwal, R. S., Bräuer, M., Cohen, A., Stanaway, J. D., Beig, G., Joshi, T. K., Aggarwal, A. N., Sabde, Y., Sadhu, H. G., Frostad, J., Causey, K., Godwin, W. W., Shukla, D. K., Kumar, G. A., Varghese, C. M., Muraleedharan, P., . . . Dandona, L. (2019).

Balakrishnan, K., Dey, S., Gupta, T., Dhaliwal, R. S., Brauer, M., Cohen, A. J., … Aggarwal, A. N. (2018).

Chateau, J., Dang, G., MacDonald, M., Spray, J., & Thube, S. (n.d.). A framework for climate change mitigation in India. papers.ssrn.com. https://doi.org/10.5089/9798400257995.001

From brown to green economy. (n.d.). https://www.pids.gov.ph/details/news/in-the-news/from-brown-to-green-economy

(PDF) Forecasting the CO2 emissions at the global level: A multilayer artificial neural network modelling. (2022, April 1). ResearchGate. https://www.researchgate.net/publication/355055871_Forecasting_the_CO2_Emissions_at_the_Global_Level_A_Multilayer_Artificial_Neural_Network_Modelling

Hasna, Z., Hatton, H., Mohaddes, K., & Spray, J. (Forthcoming). The Macroeconomic Consequences of Climate Volatility: Evidence from India.

India. (2022, October 23). Green Economy Tracker. https://greeneconomytracker.org/country/india

Kartha, S., Kemp-Benedict, E., Ghosh, E., Nazareth, A., & Gore, T. (2020). The Carbon Inequality Era: An assessment of the global distribution of consumption emissions among individuals from 1990 to 2015 and beyond. https://www.sei.org/wp-content/uploads/2020/09/research-report-carbon-inequality-era.pdf

Paddison, L. (2022, February 24). How the rich are driving climate change. https://www.bbc.com/future/article/20211025-climate-how-to-make-the-rich-pay-for-their-carbon-emissions https://www.iea.org/countries/india

The impact of air pollution on deaths, disease burden, and life expectancy across the states of India: the Global Burden of Disease Study 2017. the Lancet. Planetary Health, 3(1), e26–e39. https://doi.org/10.1016/s2542-5196(18)30261-4

World Economic Outlook, October 2022: Countering the Cost-of-Living Crisis. (2022, October 11). IMF. https://www.imf.org/en/Publications/WEO/Issues/2022/10/11/world-economic-outlook-october-2022#Chapters

SHACKLED SHADOWS:
Unveiling the Underworld of Human Trafficking as the Sinister Catalyst of the Covert Economy

KAATYAYNI BAHL

Introduction

Ali et al. (2001) stated that human trafficking has become a worldwide issue with significant consequences, especially with the expansion of the sex industry globally. This illness has been widely inherited and spread across generations on a global level. This study aims to emphasise the significance of addressing human trafficking and to offer a full account of its present manifestations, highlighting the pressing need to combat this issue. Bales (2011) defines modern slavery as a multifaceted social and economic phenomenon characterised by exploitation, harsh conditions, and inadequate pay, highlighting the substantial control traffickers exert over their victims. The antiquated system of slavery, which was previously determined by race and skills, has been superseded by a contemporary one that does not show prejudice based on race. Modern slavery has arisen as a consequence of human trafficking.

Exploring the Underground Economy

Schauer and Wheaton (2010) suggest that the human trafficking sector operates under monopolistic competition and is connected to the underground economy. Furthermore, they assert that this enterprise is intricately linked to illegal operations. This poses obstacles for economic growth at local and global scales. Recognising the profound influence of human trafficking on individuals, economies, and organised crime groups is crucial, particularly in light of experts' forecasts that it could exceed the trafficking of narcotics and firearms in the future. It is essential to tackle the issue because of its adverse impact on susceptible individuals and worldwide economic stability. It is essential to address the problem of treating victims as commodities in a fiercely competitive market.

Comprehensive research has been carried out on the industry involved in the illicit trafficking of human beings, using data collected from several statistical sources worldwide.

Upon analyzing global statistics, some themes emerge. According to a report published by the United Nations Office on Drugs and Crime (2012), 76% of trafficked individuals were women and girls.

The Trafficking in Persons (TIP) Annual Report, published by the U.S. Department of State, provides a comprehensive account of how foreign governments tackle the issue of human trafficking. Every country has its own written account that encompasses an analysis of the country's current issue of human trafficking, suggestions, legal actions, safeguards, and efforts to stop it. Out of the 196 countries in the world, the TIP Report of 2015 had narratives from 188 countries.This means that about 96% of countries were represented in the US Department of State's TIP Report of 2015. The following charts were compiled from the TIP Report of 2015, representing information from 2014, and were organised by continent.

The data presented in Chart C was collected from the nation narratives to ascertain the range of services offered in each continent for victims of both human and sex trafficking.

The country narratives indicated that trafficking victims are eligible for a range of services, such as long-term housing (as opposed to temporary shelters), medical and mental health care, immigration assistance, translation services, vocational and employment support, education opportunities, financial aid, reintegration assistance, child care, referrals to service providers, witness protection, and exemption from legal status requirements.

Chart A displays the aggregate count and percentage of countries categorized as tier 1, tier 2, and tier 3 within each continent.

Chart A

Continent	Total number of countries	Number of tier 1 countries (% total)	Number of tier 2 countries (% total)	Number of tier 3 countries (% total)
Asia	50	4 (8%)	38 (76%)	8 (16%)
Africa	55	10 (18%)	44 (80%)	1 (2%)
South America	16	1 (6%)	14 (88%)	1 (6%)
Europe	45	22 (49%)	21 (47%)	2 (4%)
North America	20	3 (15%)	16 (80%)	1 (5%)
Australia	10	2 (20%)	7 (70%)	1 (10%)

Source: Mahler, C., Gaviria, G., & Sarachaga-Barato, N. (2018). Statistics on human trafficking around the world. In Springer eBooks (pp. 255–260).https://doi.org/10.1007/978-3-319-73621-1_28

Chart B represents the total number and total percentage of countries within each continent that did not include information in each of the identified categories

Chart B (missing data)

Continent	Total number of countries	Total number of victims identified (labor and sex trafficking)	Total victims who received services (labor and sex trafficking)	Total sex trafficking victims identified
Asia	50	25 (50%)	30 (60%)	31 (62%)
Africa	55	15 (27%)	35 (64%)	47 (85%)
South America	16	3 (19%)	9 (56%)	7 (44%)
Europe	45	5 (11%)	9 (20%)	21 (47%)
North America	20	2 (10%)	9 (45%)	13 (65%)
Oceania (Australia)	10	7 (70%)	9 (90%)	9 (90%)

Source: Mahler, C., Gaviria, G., & Sarachaga-Barato, N. (2018b). Statistics on human trafficking around the world. In Springer eBooks (pp. 255–260).
https://doi.org/10.1007/978-3-319-73621-1_28

Chart C represents the total number and total percentage of countries within each continent that were included in the data we compiled.

Chart C (data available)

Continent	Total countries	Total number of victims identified (labor and sex trafficking)	Total serviced victims (labor and sex trafficking)	Sex trafficking victims identified	Sex trafficking serviced victims
Asia	50	25 (50%)	20 (40%)	19 (38%)	18 (36%)
Africa	55	40 (80%)	20 (36%)	8 (15%)	1 (2%)
South America	16	13 (81%)	7 (44%)	9 (56%)	5 (31%)
Europe	45	40 (89%)	36 (80%)	24 (53%)	7 (16%)

Chart C (data available)

Continent	Total countries	Total number of victims identified (labor and sex trafficking)	Total serviced victims (labor and sex trafficking)	Sex trafficking victims identified	Sex trafficking serviced victims
North America	20	18 (90%)	11 (55%)	7 (35%)	1 (5%)
Oceania (Australia)	10	3 (30%)	1 (10%)	1 (10%)	0 (0%)

Source: Mahler, C., Gaviria, G., & Sarachaga-Barato, N. (2018b). Statistics on human trafficking around the world. In Springer eBooks (pp. 255–260).
https://doi.org/10.1007/978-3-319-73621-1_28

In 2008, the International Labour Organization (ILO) identified about 12.3 million people as forced labourers, bonded labourers, or victims of sex trafficking. 1.39 million forced labourers are involved in commercial sex work out of the total number, according to the International Labour Organization in 2009. According to ILO statistics, women and girls make up about 98% or 1.36 million of those exploited for commercial sex. Although the ILO figures are authorised, they are not universally acknowledged as the most precise. Kara's 2009 research revealed that annually, between 1.5 and 1.8 million individuals are victims of human trafficking, with 500 to 600,000 individuals exploited in the commercial sex industry. In 2006, the US State Department said that some 800,000 people are recognized as victims of trafficking annually, across many sectors outside commercial prostitution. In 2006, the State Department reported that most of the 800,000 trafficking victims were forced into the commercial sex trade.

There seems to be an increase in the number of people becoming victims of sex trafficking in recent years, notwithstanding the inconsistencies in official data. Kara asserts that there was a 3.6% rise in the number of sex trafficking victims from 2006 to 2007, resulting in about 140,000 new sex laves by the conclusion of 2007 (Kara 2009, 18).

In 2009, the UNODC released results from a comprehensive global study on human trafficking in 155 countries. The report highlighted that commercial sexual exploitation was the predominant form of trafficking, representing 79% of cases in their investigation (UNODC 2009). Between 2003 and 2006, the UNODC documented a consistent increase in the yearly trafficking rates on a global scale. Examining the data and statistics uncovers the factors fueling this expansion.

According to Bales (2007), an enslaved field labourer worth $40,000 in 1850 is currently valued at under $100 today (12). Bales indicates that the excess in the international supply of slaves represents a substantial quantity of potential slaves globally. Because trafficked sex slaves have a high-profit margin, costing $1,895 on average but generating $29,210 annually, there are concerns about the potential increase in commercial sex slavery in the future (Kara 2009, 19). Globalization has led to lower transportation costs, which have helped fuel the growth of transnational sex trafficking. The surge in people facing severe circumstances and the profits gained from exploiting sex trafficking victims indicate that the worldwide number of sex slaves could keep increasing, with no anticipated improvements soon.

Sex slavery is widespread in different cultures and countries, unlike other forms of slavery that are impacted by culture and economy. The US is not the primary destination for victims of commercial sex trafficking, despite the prevalence of 'massage parlours' with neon signs. Other countries exceed the US in this regard. In 2006, sex slaves in the US represented just 0.9% of the total global sex trafficking victims (Kara 2009, 183). Italy has been an important transit and destination country in Western Europe. The increase is mostly attributed to the legalization of prostitution in the country and the influence of economic shifts in Central and Eastern Europe, resulting in a nearby group of economic migrants willing to move(UNICEF 2005)

When we include reduced transportation costs arising from globalisation it becomes easy to understand why transnational sex slavery is flourishing. The overwhelming numbers of desperate people and the profitability of sex slaves likely mean that even if we cannot yet accurately pinpoint the growth in the global population of sex slaves, it is likely to get worse before it gets better. Unlike other forms of slavery, which are culturally and economically dependent, sex slaves can be found across cultures and countries. The omnipresent ‘massage parlours’ with neon signs in the US give the impression that the US is a major destination country for trafficking victims, however, the US pales in comparison to other countries as a destination for victims of commercial sex trafficking. Sex slaves in the US in 2006 made up just 0.9% of the total number of global sex trafficking victims . Italy has become a major transit and destination country in Western Europe, largely because prostitution is legal there and the fallout from economic transformation in Central and Eastern Europe has created a geographically proximate supply of willing economic migrants Sex slaves from Moldova, Romania, and Ukraine arrived in record numbers in Bosnia in 1999 alongside the arrival of UN and NATO forces (IOM Counter-Trafficking Unit: Kosovo 2000–2005). Prominent non-government organizations (NGOs) are also drawing attention to Greece as a destination country in Western Europe (Amnesty International 2007).

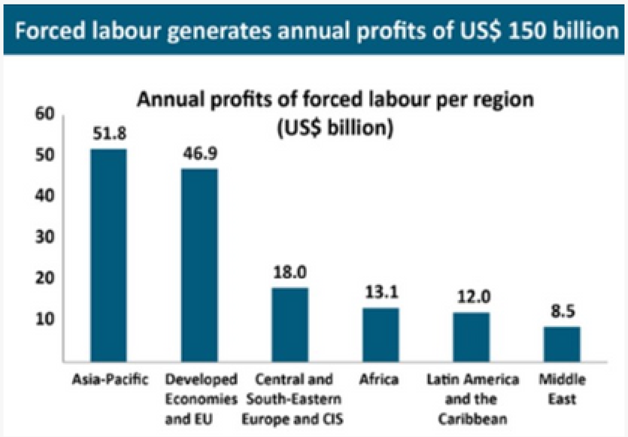
In Thailand, rapid economic growth in the late 1990s made it possible for a whole new generation of men to afford visiting prostitutes. Cultural factors that denigrate women and promote extramarital sex for men combined to create a high demand for commercial sex workers in Thailand. Lee (2005) identifies two dominant trafficking routes in Asia. One includes the flow of women from North Korea and the Yunnan province in

Southern China to Russia and South Korea. In a second major route, women are trafficked from Thailand and the Philippines to Japan and South Korea (Lee 2005, 174). In 2006, Asia accounted for approximately 54.2% of the global sex trafficking victims(Kara,2009). Between 2003 and 2008, the percentage of countries in the world that adopted legislation to specifically punish traffickers grew by 45%. In a five-year period, 69 countries adopted legislation to punish traffickers (UNODC 2009, 24).

The seriousness of the situation has become more evident with the recent data released by the International Labour Organization (ILO) on the incidence of forced labour and sex trafficking. Kara observed a significant rise in the number of sex trafficking victims between 2006 and 2007. The reality remains unchanged despite the continuous updates to the official data. In 2009, the United Nations Office on Drugs and Crime (UNODC) performed an investigation that revealed the widespread occurrence of commercial sexual exploitation in human trafficking cases worldwide.

Analysing the factors motivating human trafficking and identifying the parties involved reveals the intricate network of interconnected issues. This investigation aids in achieving the objective of understanding the complexities surrounding the problem. Several factors contribute to the continuation of this illegal behavior, such as poverty, gender inequality, the need for cheap labour, and the attraction of financial profit. The economic profits from trafficking total approximately $150 billion each year, based on extensive estimates. It is the second-largest criminal sector globally based on this data(Li et al., 2013). Furthermore, political instability and violent wars exacerbate the issue.

According to the International Labour Organization, global forced labour generates an illegal profit of $150 billion every year. Two-thirds of that comes from sexual exploitation and an estimated $51 billion stems from economic exploitation. Globally, the Asia-Pacific region profits the most from forced labor with annual illegal earnings of $51.8 billion.



Source: McCarthy, N. (2014, May 27). Forced labor generates annual profits of $150 billion. Statista Daily Data. https://www.statista.com/chart/2297/profits-of-forced-labour-per-region/

Examining social and cultural practices that influence different groups' vulnerability to exploitation is essential for gaining a comprehensive understanding of the problem of human trafficking. Improving the understanding of the topic is essential. Human trafficking may occur under specific circumstances. The issues include the devaluing of women and girls, early marriage practices, and the lack of birth registration. The heightened susceptibility of persons to exploitation is due to the prevalence of violent conflicts and forced displacement, which exacerbates their vulnerability.

An inquiry into illicit groups involved in human trafficking has revealed a correlation between human trafficking and coerced labour in specific sectors such as agriculture, manufacturing, and the sex industry. This relationship is uncovered through the investigation. The gravity of this situation is underscored by its broad occurrence. This is an example of the widespread prevalence of forced labour in the agricultural sectors of South Asia and Latin America. Two major sectors impacted by human trafficking are the garment industry and the exploitation of domestic servants. Both of these industries are substantial sectors. Human trafficking is a multifaceted problem that overlaps with multiple sectors.

Conducting a comprehensive and well-structured research study is essential to tackle the significant link between organised crime and human trafficking. Global laws and activities mostly target organised criminal syndicates, although some contend that this approach oversimplifies the intricate social aspects of trafficking.
There are criticisms aimed at this method. Opponents argue that this strategy is inadequate. To mitigate the threat of domestic trafficking by disorganised criminals, it is crucial to promptly acquire a thorough grasp of the situation.

To address human trafficking effectively, a comprehensive strategy must be developed that takes into account social, economic, and political factors. Several proposals have been made, including broadening professional choices for women, implementing social safety nets, promoting gender equality, enhancing educational access, addressing informal economic activities, and establishing improved work prospects for women. It is essential to consider the economic factors of human trafficking and develop tactics to eliminate them. Human trafficking is profitable and linked to criminal syndicates engaged in organised crime.

Conclusion

The global issue of human trafficking endures, leading to far-reaching repercussions on individuals, economies, and society as a whole. This issue requires prompt attention. This comprehensive study seeks to get profound insights into the phenomena by investigating the relationships between human trafficking and the global economy, organised crime, and other businesses. The approach to achieving this goal varies depending on the specific situation. This study aims to examine the latest patterns, trends, and underlying causes of human trafficking to contribute to the ongoing discussion on the subject. Furthermore, it supports the use of coordinated tactics based on empirical facts to tackle this intricate issue.

References

Bales, K. (2011)
What Predicts Human Trafficking? International Journal of Comparative and Applied Criminal Justice, 31,269-279.
https://doi.org/10.1080/01924036.2007.9678771

Belser, P. (2005).
Forced labour and Human Trafficking: Estimating the profits. Social Science Research Network. https://doi.org/10.2139/ssrn.1838403

Bouché, V. (2011). [Review of Sex Trafficking: Inside the Business of Modern Day Slavery, by S. Kara]. Human Rights Quarterly, 33(3), 899–906. http://www.jstor.org/stable/23016011

Broad, R., Lord, N., & Duncan, C. (2020).
The financial aspects of human trafficking: A financial assessment framework. Criminology & Criminal Justice, 22(4), 581–600. https://doi.org/10.1177/1748895820981613

Caparini, M. (2014, September 25).
Human trafficking and organized crime. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2583574

Essien, E. D. (2022).
Handbook of Research on Present and Future Paradigms in Human Trafficking. IGI Global.
https://www.statista.com/chart/2297/profits-of-forced-labour-per-region/

Jordan, R. G., Farley, C. L., & Grace, K. (2018).
Prenatal and postnatal care: A Woman-Centered Approach. John Wiley & Sons.

Mahler, C., Gaviria, G., & Sarachaga-Barato, N. (2018). Statistics on human trafficking around the world. In Springer eBooks (pp. 255–260). https://doi.org/10.1007/978-3-319-73621-1_28

Rahman, Majeed A. "Human Trafficking in the Era of Globalization: The Case of Trafficking in the Global Market Economy." Transcience Journal 2, no. 1 (2011): 54-71

Ravlik, M. (2019c).
The Fight against Human Trafficking: Drivers and Spoilers. Springer Nature.

Smith, H. (2010).
Sex trafficking: trends, challenges, and the limitations of international law. Human Rights Review, 12(3), 271–286. https://doi.org/10.1007/s12142-010-0185-4

Testing a Theory of Modern Slavery: https://glc.yale.edu/sites/default/files/files/events/cbss/Bales.pdf

Wheaton, E. M., Schauer, E. J., & Galli, T. V. (2010). Economics of human trafficking. International Migration, 48(4), 114–141 https://doi.org/10.1111/j.1468-2435.2009.00592.x

Wylie, G., & McRedmond, P. (2010). Human trafficking in Europe: Character, Causes and Consequences. Springer.

SILVER LININGS IN THE SILVER TSUNAMI: Harnessing Age Tech for a Thriving Mature Economy

ALEENA GEMMY FRANCIS

A nation's economic prosperity is intricately linked to the skillset of its younger generation. The global economies are in a rat race to capitalise on the period of a high proportion of working-age adults (in the age group 15-64), and increasing the skill set of the younger generation the demographic segment that is often ignored is the elderly (in the age group 64+) (United Nations Development Program). This window of opportunity for most countries only lasts for a period of a few years and for India, the time frame for this opportunity is estimated to be from 2001- 2061 after which there will be a rapid increase in the older segment of the population. This does not mean the end of growth opportunity for the economy. Reaping the benefits of the demographic dividend is important, but so is making the most out of an economy where the majority of its population is in the autumn of their lives (National Library of Medicine, 2022).

India's demographic landscape is undergoing a significant transformation, as evidenced by the rapidly rising ageing index. This metric, which reflects the ratio of elderly citizens (above 65) to young children (below 14), is projected to rise dramatically from 8.4 in 1950 to a staggering 74.5 by 2050. This rapid ageing presents a multitude of challenges for the Indian economy (International Institute For Population Science, 2020,).

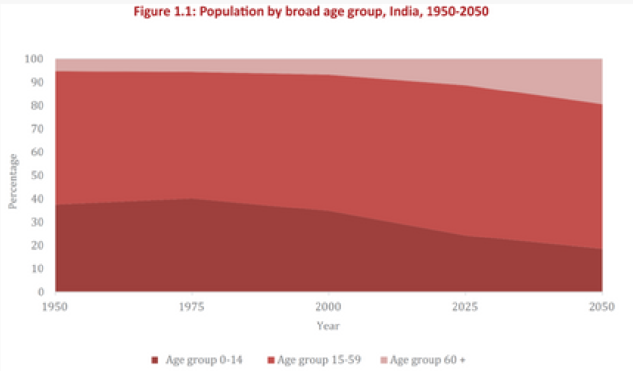
One primary issue of concern is the strain the aged population has on the working population. As the elderly population grows, the dependency ratio – the proportion of dependents, (both children under the age group 0-14 and elderly in the age group above 65) to working-age adults – will rise. Secondly, this also leads to a shrinking labour force, potentially hindering economic growth and a surge in dissaving (Bloom, 2015) .

The improved healthcare system in India has reduced the death rate drastically, thus increasing the elderly population in need for medical care which puts pressure on the government resources. The Indian pension system may also be affected as the current retirement rate in India is approximately 56-64 years of age and the number of retirees seeking financial support will increase. Unlike other developed nations like China, and Japan where opportunities like senior education, and third careers are prevalent, India lacks the infrastructure to boost its ageing sector or silver economy.

This challenge of the ageing population is indeed stressful and to be handled with care, but the unique economic opportunity it presents is unavoidable. This opportunity translates to boosting the silver economy. Silver economy relates to the production and consumption of goods, and services that cater to the needs of the senior population. The silver economy in India is estimated at ₹73,082 crore and is expected to grow in the coming years resulting from the rapid increase in the elderly population population to 13.2% by 2031 and 19% by 2050 (Manorama Yearbook, 2024). Senior citizens are potentially wealthy, influential, and untapped market segments in India.

Ensuring a fulfilling life for the elderly is paramount to unearthing the full potential of the silver economy. This can be achieved only by integrating the elderly as active contributors to society rather than viewing them as passive recipients of care and with the help of Age Tech. Age Tech is the technology aimed at providing services to an ever-growing number of older people, helping people keep connected, active, and cared for (World Economic Forum, 2021). By harnessing the possibilities of Age Tech with the elderly consumer base, the silver economy can be boosted to its extremity.

During the Covid 19 pandemic the idea of Age Tech, which was still novel at the time, was utilised on a small scale, like the use of telemedicine.



Source: United Nation. (2019). World Population Prospects, The 2019 Revision United Nations.

Monitoring Health

Senior citizens are burdened with disabilities and chronic conditions, thus the major focus of the silver economy should be on providing accessible, timely, and effective healthcare (National Library of Medicine, n.d.). Unlike the traditional system, the digital system which makes use of AI-powered wearables and smart home devices like sensors that monitor elder movements, gives prompt and emergency care. This system tracks the vital signs of the individual, detects falls, and even offers medication reminders, at the same time connecting with a dedicated care team for timely interventions (NITI Ayog, n.d.).

The use of digital tools also helps the elderly to take care of their well-being. Therefore creating content for the elderly on social media platforms based on their interests like health, leisure, nutrition, exercise, and mental health will be extremely beneficial for people of this age group. It also helps in building the geographical barriers faced in accessing traditional healthcare. Telemedical consultation helps people in remote areas to get good quality medical attention.

Further, Data Analytics can be used by healthcare workers to predict potential comorbidities shifting focus from reactive treatment to preventative care. Elderly care becomes more manageable, accessible, efficient, and cost-effective with revolutionising age tech, while at the same time improving the health of senior citizens in the comfort of their own homes while at the same time helping to solve the problem of lack of skilled workers in the senior care field.

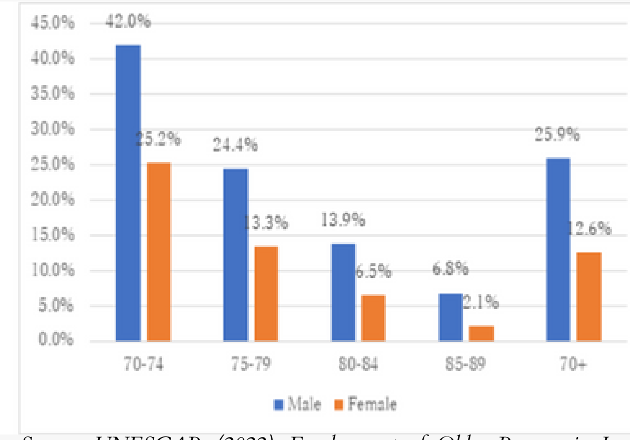
Employment- Active Contribution of the Elderly to the Society

Research conducted in developed countries shows a correlation between workforce participation and improved physical and mental health among older adults (National Institutes of Health, n.d.,). In the survey conducted by the Ngo, Helpage India, out of the total senior citizens who were not working, 36% were willing to work and 40% wanted to work 'as long as possible', 52% of elderly people surveyed reported inadequate income; 40% said they do not feel financially secured; 57% of the elderly said their expenditure was excess than savings; and 45% claimed that the pension amount was not enough for survival this economic vulnerability faced by the older population is further exacerbated by the lack of pension benefits (HelpAge India, 2022,).

The rise in the elderly population implies a decline in the working-age population or the decrease in labour supply. Japan is one of the developed countries that is currently going through a similar phase. Japan boasts the highest old-age dependency ratio in all OECD countries, with a ratio in 2017 of over 50 persons aged 65 and over for every 100 persons aged 20 to 64, and this[1]ratio is projected to rise to 79 per hundred in 2050 (OECD, Ageing and Employment Policies Working Better With Age: Japan, 2018). The series of policies that were implemented by Japan to ensure the continuous growth of the economy is a great exemplar of the management of the ageing population.

One of the key strategies of the countries was to extend the working lives and delay the mandatory retirement age. The benefits of this strategy are multifaceted. It ensures that there is less burden on the pension system of the country, stopping the drastic decline in labour participation due to early retirement, and ensuring age diversification, while at the same time involving the senior citizens in the productivity of the country.

However, to obtain the maximum productivity from employing senior workers, they have to be skilled in the digital arena to thrive in the increasingly digital and globalised job market. Japan focuses on building traversal skills for its elderly. These skills are an amalgamation of both Information and Communication Technology (ICT) proficiency and soft skills that remain relevant regardless of age. Investing in training programs for the elderly helps them to adapt to the changing workplace demands (Ageing and Employment Policies Working Better With Age: Japan, 2018,).



Source: UNESCAP. (2022). Employment of Older Persons in Japan: Perspectives on History, Policy, and the Impact of Technology.

In the case of India, with its vast informal sector, which lacks a retirement system and social security benefits, most elderly will opt to work instead of retiring.

Following the path set by Japan and equipping the elderly with digital literacy skills, we can unlock a new realm of work possibilities within the informal sector. Leveraging this digital technology expertise helps the seniors to earn a steady income while at the same time remaining employed in tasks that are less physically demanding, additionally reducing the sense of isolation and worthlessness often felt by the senior citizens after retirement.

Financial Assistance

As societies age, ensuring the financial security and well-being of senior citizens becomes paramount. Financial planning is the foundation of a secure retirement. It requires the assessment of existing savings, income, pension plans, and other sources of income. Analysing all these elements is of prime importance so that they can make an informed decision about their desired retirement lifestyle (Financial Planning Strategies for Senior Citizens to Ensure a Secure Future, Financial Express, 2023). Sometimes they might find managing the healthcare cost a bit arduous as this includes building healthcare funds, understanding medical insurance, exploring other options to meet unforeseen medical emergencies, etc.

Lack of social security measures and the meagre pension fund received by the elderly makes them vulnerable to financial insecurity which impacts their ability to access quality healthcare facilities. Thus financial instability limits healthcare utilisation, which further leads to healthcare complications which again affects their already limited healthcare fund.

Recent studies conducted by the National Institute of Aging (NIA) show that people with early symptoms of dementia have trouble handling money and paying bills and that repeated signs of financial mistakes point toward dementia in the elderly population (National Institute on Aging, 2021).

As a result, the elderly are at a higher risk of being taken advantage of.

The US has effectively monetized many of these opportunities; one praiseworthy example is SilverBills. SilverBills is a company that helps the elderly scrutinise, store, and ensure their bills are paid on time while also detecting fraudulent activities. Tools like these help seniors manage their funds effectively by allocating funds to their various needs without the stress associated with money management. Unfortunately, such facilities tailored to the needs of the elderly are still a far-away dream in India. This is just one example of great business opportunities in the silver economy; there are a plethora of many more such opportunities that, if utilised, fulfil the social mission and boost the economy.

Leveraging Technology to Battle Loneliness

Traditionally, familial support is the foundation of elderly care, in India as well as other south and east Asian countries. But this support system has been slowly eroding due to migration, urbanisation, and shifts in the thinking of the younger generation like the increased desire for a nuclear family. The reason why an increasing population of elderly are living alone is that the children are choosing to stay away from home for education, work, or marriage. This trend is not unique to urban areas as the rural areas also follow similar living situations. The implication is that the elderly can no longer rely on their children for the support that they once provided for their parents (Brotin & Majumdar, 2023,).

Strengthening social participation through digital technology is crucial for successful ageing. Easy-to-use digital technology acts as a link between the elderly with different needs and their loved ones, thus fostering healthy ageing. That is to fully reap the benefits of digital technology it is important to design it in such a way that it caters to the needs of the elderly thus empowering them to maintain a higher degree of independence (WEF, 2021).

Studies highlight the susceptibility of elderly singles to suffer from malnutrition due to social isolation. Most of such cases go unnoticed until they require elderly home care (Grini & Øydis Ueland, 2023). Research has shown a link between dining alone and malnourishment in the elderly with few of them consuming nutrient-rich foods like fruits, vegetables and proteins.

It is high time to invest in digital communication tools like Komp, which is widely used in Europe, especially during the COVID pandemic when its demand skyrocketed. In a review conducted by Age Space, a website providing information about age care in the UK, with an easy-to-use interface with not more than a single button, Komp is designed specifically for seniors with limited technical expertise, enabling them to contact not only their loved ones but carers too. This is highly beneficial for seniors who seek companionship or struggle with loneliness by actively engaging in group meals and activities conducted by various NGOs. The app administrators envision a future where Komp can be used to create social networks, lessen feelings of loneliness, and allow people to virtually join in on things like “eat together," thus fostering a sense of connection despite physical distance (Komp From No Isolation, Age Space, n.d.).

Conclusion

India's upcoming demographic shift poses a major obstacle. The traditional familial support system for the elderly is decreasing, despite the ‘silver tsunami’ of the mature population rising. India must adopt a multifaceted approach to the way forward by focusing on creating a strong digital environment for its mature population and building a culture of lifelong learning to navigate emographic turbulence and realise the economic potential of its elderly.

There are many ways to promote digital inclusion, one of which is making digital devices affordable through targeted discounts and subsidies. Furthermore, it is imperative to overcome the hesitancy and resistance of the elderly towards technology. A user-friendly one-button interface like Komp has to be implemented in India that helps seniors interact with loved ones and helps close the digital barrier. Taking these small but crucial steps goes a long way toward ensuring that seniors are not left behind in this digital era.

Community centres and self-help groups that are designed specifically to address the needs of the elderly should be equipped to provide services like workshops and campaigns to promote digital literacy.

Employing ‘Digital Champions’, to cater to the needs and doubts of the elderly regarding digital technology is another step that can make the senior citizen's life better. Social media material should be made with these demographic groups' interests, likes, and dislikes in mind to improve their online experiences. Innovation in elderly care is of paramount importance to foster growth in the silver economy. However, this growth has to be done in such a way that, while deploying these technologies, ethical considerations have to be taken into account. Innovators, governments, and policymakers have to prioritise safety and uphold the human rights of older adults while ensuring the quality of the content and devices.

Healthcare workers can also be empowered by technological solutions like for example data analytics and treatment data and rehabilitation program information obtained through smart devices can be used by nursing homes to optimise outcomes and personalised care plans. This strategy combines the skills of caregivers with data-driven technology, called ‘precision care’ will greatly enhance the quality of life of the elderly.

An increase in demand for Komp devices during the COVID-19 times points out the importance of how digital solutions help seniors who are isolated feel more connected to society. Nonetheless, cultural opposition to elder care and age tech persists in India's socially oriented society.

To bridge this gap, policymakers have a critical role to play. Promoting digital inclusion through age-friendly technology standards, incentivising developers, and prioritising digital literacy programs are crucial steps. Affordable data packages and simplified technical explanations can further bridge the digital divide. Additionally, scaling up e-health services can reduce preventative healthcare costs for this demographic. Businesses must also step up, developing user-friendly, accessible products and services tailored to the needs of seniors. Academia can contribute by offering continuing education opportunities through digital platforms and fostering intergenerational knowledge transfer through peer training programs. In conclusion, by embracing an approach that prioritises digital inclusion of the elderly, and thereby empowering both caregivers and seniors, India can transform the ‘silver tsunami’ into a wave of opportunity. By creating a thriving silver economy, we can ensure that our ageing population lives well and contributes meaningfully to society.

References

Ageing and Employment Policies Working Better with Age: Japan. (2018).
OECD. https://www.oecd.org/els/emp/Working-better-with-age-Japan-EN.pdf

1

Bloom, D. (2015).
Global Population Aging: Facts, Challenges, Solutions & Perspectives. https://www.researchgate.net/publication/277621075_Global_Population_Aging_Facts_Challenges_Solutions_Perspectives

Brotin, B., & Majumdar, S. K. (2023).
Patterns and Correlates of Living Arrangement Among the Elderly Population in India. Indian Journal of Human Development. https://journals.sagepub.com/doi/10.1177/09737030231217611?icid=int.sj-full-text.citing-articles.1

Financial planning strategies for senior citizens to ensure a secure future. (2023).
Financial Express. https://www.financialexpress.com/money/financial-planning-strategies-for-senior-citizens-to-ensure-a-secure-future 3245468/#:~:text=Pradhan%20Mantri%20Vaya%20Vandana%20Yojana,lump%20sum%20amount%20upon%20maturity.

Grini, I. S. B., & Øydis Ueland, Ø. (2023).
How Families' Use of Digital Technology Can Be a Tool for Reducing Loneliness and Improving Food Intake among Older Adults. Journal of Aging and Longetivity. https://www.mdpi.com/2673-9259/3/1/4#B20-jal-03-00004

INTERNATIONAL INSTITUTE FOR POPULATION SCIENCES. (2020).

Reaping India's demographic dividend. (2022).

Manorama Yearbook. (2024, February 20). https://www.manoramayearbook.in/india/special-articles/2024/02/20/india-silver-economy-upsc.html. https://www.manoramayearbook.in/india/special-articles/2024/02/20/india-silver-economy-upsc.html

National Institute on Aging. (2021). Dementia may cause problems with money management years before diagnosis. . https://www.nia.nih.gov/news/dementia-may-cause-problems-money-management-years-before-diagnosis

NATIONAL LIBRARY OF MEDICINE. (2022). Potential demographic dividend for India, 2001 to 2061: a macro-simulation projection using the spectrum model.

National Institutes of Health. (n.d.). Productive activities and psychological well-being among older adults. Hao Y. Productive activities and psychological well-being among older adults. J Gerontol B Psychol Sci Soc Sci. 2008 Mar;63(2):S64-72. doi: 10.1093/geronb/63.2.s64. PMID: 18441271.

National Library of Medicine. (n.d.). Geriatric population in India: Demography, vulnerabilities, and healthcare challenges. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8132790/

NITI Ayog. (n.d.). Senior Care Reforms in India: Reimagining the Senior Care Paradigm. https://www.niti.gov.in/sites/default/files/2024-02/Senior%20Care%20Reforms%20in%20India%20FINAL%20FOR%20WEBSITE_compressed.pdf

Komp from No Isolation. (n.d.). Age Space. https://www.agespace.org/reviews/komp-review

UNESCAP. (2022).
Employment of Older Persons in Japan: Perspectives on History, Policy, and the Impact of Technology. https://www.unescap.org/sites/default/d8files/event-documents/S3_5_Employment_older_Japan.pdf

United Nation. (2019). World Population Prospects. United Nations. https://population.un.org/wpp/Publications/Files/WPP2019_Highlights.pdf

UNITED NATIONS DEVELOPMENT PROGRAM. (n.d.). Reaping India's demographic dividend. Retrieved January 13, 2022, from 1. https://india.unfpa.org/en/news/reaping-indias-demographic-dividend [1]
world economic forum. (2021).
What is the biggest benefit technology will have on ageing and longevity? https://www.weforum.org/agenda/2021/03/what-is-the-biggest-benefit-technology-ageing-longevity-global-future-council-tech-for-good/

THE HIDDEN ENGINE:
Examining the link between Gender, GDP, COVID-19 and the Purple Economy

SIYA NANDY

Introduction

The Purple Economy, also known as the Care Economy, embodies a fresh economic perspective acknowledging the critical role of care work, women's empowerment, and autonomy in driving economic functionality, societal well-being, and sustainable living. The objective of this article is to identify and discuss the underlying issues in the care economy. It highlights the key concepts of the Purple Economy designed to overcome these underlying issues and their implications on economic development, gender equality and care work. It evaluates the impact of COVID-19 on the care economy and the gender gap. It aims to underscore the significance of including the valuation of the care economy in the calculation of GDP.

GDP and the care economy

Caring labour acts as a positive externality and is subject to the free rider problem as it creates public good and widespread benefits even to those who reap the benefits without any payment. However, it remains unnoticed in conventional assessments of the economy's magnitude as most care services are produced outside market exchanges.

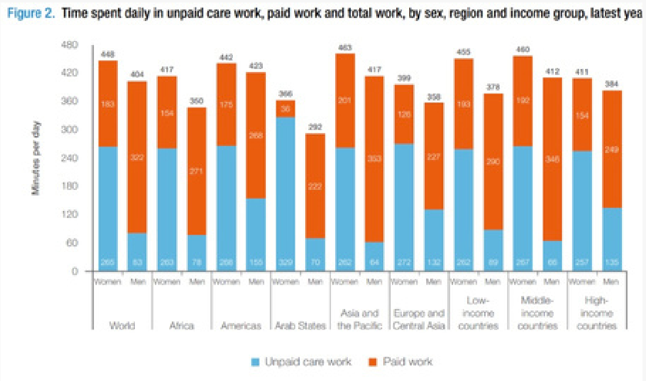
Usually, caregivers are underpaid or unpaid relative to their requirements for education and skill. The average hourly wages for home health care and childcare workers are $13.81 and $13.51, respectively, which is roughly half the average hourly wage for the workforce as a whole. This is called the care penalty (Economic Policy Institute, nd). Care work within the paid economy has identified that some types of care workers are relatively low paid and their working conditions are deficient as compared with those of other groups. A few of the reasons for the care penalty are intrinsic rewards, public goods, free riders and poor clientele. However, the economy is propped up by unpaid care work. It's the work that enables households to function in such a manner that allows others to participate in the labour force. It's the work that subsidises public care services when they are not available. Unremunerated care labour significantly contributes to the nations' economies, as well as to the well-being of individuals and societies as a whole.

The concept of the care economy highlights that unpaid care work generates value, rendering it productive or economic. The International Labour Organization (ILO) estimates that unpaid care and domestic work by country is valued to be 10–39% of GDP. In certain economies, unpaid care can contribute more to the economy than the commerce, manufacturing or transportation sectors.

Based on time-use survey data in 64 countries that was done by the ILO in 2018, estimates show that 16.4 billion hours are spent on unpaid care work every day—this is equivalent to 2 billion people working 8 hours per day with no remuneration. The OECD has also estimated the value of time spent on unpaid work to be approximately 15% of GDP on average across available OECD countries (when using the replacement cost method), and up to 27% of GDP when the opportunity costs of workers in unpaid work at home are accounted for.

Gender, COVID-19 and the Care Economy

There exist large and measurable economic impacts of unpaid care work and undervaluation of paid care work by women. The costs of providing care, which fall disproportionately on women, include foregone opportunities in education, employment and earnings, political participation, and leisure time. There exist various macroeconomic implications of the burden of care on women including reduced scope for paid work, an increase in unpaid work and the inferior status of women in the labour market. Unpaid care work also acts as a significant hurdle to women's participation in labour markets, which impacts pay equity. Women are more likely to work part-time because of care responsibilities leading to less pay and less financial security.

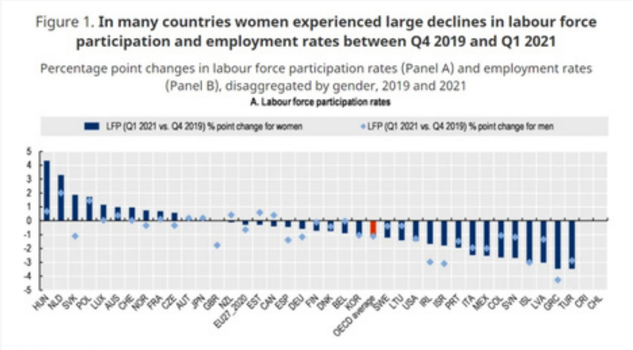


Source: Sinha, D., ILO, Sinha, D., Rajeev, S., ILO, & ILO. (2022). Creating employment and decent work in new and growing sectors. https://www.un.org/development/desa/dspd/wp-content/uploads/sites/22/2022/06/Sinha_Creating-employment-and-decent-work.pdf

The OECD's 2020 Risks that Matter survey presents cross-national evidence that when schools and childcare facilities shut down, mothers took on the brunt of additional unpaid care work – and, correspondingly, they experienced labour market penalties and stress such as reduced paid work hours.

Source: Global Gender Gap Report 2021. (2023, November 9). World Economic Forum. https://www.weforum.org/publications/global-gender-gap-report-2021/

The recession following the COVID-19 pandemic has been colloquially termed the "she-cession" due to the disproportionately negative effects felt by women. mothers were three times more likely than fathers to report that they took on most of the additional unpaid care work following school and childcare facility closures (61.5% of mothers of children under 12, compared to 22.4% of fathers) and many mothers of young children left the labour force completely. Mothers of children under age 12 were the group most likely to move from employed to not employed status between 2019 and 2020, on average across OECD countries. (OECD Risks That Matter, 2020)



OECD. (n.d.). https://read.oecd-ilibrary.org/view/?ref=1122_1122019-pxf57r6v6k&title=Caregiving-in-crisis-Gender-inequality-in-paid-and-unpaid-work-during-COVID-19

Case Study: The Care Economy Valuation in Columbia:

According to a study, the care economy would equal around 20% of Colombian GDP (DANE, 2020). This suggests that the care economy would hold a higher ranking in gross product than both the financial and agricultural sectors. The significance of this unseen sector in Colombian society suggests an opportunity to elevate the care economy beyond familial confines and transition it into a formal productive industry.

Under the DANE's measurements, specifically under the data observed from its 2012 and 2017 surveys, Colombian women dedicated 31 hours per week to unpaid care chores, representing 78% of their working hours. In contrast, men committed less than half of the time to the same activities. The COVID-19 pandemic highlighted the care crisis in both micro and macroeconomic spheres.

While both women and men increased their unpaid workloads, women continued to shoulder the bulk of unpaid care and domestic work. This led to a negative ripple effect on their working hours, earnings, mental health and wellbeing. In 2022, 50% of Colombian women could not access the labour market as they were expected to spend their time as housekeepers. Persistent gender disparities and societal norms surrounding caregiving have existed for a long time, and the COVID-19 pandemic has exposed the detrimental effects of these dynamics

Policy Recommendations:

The care needs, abilities and resources are not equally distributed among individuals and groups, creating a need for public or collective intervention to meet care needs. To tackle such issues, the key concepts of the Purple Economy call for a policy change:

Recognising care as a public good creates a positive externality. Cease freeriding unpaid and underpaid labour extended by women and collectively assume the cost of quality care. All workers in the care sector enjoy equal pay for work of equal value, with value being redefined to recognise social contributions.

To achieve these objectives, it is proposed that the care economy should be formalised however, it should still remain accessible to everyone. Therefore, the state should assume the cost of caretaking and nursing the most vulnerable sections of the economy. Another reason for the government to cover expenditure is the prevalent free rider problem associated with care work. On the other hand, the market should supply the remaining sectors, whose purchasing power will cover the costs of these new paid activities. The care economy, then, can exist under a mixed market approach.

In the US alone, a public-private $1.3 trillion investment (10% of GDP) in social sectors, spread between now and 2030, would result in a GDP boost and new jobs, specifically:

A $3.1 trillion GDP return (Accenture, 2022). These productivity gains are also enabled by increased investment in future work technologies that augment work tasks, allowing talent in the caring economy to focus more on the human side of their job. The creation of 10 million additional jobs in the social sector by 2030 by creation of 4.8 million jobs in teaching, 1.8 million care-giving jobs and 900k jobs in healthcare. Followed by a ripple effect of an additional 1 million jobs in other sectors (Accenture, 2022).

The Purple Economy also aims to identify ineffective policies, acknowledge that policies are not gender neutral and establish more effective policies. A transformative approach involves the 3R's—Recognising including adequate reward systems for paid care workers, Reducing and Redistributing unpaid care—can provide overall guidance.

- Recognising means acknowledging the nature, extent, and role of unpaid care work in any given context. It goes beyond crude aggregate measures of unpaid care work. It requires the development of detailed accounts and analyses that can inform precisely who is doing unpaid care work, and to what extent. The extremely low pay that health care support, service, and direct care workers earn has long been woefully inadequate. The government should enact hazard pay to ensure that no worker risking their life during this crisis is paid less than a family-sustaining wage.

- Reduction of care work has implications for the time of the caregiver, and for her health and wellbeing, when providing care involves drudgery, or is done in an unsafe environment. Developmental projects reduce the time spent by the caregiver. For example, investments in sustainable water, electricity and transport infrastructure.

- Redistribution of care work may take place within households between women and men or within society as a whole, through the development of policies supporting the provision of or access to care services. Such as providing paternity leave to fathers, and alleviating the stress of solely caring for the child.

Conclusion:

In conclusion, the care economy which is overlooked in traditional economic assessments, emerges as a critical driver of societal well-being and economic productivity. Despite being predominantly unpaid or underpaid, caregivers contribute immensely to households and economies. It is imperative to account for care work in the GDP as it can contribute more to the economy than the manufacturing, commerce or transportation sectors. By integrating the care economy into economic frameworks and policy agendas, societies can foster resilience, equity, and prosperity for all. Recognising the true worth of care work and fostering a more equitable distribution of caregiving responsibilities are crucial for achieving gender equality and boosting GDP. By implementing the Purple Economy's principles, we can unlock this potential and build a future where care work is valued, supported, and contributes to a thriving society for all.

References

A caring economy, jobs of tomorrow. (n.d.). Accenture. https://www.accenture.com/us-en/blogs/business-functions-blog/caring-economy-three-trillion-gdp-boost

Care economy: an opportunity to create jobs and close the gender gap. (2022, May 22)

England, P., & Folbre, N. (1999).The Cost of Caring. The Annals of the American Academy of Political and SocialScience,561(1),39-51. https://doi.org/10.1177/000271629956100103

Esquivel, V. (2014) 'What is a transformative approach to care, and why do we need it?' Gender & Development Vol. 22(3)

Himmelweit S, July 2007 'The prospects for caring: economic theory and policy analysis', Cambridge Journal of Economics, Volume 31, Issue 4

OECD. (n.d.).https://read.oecd-ilibrary.org/view/?ref=1122_1122019-pxf57r6v6k&title=Caregiving-in-crisis-Gender-inequality-in-paid-and-unpaid-work-during-COVID-19

Setting higher wages for child care and home health care workers is long overdue. (n.d.). Economic Policy Institute.https://www.epi.org/publication/higher-wages-for-child-care-and-home-health-care-workers/

Sinha, D., ILO, Sinha, D., Rajeev, S., ILO, & ILO. (2022).Creating employment and decent work in new and growing sectors. https://www.un.org/development/desa/dspd/wp-content/uploads/sites/22/2022/06/Sinha_Creating-employment-and-decent-work.pdf

World Economic Forum. https://www.weforum.org/agenda/2022/05/care-economy-gender-gap-davos22/

Illustration by Tesa Joby

ORGANIZED CRIME & URBAN DYNAMICS: The Black Economy's Influence on City Life in India

HIYA KESHARWANI

Introduction

The black economy is a term used to describe economic activities that are illegal or unreported, such as smuggling, counterfeiting, and tax evasion. These activities are often associated with organised crime groups, which use violence and corruption to maintain power.

According to a study by Nicholas Barnes, political science has mostly ignored organized criminal violence, despite its increasing relative importance. Barnes argues that organized criminal violence should be considered a competitive form of state-building and be viewed as political. He contends that the dominant paradigm in the study of political violence, which has neatly separated political from criminal, is neither conceptually nor theoretically justified. Distinguishing between the two has become increasingly difficult as illicit networks and criminal actors shape the patterns of violence in most contemporary conflicts.

A study published in 'Trends in Organized Crime' proposed a conceptual framework for connecting organized crime groups and territories. The study analyzes the nexus between organised crime groups and territories, and how these groups can exploit resources that circulate within the territorial contexts in which they operate. The study also shows how these processes link with the main types of organised crime groups differently.

Organized crime is a dynamic and adaptable phenomenon, with criminal entities, including terrorist groups, often driven by political agendas. The rise of globalization, rapid communication, financial transfers, and international travel has significantly enhanced the opportunities for transnational criminal groups to proliferate. Traditional and terrorist-oriented organised criminal entities have transformed, giving way to more nimble networks that operate across borders. This evolution has led to a broad spectrum of criminal activities affecting states involved in the supply, demand, or transmission of illicit goods and services.

Organised Crime in India

A book titled "Dynamics of Crime - Spatial and Socio-Economic Aspects of Crime in India" examines the nature and magnitude of crime in India, including organized crime. The book identifies dominant socioeconomic features of Indian society that impact criminal behaviour. It concludes that the bulk of crime in India has economic roots, with about 90 per cent of crime motivated by the desire for monetary gain. Lower-class crime is believed to correlate with unemployment.

Various forms of organized crime, such as narcotics smuggling, arms trafficking, gold smuggling, counterfeit currency circulation, human trafficking, kidnapping, extortion, contract killings, cybercrime, money laundering, maritime piracy, smuggling of Chemical, Biological, Radiological, and Nuclear (CBRN) materials, illegal trading in human organs, and infiltration of illicit businesses, pose serious threats globally. While India lacks specific legislation addressing organized crime, existing laws related to criminal conspiracy (e.g., Section 120-B of the Indian Penal Code) and offences like dacoity (Section 395) and kidnapping for ransom (Section 364-A) are in place.

Some states in India, such as Uttar Pradesh, Maharashtra, and Karnataka, have introduced laws to combat organized crime, with Uttar

Source: The Organised Crime Index

Pradesh enacting the Uttar Pradesh Gangster and Anti-Social Activities (Preventive Act, 1986). Additionally, national acts like The National Security Act 1980 and The Prevention of Illicit Traffic in Narcotic Drugs and Psychotropic Substances Act 1988 aim to address specific aspects of organized criminal activities.

Introducing the Uttar Pradesh Control of Organized Crimes Act (UPCOCA) is a step towards curbing organised crime and mafia activities. It encompasses offenses like illegal mining, the sale of unauthorized medicines, land encroachments, abduction syndicates, wildlife smuggling, extortion, and white-collar crimes. The intertwining of terrorist and organized crime groups has created a symbiotic relationship, allowing terrorists to reduce dependence on state sponsors and other supporters.

What has organised crime been like in India?
Terrorism

During the latter part of the 1990s, terrorist groups began leveraging criminal networks, engaging in activities such as illegal drug and arms trafficking, human trafficking, counterfeit currency circulation, and money laundering.

This collaboration serves the dual purpose of providing terrorists with the necessary resources, including arms and funds while offering organized crime groups the support of terrorists. The intricate connection between these entities operates at national and transnational levels, with implications within India and beyond its borders.

Over the years, cases of organized crime have witnessed a surge in India, particularly through sea routes, where criminal activities range from smuggling to the infiltration of terrorist groups into the country.

In the northeastern states of India, various militant groups have established quasi-governments or exert influence over specific regions, extracting funds directly from the local population. These groups often coerce or demand bribes from government officials, compelling them to support the militants' cause. In return, the militants sell essential commodities, such as rice and fuel, at inflated prices to the local populace, creating a nexus between organized crime and terrorism within India. Activities like kidnapping, extortion, contracts, and black market dealings arise due to financial shortages, prompting involvement in transnational activities.

In the North-East, terrorist groups act as couriers for illegal drugs, arms, and human trafficking across different parts of the country. Key entry points from Southeast Asia, such as Chittagong Hill Tracts, Moreh, and Cox's Bazar, have fallen under the control of these groups. Similarly, in Kashmir, connections between terrorist organizations and organized crime exist on various levels, fueled by external funds primarily from countries like Pakistan and several Gulf nations. Muslim terrorist groups operating in India, often supported by Pakistan's ISI, utilize drug money to finance their militant activities, with counterfeit currency playing a significant role.

The Bombay Blast of 1993 serves as a glaring example of the intertwining of terrorist activities and organized crime. Orchestrated by Dawood Ibrahim, a key figure involved in drug and gold smuggling, as well as match-fixing, the coordinated bombings resulted in numerous casualties. Organized crime in India stems from a desire for rapid wealth accumulation, the pursuit of power through illegal means, monopolistic control to manipulate prices, and societal inequality. Historically, criminal gangs have operated in India, engaging in robbery and murder since ancient times. Mumbai, being the financial capital of India, is particularly susceptible to both terrorist attacks and criminal activities. Many gangs in Mumbai trace their origins to local support gained through the distribution of illicit liquor. Examples of such gangs include Varad Rajan Mudaliyar, Hazi Mastan, Ravi Pujari, Karim Lala, Chhota Rajan, Yusuf Patel, Amar Naik, Arun Gawali, and Dawood Ibrahim. The city's seaports are major hubs for smuggling operations, dating back to the 1960s and 1970s, when gold smuggling began in Mumbai, Gujarat, and Dubai, followed by drug trafficking.

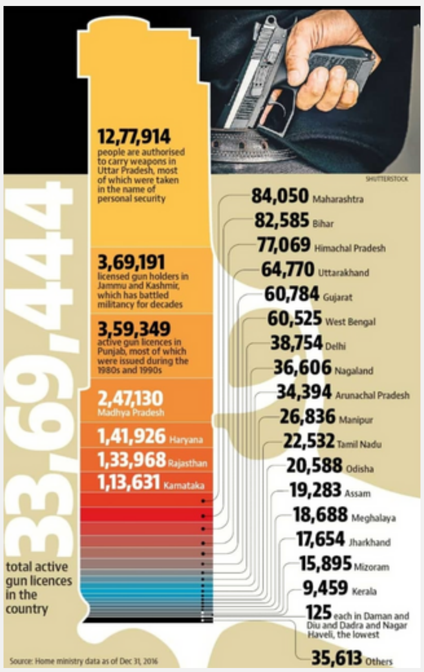
Trade

Trade has been a pivotal element in the arsenal of organized crime, with criminal activities such as kidnapping and extortion extending to sea routes, particularly involving illegal migrants on the eastern coast. The collaboration between Naxalites, North-East insurgencies, hinterland groups, and Kashmiri terrorists with organized crime entities poses a significant internal security threat to India. This collaboration accelerates the spread of terrorism within India, adversely impacting the nation's economy. India is a key player in the illegal arms trade, which spans across borders and within the country *(Exclusive: In Past 7 Years, Biren Singh Govt Has Issued Highest Number of Gun Licences in Northeast, n.d.).*

Delhi is an important hub for smuggling guns from the central and eastern regions to the northern states of Punjab and Haryana. But now, many illegal arms factories have sprung up around the capital city, and gun dealers from Meerut, Aligarh, and other places in western Uttar Pradesh have become the main sources of illicit firearms for the criminals in the National Capital Region. This has led to a growing acceptance of gun culture in various states, an increase in violent crimes involving guns, and more insecurity due to the easy availability of illegal weapons. Data released by the Union Home Ministry shows that India has a total of 33,69,444 active gun licences as of December 31, 2016. The highest number of gun licences were given in Uttar Pradesh where 12,77,914 people are authorised to carry weapons, most of which were taken in the name of personal security. As per the 2011 census, the population of Uttar Pradesh is 19,98,12,341. Jammu and Kashmir, hit by three decades of militancy, has 3,69,191 licenced gun holders, including those of prohibited bore and non-prohibited bore arms. The total population of the state as per 2011 census is 1,25,41,302, the ministry said. Punjab, which witnessed terrorism in the 1980s and 1990s, has 3,59,349 active gun licences, most of which were issued during the two decades wherein militancy had engulfed the state. Punjab has a population of 2,77,43,338 as per the 2011 census. There are 2,47,130 active gun licences in Madhya Pradesh, followed by Haryana where 1,41,926 people are authorised to carry licenced weapons, it said. The other states with large numbers of licenced gun holders include Rajasthan (1,33,968 licences), Karnataka (1,13,631), Maharashtra (84,050), Bihar (82,585), Himachal Pradesh (77,069), Uttarakhand (64,770), Gujarat (60,784) and West Bengal (60,525). The illegal arms trade is linked to the narcotics trade in northeast India, where rebel groups either make drugs to smuggle or charge drug traffickers for safe passage for their illicit trade. The money collected from the drug trade is then used to buy arms and weapons from outside. Fake goods are a big issue in India, with serious economic, health, and safety implications for different sectors such as consumer goods, food and beverages, medical equipment, and electronics. The problem has worsened in recent years by unauthorised actors from neighbouring countries trying to establish a foothold in India.

NUMBERS GAME	
STATE	No of guns
UP	12.77 lakh
Punjab	3.59 lakh
MP	4.47 lakh
J&K	3.69 lakh
Delhi	38,754
Karnataka	1.13 lakh
Kerala	9,459

Source: AsianAge



Source: Hindustan Times

The most common fake products in India are cosmetic products, textiles, pharmaceutical products, and copied books and videos. These products are easily available in local markets in the country.

The illegal trade in excise goods, especially tobacco products, is another widespread market in India, causing major public health hazards and loss of tax revenue. Illegally made alcohol is a big market in India, with nearly half of all liquor consumed in the country coming from an illegal source. In states with partial or calibrated prohibition, the demand for illegal liquor is not very high, but its consumption leads to a large number of deaths in various parts of the country.

Drugs

India lies between two large regions of opium production to its east and west, the Golden Triangle (Myanmar, Thailand, and Laos) and the Golden Crescent (Afghanistan, Pakistan, and Iran), making it a major hub for the movement, trade and use of opium products, often linked to shipments of drugs sold on the dark web. Lately, the sea route has become a new way of smuggling drugs, while the biggest spice market in Gujarat has turned into a land transit point.

India also grows opium, but despite government measures, some of it is likely diverted from the legal to the illegal market. However, most of the heroin that enters the market comes from Afghanistan, via Pakistan.

India is also affected by the opioid crisis, with millions of people using this drug. The heroin trade is a rising problem, with reports indicating that Pakistani traders are looking for new ways to send heroin to India along the coasts of Sindh and Gujarat, with the target being Indian Punjab. India is a destination country for the cocaine trade, but the cocaine market is smaller than other drug markets in the country. In the past, cocaine was brought into the country by criminal actors from African countries. Still, recently cocaine has been obtained from other sources, such as Afghanistan and several countries in South America. A new trend is drug gangs' use of cryptocurrencies and the dark web; these are mainly African smugglers based in India. The end destinations for cocaine in the country are upper-class and urban areas in New Delhi and Mumbai.

Cannabis plays a key role in India's illegal drug trade, with Odisha becoming a major centre for drug trafficking, especially of cannabis grown in areas that were previously affected by the Maoist rebellion. Debates around the legalization of cannabis have led to the legalization of cannabis cultivation for medical and industrial purposes in the state of Madhya Pradesh. However, its cultivation and trade are still partly restricted in other states like Himachal Pradesh and Uttarakhand.

India is also a source and transit point for synthetic drugs, with domestic use mostly limited to urban areas. The country is thought to be a secondary source of precursor chemicals, from where shipments go to the Golden Triangle in South East Asia. India is often listed as a destination for drugs traded on the dark web, and pharmaceutical companies are at risk of their products being diverted for narcotics trafficking. Occasional seizures of yaba tablets show that there are multiple exit points along the border in the Indian states of Tripura, Assam, and Meghalaya. Ephedrine and pseudoephedrine are reportedly traded across the border with Myanmar, with the reverse trade of methamphetamine back into India.

Conclusion

We have explored the various aspects of organized crime in India, such as its linkages with terrorist groups, its activities such as drug trafficking, extortion, kidnapping, human trafficking, fake currency, and smuggling, its impact on the country and the states, especially the coastal ones, and its historical roots. We have argued that organized crime is a serious challenge to the security and integrity of India, as it undermines the rule of law, economic development, and social cohesion of the country. Therefore, it is essential to take effective and comprehensive measures to combat this problem, both at the national and the international level.

References

Zabyelina, Y. (2023, September 1). Revisiting the Concept of Organized Crime through the Disciplinary Lens of Economic Criminology. Journal of Economic Criminology. https://doi.org/10.1016/j.jeconc.2023.100017

Barnes, N. (2017). Criminal politics: An integrated approach to the study of organized crime, politics, and violence. Perspectives on Politics, 15(4), 967-987.

Ahmed, N. (2017). Transnational Organised Crime in India: A New Framework of Analysis. European Journal of Social Sciences Studies.

The Scourge of the Black Economy in India: Origins, Causes and Remedies. (n.d.). The Wire. https://thewire.in/books/scourge-black-economy-india-origins-causes-remedies

India has 33.69 lakh gun licences, Uttar Pradesh tops list with 12.77 lakh. (2017, October 3). Hindustan Times. https://www.hindustantimes.com/india-news/india-has-33-69-lakh-gun-licences-uttar-pradesh-tops-list-with-12-77-lakh/story-uRQ9XGCy9wpczOiEMcFmAN.html

Secretary-General: Transnational Organized Crime 'a Vicious Threat' to Sustainable Development. (n.d.). India. https://india.un.org/en/255200-secretary-general-transnational-organized-crime-%E2%80%98-vicious-threat%E2%80%99-sustainable-development

Thirumalai, N., Sharma, A., & Sharma, A. (2023, September 12). Pak Drug Suppliers Now Dropping Heroin Along Gujarat and Rajasthan Borders. Final Destination is Punjab. News18. https://www.news18.com/india/pak-drug-suppliers-now-dropping-heroin-along-gujarat-and-rajasthan-borders-final-destination-is-punjab-8573945.html

Exclusive: In the Past 7 Years, Biren Singh Govt Has Issued the Highest Number of Gun Licences in the Northeast. (n.d.). The Wire. https://thewire.in/security/manipur-gun-licenses-biren-singh-violence

Global Organised Crime Index

INVESTING IN CLEAN TECH:
The Economic Opportunities of Golden Innovations

ADA SHARMA

Introduction

"The climate emergency is a race we are losing, but it is a race we can win."
~António Guterres, Secretary-General of the United Nations.

Forget about the wolves of Wall Street or the unicorns of Silicon Valley; the next big wave of investments isn't riding on rollercoaster stocks or flashy apps. Instead, it's the quiet revolution unfolding right under our feet: the rise of clean technology.

The Clean Tech Boom: A Multi-Trillion Dollar Industry

Clean tech is projected to grow into a multi-trillion-dollar industry, with forecasts indicating a monumental valuation of $2.7 trillion by the year 2027. This extraordinary growth trajectory, as mentioned in the seminal report "Clean Tech Market Global Report 2020-30: Covid 19 Impact and Recovery" by Research and Markets, underscores the shift occurring within the global energy landscape. Clean technology is now offering investors a blend of environmental impact and financial returns.

Driving the Green Revolution: Major Players and Billions in Investments

The big shots themselves are driving the green revolution. From Bill Gates' Breakthrough Energy Ventures, investing in cutting-edge solutions with a long-term perspective, to Singapore's sovereign wealth fund Temasek, a major player with diverse holdings in clean tech companies, major investors are pouring billions into the sector. Venture capitalists, like Lowercarbon Capital focusing on late-stage climate solutions, and private equity firms, like Acasta Capital specialising in the energy transition, are all throwing their weight behind this critical sector.

Even tech giants like Microsoft and Google have dedicated funds, like the Microsoft Climate Innovation Fund, to support early-stage ventures tackling climate challenges. Global cleantech investment soared to a record $329.2 billion in 2021, nearly doubling from the previous year, as reported by BloombergNEF's "Clean Energy Investment: Global Trends 2021" report. Additionally, venture capital (VC) investment in cleantech surged to $121.3 billion in 2021, more than tripling from 2020, underscoring the growing confidence in the sector's potential.

This report examines clean technology, dissecting its economic and environmental significance in the global economy. It analyses the current state of the industry, scrutinises financial performance of key players, and explores innovative risk management strategies. The aim is to equip investors with a comprehensive understanding of this dynamic sector, enabling them to capitalise on its immense potential, while mitigating inherent risks.

Orsted: A Beacon in CleanTech Investing

Orsted, a prominent player in the energy sector, emerges as an excellent fit for cleantech investing, supported by its robust financial performance. Over the years, Orsted has demonstrated consistent revenue growth, rising from 59,504 TCr in 2017 to an impressive 1,32,277 TCr in 2022(Orsted Investors, n.d.). This upward trajectory aligns seamlessly with the flourishing clean tech industry, showcasing Orsted's pivotal role in this expanding market.

In terms of net profit, Orsted has consistently delivered positive results, with figures climbing from 20,199 TCr in 2017 to 14,996 TCr in 2022(Orsted Investors, n.d.). This financial stability positions Orsted as a reliable investment choice within the clean tech sector, where stability is crucial for investors seeking both environmental impact and financial returns.

Their substantial market capitalisation of 16.58 TCr(Orsted Investors, n.d.) further underscores its significance in the cleantech investment space, reflecting investor confidence in its potential to drive sustainable and profitable initiatives.
Their strong financial performance, marked by consistent revenue growth, positive net profits, and substantial market capitalisation, makes it a compelling choice for investors seeking opportunities in the rapidly expanding clean tech industry. As the world increasingly prioritizes sustainable solutions, Orsted stands out as a frontrunner, offering a lucrative and environmentally conscious investment opportunity.

Investment Approaches: Navigating the Clean Tech Opportunities

To navigate the landscape of clean technology opportunities, investors employ various strategic approaches tailored to their risk levels, investment horizon, and overarching objectives. These approaches encompass value investing, growth investing, and impact investing, each offering distinct advantages and considerations.

Value Investing:

Value investors seek out undervalued assets, focusing on established companies with proven technologies and stable cash flows. This approach proves particularly attractive in mature segments of cleantech, such as wind and solar energy, where cost reductions continuously enhance profitability. According to data from Bloomberg New Energy Finance (BNEF), global investment in renewable energy projects reached $303.5 billion in 2023, marking a 5% increase from the previous year. Notably, companies like NextEra Energy, a prominent US utility giant, exemplify the value investing strategy in cleantech. NextEra Energy has steadily expanded its renewables portfolio while delivering consistent dividends to investors. This strategic emphasis on established players with robust fundamentals mitigates risk while positioning investors to capitalise on the steady growth trajectory of cleantech industries.

Growth Investing:

Contrary to value investing, growth investors target high-potential early-stage companies possessing disruptive technologies within the cleantech sector. Despite the inherent risks associated with nascent ventures, growth investing offers the allure of exponential growth potential. According to a report by McKinsey & Company, venture capital investment in clean energy technologies reached $22.8 billion in 2023, representing a 17% increase from the previous year. Tesla, an industry pioneer in electric vehicles, epitomises the growth investing strategy within cleantech. Tesla's early adoption and relentless innovation have propelled its valuation to unprecedented heights, making it a quintessential case study in capitalising on disruptive technologies within the clean energy space. While growth investing entails heightened volatility, astute investors can reap substantial rewards by identifying and supporting innovative cleantech ventures poised for rapid expansion.

Impact Investing:

Impact investors prioritise environmental and social considerations alongside financial returns, fostering a symbiotic relationship between profitability and sustainable development. This approach often entails investments in renewable[1] energy infrastructure, sustainable materials, or clean water solutions, thereby addressing pressing global challenges while generating financial gains. According to the Global Impact Investing Network (GIIN), the size of the

impact investing market exceeded $715 billion in 2023, representing a significant increase from previous years. Ørsted, a leading Danish energy company, exemplifies the transformative potential of impact investing in cleantech. Ørsted's strategic shift from fossil fuels to offshore wind energy has not only improved its financial performance but also facilitated significant reductions in carbon emissions, underscoring the dual impact of environmental stewardship and financial prosperity. By aligning investment capital with socially responsible initiatives, impact investors can drive positive change while realising competitive returns in the burgeoning cleantech sector.
In conclusion, when it comes to cleantech investing, you need to understand various investment approaches. Each one is designed to take advantage of different market trends and goals. Whether you're aiming for profits, growth, or making a difference, these strategies can help you tap into the power of clean technology while supporting global sustainability efforts.

Unique Considerations and Risk Factors:

Clean technology, while offering a crucial path towards a sustainable future, presents unique challenges for investors and developers. Here's a closer look at some key considerations and risk factors, along with relevant data to illustrate their significance:

Technological Immaturity: Unlike established technologies, many cleantech solutions are in their early stages of development. While innovation is a hallmark of the sector, it also introduces uncertainties. Technologies may not be fully optimised, and long-term performance and reliability can be difficult to predict. This immaturity can pose challenges in terms of scalability, cost-effectiveness, and integration with existing infrastructure. Rigorous testing and ongoing research and development are crucial to ensure the viability and long-term success of cleantech solutions.

According to a 2023 report by the International Renewable Energy Agency (IRENA), nearly two-thirds (62%) of global renewable energy capacity additions in 2022 came from emerging renewable energy technologies, such as concentrated solar power and offshore wind [^1]. This highlights the rapid pace of innovation in the cleantech sector, but also underscores the need for continued development to ensure these technologies can compete effectively.

Policy Dependence: The success of many cleantech companies is heavily influenced by government policies and regulations. Incentives such as tax breaks, subsidies, and feed-in tariffs can significantly stimulate market demand and make clean technologies more affordable. Conversely, a lack of supportive policies or sudden changes in regulations can create uncertainty and hinder market growth. Cleantech companies need to be adaptable and strategically navigate the evolving policy landscape to ensure sustainable business models.

A 2022 study by the World Resources Institute found that countries with strong renewable energy policies have seen a significant increase in clean energy investment. For example, China, which has implemented ambitious renewable energy targets and supportive policies, attracted over $380 billion in clean energy investment in 2021, more than any other country [^2]. This demonstrates the critical role of government policies in driving cleantech adoption.

Long Investment Horizon: Cleantech solutions often involve significant upfront investments in research, development, and infrastructure. Additionally, some technologies may have longer payback periods compared to traditional options. This can deter investors seeking quick returns. Investors in cleantech need to be patient and have a long-term perspective, recognising the potential for environmental and economic benefits alongside financial returns.

While payback periods can vary depending on the specific technology, a 2023 report by Bloomberg New Energy Finance (BNEF) suggests that the levelised cost of electricity (LCOE) for solar and wind power has declined significantly in recent years. In fact, solar and onshore wind are now the cheapest sources of electricity in many regions, making them increasingly attractive investments over the long term [^3]. This trend suggests that cleantech solutions are becoming more cost-competitive, potentially reducing the investment horizon for some technologies.

Successful Investment Strategies by Institutional Investors:

- Temasek Holdings (Singapore): Temasek Holdings, a sovereign wealth fund based in Singapore, adopts a multi-stage approach to cleantech investing, targeting both established and early-stage companies across diverse sectors globally. Their investment portfolio boasts a balanced mix of value and growth opportunities, exemplified by holdings in companies like Ørsted and Beyond Meat. Ørsted, a Danish energy company, underwent a successful transformation from fossil fuels to offshore wind energy, while Beyond Meat revolutionized the plant-based food industry. Temasek Holdings' investment strategy underscores its ability to identify promising cleantech ventures at various stages of development, positioning the fund for long-term success.

- BlackRock (USA): BlackRock, a leading asset management firm based in the USA, has demonstrated a commitment to sustainability through the launch of the BlackRock Sustainability Infrastructure Fund. This fund targets renewable energy projects characterised by predictable cash flows and attractive risk-adjusted returns. By focusing on infrastructure

- investments within the clean tech sector, BlackRock seeks to provide investors with stable entry points while contributing to the transition towards a low-carbon economy.

- Norges Bank Investment Management (Norway): Norges Bank Investment Management, responsible for managing Norway's sovereign wealth fund, integrates environmental, social, and governance (ESG) factors into its entire investment portfolio. The fund allocates significant resources to clean tech leaders such as Tesla and SolarEdge, reflecting a growing emphasis on sustainability principles in mainstream investment strategies. Tesla, a pioneer in electric vehicles, and SolarEdge, a leading provider of solar energy solutions, embody Norges Bank Investment Management's commitment to supporting innovative cleantech companies with strong ESG credentials.

Derivative Trading: Hedging Risks, Boosting Returns

Clean technology presents a compelling investment opportunity with the potential to revolutionise global energy production and consumption. However, inherent market volatilities can pose significant challenges for cleantech companies and investors. These volatilities stem from various factors, including evolving government policies, technological advancements, and fluctuations in the prices of critical resources.

Derivative instruments offer a strategic approach to mitigate these risks and enhance the overall attractiveness of cleantech investments. These instruments function as financial contracts derived from the value of underlying assets such as stocks[1], commodities, or currencies. By strategically utilizing options and futures contracts, cleantech stakeholders can proactively manage risk and navigate the inherent volatilities within the market.

BlackRock's Sustainability Infrastructure Fund serves as a prime example, using derivatives to invest in predictable renewable energy projects, ensuring stable cash flow alongside impactful returns. These tools are powerful allies, but wielding them effectively requires expert guidance and a robust risk management strategy.

Successful Derivative Trading Strategies in Clean Tech

Clean technology presents unique opportunities for utilizing derivative instruments to manage risk and enhance returns. Here's a closer look at some prevalent derivative trading strategies employed in the cleantech sector:

1. Carbon Credits Trading:

Many cleantech companies involved in activities that reduce greenhouse gas emissions can participate in carbon credit markets. These markets allow companies to generate and trade carbon credits, essentially permits to emit a specific amount of carbon dioxide or equivalent greenhouse gas. Companies that reduce their emissions beyond regulatory requirements can generate credits, which can then be sold to companies that exceed their allotted emissions.

Strategy: Cleantech companies can utilise futures contracts linked to carbon credit prices to:

- Lock in profits: By selling carbon credits futures contracts at a predetermined price, companies can secure future revenue from their carbon reduction efforts, mitigating the risk of price fluctuations.
- Create additional revenue streams: Companies with consistent emission reduction capabilities can use carbon credit futures to create a predictable income stream, supplementing their core business activities.

The global carbon credit market is expected to reach a value of USD 2.47 trillion by 2027, according to a 2023 report by Grand View Research. This significant growth potential highlights the increasing importance of carbon credits for cleantech companies.

2. Weather Hedging:

Clean energy sources like solar and wind power are inherently dependent on weather patterns. Fluctuations in sunshine or wind speed can significantly impact energy production and, consequently, revenue for cleantech companies.

Strategy: Cleantech companies can utilize weather derivatives like forward contracts tied to weather indices to hedge against weather-related risks. These contracts allow companies to:

- Mitigate production losses: By locking in a price for future energy production based on a specific weather index, companies can protect themselves from revenue shortfalls due to unfavourable weather conditions.
- Enhance financial stability: Hedging against weather volatility can lead to more predictable cash flows, improving a company's financial profile and potentially attracting investors.

A 2022 study by the International Renewable Energy Agency (IRENA) found that weather variability can reduce solar and wind power plant output by an average of 5-10%, highlighting the potential benefits of weather hedging for cleantech companies.

3. Structural Hedging:

Cleantech projects often require substantial upfront investments in infrastructure and technology. Fluctuations in interest rates can significantly impact the cost of financing these projects, potentially jeopardising their viability.

Strategy: Cleantech companies can utilise interest rate derivatives such as interest rate swaps to hedge[1] against interest rate fluctuations during project financing. These instruments allow companies to:

- Lock in borrowing costs: By entering into an interest rate swap, companies can fix their borrowing costs for a predetermined period, mitigating the risk of rising interest rates impacting project financing.

- Enhance project viability: By ensuring stable financing costs, companies can improve the overall financial feasibility of cleantech projects, increasing their chances of success and attracting investors.

A 2023 report by the World Bank found that renewable energy investments are expected to reach USD 1.3 trillion globally in 2023, underscoring the importance of managing financing risks for cleantech projects.

Conclusion

In the world of clean tech, there's a lot going on, from big money moves to the success story of Ørsted and the tricky world of trading. It's clear: fighting climate change is a big challenge, but it's also a huge opportunity. Investors, armed with clever plans and a good understanding of the scene, can make money and help the planet.

The clean tech revolution is happening now, and as we look at it all, we see that this challenge isn't impossible. With new tech, smart investments, and good policies, we can push towards an economy that's less harmful to the planet. This big change isn't just about making money; it's about a turning point in history, where making money can also help save the environment.

As the world deals with the urgent need to act on climate change, the clean tech sector is right at the front, ready for big changes. By working together, coming up with new ideas, and making smart investments, we can make the most of clean tech to lessen the impact of climate change and build a better future for everyone.

References

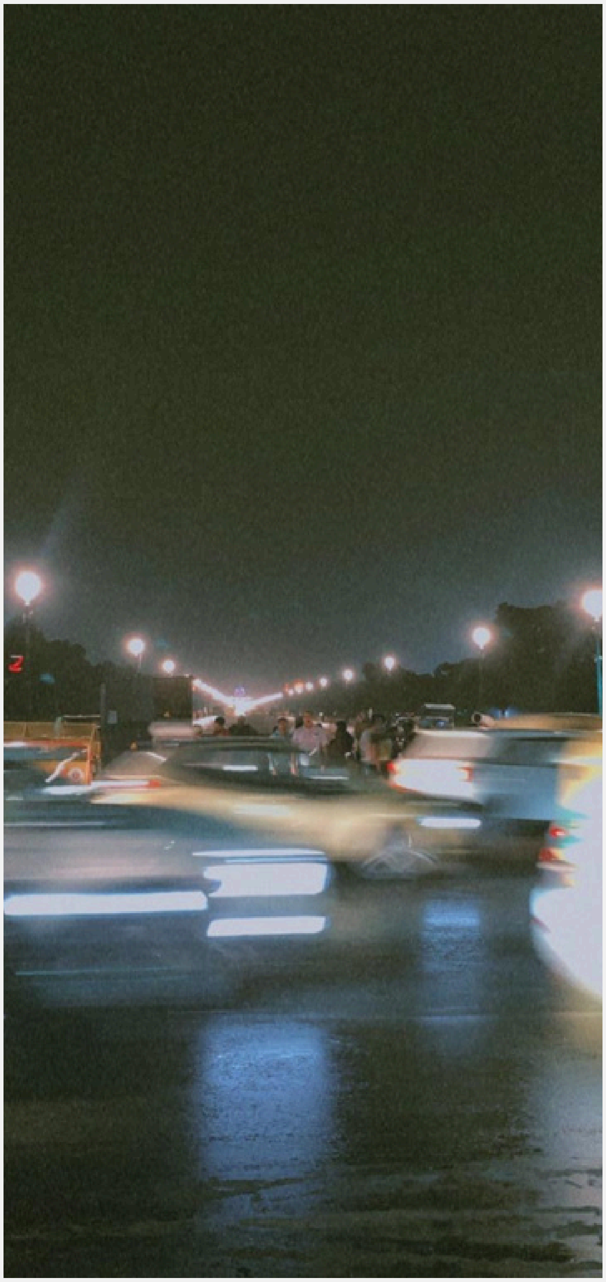
2020 Annual Impact Investor Survey. (n.d.). The GIIN. https://thegiin.org/research/publication/impinv-survey-2020/

Bevilacqua, M., Grünewald, T., Overlack, S., Rolser, O., Schrum, A., & Therkelsen, C. (2024b, January 16). Global Energy Perspective 2023: Energy value pools outlook. McKinsey & Company. https://www.mckinsey.com/industries/oil-and-gas/our-insights/global-energy-perspective-2023-energy-value-pools-outlook

Investors. (n.d.). Ørsted. https://orsted.com/en/investors Renewable capacity statistics 2023. (2023, March 1). https://www.irena.org/Publications/2023/Mar/Renewable-capacity-statistics-2023

BloombergNEF. (2024, March 28). Global clean energy investment jumps 17%, hits $1.8 trillion in 2023, according to BloombergNEF report | BloombergNEF. BloombergNEF. https://about.bnef.com/blog/global-clean-energy-investment-jumps-17-hits-1-8-trillion-in-2023-according-to-bloombergnef-report/#:~:text=In%20addition%2C%20BNEF's%20report%20finds,over%20the%20next%20two%20years

Boshell, F., Anisie, A., Santosh Kamath, Harsh Kanani, Shikhin Mehrotra, & KPMG India. (2020). Innovation landscape brief: Advanced forecasting of variable renewable power generation. International Renewable Energy Agency. https://www.irena.org/-/media/Files/IRENA/Agency/Publication/2020/Jul/IRENA_Advanced_weather_forecasting_2020.pdf

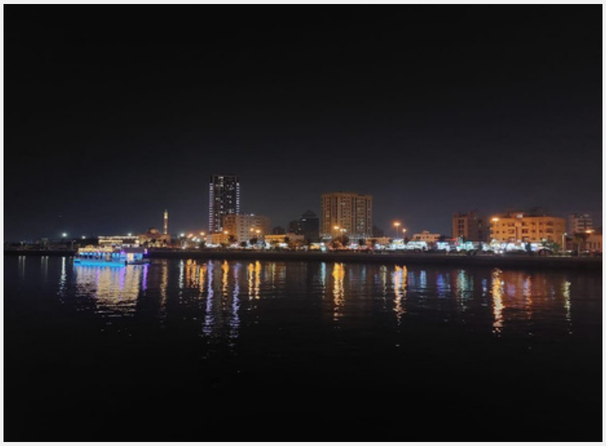


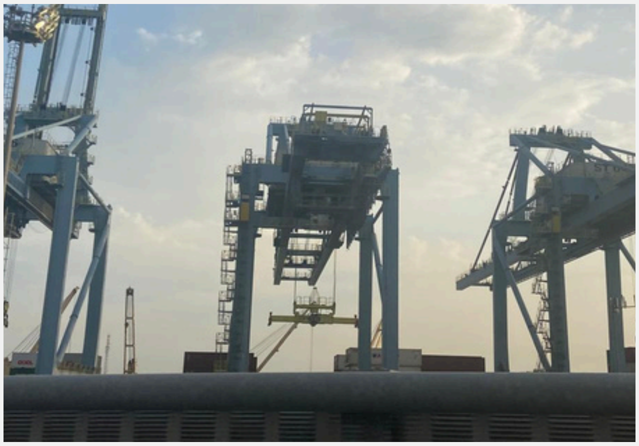
Carbon Credit Market Size, Share & Trends Analysis Report by type (Compliance, Voluntary), by project type (Avoidance/Reduction projects, Removal/Sequestration Projects), by end-use, by region, and segment Forecasts, 2023 - 2030. (2023, June 2). https://www.grandviewresearch.com/industry-analysis/carbon-credit-market-report

Chen, P., Grünewald, T., Noffsinger, J., & Samseth, E. (2024, January 16). Global Energy Perspective 2023: Power outlook. McKinsey & Company. https://www.mckinsey.com/industries/oil-and-gas/our-insights/global-energy-perspective-2023-power-outlook

Global status of clean energy innovation in 2020 – Clean Energy Innovation – Analysis - IEA. IEA. https://www.iea.org/reports/clean-energy-innovation/global-status-of-clean-energy-innovation-in-2020

What You Need to Know about Impact Investing. The GIIN. https://thegiin.org/impact-investing/need-to-know/?gad_source=1&gclid=CjwKCAjww_iwBhApEiwAuG6ccIWThOZpkQMXcpr3TR0V2oYmj_dm1ofTuPg6XRubqh0-69lbhVgebBoCbagQAvD_BwE#what-is-impact-investing





THE ECONOMICS OF TIME:
The Human Cost of Exponential Growth of Fast Industries

MILIN MARY MATHEW

In 1953, the Chinese Communist Party launched its first Five Year Plan intending to become the world's largest manufacturer by dominating the Orient. After a long, tragic history of exploitation by the Empire of Japan and the Crown of Britain, CCP's FYP constituted goals to restore the former glory of wealth and authenticity of the Chinese economy. For the Chinese, reestablishing its old prestige in the Orient corresponded to achieving growth and development that would take nearly a century, in a decade or two.

This meant boosting productivity, increasing production in decreased time and introducing new methods and technologies of production. Introducing new cropping patterns and innovative technologies, and assigning quotas to peasants in the countryside for export production initially succeeded. The economy expanded by 9% by the end of the first FYP. (Clayton, 2012)

The first Five Year Plan's success inspired CCP to proceed with the second FYP. The success signalled CCP to transform the agrarian economy into an industrial one. Back then, the idea of industrialisation was still fresh to Chinese communities that relied on livestock rearing and agriculture. Initiation of industrialisation demanded more labour productivity that the Chinese countryside citizens were not used to. Demand for industrial labour multiplied day by day along with an inflated grain quota. But forced labour exhausted the peasant force and shortage of food led to malnourishment and contraction of illnesses among the young and old workforce of China. Exploitation of human labour with no compensation even in the form of grains, led to failure of the Great Leap Forward, Mao Zedong's dream for China. Corruption, fabricated production data and over export led to a man-made famine in China, prompting people to feed on corpses and to practise cannibalism (Brown, 2012). One reason for the collapse of the Chinese economy in the late 1950s and early 1960s was CCP's overestimation of the workforce's physical ability and unrealistic goals. Economic historians argue that in 1962, Mao Zedong's plan consisted of increasing the steel manufacturing to 100 million tons to outproduce the US. Estimations state that this meant China had to increase the production by 2000% in 5 years which was very clearly impossible. (Brown, 2012)

Link between the Chinese Analogy and Capitalistic Labour Demands

In today's capitalistic economies, the growth and development of an economy is appreciated for the rate at which it expands and increases production. Time has growing relevance in businesses. This variable distinguishes high efficient production from low. For instance, the faster a company or a corporation can produce and deliver services or satisfy clients, the more likely it is to get more competitive, and profitable offers. The Chinese analogy is pivotal to mention as it is parallel to the expectations of the modern world economy to increase production and expand the economy in a short period of time. Two factors common to the Communist party and today's multinational industries like fast fashion, fast food and beauty industry are their demand for higher production levels at a faster pace or in very less time.

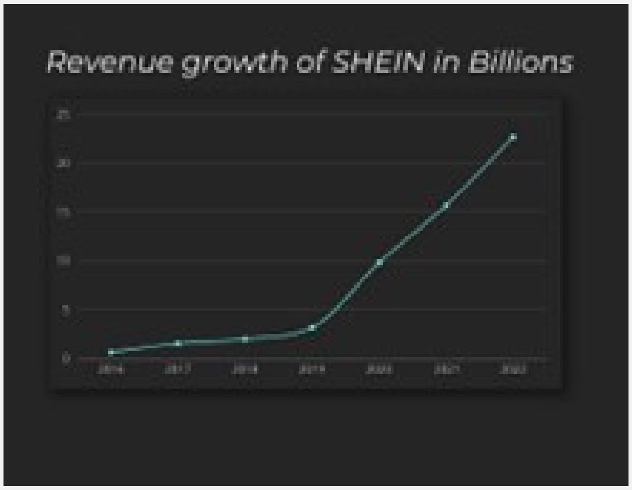
The case of Chinese citizens is incomparable to the victims of the fast paced global commercial industries. In Chinese analogy, there were many demographic elements that helped the citizens to unionise and demand relaxation from tyrannical government authorities against overexploitation of labour. It is different in the case of modern day daily wage workers, who are exploited daily for the benefit of corporations as these workers are spread throughout the globe, differing in nationalities, skin colour, diet, language and religions.

The purpose of this article is to observe in depth the realities of working conditions of the employees of the fast fashion, fast food and beauty industries. Fast fashion and fast food industries are two fastest growing industries in the world. Their supply chain is distributed all over the world and is very complex to trace. These industries are proponents of mass consumption and mass production and their introduction into respective markets have caused a deterioration in the sales of authentic, localised products as the mass produces are cheaper in comparison. These industries contribute significantly to the GDP of numerous countries and make sure that there is a consistent stream of sales in outlets by introducing new offers and discounts frequently. It is only reasonable to assume that the cheap price of these mass produced goods are due to low cost of production and to speculate the human cost behind it.

Fast Fashion Industry

In India, the fast fashion industry is valued at US $9.9 billion (globally at US $122.8 Billion) and expected to grow at a compound annual growth rate of 16.5% (DFU, 2024). Clothes, footwear, bags, purses, and accessories are the major selling points of the fast fashion industry. Comfortable garments at cheap prices is a major customer attraction. By the advent of social media, businesses in this industry have flourished rapidly due to online marketing and commercialisation of social media platforms. During Covid-19 pandemic, Social media rose in popularity and thus proportionally boosted the sales of fast fashion commodities as online brands started collaborating with influencers on TikTok, Instagram, Facebook etc.

For example, SHEIN is an online fashion brand, famous for designing a product faster than ZARA. The following graph illustrates the growth of SHEIN before and after Covid-19.



Source: The following graph has been produced on the basis of data published by Statista regarding the revenue growth of SHEIN in the time period 2016-2022.
https://www.statista.com/statistics/1360515/shein-estimated-annual-revenue/

SHEIN's remarkable growth has been attributed to its trendy fashion and its profits to low cost of production and supply chain management. A report from Business Insider states "*For instance, workers in fast fashion industries like Shein make as little as 4 cents per item and don't receive a base salary. Yearly pay is approximately $556, but that is if they make at least 500 clothing items per day; this often requires extremely long hours of work (18 hours a day), leaving barely enough time to rest and complete basic tasks for themselves. Weekends aren't a thing either; they only get a day off each month.*" (*Shein Factory Employees Work 18-Hour Shifts, Make 4 Cents Per Garment: Report*, 2022)

The fast fashion industry's exponential growth has received plenty of calls from consumers for transparency. Despite this, very little information regarding the supply chain of this industry has been disclosed recently. (Fraser & der Van, 2022)

To boost sales, these industries change fashion trends every week instead of tri or biannual changes. This brilliant business acumen of introducing 52 micro seasons every year is what human labour is exploited for in developing countries.

In 2018, US Department of Labour published a report that has evidence of forced and child labour in the fashion industries of third world countries such as Inida, China, Argentina, Brazil, Turkey, Phillipines, Indonesia, Vietnam etc. Multinational corporations set up sweatshops in third world countries to minimise cost of production by paying a very low, minimum wage to the employees in order to widen their profit. They target children as they are more obedient, quick, cheap and small & are often paid less than minimum wage given to adults. (Lambert, 2014)

In addition to deterioration of physical health due to long hours, these children are also victims of generational poverty as they cannot pursue a formal education. Beauty industry, usually considered an extension of fashion industry, also faces allegation of exploitation of child labour. Children in villages of North India, Bihar and Jharkhand are forced to work in mines for mining mica. The beauty factories actively hire children to fit into the holes to mine mica. The National Commission for Protection of Child Rights, in 2018, procured a report that estimates the number to be around 22,000. ("Around 5000 Children Abandon Education in Mica Mines of Jharkhand and Bihar; Some Now Child Labourers: Survey," 2019)

Most of the sweatshops where employees work do not have proper toilets, sanitation resources, water & electricity supply, and fire extinguishers. Lack of toilets affect female employees, especially those on menstruation. These sweatshops are extremely dangerous and can cause hazards. Employees at these industries are often prone to abuses and salary cuts. (Williams, 2022)

Fast Food

In contrast to the fast fashion industry, labour exploitation in this sector is not very focused at the production part, rather it is at the service part.
International fast food chains like McDonalds, KFC, Burger King etc. are accused of exploiting the labour of waitresses, delivery partners, staff in outlets and managers. Long hours, lack of job security, and minimum wage make it difficult for these workers to improve their lifestyle.

What makes it difficult for these workers to unionise and raise their voice is that a decent percent of them are students or individuals undergoing frictional unemployment who are fine with the hours being low and lack of good benefits as it is temporary for them. (Allan, 2002) However, for those who are stuck in these outlets and consider this their career, then the matter of exploitation of their labour becomes a serious one. These service staff are prone to abusive behaviour from customers, and are looked down on in several walks of life. In conclusion, the paycheck of permanent staff at fast food outlets is not enough to maintain a decent lifestyle or to run a family.

Conclusion

Labour exploitation is often taken away from hindsight of consumers by corporations for the fear of losing reputation or profits. But it is a very concerning issue as lives are degrading behind the closed eyes of customers. Governments all over the world should take this matter seriously and pass & implement laws that strictly prohibit child labour and stop exploitation of labour. Policies should be passed to make the working environment hospitable, workable and safe with proper restrooms/ toilets. Sweatshops and factories that work on bare minimum without proper waste management and chimneys/exhausts to maintain clean air should be shut down. Government should take responsibility to make sure that the corporations that produce goods through unethical means suffer the consequences of their actions. Consumers should be made aware of where their products are made and the process of production. Corporations should be made accountable for lack of transparency in their supply chain management.

References

Allan, C. (2002). Do Young People Like Working in Fast Food?

Around 5000 children abandon education in mica mines of Jharkhand and Bihar; some now child labourers: Survey. (2019, August 25). Hindustan Times. https://www.hindustantimes.com/education/around-5-000-children-abandon-education-in-mica-mines-of-jharkhand-and-bihar-some-now-child-labourers-survey/story-zRP5RVQq7QnsCnr1AnwmPO.html

Brown, C. D. (2012). China's Great Leap Forward. (Vol. 17).

DFU. (n.d.). India's fast fashion: A booming market poised for exponential growth. DFU Publications. Retrieved April 9, 2024, from https://r.search.yahoo.com/_ylt=AwrPrK4uUxRmhAQAP_K7HAx.;_ylu=Y29sbwNzZzMEcG9zAzEEdnRpZAMEc2VjA3Ny/RV=2/RE=1713817646/RO=10/RU=https%3a%2f%2fdfupublications.com%2fcategories%2ffashions%2ffashion%2findia-s-fast-fashion-a-booming-market-poised-for-exponentia

Fraser, E., & der Van, H. (n.d.). Increasing Transparency in Global Supply Chain: The case of Fast Fashion Industry. Sustainability, 14(2022).

Lambert. (2014). The Lowest Cost at Any Price: The Impact of Fast Fashion on the Global Fashion Industry.

Shein Factory Employees Work 18-Hour Shifts, Make 4 Cents Per Garment: Report. (2022, October 16). Business Insider. Retrieved April 9, 2024, from https://www.businessinsider.com/shein-factory-workers-18-hour-shifts-paid-low-wages-report-2022-10.

Williams, E. (2022). Appalling or Advantageous? Exploring the Impacts of Fast Fashion From Environmental, Social, and Economic Perspectives. Journal for Global Business and Community, 13(1).

UNVEILING THE SILVER ECONOMY: Economic opportunities and impacts of an aging population

GARIMA ARORA

The economic opportunities and activities that have been linked with the older population, often those who are 60 years of age and older, are commonly referred to as the "silver economy". A growing number of people are coming to realise the economic possibilities of older persons as global populations age.

The number of individuals over the age of 60 in the world is projected to exceed 2.1 billion by 2050 (World Health Organization). Cities around the globe will be greatly impacted by the ageing population. India needs to start establishing "age-friendly cities" in order to adapt to these changes for its elderly population. Several research institutions and non-governmental organisations globally develop frameworks aimed at rendering communities more "age-friendly" have been developed. These encompass everything from the Sustainable Development Goals of the United Nations to the World Health Organization, and many of them have been modified in order to emphasise the built environment's role in encouraging age-friendly communities for the well-being of their citizens. The products, services, and economic activities that respond to the needs of people over 50 are as a whole defined as the "silver economy." This term, which was coined in the 1970s to refer to the population over 65 as the "silver market", emerged in Japan and brings together a wide range of industries, including banking, energy, housing, telecommunications, health, and automotive, among others, leisure and tourism. (World Economic Forum, March 2016)

Older people and housing – building for growth

Local housing markets would benefit from having more choices for those seeking to move, including those looking to downsize, whenever a greater variety of older-friendly homes and apartments have been constructed, resulting in economic benefits.

This includes generating employment in the residential construction sector and distributing wealth from housing, which might increase purchasing power and promote the local economy by encouraging the purchase of goods and services. This pertains to the possible growth of the market in addition to the growing need for the services provided by medium-sized and small construction firms that handle maintenance, decorating, and home repair. These perks might be increased if older people's belief in the market was increased.

These days, elderly people might be more or less cautious about investing in the market because of things like prior experiences, recessions, or a lack of faith in financial institutions. Studies by institutions such as the Pew Research Centre and Gallup indicate that a sizable segment of elderly populations may voice worries over market volatility or uncertainty. One way to boost older individuals' confidence in the market is through focused educational campaigns, individualised financial planning services, or efforts to dispel prevalent misconceptions about investing.

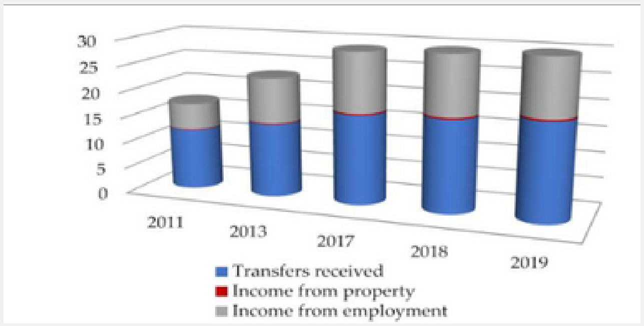
Senior citizens have an enormous impact on local economies because of their tendency to spend and purchasing power. Integrated transportation, easily accessible neighbourhood shops, and "age-friendly" services encourage senior citizens to maintain their economic activity and make local purchases. Elderly Individuals are becoming increasingly important to the state of local economies. Every day, over 10,000 baby boomers retire putting a strain on the resources of the retired due to longer life expectancies and their transition to defined contribution plans. Seniors tend to react by working longer hours or going back to part-time employment.

Along with being an important customer segment and driving up demand for home help and health care services, those retiring can also benefit from the delivery of social services. (K. Kochhar, 2019)

Economic Impact of Senior Tourism

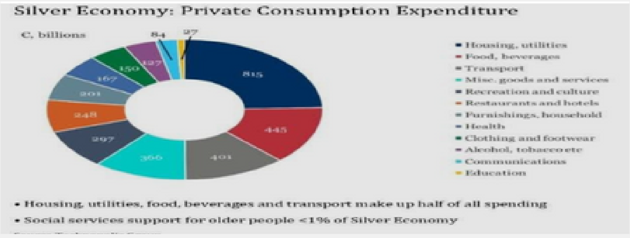
Senior tourism is a crucial component of the silver economy, tapping into the travel aspirations of older individuals and capitalising on the economic potential of this demographic.

Job Creation and Economic Stimulus: The increasing number of senior travel is directly linked to economic growth and job creation. Employment opportunities are generated as a result of the demand for specialised services such as transportation, guided tours, and senior-friendly lodging. In addition, the increasing number of elderly visitors brings in money for local businesses like dining establishments, retail stores, and cultural centres, which supports the general economic growth of the destination areas. According to a study conducted by AARP, older travellers aged 50 and above contribute significantly to the tourism industry's economic growth. In 2019, travellers aged 50 and older spent an estimated $268 billion on domestic and international trips in the United States alone.



*Source: **Решетникова, Л.**, Boldyreva, N., Perevalova, M., Kalayda, S. A., & Pisarenko, Z. (2021). Conditions for the growth of the "Silver Economy" in the context of Sustainable Development Goals: Peculiarities of Russia. Journal of Risk and Financial Management, 14(9), 401. https://doi.org/10.3390/jrfm14090401*

Increased Spending Power: The significant amount of money that senior visitors have is one of the main economic benefits of elderly travel. Seniors are able to engage in leisure and travel activities because they often have savings, pensions, and other financial resources. This economic infusion into the tourism sector encourages economic expansion and has a beneficial knock-on effect on the whole economy. Compared to other age groups, senior travellers frequently have more spare cash and more leisure for travel. They thus provide a substantial financial contribution to tourism. The U.S. Travel Association reports that in 2018, travellers 65 years of age and over spent $155 billion on travel, or about 20% of all travel expenses.(Spero:2018).



Source: Spero, I. (2018, March 9). Silver economy predicted to generate 6.4 trillion euros & employ 88m by 2025. https://www.linkedin.com/pulse/silver-economy-predicted-generate-64-trillion-euros-employ-ian-spero

Role of Business Catering to The Elderly in Economic Growth: Silver Power

Businesses enjoy a lot of potential in this economy, and it has an array of advantageous impacts on economic growth. Companies create a vast array of goods and services with the elderly market in mind. This covers drugs, medical equipment, and home healthcare services as well as healthcare products. In order to meet the various needs of elders, businesses also provide services including retirement complexes, assisted living facilities, and home care services. Technology has a big impact on helping elders live better lives. To improve older folks' freedom, safety, and connectedness, businesses are investing in the development of cutting-edge solutions, for instance - the development of smart home technology tailored to the needs of seniors.

These technologies include smart sensors, wearable devices, voice-activated assistants, and remote monitoring systems that can enhance safety and security in the home environment. For instance, smart sensors can detect falls or unusual activity and alert caregivers or emergency services automatically. Wearable devices, such as smartwatches or pendants, can track vital signs and provide real-time health monitoring.

Retirement Communities	Housing, healthcare, and social activities tailored to seniors.
Home Care Agenciess	In-home assistance with daily living activities.
Transportation Services	Catering to seniors who cannot drive themselves, ensuring mobility and independence.
Financial Planning Services	Guiding seniors towards financial security in their golden years.

Boosting Tax Revenue

Government tax collection rises substantially as a consequence of the silver economy's increased spending and rise in employment. (Lee:International Monetary Fund,2017) India's demographic trends include rising population growth and a growing ageing population. The value of India's silver economy is approximately $7 billion which highlights the elderly as a unique consumer demographic. By cultivating this market through specialised products and services, new avenues for seniors to lead fulfilling lives will emerge, consequently driving economic expansion(Bureau, Economic Times:2024). Growth in the silver economy may lead to increased demand for certain types of properties, such as retirement communities or assisted living facilities. This can contribute to higher property tax revenues for local governments. This cash generates a beneficial cycle of feedback that may be utilised for funding for infrastructure, education, and, paradoxically, healthcare. (Mukherjee, 2024)

Creating a Job Bonanza

The silver economy produces jobs in a number of industries, which makes it a job creation machine: **In the sector of Healthcare**, To care for the ageing population, there is an urgent requirement for nurses, staff members, therapists, and specialists, however in **Social Services**, Activity coordinators, case managers, and social workers assist senior citizens in retaining their independence and general well-being. In **Retail**, companies that offer tailored products, such as wheelchairs or clothes fit for senior citizens, need personnel. In **Transportation**, Drivers and support employees are required for services like senior ride-sharing or accessible public transportation for the ageing population.

The Future of The Silver Economy

As the world's population ages, the silver economy offers enormous economic potential and impacts.

- Businesses have a major impact on the development of age-friendly cities as well as the production of goods and services geared towards senior citizens.
- Senior tourism promotes job growth and economic progress, while the construction of senior-friendly homes benefits housing markets.
- In addition, the silver economy increases tax receipts and produces a wealth of jobs in a variety of sectors, including transportation and healthcare.
- Businesses that innovate and meet the demands of the elderly will prosper as the population ages, advancing global social and economic development.

The population's advancing and increasing disposable income among older persons will contribute to the silver economy's future growth. Companies who serve this market by offering cutting-edge, superior products and services will contribute to the silver economy's future growth. Companies who serve this market by offering cutting-edge, superior products and services will be in an excellent position to contribute to social progress and economic expansion.

The development of goods and services which cater to the interests and lifestyles of senior citizens is a major part of the silver economy, compared to only meeting their most fundamental needs.

The Silver Economy encompasses an international phenomenon that offers chances to companies all around the world.The silver economy's impact will only grow as the population of elderly individuals increases.

Conclusion

In a nutshell there are a lot of economic advantages and implications associated with an ageing population in the silver economy. The number of individuals over 60 will rise to more than 2.1 billion by 2050 as the world's population ages, causing the development of age-friendly cities and communities essential to cater to the needs of the elderly.(World Health Organization: 2022) . The banking, energy, housing, telecommunications, healthcare, automotive, leisure, and tourism industries are merely a few of the many industries that render to the silver economy while presenting a variety of opportunities for economic expansion.

References

AgeLab at MIT. (2023).
AgeLab: Research for better lives.
https://news.mit.edu/2023/unique-mit-suit-helps-people-better-understand-aging-experience-0120

Fulton, W. (2010).
The impact of mixed-use senior housing on surrounding property values. Journal of Housing Economics, 19(4), 366-382.

Bureau,E.T,2024
https://m.economictimes.com/opinion/et-editorial/tap-and-nurture-our-silver-economy/articleshow/107922238.cms?utm_source=whatsapp_pwa&utm_medium=social&utm_campaign=socialsharebuttons

Council, N.G. 2024.
AARP Survey: Anticipated Travel Holds Steady for 50-Plus Travelers in 2024. Retrieved from https://www.aarp.org/travel/travel-tips/budget/info-2024/travel-trends.html.

Global Ageing Network. (2023).
8th Global Conference on Ageing Innovation.

JRC. (2020). Silver Economy:Private Consumption Expenditure,retrieved from https://images.app.goo.gl/nujrBBQtVCyA6h6D6

Lee, International Monetary Fund(2017) https://www.imf.org/external/pubs/ft/fandd/2017/03/lee.htm

National Institute on Aging. (2023, September 19). Ageing and health disparities.
https://www.nih.gov/about-nih/what-we-do/nih-almanac/national-institute-aging-nia

OECD (Organisation for Economic Co-operation and Development). (2015). Pensions at a glance 2015: OECD indicators.

Przybysz. (2022).Income share from Employment in Silver Economy,Retrieved from https://images.app.goo.gl/25XqYejF66d9caxt7

Salomon, J. (2019, June 4). The Economic Contribution of Retirees to communities.
https://www.researchgate.net/publication/235262664_The_socio-economic_contribution_of_older_people_in_the_UK

Spero, 2018,U.S. Travel Association https://www.ustravel.org › filesPDF

1 US Census Bureau. (2023, October 26). An ageing world: 2023. https://www.census.gov/topics/population/older-aging.html

World Economic Forum: March 2016,Retrieved from https://www.iberdrola.com/innovation/silver-economy

World Health Organization. (2020). Global strategy and action plan on ageing and health: The integrated care for frail older people (ICF-FOP) approach. http://www3.weforum.org/docs/WEF_GAC_Global PopulationAgeing_Report_2012.pdf

World Health Organization:2022 https://www.who.int/news-room/fact-sheets/detail/ageing-and-health

Решетникова, *Л., Boldyreva, N., Perevalova, M., Kalayda, S. A., & Pisarenko, Z. (2021). Conditions for the growth of the "Silver Economy" in the context of Sustainable Development Goals: Peculiarities of Russia. Journal of Risk and Financial Management, 14(9), 401. https://doi.org/10.3390/jrfm14090401*

Spero, I. (2018, March 9). Silver economy predicted to generate 6.4 trillion euros & employ 88m by 2025. https://www.linkedin.com/pulse/silver-economy-predicted-generate-64-trillion-euros-employ-ian-spero

ECHOES OF THE ABYSS:
Cultivating prosperity while safeguarding marine marvels

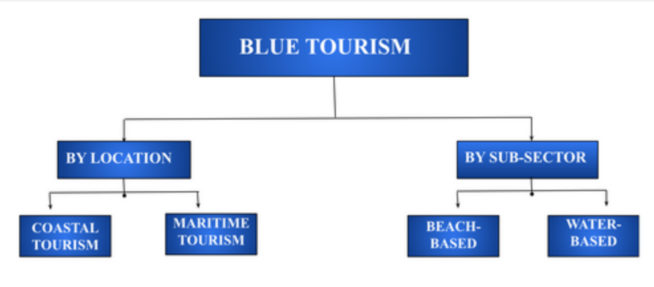
SHRIYA GUPTA

Introduction

In the hands of Poseidon, the trident commands the seas. In our hands, responsible tourism becomes the trident that preserves the power and beauty of our oceans.

Blue tourism, also known as coastal or maritime tourism, revolves around activities and destinations associated with oceans, seas, and coastal areas. Its scope transcends the idyllic and conventional beach holidays, for it embraces a multiplicity of experiences such as marine wildlife observation, water sports, sailing, and cultural immersions in coastal communities. Such coastal and maritime tourism (CMT) represents at least 50% of the global tourism sector and supports millions of jobs and livelihoods worldwide. (Balestracci & Sciacca, n.d.) A realm where the allure of the ocean meets leisure, Blue Tourism has surged in popularity in recent years, drawing millions to coastal and marine destinations worldwide. As travellers flock to seaside destinations seeking leisure and adventure, the consequences ripple far beyond the surface. This introduction sets the stage for an exploration into the multifaceted impacts of blue tourism, illuminating its effects on environmental sustainability, cultural integrity, and economic dynamics.

Composition of the Blue Tourism sector:



The blue tourism sector is ever-growing and diverse and this very fact necessitates the need for a sustainable strategy for its growth. It encompasses a variety of segments which can be distinguished by: i) location and ii) sub-sector

By location	Coastal tourism	Comprises tourism in the coastal area as well as the supplies and manufacturing industries associated with these activities.
	Maritime tourism	Covers tourism in the maritime area.
By Sub-Sector	Beach-based.	Comprises of beach-based recreation and tourism (e.g. sunbathing, walking on the beach, kite competitions, etc.), and non-beach related land-based tourism in the coastal area (any additional tourist and leisure pursuits conducted in coastal regions where proximity to the sea is a prerequisite), as well as the supplies and manufacturing industries associated to these activities
	Water-Based	Comprises tourism that is mainly water-based rather than land-based (e.g. swimming, canoeing, surfing, windsurfing, sport fishing, diving, snorkelling, underwater cultural heritage, whale watching, seabirds watching, boating, yachting, nautical sports, etc.), but includes also the operation of landside facilities, manufacturing of equipment, and services necessary for this segment of tourism.

Source: De Swart et al., 2018

Growth and Projections

BEACH TOURISM MARKET - (*Ronak Shah*, 2023)	
CAGR (2022 - 2023)	5.70%
Market value 2023	USD 153.3 billion

SURFING TOURISM MARKET -(*Ronak Shah*, 2024)	
CAGR 2023 -2033	12.50%
Market Value 2023	USD 65952.5 million

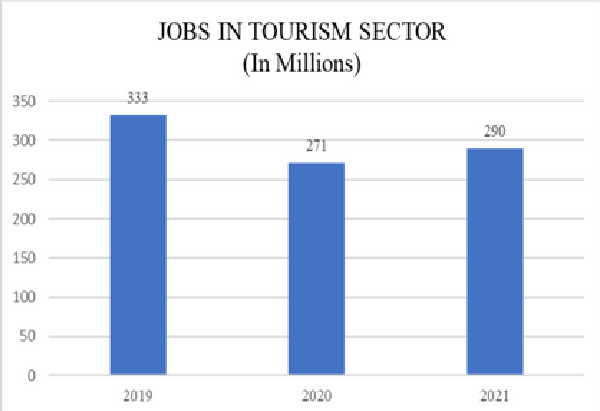
In our nation, the increasing importance of harnessing blue tourism's potential was reflected in the Interim Budget for FY 24-25 as our Finance Minister remarked, "To address the emerging fervour for domestic tourism, projects for port connectivity, tourism infrastructure, and amenities will be taken up on our islands, including Lakshadweep.

This will help in generating employment also." This proves beyond a shadow of a doubt that, when developed responsibly, coastal and maritime tourism can have positive effects on the environment and the economy.

Factors affecting Growth

While the fact is now established that blue tourism is growing at a rate faster than any other sector, it is also fascinating to learn the driving forces behind it so that these factors can be multiplied or reversed, based on the impact they have on the blue resources:

1. **Revenge Tourism:** After a drop of almost US$4.9 trillion in 2020 (50.4% decline), the contribution of travel and tourism to GDP increased by US$1 trillion (21.7% increase) in 2021. In 2020 tourism's contribution to GDP decreased to 5.3% due to ongoing restrictions on mobility, then rising back to 6.1% in 2021. In 2020, 62 million jobs were lost, representing a drop of 18.6%, equating to just 271 million people being employed in the tourism sector globally, compared to 333 million in 2019. In 2021, jobs increased by 18.2 million, representing an increase of 6.7% year-on-year. Following a decrease of 47.4% in 2020, domestic visitor spending increased by 31.4% in 2021. (Balestracci & Sciacca, n.d.) COVID-19 clearly demonstrates that the range of global shocks and stressors impacting marine tourism is wider than the well-known rapid onset phenomena associated with climate change, political conflict and economic crises.



Data Source: Balestracci & Sciacca, n.d.

2. **Geopolitical Tensions:** Post the India-Maldives Controversy, Online travel platform MakeMyTrip reported a 3,400% increase in on-platform searches for Lakshadweep. The popular site announced a 'Beaches of India' campaign to swiftly capitalise on the newly developed interest. The Russian and Ukrainian markets also shrunk because of the Russia- Ukraine conflict. The Russian Federation and Ukraine accounted for a combined 3% of global international tourism spending in 2020 and the conflict resulted in the possible loss of US$14 billion in global tourism receipts. In the Western Indian Ocean, Russian tourists represented 17% of international tourists in the Seychelles in 2021, and 1% of tourists in Mauritius in 2021, which were concentrated in the lucrative sectors of yachting and long stays.(Balestracci & Sciacca, n.d.).

3. **Blue tourism and climate change:** Climate-induced changes are expected to alter the geographical and seasonal distribution of global tourism demand, thereby significantly impacting destination competitiveness and economic growth possibilities, putting the livelihoods of many at risk. Coastal erosion, for example, is now prevalent on many coastlines, such as in the south Mediterranean. Climate change presents a number of issues to tourist operators and other stakeholders on sea and ocean beaches, including rising sea levels, coastal erosion, and a shortage of water.

These factors are indicative of the fact that there is a need to alter wider commercial, social and political practices and bring out sustainable changes in these spheres before driving an ecological change in blue tourism itself. Broader and more addressable solutions are bound to revolutionise coastal tourism.

Blue Tourism contributes significantly to the economic well-being of island and coastal communities by generating revenue, jobs, and investment. Along with the positive aspects of tourism development, there are drawbacks as well, like pollution, overtourism, biodiversity loss, and resource consumption. For example, it has been discovered that tourism and other associated value chains in coastal areas contribute significantly to the total amount of marine plastic litter. Tourism emissions have also been forecasted to increase by 25% by 2030 under a business-as-usual scenario. (UNWTO & ITF, 2019)

Striking a balance: Proposed suggestions

The blue economy is considered to be an engine for economic development, to be managed in line with Sustainable Development Goal 14 which targets the conservation and sustainable use of oceans, seas and marine resources. As the blue tourism sector is expected to grow, destinations must consider the current sustainability challenges, and how they will be affected by and will affect the tourism sector (e.g., climate change, biodiversity loss). Proactive cooperation and collaboration across all tourism stakeholders and beyond is needed to create business models that deliver sustainable tourism experiences enabling the prevention of negative impacts such as resource overconsumption, degradation of natural ecosystems and excessive coastline touristification. Apart from the constant monitoring of ocean health by multiple established organisations like UNEP, UNWTO, WestMED, Indian Ocean Rim Association, etc. there is an urgent need to establish frameworks that aim to strike a balance between economic growth and marine conservation through blue tourism. Suitable suggestions now follow:

1. **Community-Based Tourism**: The concept of "tourism by the local people for the local people" is put forth by community-based tourism, or CBT. Because locals control all of the decisions regarding their tourism development and stand to gain the most from it, it is one of the answers for sustainable tourism. Local communities are more motivated to balance economic expansion with the socio-cultural and environmental effects of tourism since they have lived in the area for a considerable period of time.Inspiration can be derived from “La Ruta del Coral" tourism initiative that’s been designed in partnership with local communities connected with coral reefs in Colombia. It provides sustainable income for fishers and other local actors, helps grow and restore coral structures and is an attractive alternative adventure where the whole family can plant and nurse new corals and be stewards of an endangered ecosystem. The project will also generate high-quality blue-carbon credits in the future. (The Economist Impact, 2023))

2. Revisiting governance, policies, and instruments:

Tourism and environment policy makers shall join forces, as sustainable consumption and production should be the key pillar of tourism plans. To facilitate measuring, tracking, and scaling up of tourism-related ocean activities, including the expansion of marine and coastal protected areas as tourist attractions, governance needs to be strengthened and policy tools need to be put in place.

3. Supporting an Integrated Maritime & Coastal planning through an Ecosystem-Based approach: Implementing transversal planning instruments, such as Integrated Coastal Zone Management (ICZM) and Marine Spatial Planning (MSP), in order to involve all levels of government, administrative and planning authorities in coastal management plans with an integrated vision of CMT impacts.

This process must include a comprehensive land-sea planning process based on an ecosystem-based approach (EBA) Montenegro has developed the National Strategy for Integrated Coastal Zone Management where a comprehensive ecosystem approach has been undertaken in a localised area of Boka Kotorska Bay. (Fletcher et al., 2018)

4. **Mainstream sustainability certifications, eco-labelling and environmental initiatives:** This includes identifying, adapting and implementing a shared and standardised certification system for hotels and resorts at the regional and national levels, as an integral part of sustainable tourism policies in coastal and maritime areas. The scheme system must be identified and disseminated by all stakeholders, authorities, Companies, research institutes and universities, NGOs, etc., and it should consider the three dimensions of sustainability (environmental, social and economic) while guaranteeing the transparency of the certification criteria and the information about the results.

Conclusion

In the present times, blue tourism holds paramount importance as it represents a harmonious convergence of recreational, cultural, and environmental facets within the travel industry. Beyond offering picturesque landscapes and thrilling water activities, blue tourism serves as a vital conduit for environmental education and conservation. Oceans and coastal areas, often the focal points of blue tourism, are repositories of immense biodiversity and natural beauty. Additionally, the economic significance of coastal tourism cannot be overstated, as it contributes significantly to local economies, creating employment opportunities and supporting businesses. Furthermore, it acts as a bridge for cultural exchange, connecting tourists with coastal communities and preserving the rich maritime heritage of these regions. Coastal Tourism with its promise of unforgettable experiences, irrelevant for tourism dependent countries such as Small Island Developing States. By adopting responsible practices, travellers, communities, and the tourism industry collectively contribute to the longevity of these breathtaking environments, ensuring that the allure of blue tourism endures for generations to come.

References

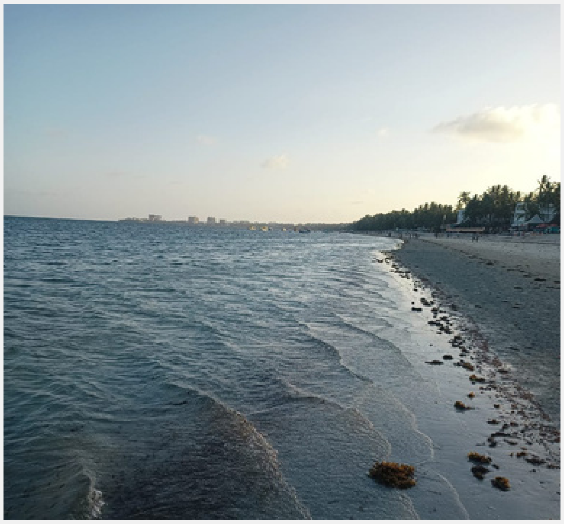
Balestracci, G., & Sciacca, A. (n.d.). TOWARDS SUSTAINABLE BLUE TOURISM: TRENDS, CHALLENGES AND POLICY PATHWAYS (By Jeremie Fosse & J. Rochette; A. Teixidor Costa, S. Obiene, & N. Leotaud, Eds.).

De Swart, L., Van Der Haar, A., Ecorys, European MSP Platform Consortium Contractors, Thetis, University of Liverpool, NIMRD, & Seascape Consultants. (2018). Technical Study: MSP as a tool to support Blue Growth. Sector Fiche: Coastal and Maritime Tourism. In the European MSP Platform.

Fletcher, R., Scrimgeour, R., Friedrich, L., Fletcher, S., Griffin, H., Thornton, H., & UN Environment World Conservation Monitoring Centre. (2018). Conceptual guidelines for the application of Marine Spatial Planning and Integrated Coastal Zone Management approaches to support the achievement of Sustainable Development Goal Targets 14.1 and 14.2. In *UN Regional Seas Reports and Studies* (No. 207; p. 58pp).

Online, E. (2024, January 8). “Lakshadweep” sees a big spike in Google search interest after PM Modi’s visit and Maldives controversy. *The Economic Times*.

Shah, R. (2023). Beach Tourism market. In *Future Market Insights*. Future Market Insights.



*Skyquest. (2024).
Global Coastal and Maritime Tourism Market Insights. In Skyquest.*

*The Economist Impact. (2023, April 14).
Regenerative Coastal tourism: protecting the planet through unforgettable experiences. The Economist Impact.*

*Tonazzini, D., Fosse, J., Morales, E., González, A., Klarwein, S., Moukaddem, K., Louveau, O. (2019)
Blue Tourism. Towards sustainable coastal and maritime tourism in world marine regions. Edited by eco-union. Barcelona*

*Tulsian, V. (2024, February 1).
India to push tourism infra in islands including Lakshadweep: FM in budget speech. Hindustan Times.*

World Tourism Organization and International Transport Forum (2019), Transport-related CO2 Emissions of the Tourism Sector – Modelling Results, UNWTO, Madrid, DOI: https://doi.org/10.18111/9789284416660

INFECTING THE ECONOMY:
The Economic Consequences of Antimicrobial Resistance

NAVYA BAHL

Introduction

"When I woke up just after dawn on September 28, 1928, I certainly didn't plan to revolutionize all medicine by discovering the world's first antibiotic, or bacteria killer. But I suppose that was exactly what I did."

With the discovery of penicillin in 1928 by Sir Alexander Fleming, modern medicine was transformed forever. Antibiotics, the 'wonder drugs' that combat infections or microorganisms, have been instrumental in not only saving hundreds of millions of lives across the globe but also reshaping the ways in which the agricultural and animal husbandry industries functioned. But it was in the early days of their usage that Fleming voiced a concern - if used for too short a duration or in too small a dosage, microorganisms could potentially become resistant to penicillin. Antimicrobial medicine is the umbrella term that refers to antibiotics, antivirals, antifungals, and antiparasitics used to fight against disease-causing pathogens in humans, animals, and plants. Antimicrobial resistance (AMR) has emerged as a significant concern in the past few decades, with health costs predicted to rise by $330 billion by 2030 in a low-impact scenario, or by up to $1.2 trillion in a high-burden scenario [World Bank, 2017]. As the list of infections becoming resistant to antibiotics continues to grow, it becomes essential to analyse the high economic burden associated with AMR, and the impact it has on the white economy.

Antimicrobial Resistance

The cornerstone of modern medicine, antibiotics have significantly enhanced both healthcare and economic outcomes across the globe since the 1940s.

In addition to expanding the average human lifespan by 23 years, it was the discovery of these drugs that have made procedures such as open heart surgeries and organ transplants. They work by attacking the bacteria causing the disease, hence curbing the spread and eliminating the threat. The development of antibiotics is expensive and has slowed down over time, while their inefficient utilisation and rampant misuse have eroded the effectiveness of those in existence.

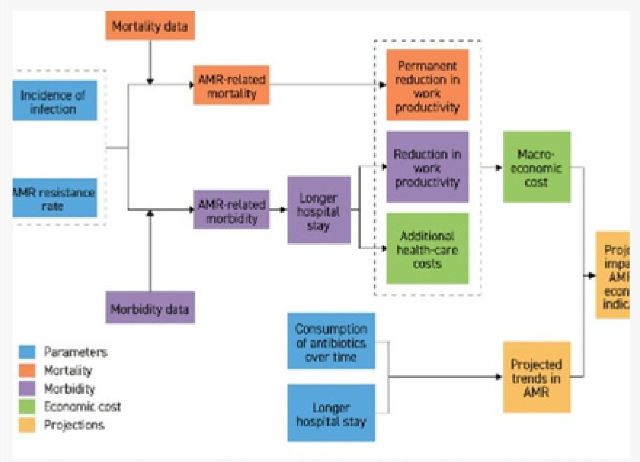
According to the World Health Organisation (WHO), Antimicrobial Resistance (AMR) occurs when bacteria, viruses, fungi, and parasites no longer respond to antimicrobial medicines. As the genetic makeup of pathogens mutates to combat the threat that antimicrobials pose, AMR is indeed a natural phenomenon, bound to occur gradually over time. However, the list of pathogens becoming resistant shows an alarming trend - more and more drugs are becoming ineffective, losing their ability to inhibit the growth of pathogens. Without these drugs to turn to, recovering from infections, which had previously been considered treatable, would now become challenging or impossible. In this scenario, it would become difficult to contain the spread of disease and lead to disability and death. In the context of this article, the term AMR focuses on the particularly important antibiotic resistance, which results in 35,900 deaths annually in the United States alone [CDC, 2019]

Costs associated with AMR

The economic impact of AMR is defined by the World Health Organisation as the total economic cost – resulting from higher treatment costs (direct costs) and costs related to loss of productivity from premature deaths and prolonged hospitalizations (indirect costs) – related to AMR infections compared with antibiotic susceptible infections.

AMR poses a significant threat to health security for all nations across the globe. Various studies give different estimates as to the costs associated with AMR - as common infections become difficult to treat, healthcare costs of the patients go up since they require more resources for treatment owing to clinical outcomes that are decidedly worse. A patient afflicted with an AMR infection would be ill for an extended duration, require further diagnostic services, and might need hospitalisation and drugs that are expensive and difficult to acquire, apart from the increased [1] morbidity and [2] mortality already associated with such infections. These patients experience a loss of productivity and sources of income since they are out of the workforce for the extended duration it takes them to recover. The intangible costs are even harder to estimate - these include psychological costs and the pain and suffering that the patient has to go through. If hospital beds are occupied by patients affected by AMR, we will have a situation similar to what was seen during the COVID-19 pandemic - other patients will suffer. If antibiotics are no longer efficacious, childbirth, routine surgeries, and cancer treatment too become significantly riskier.

As such, the economic costs associated with AMR are complex - they strain healthcare systems and economies since the cost comprises not only the cost of research and development required for more complex antibiotics to combat these drug-resistant bacteria, but also the costs of the expensive medications and hospitalisation, and the trickle down cost associated with missed work or potential disability. In the United States, antibacterial resistance is associated with a $1400 increase in the hospital bill [CDC, 2013].

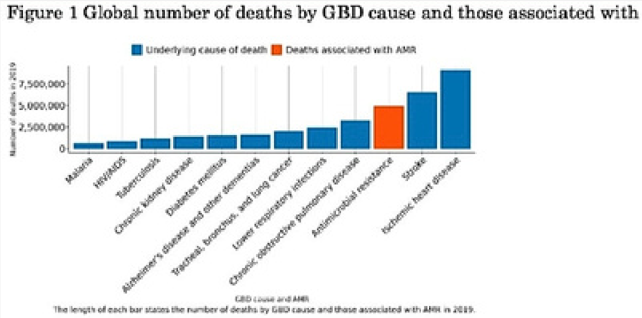


Source: Health and economic impacts of antimicrobial resistance in the Western Pacific Region, 2020–2030, World Health Organisation (WHO)

Indian Scenario

India sees one of the largest numbers of bacterial infections across the globe. According to data from the National Centre for Disease Control, the crude mortality from infectious diseases in India today is 417 per 100,000 persons. It is, therefore, important for India to make AMR its focus, since it is bound to have a higher impact.

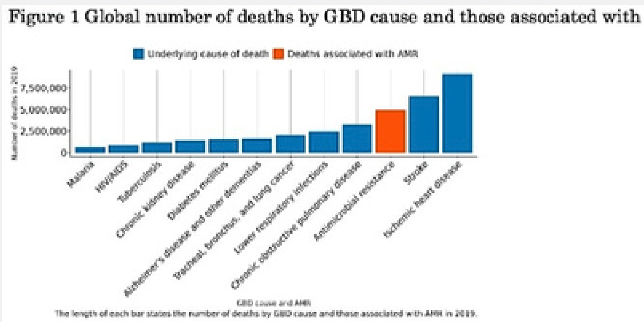
The data collected by The Lancet, in their 2019 analysis of the global burden of disease, concurs that antimicrobial resistance was directly responsible for 1.27 million deaths globally, making it the twelfth leading cause of death worldwide. 1 in 5 of these deaths occurred in children under the age of 5.



Source: The burden of Antimicrobial Resistance in India, Institute of Health Metrics and Evaluation, University of Washington.

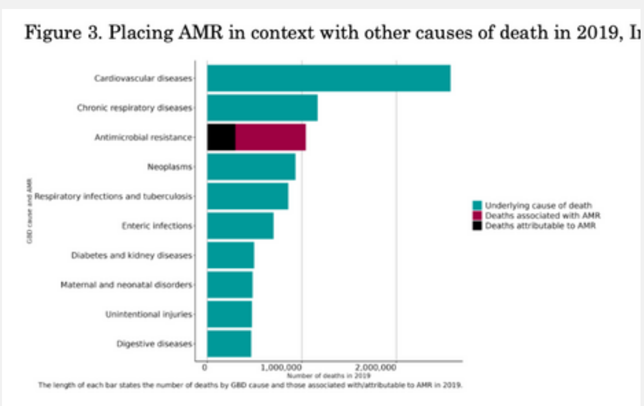
[1] AMR-related disease (morbidity): Additional/extra days spent in hospital by people infected with antibiotic-resistant bacteria compared with patients infected with antibiotic-susceptible bacteria. It is estimated in this study as total cumulative extra days spent in hospital from 2020 to 2030. [WHO]

[2] AMR-related deaths (mortality): Additional/excess deaths among people infected with an antibiotic-resistant bacterial pathogen compared with people infected with antibiotic-susceptible bacteria of the same species. It is estimated in this study as total cumulative excess deaths from 2020 to 2030. [WHO]



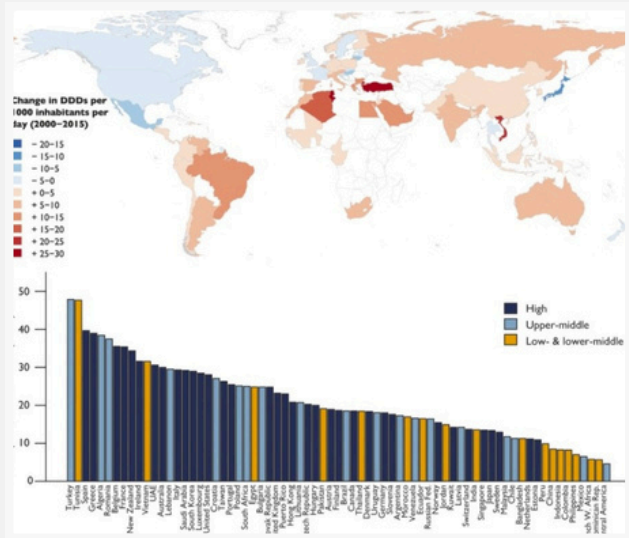
Source: The burden of Antimicrobial Resistance in India, Institute of Health Metrics and Evaluation, University of Washington.

The leading causes of death in India in 2019 were cardiovascular diseases, chronic respiratory diseases and neoplasms. n that year, 297,000 deaths were attributable to bacterial AMR and 1,042,500 deaths were associated with AMR in India, comparable to neoplasms and chronic respiratory diseases, and considerably higher than rates for tuberculosis, diabetes and kidney diseases [The Lancet, 2019].



Source: The burden of Antimicrobial Resistance in India, Institute of Health Metrics and Evaluation, University of Washington.

The single most important factor driving this growth is the volume of antibiotic usage. Findings suggest that between 2000 and 2015, consumption of antibiotics rose by 65% worldwide, which was largely attributed to lower-and-middle-income countries where the increase stems from an increase in incomes and living standards (the rise in the GDP of LMICs shows a positive correlation with antibiotic consumption). In the same period, India's consumption increased by a harrowing 103% [Klein et al, 2018]. Though the per capita consumption of India is comparatively lower, the data from multiple studies makes clear that the proportion of antibiotics recommended for 'restricted use' by the World Health Organisation consumed is high.



Global antibiotic consumption by country: 2000–2015

Source: Klein, E., Van Boeckel, T. P., Martínez, E., Pant, S., Gandra, S., Levin, S. A., Goossens, H., & Laxminarayan, R. (2018b). Global increase and geographic convergence in antibiotic consumption between 2000 and 2015. Proceedings of the National Academy of Sciences of the United States of America, 115(15). https://doi.org/10.1073/pnas.1717295115
Data source: IQVIA MIDAS, 2000–2015, IQVIA Inc.

In a developing country like India, there is little to no oversight over medical practices and no guidelines or regulations in place concerning the dissemination of antibiotics. Though designated as prescription drugs', most antibiotics are readily available over the counter (OTC) at pharmacies, where employees, who may not be trained pharmacists, often end up 'advising' customers as to which antibiotic to consume for their concern. Patients who get to purchase medication directly end up resorting to self-treatment, thereby saving them the time and cost of actually visiting a healthcare professional.

A multi-country survey conducted by The World Health Organisation points out that 64% of patients trust that antibiotics will help treat infections caused by viruses, like the common cold and flu. In areas where the penetration of diagnostic lab services may be low, such as the rural areas where 70% of Indians reside and where Primary Health Centres (PHCs) suffer from a shortage of doctors, and medical and pharmaceutical staff, prescriptions of antibiotics are resorted to as the line of treatment.

Consuming or prescribing antibiotics when they are not required is one of the most common examples of their misuse.

Another factor that can contribute to the development of AMR is the length of time for which doctors end up prescribing the antibiotic. Patients prefer to have an antibiotic prescribed – they strongly believe that it would help them recover quicker. For the satisfaction of their patients, medical practitioners end up prescribing stronger antibiotics than may be needed – the impact of a single prescription on the spread of AMR is perceived to be so small, that the benefit perceived of prescribing the antibiotic seems to outweigh the costs. A satisfied patient would become a regular patient.

Global Estimates

AMR has serious ramifications for overall development. Owing to the high costs associated with it, inequalities will widen and it is the marginalized who will be affected most adversely. Lower-and-middle-income countries stand to lose out the most since they are less likely to be able to access complex, expensive medications and their healthcare systems would be the most overburdened. Since such economies are more likely to be dependent on labour income, their downstream costs would also be significantly greater, elevating poverty levels and straining their economy further. The gap between the developed and the developing countries will widen, and it is the underprivileged population of the world that will be most adversely affected.

The earliest attempt made to quantify the impact AMR would have on the global economy was made by the Centers for Disease Control and Prevention (CDC) in 2013. It was revised further in 2019 and attempted to estimate only the direct costs associated with treating six multidrug-resistant microbes ($4.6 billion a year), C. difficile ($1 billion a year), and drug-resistant gonorrhoea ($133.4 million a year).

The Organisation for Economic Co-operation and Development (OECD) released its first report in 2015 – this report was the one that drew attention towards the lack of national antimicrobial resistance plans across the globe. They estimated that though the percentage of bacterial infections resistant to antibiotics remains low (17 per cent) in OECD nations, it is considerably higher outside – over 40 per cent in countries like India and China, and it is this variation that influences mortality. This particular model estimated around 2.4 million deaths from resistant infections in the United States, Europe, Canada, Mexico and Australia. It also suggested that 1.75 million years of healthy life are currently lost every year across 33 countries. It would cost these healthcare systems $3.5 billion a year. It was this report that highlighted the importance of negative externalities that would be hard to model but are necessary to consider nonetheless; AMR can hurt the livelihoods depending upon or being involved in the tourism or agricultural industries and shake the confidence the public has in the healthcare system, leading them to avoid physical consultations.

Report	Measure	Quantity	Geographic Area
AR Threats Report	Deaths per year	35,900	United States
AR Threats Report	Deaths per year (drug-resistant *C. difficile*)	12,800	United States
Stemming the Superbug Tide	Deaths per year, 2015 to 2050	30,000	United States
Stemming the Superbug Tide	Deaths per year	60,000	United States, Europe
Stemming the Superbug Tide	Deaths per year, 2015 to 2050	2.4 million	North America, Europe, Australia
Stemming the Superbug Tide	DALYs lost per year	1.75 million	33 high-income countries
O'Neill report's RAND model	Cumulative deaths 2015 to 2050	11 to 444 million adults	Global
O'Neill report's KPMG model	Cumulative deaths 2015 to 2050	200 to 700 million	Global
The O'Neill report	Deaths per year by 2050	10 million	Global
European CDC, Cassini and colleagues	Deaths in 2015	33,000	Europe
The Global Burden of Disease	Deaths caused by infection with a resistant pathogen in 2019	0.91 to 1.71 million	Worldwide
The Global Burden of Disease	Deaths associated with infection with a resistant pathogen in 2019	3.62 to 6.57 million	Worldwide

MR Collaborators; CDC, 2019; KPMG LLP, 2014; OECD, 2018; O'Neill, 2014; Taylor et al., 2014.

Sources: Taylor, J., Hafner, M., Yerushalmi, E., Smith, R., Bellasio, J., Vardavas, R., Bienkowska-Gibbs, T., & Rubin, J. (2014, December 10). Estimating the economic costs of antimicrobial resistance: Model and Results. RAND. https://www.rand.org/pubs/research_reports/RR911.html; The global economic impact of anti-microbial resistance. (2014, December 11). KPMG LLP. https://assets.kpmg.com/content/dam/kpmg/pdf/2014/12/amr-report-final.pdf;

Stemming the superbug tide. (2018). In OECD health policy studies. https://doi.org/10.1787/9789264307599-en;
Antibiotic resistance threats in the United States, Centres for Disease Control and Prevention, 2019. (2019). https://doi.org/10.15620/cdc:82532;
The Review on Antimicrobial Resistance, & O'Neill, J. (2014). Antimicrobial Resistance: Tackling a crisis for the health and wealth of nations. https://amr-review.org/sites/default/files/AMR%20Review%20Paper%20-%20Tackling%20a%20crisis%20for%20the%20health%20and%20wealth%20of%20nations_1.pdf

The report by the World Bank, published in 2017, hypothesises that healthcare costs would be most drastically hit since such infections are costlier. An upward rise would be seen in the spending of governments and the private sector on healthcare, which when accompanied by a fall in trade and production of livestock, could end in a public deficit. The impact on the global economic output could potentially extend for the next 30 years, diminishing the world's annual GDP by between 1.1 and 3.8 percent. This could end up being as serious a shock as the financial crisis of 2008-09, only the aftershocks of this would last much longer than those had.

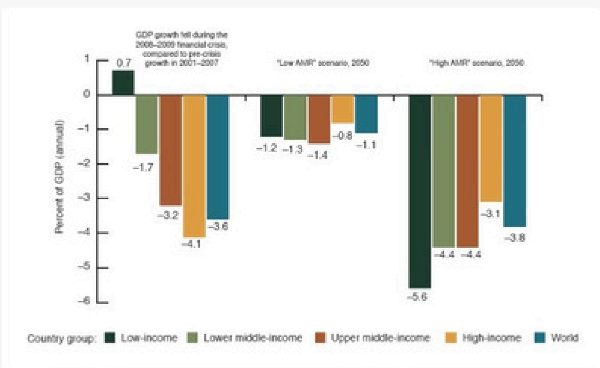


FIGURE 3-5 Costs to the economy of antimicrobial resistance compared to those of the 2008–2009 financial crisis; annual cost expressed as percentage of GDP.
SOURCE: The World Bank, 2017.

Costs to the economy of antimicrobial resistance compared to those of the 2008-2009 financial crisis; annual cost expressed as percentage of GDP

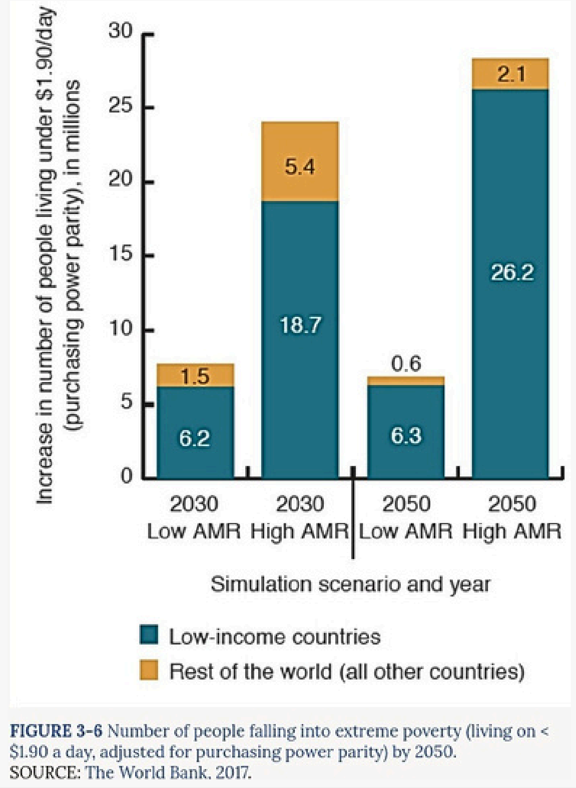
Source: Drug-Resistant Infections; A Threat to Our Economic Future. (2017, March). World Bank Group. https://documents1.worldbank.org/curated/en/323311493396993758/pdf/final-report.pdf

The impact of AMR on workforce productivity is usually studied via two channels: the loss in the productivity of the workers who are afflicted with a drug-resistant infection, and the loss of productivity of those who are the caregivers. The direct costs associated with AMR infections were estimated to be between $4.1 billion and $5.1 billion [Nelson et al., 2021]. The costs of such infections incurred to society are necessary, especially because of the negative externalities associated with the loss in the number of useful drugs and the disastrous consequences that would follow.

AMR places universal health coverage at risk and derails the progress that has been made towards several Sustainable Development Goals (SDGs), including No Poverty (SDG 1), Good Health and Well-being (SDG 3), Reduced Inequalities (SDG 10), and Decent Work and Economic Growth (SDG 8). It could end up pushing between 8 million to 28 million people into extreme poverty by 2050 [The World Bank, 2017].

As per a study conducted by The World Bank, channeling resources into AMR mitigation may be one of the highest-yield investments a country can make.

Illustration by Tesa Joby



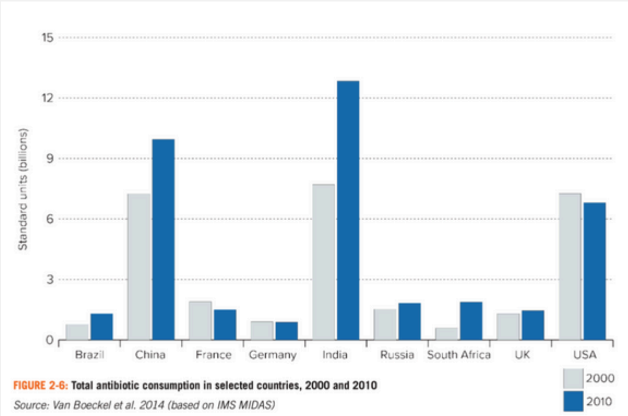
Number of people falling into extreme poverty (living on <$1.90 a day, adjusted for purchasing power parity) by 2050

Source: Drug-Resistant Infections; A Threat to Our Economic Future. (2017, March). World Bank Group. https://documents1.worldbank.org/curated/en/323311493396993758/pdf/final-report.pdf

The biggest challenge is the wide variability in estimates across studies, and it points toward a singular conclusion: the cost of AMR cannot be compartmentalised. The economic consequences of AMR cannot be reduced to one definite number since its burden depends on the context and trickles down to sectors besides healthcare (namely, food safety and livelihoods). Measuring resistance is difficult since it can emerge out of nowhere and present in different ways depending on the microbe. The role of microbiological laboratories becomes integral, and it is the lack thereof that negatively impacts the collection of surveillance data from lower-and-middle-income countries. In India, the most populous nation in the world, national estimates come from a few thousand laboratories and a handful of hospitals [Islam et al, 2019].

Moreover, this microbiological data is available only for the relatively well-off, since it is an out-of-pocket expense, thereby excluding entire sections of the population.

As a country that historically has not invested much in public health, COVID-19 should have been an eye-opener for India. However, FY'23 saw only 2.1% of the Gross Domestic Product (GDP) being spent on health, among the lowest in the world. As a country that carries one of the highest levels of drug-resistant bacteria worldwide, where cases of tuberculosis are yet to abate and yet, the burdens of multidrug-resistant tuberculosis remain the highest in the world, India needs to double down in its efforts to combat a threat that looms large. By the year 2050, two million deaths are projected in India alone, due to AMR [Gelband et al, 2015].



Source: Van Boeckel, T. P., Gandra, S., Ashok, A., Caudron, Q., Grenfell, B. T., Levin, S. A., & Laxminarayan, R. (2014). Global antibiotic consumption 2000 to 2010: an analysis of national pharmaceutical sales data. Lancet. Infectious Diseases/the Lancet. Infectious Diseases, 14(8), 742–750. https://doi.org/10.1016/s1473-3099(14)70780-7

Though India has been contributing to the Global Antimicrobial Resistance Surveillance System since 2017, nevertheless clinical oversight remains nonexistent. As the world's largest user of human antibiotics, where 70% of the population opts for private-sector healthcare, the collaboration of government, academia and the private sector is integral to India's fight against AMR [The Lancet, 2021].

Reference

Antibiotic resistance: Multi-country public awareness survey. (2015). In World Health Organization. Retrieved January 18, 2024, from https://iris.who.int/bitstream/handle/10665/194460/97892415?sequence=1

Antibiotic resistance threats in the United States, 2019. (2019). https://doi.org/10.15620/cdc:82532

Buckley, G. J., & Palmer, G. H. (2022). Combating antimicrobial resistance and protecting the miracle of modern medicine. In National Academies Press eBooks. https://doi.org/10.17226/26350

Dadgostar, P. (2019). Antimicrobial Resistance: Implications and Costs. Infection and Drug Resistance, Volume 12, 3903–3910. https://doi.org/10.2147/idr.s234610

Drug-Resistant Infections; A Threat to Our Economic Future. (2017, March). World Bank Group. https://documents1.worldbank.org/curated/en/323311493396993758/pdf/final-report.pdf

Gelbrand, H., Miller-Petrie, M. K., Pant, S., Gandra, S., Levinson, J., Barter, D., White, A., Laxminarayan, R., Ganguly, N., Kariuki, S., Ndegwa, L., Wesangula, E., Sigaúque, B., Sevene, E., Basnynat, B., Pokharel, P. K., Dixit, S., Giri, S., Dusé, A., . . . Nga, D. T. (2015). The State of the World's Antibiotics 2015. Center for Disease Dynamics, Economics & Policy, 8(2), 30–34. https://journals.co.za/content/mp_whsa/8/2/EJC180082

India. (n.d.). Institute for Health Metrics and Evaluation. https://www.healthdata.org/research-analysis/health-by-location/profiles/india

India. (2023). Tracking AMR Country Self Assessment Survey (TRACSS) 2023 Country Report. https://amrcountryprogress.org/download/profiles/2023/english/EN_IND_TrACSS_2023_India.pdf

Islam, S., Aldstadt, J., & Aga, D. S. (2019). Global antimicrobial resistance: a complex and dire threat with few definite answers. TM & IH. Tropical Medicine and International Health (Print), 24(6), 658–662. https://doi.org/10.1111/tmi.13230

National Action Plan on Antimicrobial Resistance (NAP-AMR). (2017, April). In Government of India. Retrieved January 24, 2024, https://ncdc.mohfw.gov.in/WriteReadData/l892s/File645.pdf

India. (2023). Tracking AMR Country Self Assessment Survey (TRACSS) 2023 Country Report. https://amrcountryprogress.org/download/profiles/2023/english/EN_IND_TrACSS_2023_India.pdf

Islam, S., Aldstadt, J., & Aga, D. S. (2019). Global antimicrobial resistance: a complex and dire threat with few definite answers. TM & IH. Tropical Medicine and International Health (Print), 24(6), 658–662. https://doi.org/10.1111/tmi.13230

National Action Plan on Antimicrobial Resistance (NAP-AMR). (2017, April). In Government of India. Retrieved January 24, 2024, https://ncdc.mohfw.gov.in/WriteReadData/l892s/File645.pdf

Klein, E., Van Boeckel, T. P., Martínez, E., Pant, S., Gandra, S., Levin, S. A., Goossens, H., & Laxminarayan, R. (2018). Global increase and geographic convergence in antibiotic consumption between 2000 and 2015. Proceedings of the National Academy of Sciences of the United States of America, 115(15). https://doi.org/10.1073/pnas.1717295115

Murray, C. J. L., Ikuta, K. S., Sharara, F., Swetschinski, L. R., Aguilar, G. R., Gray, A. P., Han, C., Bisignano, C., Rao, P. C., Wool, E., Johnson, S., Browne, A. J., Chipeta, M. G., Fell, F., Hackett, S., Haines-Woodhouse, G., Hamadani, B. H. K., Kumaran, E. a. P., McManigal, B., . . . Mturi, N. (2022). Global burden of bacterial antimicrobial resistance in 2019: a systematic analysis. Lancet, 399(10325), 629–655. https://doi.org/10.1016/s0140-6736(21)02724-0

Manesh, A., & Varghese, G. M. (2021). Rising antimicrobial resistance: an evolving epidemic in a pandemic. The Lancet Microbe, 2(9), e419–e420. https://doi.org/10.1016/s2666-5247(21)00173-7

Nelson, R. E., Hatfield, K. M., Wolford, H., Samore, M. H., Scott, R., Reddy, S., Olubajo, B., Paul, P., Jernigan, J. A., & Baggs, J. (2021). National estimates of healthcare costs associated with Multidrug-Resistant bacterial infections among hospitalized patients in the United States. Clinical Infectious Diseases, 72(Supplement_1), S17–S26. https://doi.org/10.1093/cid/ciaa1581

Ouakrim, D. A., Cassini, A., Cecchini, M., & Plachouras, D. (2020). The health and economic burden of antimicrobial resistance. In Cambridge University Press eBooks (pp. 23–44). https://doi.org/10.1017/9781108864121.003

Stemming the superbug tide. (2018). In OECD health policy studies. https://doi.org/10.1787/9789264307599-en

The global economic impact of anti-microbial resistance. (2014, December 11). KPMG LLP. https://assets.kpmg.com/content/dam/kpmg/pdf/2014/12/amr-report-final.pdf

Taylor, J., Hafner, M., Yerushalmi, E., Smith, R., Bellasio, J., Vardavas, R., Bienkowska-Gibbs, T., & Rubin, J. (2014, December 10). Estimating the economic costs of antimicrobial resistance: Model and Results. RAND. https://www.rand.org/pubs/research_reports/RR911.html;

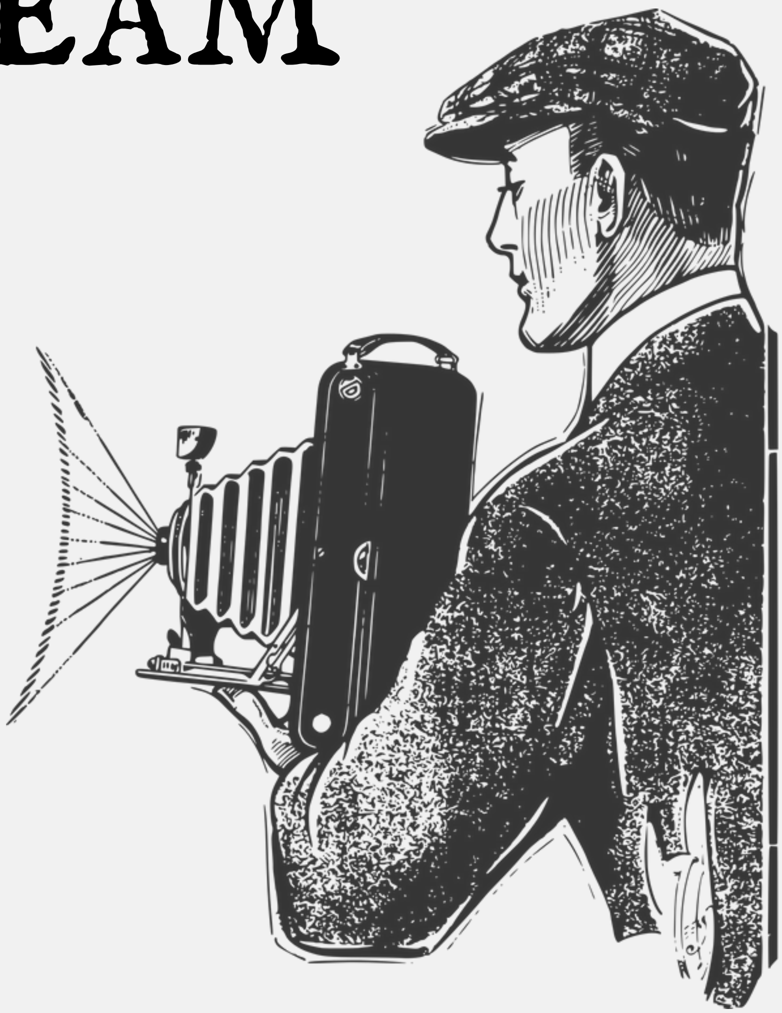
The Review on Antimicrobial Resistance, & O'Neill, J. (2014). Antimicrobial Resistance: Tackling a crisis for the health and wealth of nations. https://amr-review.org/sites/default/files/AMR%20Review%20Paper%20-%20Tackling%20a%20crisis%20for%20the%20health%20and%20wealth%20of%20nations_1.pdf

U S Centers for Disease Control and Prevention, Frieden, T., & Committee on Foreign Affairs Subcommittee on Africa, Global Health, Human Rights, and International Organizations United States House of Representatives. (2013). ANTIBIOTIC RESISTANCE THREATS in the United States, 2013. https://www.cdc.gov/drugresistance/pdf/ar-threats-2013-508.pdf

Van Boeckel, T. P., Gandra, S., Ashok, A., Caudron, Q., Grenfell, B. T., Levin, S. A., & Laxminarayan, R. (2014). Global antibiotic consumption 2000 to 2010: an analysis of national pharmaceutical sales data. Lancet. Infectious Diseases/the Lancet. Infectious Diseases, 14(8), 742–750. https://doi.org/10.1016/s1473-3099(14)70780-7

Wong, G., Tan, L., & Yap, P. (2015). A moral price for medicine. Singapore Medical Journal, 56(07), 363–365. https://doi.org/10.11622/smedj.2015104

From the creative team

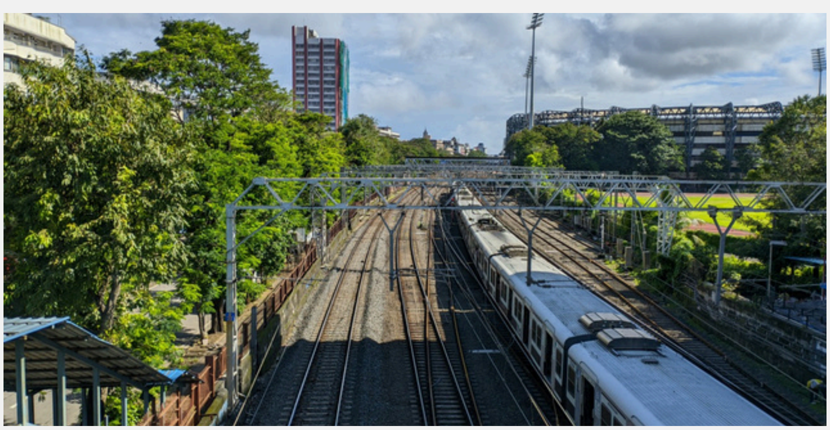


URBAN LANDSCAPE

Perspectives, Dynamics, Development & Lifestyle

SAKSHI BANSAL

Urban development is often seen as best represented by the high rise buildings and infrastructural marvels in a city, often neglecting the sustainability involved. The photo essay represents one of the most developed cities in the Indian subcontinent, a city that probably surpasses any other in the velocity of development in terms of infrastructural projects. The fancy buildings and ever-continuing metro constructions hide the real part of the city, one which hosts India's largest slums and often overlooks the importance of sustainability and greenery. The photos depict a brown economy which refers to the fast scale of development at the expense of the environment. Even if the expanding necessity of towers and sea links to facilitate easier commute, the harm to biodiversity and environment, depreciation greenery in the city and use of conventional sources of energy are issues that should not be overlooked.



SERENADING THE SEAS

A love affair with India's islands

SHRESHTHI DUBEY

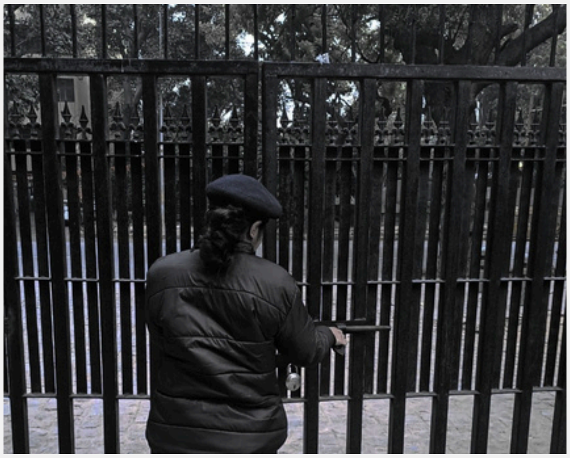
In the embrace of the Indian Ocean, India's vision of sustainable tourism becomes a poetic love affair with paradise. Amidst the hum of renewable energy and the vibrant hues of a blossoming blue economy, these stills reflect a shared journey of love and growth, an ode to sustainability that lies on the edge of a thriving blue ocean. Considered to be the next great economic frontier, blue economy, defined as the sustainable utilization of ocean resources for economic progress and improved livelihoods, holds immense potential for India's economic development. The government's vision of New India highlights the blue economy as a key dimension for growth, emphasizing the need to uplift coastal communities and accelerate development and employment. Key sectors like marine leisure and recreation, renewable energy production, and marine biotechnology contribute significantly to India's blue economy. The Sagarmala initiative, focusing on port-led growth and infrastructure development, plays a vital role in realizing this potential.

However, discussions on harnessing a blue economy are occurring at a time when the oceans are seeing unprecedented levels of warming and the effects of climate change are causing environmental degradation and threatening livelihoods. In this context, isn't the concept of a blue economy favouring the exploitation of ocean resources for economic growth? Critics argue that the true stewards of ocean sustainability are small scale fisherfolk while the blue economy discourse seems to be less about really challenging what is driving the destruction of marine and coastal ecosystems, and more about turning conservation into a profitable venture, while accommodating destructive uses of ocean-space.

In essence, like the vast oceans that surround it, India's blue economy holds limitless potential for growth and investment. With strategic planning and collaboration between government and private stakeholders, India's blue economy can soar, enriching trade, tourism, security, and inclusive development on a global scale. However, it is essential to prioritize sustainable usage of ocean resources to ensure that this potential is harnessed responsibly and for the long-term benefit of both present and future generations.

CARE GIVER WELL BEING & SUPPORT SYSTEMS

ANNE LISA AUGUSTINE & LAYA THOMAS



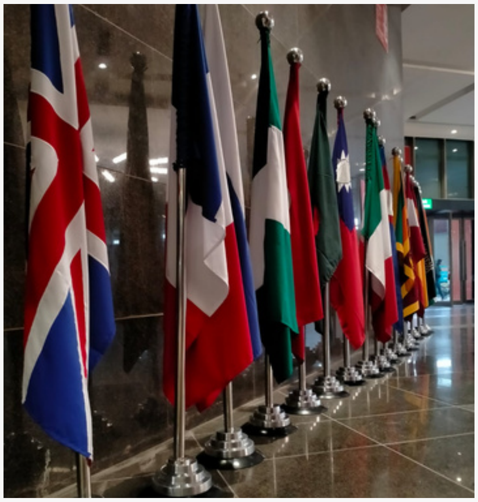
On being asked what is it that motivates her to come to work daily, Arti believes it is the satisfaction that her job brings her, the feeling of being able to contribute to the family, besides nurturing her two and a half year old son at an age as early as twenty-three. Arti works as a security guard at a hostel in New Delhi. With absolutely no pressure from her family or so, it is her avidness to work that widens her smile as she stands with a welcoming disposition at the gates that guard the white walls, a home to many. After losing her job, owing to the pandemic, it's been over a month since she joined her current place of work and as far as contentment is concerned, Arti is unreservedly satisfied with what she does. In a world hemmed in uncertainty, the recognition of being financially independent with a stable source of income instills a sense of fulfillment and pride among her kith and kin. With the increasing significance of education, Arti a B.Com graduate is of the idea that skills are what determine the course of one's career which is why she learns tally during her free time. With the aim to achieve proficiency in her field of interest, doing so would help her secure a more skill demanding job, something Arti sees for herself in the near future.

At present our country spends less than 1% of the GDP on the care economy. The ever growing demand for care work however necessitates a need to transform our outlook towards the same. With a dearth of economic opportunities, the care economy provides a means to earn a livelihood by facilitating job creation, especially in areas that require care services such as healthcare, social service, childcare and support to the elderly. The care economy in some way or the other knits the society together by allowing individuals at both the giving and receiving ends to build meaningful relationships with each other. It is high time that the social challenges that face our economy are addressed and the required investments are made so that it can realize the enormous potential that it holds in its core.

GLOBAL ECONOMIC DEVELOPMENT THROUGH TIME

A Journey from Brown to Green

ANYA GAMALIEL



Every picture has a story to tell, and so do these. Each of these navigates through our complex development journey. Our journey begins amidst the relics of industrialization, where smokestacks lace the skyline and the earth bears the scars of ruthless exploitation, in the name of development. Old buildings stand as silent witnesses to a bygone era, their weathered facades bearing witness to the unrelenting quest for profit at any cost. This is what you can call the Brown economy.

Amidst the concrete jungle, construction sites, and tall buildings we have neglected the shadows and cries for help that linger in the alleyways. The shadows of people in the slums, at whose cost we have built this concrete empire, and the whimpers of nature that beg us to stop this exploitation. In our relentless pursuit of a better today, we have forgotten what we are leaving behind.

But there is hope on the horizon. The green economy emerges as a beacon of sustainability, offering a path forward towards a brighter future. Renewable energy sources harness the power of the sun and wind, transforming the landscape and reviving communities. In this vision of tomorrow, economic growth is no longer measured solely in monetary terms but in the health of our planet and the well-being of all its inhabitants.

As we reflect on our journey through time, we are confronted with a choice: to continue the legacy of the brown economy or to embrace the transformative potential of the green economy. The flags of nations flutter in the breeze, a reminder of our shared destiny and the collective responsibility we bear toward future generations. In the end, we must remember this change will not come automatically, we must give our best to make it happen. After all, sustainable development is always a “work in progress.”

ECHOES IN THE GREY ECONOMY

Informal livelihoods in India

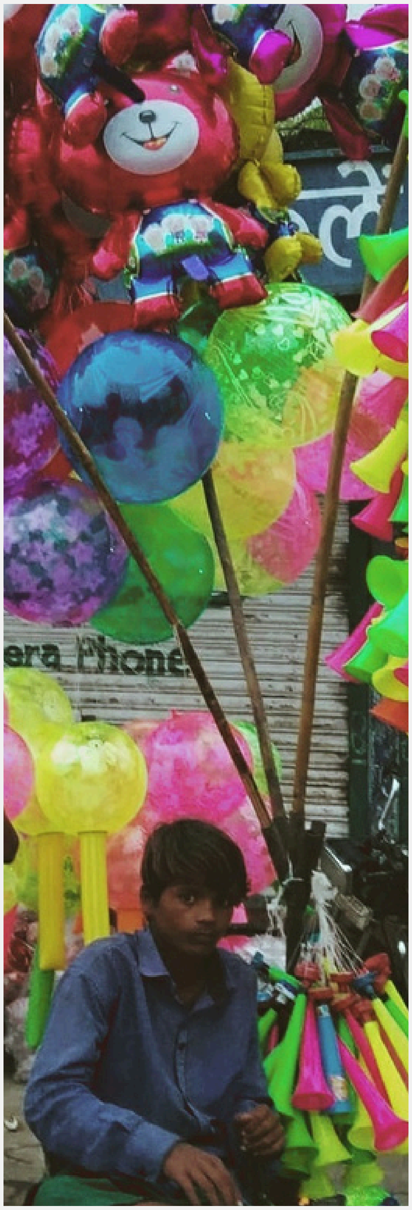
AMIYA ANTONY

In the crowded streets of Indian cities, informal laborers toil away, often without the protections and benefits afforded to formal workers. This disparity in labor conditions deepens existing inequalities, as informal workers face lower wages, limited access to healthcare, and precarious employment conditions. The grey economy in India is a double-edged sword, providing livelihoods for millions while also perpetuating and amplifying socioeconomic disparities. India's grey economy, thriving beneath the surface of formal structures, paints a diverse and complex portrait of survival and eesilience. whether in lively markets or serene alleyways, the informal sector seamlessly integrates into daily existence, reflecting resilience and adaptability.

INEQUALITY AMPLIFIED

The role of Grey Economy in exacerbating socioeconomic disparities

PALAK SHARMA



The grey economy" is the part of the economy that is not subject to official control and supervision. This includes things like underground markets, smuggling, tax evasion, and unreported financial transactions. The spread of this phenomenon, particularly in regions where regulations are not strictly enforced, has the potential to worsen wealth disparities and undermine established economic systems.

"Inequality Amplified" explores the grey economy and how it contributes to growing income gaps. Readers can gain a profound comprehension of the societal repercussions of this underground economy through in-depth case studies and professional research.

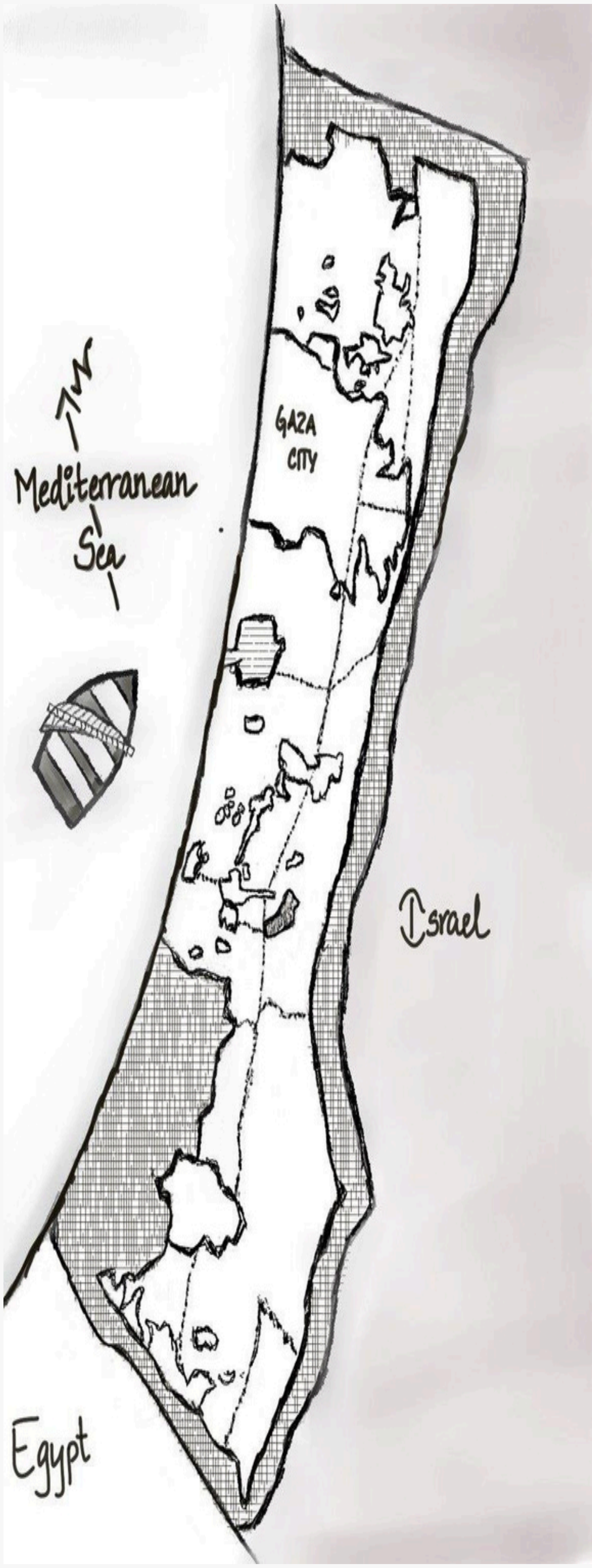
The publication's goal is to inspire people to take action in order to build a more equitable society by displaying images that motivate empathy and awareness. As an example of the power of empathy and information to overcome socioeconomic barriers, consider the picture of an old educated guy reading the newspaper to a lower-class, less-educated person.

An additional remarkable image depicts a preteen or teen boy who, rather than going to school, is making a living selling toys and balloons on the side of the road. The difficulties endured by disadvantaged youngsters who are denied access to education are reflected in his worn-out clothing and exhausted demeanor. This portrayal is a sobering reminder of the ongoing disparities that prevent many children around the world from having access to education and from striving for a brighter future. It stresses how critical it is to remove structural obstacles that limit access to education.

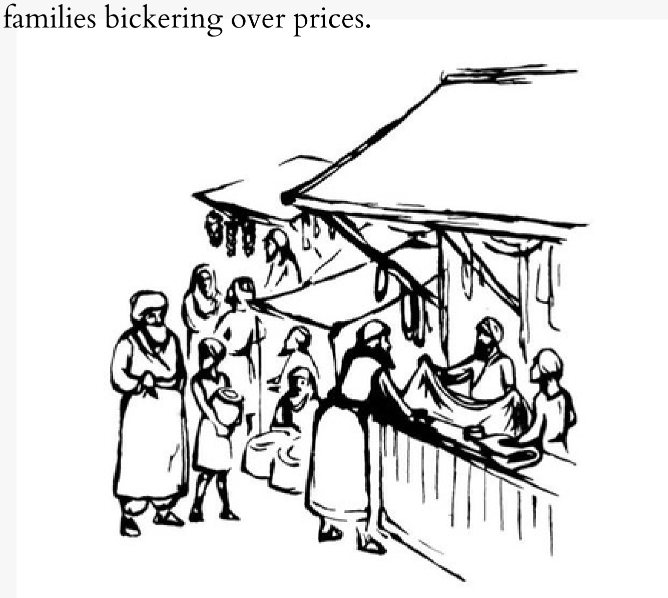
WAVES OF STRUGGLE

TESA JOBY

This fictional cartoon strip portrays the difficulties experienced by Palestinian fishermen amid the Palestine-Israel conflict. It sheds light on the challenges they face in navigating the turbulent waters caused by the ongoing turmoil in the region.



The Gaza city market buzzes with life on this Saturday morning. Freshly harvested crops line the stalls, artisans proudly display their crafts, and villagers exchanging stories amidst the lively atmosphere. Laughter echoes through the air as children play and families bickering over prices.



As the market teems with activity, two interviewers arrive with cameras in hand, eager to capture the essence of Palestinian life. They navigate through the bustling crowds, seeking out individuals willing to share their stories for an upcoming documentary.

[Approaching the old man]

Ahmed, the old man, agrees and invites the journalists. As they settle, he introduces himself. The journalist then asks about his livelihood.

Ahmed responds saying that his family's livelihood depended on fishing. Due to war, strict rules limited them to fishing near the Gaza Coast, which affected their earning. Then, a tragedy struck, Ahmed's son and his friend accidentally crossed the border while fishing.

The journalists offers heartfelt condolences to Ahmed, expressing hope for peace to bring solace and thanked him for sharing his poignant story, promising to convey it faithfully in their documentary. They bid Ahmed farewell, wishing him well.

At first glance, amidst the laughter and warmth, it's easy to overlook the pain hidden beneath the surface. Like Ahmed, some have sought alternative employment opportunities, while others have struggled to make ends meet, many here have lost their livelihoods and loved ones to the ravages of war.

The economic activity related to the seas and oceans is referred to as the “ocean economy” or “blue economy”. The portrayal of the challenges faced by the Palestine fishermen, such as, fishing zone limitations, disrupts their standard way of life and make it more difficult to manage fisheries sustainably which in-fact is a very important aspect of the blue economy: “the sustainable use of ocean resources for economic growth and community well-being”.

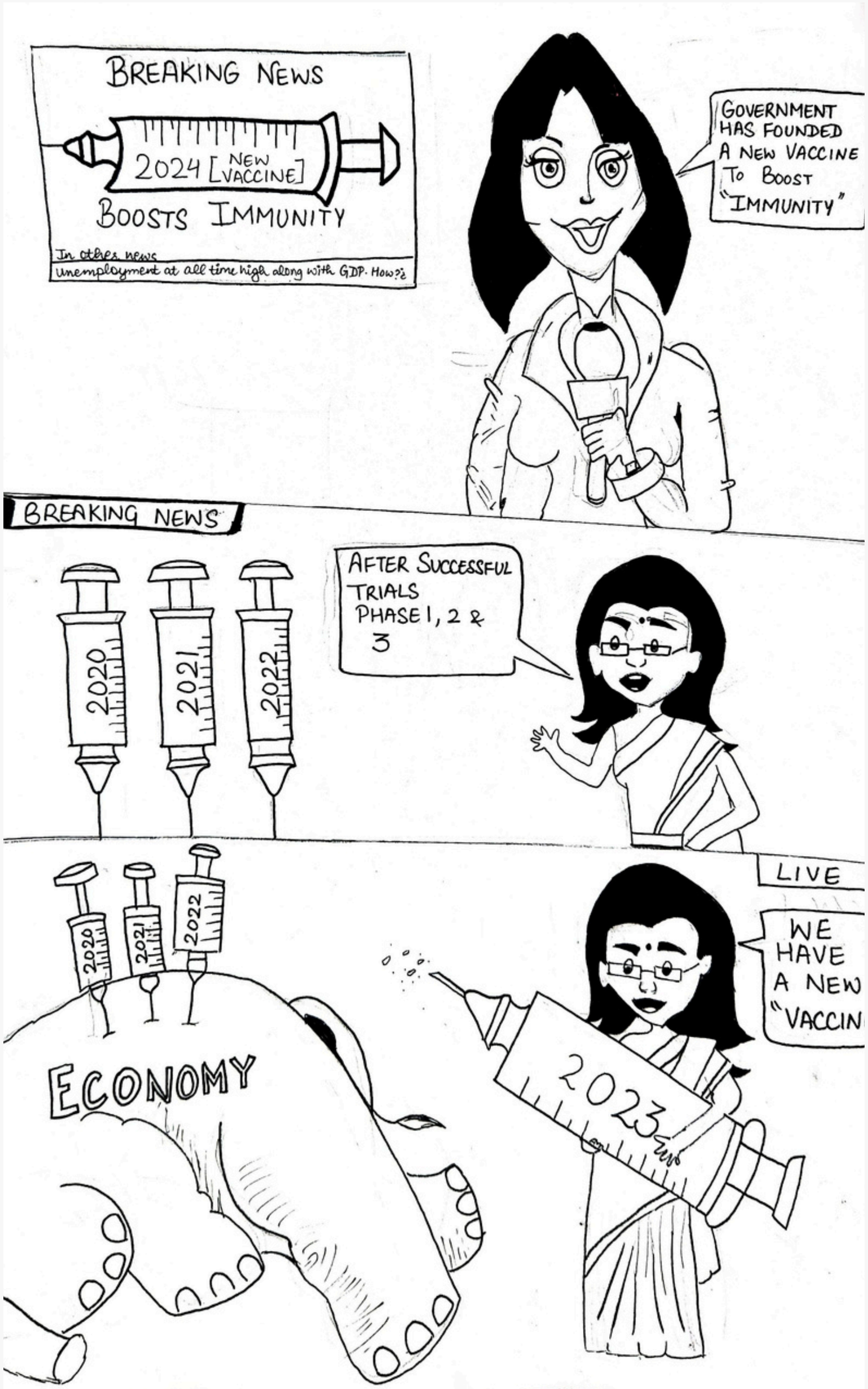
Fishing is a crucial part of the Palestinian economy in the Gaza Strip, but Israel has restricted its access to the region since 1967. The fishing range, under the Oslo Agreements, was 20 nautical/miles. Over time, the range has been reduced to 6 nautical miles. The number of fishermen in Gaza dropped from 10,000 to fewer than 4,000 between 2000 and 2010.

Israel's military attacks, infrastructure damage, and sewage facilities have caused environmental consequences, destroying fish habitats. The closure of Gaza's sea and land buffer has crippled the economy and reduced the supply of fish, causing food insecurity for 57% of the population.

Source*: Ej Atlas. (2021). Decimation of Palestine’s fishing industry, Palestine.*
https://ejatlas.org/conflict/the-decimation-of-palestines-fishing-industry

PAINTING WHITE OVER RED

SEJAL THAKKAR

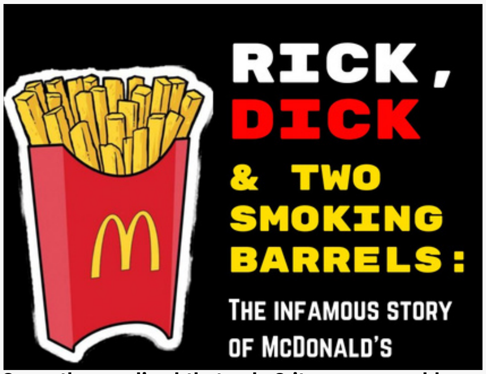


The cartoon strip employs satire to critique the government's focus on the vaccine announcement while subtly addressing economic concerns. The focus is on the flashy vaccine announcement while the economic hardship is presented more subtly.It aims to sow doubt about whether the government may be artificially boosting the economy under the guise of an extravagant vaccine initiative.

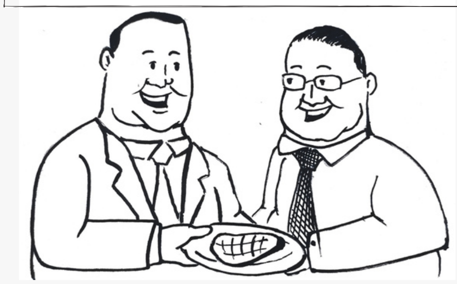
This portrayal contrasts government control of resources and production, with the left side depicting economic hardship from prioritizing the vaccine project, while the right highlights government achievement. It reflects a top-down approach, characteristic of a red economy. This cartoon tries to convey how the government has been suggesting good news over addressing the real concerns of citizens.

On the face of it, one might think the depiction might be about the white economy. However, the issue pertaining to the red economy can only be understood when deeply scrutinizing the cartoon. This reflects the complexity of different situations, each comprising a blend of various colours.

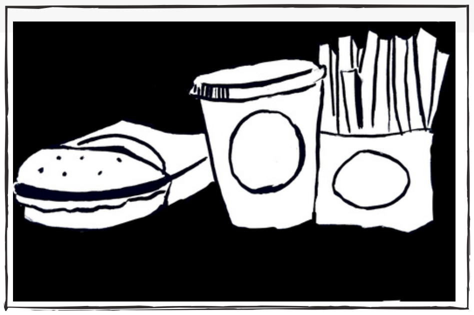
GUEST
ENTRIES



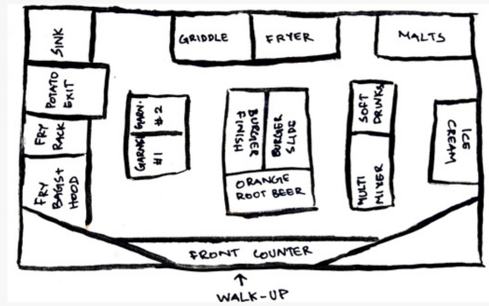
McDonald Brothers, Richard(Rick) and Maurice(Dick) opened McDonald's BBQ restaurant in 1940.



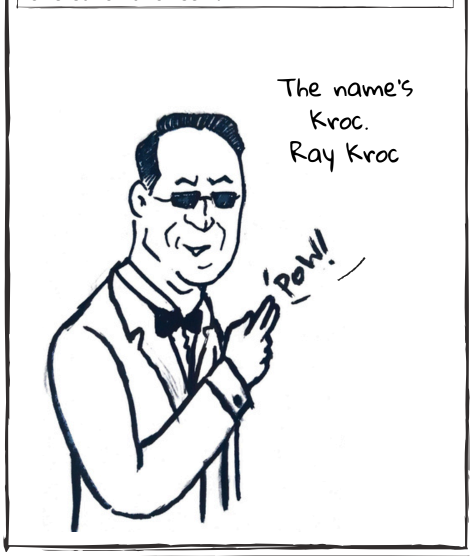
Soon, they realised that only 3 items were sold regularly and time taken to prepare each order was too much. In 1948, they cut down their menu, started using disposable cups and plates, introduced walk-up counter and invented Speedee service system- an assembly line food preparation system.



Speedee service system



1950- Ray Kroc, a milkshake salesman and a born hustler, join hands with the brothers and offered to franchise it.



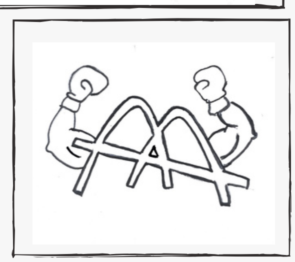
Within 6 years, Ray opened up numerous McDonald's restaurants across America while the brothers simply managed their original joint. Eventually, Ray grew tired of the brothers as he had to pay 0.5 % of each sale he made to the brothers and the rising expenses with each franchise ate up Ray's profits. They also roadblocked his ideas to decrease expenditure.

1955

The two smoking barrels, Ray Kroc and Harry J Sonnenborn team up and create the perfect plan. He tells Kroc to buy plots of land to lease to franchisees who, as a condition of their franchise agreement, can only lease from Kroc.

That way, Kroc gets a steady, up-front revenue stream that begins when an agreement is signed, not months later when the sales kick in.

And it provides what Kroc desperately needed: control over how franchisees operate. Control over menus. Control over service and quality standards. If a franchisee violated standards, Kroc wielded the reaper's scythe: He could cancel their lease.



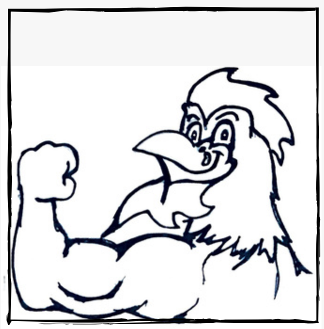
The Sonnenborn model made McDonald's invincible

In 1961, Ray Kroc buys out McDonald's brothers for 2.7 million dollars from their own company

Kroc pushes Sonnenborn out and takes the position of CEO himself. Meanwhile, McDonald's opens its first international restaurant in Canada in 1967. McDonald's expands internationally and the most important of them, McDonald's opens a restaurant in Pushkin Square, Moscow. Given the cultural status of the restaurant, this is seen as a symbolic moment in the end of the Cold War.

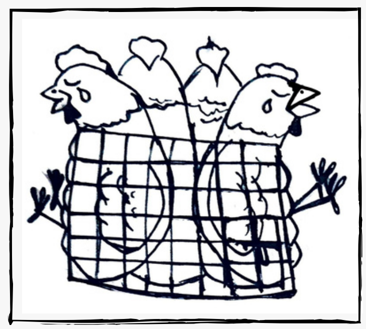
By the end of the 1990s, McDonald's has opened more than 11,000 restaurants outside of the U.S.Today, McDonald's is the biggest fast-food chain in the world with more than 37,000 locations in more than 115 countries. McDonald's employs more than 200,000 workers worldwide and has a market cap of more than $150 billion.

BUT, AT WHAT COST?



Genetically manipulated poultry

Unchecked CO2 emissions



Inhumane treatment of poultry

We all have a decision to make....

This is your last chance. After this there is no turning back. You take the blue pill, the story ends; you wake up in your bed and believe whatever you want to believe but your next of kin bears the brunt of your ignorance.

You take the red pill, you stay in this wonderland and I show you how deep the rabbit hole goes. You choose to live with sustainable practices, ethical farming and responsible consumption. Humanity lives happily ever after.

The Goddess in the Lanes

Gender Discrimination and Economic Struggles of Women Idol Makers in Kumartuli

- SAHIL PRADHAN -

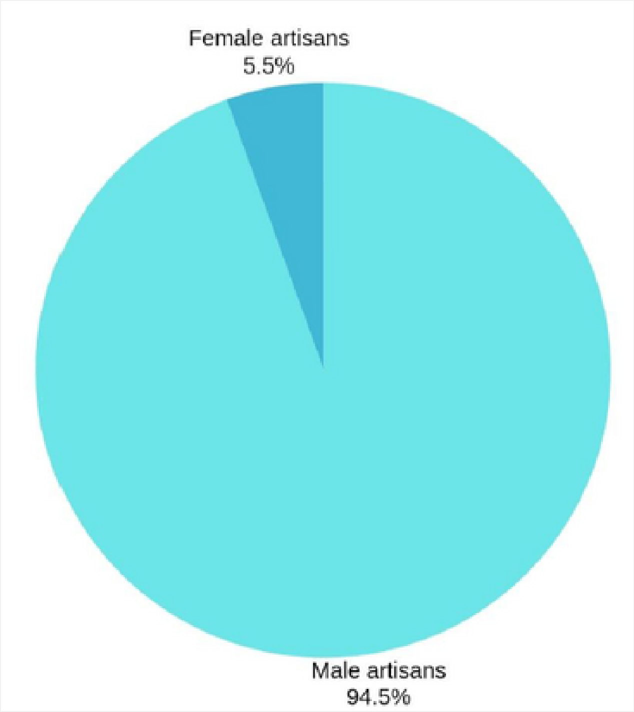
In the alleys of Kumartuli, where the goddess manifests amidst mud and odors, skilled artisans craft thousands of idols for Kolkata's grand festivities. Despite employing over 300,000 workers annually, only 20-25 are women, perpetuating gender discrimination rooted in societal norms. Interviews with artisans, including the Pal quartet, reveal worsening economic prospects due to climate uncertainties, labor disputes, and meager compensation. This article exposes the hidden economic crisis fueled by gender disparity, hindering progress amidst the abundance of the festive season.

A Durga idol being made in Kumartuli[1]

The Festive Boom and its Artisans

During Kolkata's vibrant Durga Puja festivities, over 400 registered workshops in Kumartuli employ 3000 artisans, with an estimated total of 5000. They craft over 4000 idols, celebrated nationwide. The frenzied season engaged around 300,000 workers in allied services. Amidst challenging conditions, artisans innovate with sustainable materials, preserving tradition while embracing contemporary themes. Durga Puja epitomizes their passion and devotion, igniting joyful celebrations citywide.

Surprisingly though as per the Samity's membership records, only 22-25[2] of the over 3000 registered artisans are women. Kumartuli thus thrives on a heavily gendered workforce centered around men as primary earners and women only in supporting capacities like painting assistants or construction helpers. Even for the 'Mother Goddess', societal discrimination severely curtails economic and skilling opportunities for women artisans.



The gender divide in artisans of Kumartuli

1. 2022, Sahil Pradhan
2. https://www.google.com/amp/s/www.telegraphindia.com/amp/culture/in-thy-likeness-their-unlikeness-darli

Understanding the Pal Quartet [3]

In the heart of Kumartuli, Mala Pal, buoyed by familial support, established herself as an acclaimed artist, striving to uplift other women in the craft. Despite initial familial pressures, she pursued recognition, dreaming of a school exclusively for women sculptors, while juggling multiple responsibilities, including caring for her ailing mother. Specializing in miniature idols, her craftsmanship garnered international acclaim, reflecting her determination amidst financial hardships and skepticism.

In contrast, Kakoli Pal's journey into idol-making stemmed from necessity after her husband's demise. With no formal training, she overcame challenges, expanding her business beyond Kolkata despite ongoing struggles, including safety concerns and worker poaching. Despite sculpting idols in narrow lanes without a studio, Kakoli perseveres, aiming to broaden her clientele beyond Bengal. Similarly, China Pal's story epitomizes resilience, as she inherited her father's studio and mastered the craft despite initial skepticism. Managing a team of 12, China's dedication to her profession outweighs personal challenges, emphasizing the demanding nature of idol-making in Kumartuli. In contrast, Kanchi Pal represents a new generation of artists, seamlessly managing her workshop and challenging gender norms in the industry, inspired by her mother's legacy.

While Mala and Kakoli envision growth and expansion, China and Kanchi navigate modern challenges, from social media attention to bureaucratic neglect. Despite financial struggles and the lack of institutional support, these women artists embody hope for the future, inspiring others to join the craft through their creativity and dedication.

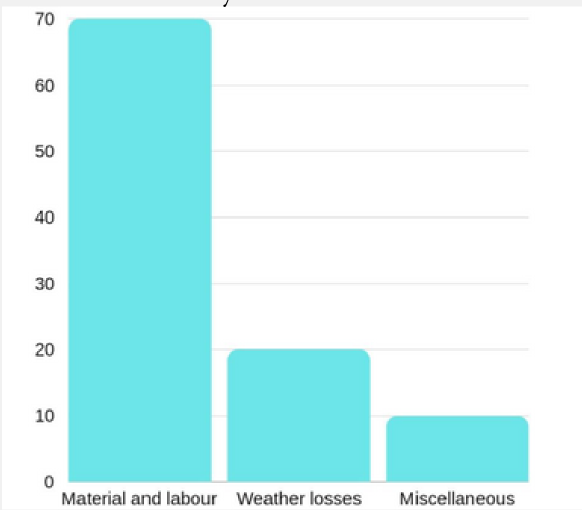
Amidst a changing landscape, Kumartuli's women artists continue to carve their place in history, symbolizing resilience, creativity, and determination against all odds. Their stories illuminate the gender-specific challenges faced by women in the industry, yet their unwavering spirit underscores the transformative power of art in shaping communities and inspiring generations to come.

The Insidious Creep of Gender Discrimination

In recent years, Kumartuli's community has suffered tremendously from climate vagaries, labor shortages, and worrying compensation trends. Their experiences reveal a creaking economy centered around inherent gender bias.

Increasingly erratic monsoonal rainfall over the past decade has severely disrupted idol production schedules, confirming climate researchers' predictions. Work usually starts by June-July once rainfall reduces but has often extended through September now.

The artisans are forced to cover structures with temporary shades while chasing any sunny interval for drying the clay. However such adjustments hike infrastructure costs and do not fully prevent damage from persistent humidity. As per organizers' estimates, over 20% of orders now face weather-related delays or last-minute fixes.[4]



Expenses and losses of artisans in percentage

3. https://www.google.com/amp/s/www.femina.in/achievers/a-tale-of-4-kumortuli-women-idol-makers-25024. amp#ip=1
4. https://globalclimatecare.in/climate-north-america/f/climate-change-damages-road-of-durgas-home-coming

Labor availability has also dipped drastically due to poor compensation and lack of contracts. Per capita idol artisan incomes as per Union surveys have remained stagnant around Rs 6000-8000 monthly despite inflationary pressures. But the strenuous work requires being on one's feet for 14-16 hours daily amid extreme heat, humidity, and dust[5]. Workers now prefer flexible construction jobs under rural employment schemes that assure[6] minimum daily wages without intensive labor or health impacts.[6]

With expanding production, organizers also negotiate pricing very aggressively to control budgets. Competition from cheaper fiberglass idol makers has strained workshops' shaky finances further. Material and labor now account for 60-70% of the artisans' expenses as they refuse to compromise on quality. Reducing profit margins leaves a minimal buffer for external uncertainties.

While all artisans face such hardships now, the issues get particularly exacerbated for women due to prevalent gender bias. They constantly battle the notion that idol-making is a 'male' domain with doubts about their design and sculpting prowess. Organizers, even laborers resist taking orders from women supervisors. Contract negotiations focused primarily on the lowest cost completely dismiss their extensive expertise.

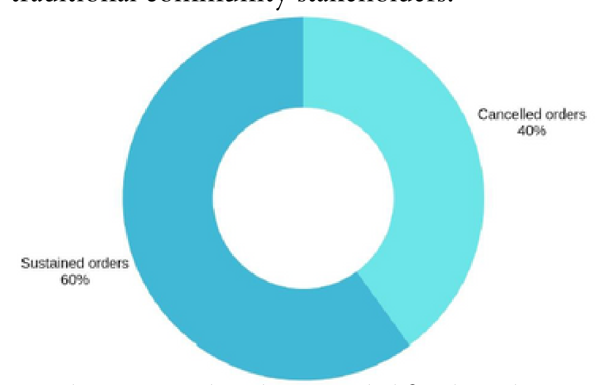
As single earners, they cannot match workshops with more artisans churning out cheaper fiberglass idols. Abandonment by their husbands denies them both spousal income and legitimacy within the local community. Constant barbs like "women lack creative visions" or "can't handle production responsibilities" hurt more than their calloused hands, even after years of proving their excellence.

China articulates this discrimination candidly, "We carry the same sacks of clay, sculpt similar figures. But our hourly wages or schedule flexibility remain secondary considerations, if at all." [7]

The societal stigma and erosion of compensation directly throttles women's economic progress and career growth. There exists no platform recognizing their artistic talents or unique feminine perspectives on idol conceptualization. For them, the frenzied festive season does not represent increasing prosperity but rather deepening uncertainty and despair.

As the quotes suggest, all artisans face such disruptive trends impairing Kumartuli's economy currently. However, the issues get particularly exacerbated for women due to prevalent gender bias bordering on discrimination.

Societal mindsets doubting women artisans' competencies remain rampant, dismissing their extensive expertise as trivial or inferior. As per the Union's member survey, over 40% of new client outreach ends unsuccessfully due to inherent skepticism from organizers on assigning major projects to women-led teams. Tech-savvy young women artisans looking to modernize the craft using digital sculpting or online branding also report facing prejudice while pitching their ideas to traditional community stakeholders.



New client outreach orders canceled for the Pal Quartet

5. https://www.google.com/amp/s/timesofindia.indiatimes.com/city/kolkata/rain-spells-trouble-for-kumartuli-id ol-makers-ahead-of-festive-season/amp_articleshow/103096959.cms
6. https://www.telegraphindia.com/amp/opinion/letters-to-the-editor-climate-change-hurdle-for-kumartuli-artis ans-ahead-of-durga-puja/cid/1956894
7. Excerpts from interview conducted by author

Contract negotiations focused primarily on the lowest production cost completely ignoring the women's teams' finesse, quality assurance, and rich experience. Their status as single earners supporting families denies them the flexibility of workshops with multiple income streams that can underbid rates. The Pals highlight how even after proving expertise over the years, they still fight notions that idol-making remains a 'male' domain.

The erosion of earnings and respect directly throttles their career advancement. There exists negligible formal skilling support focused on harnessing women's unique perspectives. The limited funding or incubation avenues lead bright young talents like their daughters or others in the community to consider abandoning their ancestry. For most women then, the frenzied festive season represents deepening uncertainty rather than increasing prosperity.

An idolmaker makes the idol in Kumartuli[8]

Reasons for Persistent Discrimination

India's current labor statistics portray a worsening gender disparity in workforce participation and job vulnerability over the past decade, partly attributed to persisting stigma. As per 2022 surveys by CMIE, India's overall unemployment rate hovered around 7 -8%. But while male joblessness fluctuated between 5-7% with cyclical variations, women faced double-digit unemployment throughout, peaking at 47% during COVID lockdowns.[9] Currently, only around 20% of working-age urban women actively engage in the workforce.

Moreover, existing gender gaps in entrepreneurship ecosystems greatly disadvantage women-led enterprises, as evident among Kumartuli's artisans. A survey report studying Indian women entrepreneurs revealed only 2% of all venture funding over 2014-19 got allocated to all-female founding teams while mixed-gender leadership startups received 79% of funding. Inadequate access to capital, incubation, networks, and role models denies women entrepreneurs the support systems allowing sustainable scaling.[10]

Structural Challenges Around Women's Work

Goldin's analyses[11] help highlight how such stark gender divides often get shaped by 'structural' barriers within professions imposing greater trade-offs for women between careers and family duties.

Her research traced the emergence of the US gender wage gap during the 20th century to differences in male and female labor force participation. Women tended to exit from inflexible yet highest-paying occupations the most as their domestic responsibilities increased after marriage. But male incomes kept rising as they gained experience without career breaks.

Goldin thus differentiates between labor divided by gender versus divided merely along skill lines. Eliminating the former even within skilled sectors can promote merit-based equitable participation. However cultural definitions and evaluation of 'high skill' act as man-made barriers preventing women's opportunities.

Kumartuli similarly demonstrates a highly skilled domain with stringent demands on labor time and mobility that disadvantages women disproportionately due to societal stigma.

8. 2022, Sahil Pradhan
9. https://www.epw.in/engage/article/gendered-impact-unemployment-case-study-india
10. https://www.statista.com/statistics/1306898/india-unemployment-rate-by-gender/
11. https://scholar.harvard.edu/goldin/publications/why-women-won

Rampant skepticism over female artisan capabilities often limits their access to large patronage contracts, training, and mentor networks perpetuating unequal success divides. Constantly battling doubts around professionalism and overcoming family obligations adds mental labor draining motivation levels.

Structural Support - The Sustainable Solution

Goldin optimistically argues that such 'structural' divides limiting women's workforce participation signal focus areas for policy reforms. Solutions promoting labor flexibility, remote work, access to capital, skill training, and leadership representation can transform gender gaps across domains.

Kumartuli similarly needs a structural revamp in its patronage, training, and financing models focused on merit and craft sustainability. Innovative institutional support through digital platforming, co-working spaces, skill incubators, and microfinance access exclusively for its women artisans can promote enterprise stability. Sensitizing all ecosystem stakeholders and bringing successful women role models to the forefront would also help tackle discrimination.

Goldin views the rapid narrowing of medical career gaps through innovative flexibility policies as a template for structured transformations achievable in a generation. Kumartuli likewise can transition into an equitable globally renowned crafts hub if its structural flows receive prompt policy redressal. Else resisting forces of stigma risk draining the hub of all its abundant feminine talent and energy.

The Road Ahead

Kumartuli's present turmoil thus mirrors broader Indian and global challenges around expanding women's workforce equity.

The trends demand urgent public-private collaborations delivering structured changes promoting sustainable women's livelihoods.
Skill-building programs, access to finance, formal contracts and social security must target women specifically to offset existing disparities. Progressive labor regulations, incubation support, and results-based financing can incentivize their productive participation. Platforms for collective voice and representation would help shape policy dialogues per their priorities.

However such external structural shifts need aligning with internal mindset changes to sustain progress. Sensitization drives and measurable progress tracking must engage entire communities towards equitable opportunity unshackling women's potential. Lasting prosperity shall only emerge once feminine creativity and leadership get accorded equal prestige as male counterparts.

The Pal quartet's example demonstrates that when provided adequate nurturing support despite societal barriers, women artisans can reach glorious heights even in traditionally masculine spaces. They continue chipping away at glass ceilings, quietly transforming karmic cycles of discrimination. The final idol to be dismantled now is that of regressive public attitudes doubting women's capabilities. For India's goddesses shall bloom fully only when the feminine spirit flies free of man-made shackles!

Academic researchers have studied the Kumartuli gender dynamics extensively to highlight key reasons societal stigma and discrimination continue thriving despite rapid urbanization and legal safeguards.

The religious outlook viewing the goddess Durga and other female deities as the universal mother and protector promotes conceptions of women primarily as homemakers rather than career professionals.

Dr. Sayantani Banerjee, a gender studies professor notes, "Resistance persists against women entering non-traditional roles like hands-on idol making which gets labeled masculine work. Women artisans thus constantly battle doubts about their serious vocational abilities.

As Hindi cinema showed through Pink, our society still accords women's conditional legitimacy."[12]

Moreover, women depend greatly on familial support to balance long artisan hours with domestic duties. However, the inter-generational craft traditionally got passed down among male family members only. Reema Das, PhD Scholar researching artisan women highlights, "Daughters or wives assisting actively in workshops is a recent trend over 2-3 decades only. The current elder generation remains unable to reconcile." [13]

The Future Beckons with Hope and Despair

The Pal quartet symbolizes women artisans overcoming male-dominated barriers, yet facing uncertainty. Government and private efforts train more women, combat discrimination, and promote sustainability. Challenges include declining patrons, attracting youth, and fiberglass dominance. Compensation and stability initiatives aim to improve conditions. Mala's optimism fuels hope, envisioning a future where more women shape the Goddess. Despite ongoing struggles, the resilience of Kumartuli's artisans shines through. However, without swift action against discrimination and economic challenges, darkness looms over these historic lanes, particularly for women artisans, making their battle urgent.

12. https://www.google.com/amp/s/indianexpress.com/article/cities/kolkata/at-kumartuli-handful-of-women-ido l-makers-break-tradition-taboo-as-they-leave-an-imprint-8944559/lite/
13. Interview by author

Globalised Commodification of Water: India's Case

-RIYA GANGWAL & RAJ MAYANK -

With our lives being suspended on the thin thread of market capitalism and global interconnectedness, commodification has assimilated everything from our soil to our sleep. Credits to the unabated rise of globalised trade, "virtual water" is now a market commodity. The flow of trade in commodities, and agriculture goods in particular, displays a comparative advantage difference across various countries. This difference is inclusive of the varying resource endowments available to each economy. However, the calculation of gains from trade is often underestimates or overlooks the economic cost of many natural resources, or alternatively the environmental cost of producing a commodity. This cost is manifest not only in terms of immense externalities that spill over time and space, but also in terms of the losses made by the producers since they are under-compensated for their input use. Water being one such resource is embedded in the trade of goods, and the magnitude and direction of virtual water trade can be misleading, as is outlined below.

Virtual Water Trade (VWT) is the amount of water that is utilised in the production of goods that are then traded in the international market (Allan, 1998). This may be in the form of either green (soil moisture) or blue (renewable and non-renewable) virtual water. In many water-stressed areas, this trade helps to reduce water-stress. Some regions would not be able to meet their agricultural demands through domestic production alone due to water strains. A growing amount of non-renewable groundwater is being extracted from deep aquifers to grow crops that are then traded internationally, despite the fact that green water, or renewable blue water, makes up the majority of the water traded globally (Rosa et al, 2019). Conventional methods of calculating gains and losses from trade to validate the existing trade patterns therefore fail at giving an accurate measure of whether the trade practices are efficient.

Unequivocally, the climate crisis and water stress faced by an agrarian and developing economy like India makes the 'Virtual Water Trade' extremely critical.

Contextualising Water as a Tradable Good

The quantity of goods traded between the nations and the amount of water required to create these commodities at the point of production determine the volume of virtual water flows. The water in a product's production domain is real; when it crosses national borders, in its consumption domain it becomes virtual. The difference between the amount of virtual water included in imports and the volume of virtual water included in exports is used to compute a nation's virtual water trade balance.

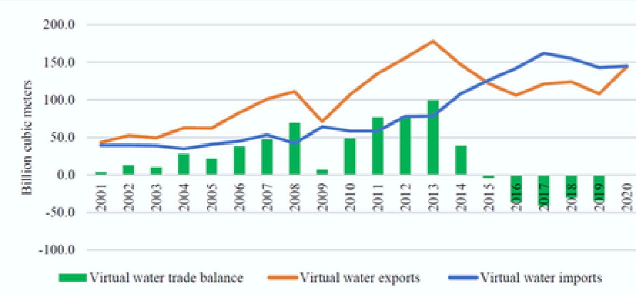
If a country is net importer of virtual/embedded water, it is said to have saved the quantity of water that would have been needed if the imported goods had been produced in the home country (Renault, 2003). The scenario is different when it comes to net virtual water export, though; exporting some goods might result in a net loss of domestic water, which can be especially dangerous if the exporting nation faces a water shortage. Trade imbalances have major effects on trade policy for developing economies, particularly when the nation significantly relies on natural resources.

India's Export-Import Switch and Unsustainability

Since its common knowledge that economically logical water pricing is absent in many regions of 1
the world, many products enter the world market at a price that does not entirely include the cost of the water contained in the manufacturing or production of the product. This creates situations where some nations in fact subsidise export of scarce water (Hoekstra and Hung, 2005). India was the fifth largest net exporter of virtual water up until 1999 (Chapagain and Hoekstra, 2003).

However, during 1999-2013, a fluctuation of sorts could be observed, of net export and net import of virtual water in food crops in India. For instance, 1999-2001, 2006, and 2009 marked India as the net importer of water in food crops. However, after 2013, India became the net importer of water in food crops.

Figure1: Trends in Virtual Water Imports and Exports, India



Source: Kannan and Kumar, 2023; WITS, UN

Changes in the nature and composition of the quantity exported and imported are the reason behind India's shift from being a net exporter to a net importer of virtual water between 2014 and 2017. The export of water-intensive goods including soybean cake, milled rice, and wheat flour decreased. Concurrently, there was a notable surge in the importation of oil goods, particularly oil palm, soybean, and sunflower oils (Shivaswamy et al, 2021). The Global Agricultural Value Chain analysis too highlights the bulkiness of agricultural raw material on India's basket of exports, and therefore supports the claim that countries like India in the global south have been reduced to exporters of raw material (Jha and Yeros, 2019).

Moreover, as discussed above, the trade of commodities doesn't include the economic and environmental cost of embedded water due to absence of accurate pricing of water as a commodity. These costs could enlarge over time and space, particularly for water-stressed regions within a country (Dong et al, 2014; Kumar and Jain, 2011). This reasserts the fact that 'globally efficient allocation' of water as a resource may not fall in sync with 'locally efficient allocation'.

Hence, India's shift from being a net exporter to a net importer of virtual water is indicative of not only the water stress faced by the country but also the dependence on natural resource endowments embedded in the commodities exported and imported.

Globalisation of Water as a Resource, and the Misapplication of Trade Theories

The globalization of water through VWT is leading to a displacement of water use and a detachment between human populace and the water resources they rely on. Trade of crops and other goods existed in civilisations as old as the Roman Empire, and estimates indicate that the water costs of crop production were often externalized beyond regional boundaries (Dermody et al 2014). Trade has significantly magnified in the modern world, especially in the previous several decades. Through VWT, the dynamics of modern globalization have significantly increased the temporal and spatial dislocation of production and consumption.

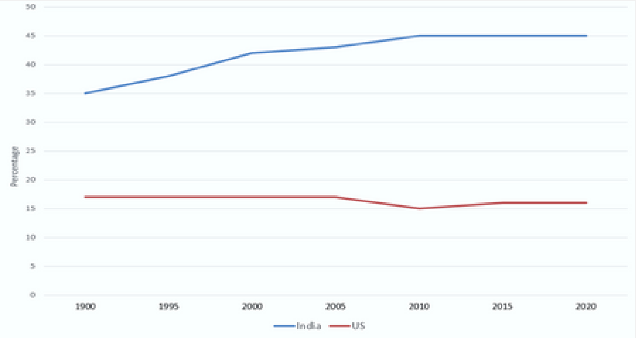
Modern trade theories and the political economy of international trade have intellectually justified such integration. The Heckscher Ohlin (HO) theorem posits that water-abundant countries may produce commodities that use more water and export the same to water-scarce countries. Thus, water-scarce countries can utilize their water resources for other productive activities (Shivaswamy et al, 2019). However, the point missed here is two-fold: 1) This pressurises countries to visualise water as a resource and extract water through whichever methods and locations possible. This may have adverse consequences for local ecological balance in various regions, which do not surface at the global level; 2) Water as a commodity cannot be priced in the market because of its nature of use and availability, and therefore while virtual water disparities may indicate scope of trade, its market value may depend on a lot of local ecological as well as socioeconomic needs (environmental balance, disease conditions etc.)

which remain hidden since water is traded as embedded in commodities.

Wichelns (2004) suggested that other factors such as production technology, domestic and international commodity prices, and trade barriers significantly affect VWT. Additionally, Ramirez-Vallejo and Rogers (2004) observed no association between water resource endowment and VWT.

The figure below gives a comparison between India's and the US's freshwater extraction as a per cent of total inland resources. The United States for the longest time has been a major net exporter of virtual water, while India has found its position fluctuating in recent years. While the US remains a key net exporter of virtual water in the world, what remains unseen is the level of water extraction relative to its water resources, which is significantly lower than India, whose developmental needs and natural resource dependency are much higher.

Figure2: Annual freshwater withdrawals, total (% of internal resources) - India, United States



Source: World Bank

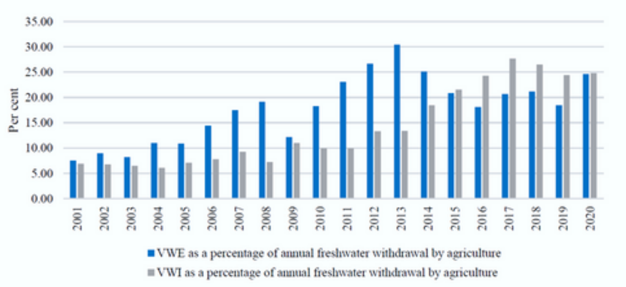
Trends emerging from Figure 1 and 2 indicate with clarity that water stress is on the rise in India. Even though since 2015, the volume of imported virtual water as a proportion of total freshwater consumption has increased (Kannan and Kumar, 2023) surpassing that of virtual water exports, the composition of this trade involves India importing a lot of processed food as noted above.

India has been importing virtual water from supposedly 'less–water-abundant' countries such as Ukraine, Benin, Tanzania, Mozambique, Côte d'Ivoire, and Ghana. Some countries from which India imports virtual water have much lower per capita levels of renewable internal freshwater resources than India (Kannan et al, 2023). Hence, uninformed trade practices can strain the natural resources of developing countries like India, in turn diverting the agricultural raw supplies away.

Exclusion of Certain Commodities from Analysis

The commodities that comprise the bulk of virtual water in international trade include enormous raw agricultural supplies (like rice, maize, and oilseeds) as well as processed foods which are also water-intensive in their manufacturing. Naturally, most studies have focused on the water embedded in the grain trade or largely food-based agricultural value chains. However, commodities like cotton which also embed water use are often excluded from analysis, thereby painting a hazy picture of the quantum of trade and its implications. For instance, a very compelling account of VWT in Indian agriculture is given by Kannan and Kumar (2023), where they discuss virtual water imports and exports as a percentage of total annual freshwater withdrawal by the agriculture sector.

Figure3: VW Import and export as a percentage of total annual freshwater withdrawal by the agricultural sector (%)



Source: Kannan and Kumar, 2023; WITS, UN

The above figure elucidates that considering agriculture as inclusive of crops other than grains gives a figure of virtual water exports (VWE) exceeding the imports (VWI) up until 2014, and falling short only by small margins until 2020, when the two nearly balanced out. Shivaswamy et al (2019) in their paper have outlined that factors like the foreign economy's GDP, population, the distance between trading partners and total arable have a significant bearing on trading decisions. Therefore, when the analysis extends beyond grains and then beyond agriculture, there could be a multitude of factors that determine how water-embedded goods flow across borders; as highlighted above, this may have little to do with corresponding water abundance/scarcity of trading partners.

Is there a bail-out?

The grandest challenge concerning water stress and the larger environmental crisis is the subjugation of the simplified economic justification that trade surplus implies celebratory trade practices. As discussed above, in the case of India particularly, the current trade surplus which has been observed only after a long-standing status of being a net importer of virtual/embedded water does not suggest that the trade patterns are efficient. It rather hides multiple facets of unsustainability, regional disparities in water use, local ecological harm, stressed freshwater use, and the absence of sound economic pricing which yields commensurate returns to trade. The challenges exist at various junctures of the very real and valid climate crisis as well as losses from trade. As long as these two concepts intersect and feed back into each other, as a developing country we must tweak our international trade practices and agreements in a way that suits sustainable developmental needs.

References

Allan, J. A. (1998). Virtual water: a strategic resource. Ground water, 36(4), 545-547.

Rosa, L., Chiarelli, D. D., Tu, C., Rulli, M. C., & D'Odorico, P. (2019). Global unsustainable virtual water flows in agricultural trade. Environmental Research Letters, 14(11), 114001.

Zimmer, D., & Renault, D. (2003, December). Virtual water in food production and global trade: review of methodological issues and preliminary results. In Virtual water trade: Proceedings of the International Expert Meeting on Virtual Water Trade. Value of Water Research Report Series (Vol. 12, No. 1, pp. 1-19).

Hoekstra, A. Y., & Hung, P. Q. (2005). Globalisation of water resources: international virtual water flows in relation to crop trade. Global environmental change, 15(1), 45-56.

Chapagain, A. K., & Hoekstra, A. Y. (2003). Virtual water flows between nations in relation to trade in livestock and livestock products (Vol. 13). Delft, The Netherlands: UNESCO-IHE.

Shivaswamy, G. P., Kallega, H. K., Anuja, A. R., & Singh, K. N. (2021). An assessment of India's virtual water trade in major food products.

Jha, P., & Yeros, P. (2019). Global agricultural value systems and the South: Some critical issues at the current juncture. Agrarian South: Journal of Political Economy, 8(1-2), 14-29.

Dong, H., Geng, Y., Fujita, T., Fujii, M., Hao, D., & Yu, X. (2014). Uncovering regional disparity of China's water footprint and inter-provincial virtual water flows. Science of the total environment, 500, 120-130.

Kumar, V., & Jain, S. K. (2011). Export and import of virtual water from different states of India through food grain trade. Hydrology Research, 42(2-3), 229-238.

Dermody, B. J., van Beek, R. P., Meeks, E., Klein Goldewijk, K., Scheidel, W., Van Der Velde, Y., Bierkens M. F., Wassen M. J., & Dekker, S. C. (2014). A virtual water network of the Roman world. Hydrology and Earth System Sciences, 18(12), 5025-5040.

Wichelns, D. (2004). The policy relevance of virtual water can be enhanced by considering comparative advantages. Agricultural Water Management, 66(1), 49-63.

Ramirez-Vallejo, J., & Rogers, P. (2004). Virtual water flows and trade liberalization. Water Science and Technology, 49(7), 25-32.

Kannan, E., & Kumar, A. (2023). Trends and determinants of India's virtual water trade in crop products. Intl Food Policy Res Inst.

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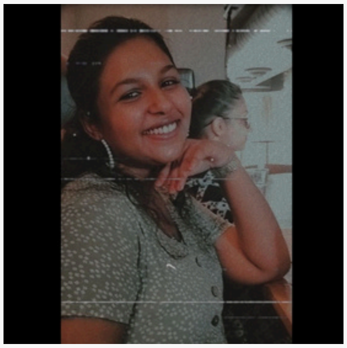

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