



artha

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OF THE ECONOMICS SOCIETY
SHRI RAM COLLEGE OF COMMERCE

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PRINCIPAL'S NOTE



PROF. SIMRIT KAUR

Economics is a ubiquitous field. Being a common thread that runs through and brings together a multitude of disciplines, changes in the economic landscape invariably have far-reaching repercussions for society as a whole. As the world continues to battle the coronavirus pandemic, a crisis that is unprecedented in scale and severity and often marked by rampant hysteria and misinformation, the importance of engaging in good economics, both by the public and the private sector cannot be emphasized enough. We, on our part, can continue to comply, remain analytical and take the necessary measures for a speedy eradication of the pandemic.

Shri Ram College of Commerce has established itself as a premier institution of commerce and economics and has consistently been ranked first in India. Its legacy of erudition draws the brightest minds of the country. Through a plethora of academic and extracurricular pursuits, the institution encourages students to stretch their boundaries, harness their inherent potential and emerge as future leaders of the country. The Economics Society, in line with our collective vision of becoming a 'College of Global Choice,' has consistently traversed outside the confines of the classroom by organising lectures by seminal scholars from the world over, widening student horizons through collaborations and paper writing competitions and stimulating knowledge dissemination. SRCC's Annual Economics Journal, Artha, epitomizes this spirit of research by bringing together students and experts alike and raising the bar for discourse on a wide variety of pertinent topics such as adopting a novel approach to global supply chains, analysing the impact of shifting to electrical vehicles, determining the cost of social exclusion and many more.

I congratulate the entire team of Artha for their seamless work in collating the journal and thank all the contributors for their submissions, which offer fresh takes and unique perspectives on vital issues. I wish all those involved success for this journal and their future endeavours. Lastly, as online learning becomes the new normal, we shall keep striving to make the shift inclusive for everyone and ensure that the college functions unfettered. I'd like to applaud all the students and teachers, who have shown great resilience and courage in these tormenting times and have not let any hindrance come in the way of their quest for knowledge. I also extend my heartfelt gratitude to all the frontline workers who are bravely and tirelessly helping us combat the pandemic.

FACULTY ADVISOR'S NOTE

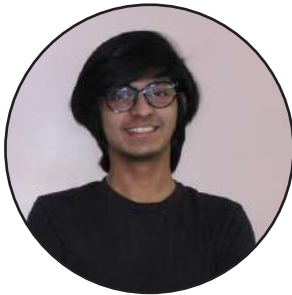


DR. AJC BOSE

The Economics Society has been a pioneer of meaningful and holistic discourse on themes of economics, policy, finance, business and much more. Built on the foundation of research and policy, the society has gone above and beyond the traditional realms of learning and imparts essential life skills via its multiple operations. From running a DataLab to collaborating with the smartest minds of the country, the society has transformed into an organisation that maintains the highest standards of professionalism and research rigour. Through a concerted effort, they have attained greater heights each passing year. The society's heterodox approach has been in the true spirit of a liberal arts education.

On behalf of the Economics Department of Shri Ram College of Commerce, I wholeheartedly commend the society for collating its annual publication, Artha which brings forth pressing issues and nuances of economics through a series of essays and interviews. The impetus to initiate discourse and offer multitude of perspectives on contemporary issues is deeply appreciable. I convey my best wishes to The Economics Society for Artha and their annual data project, Jankaari along with their digital publication, Ceteris Paribus.

EDITORS' NOTE



AARADHYA DAGA



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ANUDHII SUNDARAM

It has been more than a year since the world came under the grip of Covid-19, but people across the globe continue to languish in the pandemic-induced misery, agony and suffering. As economists and policy-makers strive to find pragmatic solutions to resuscitate economies and bolster healthcare systems, millions of people continue to struggle to meet their basic needs and necessities. However, in these bleak and harrowing times, the hope for a better tomorrow and a sense of compassion and brotherhood has brought people together and instilled in them the courage to fight for survival. It is in this spirit of hope, solidarity and fraternity, that we present Artha 2021.

Artha is an amalgamation of thoughts that manifests the evolving nature of economics and the human mind. In the course of this publication, you will find a wide variety of articles that shed light on the interconnectedness between economics and other disciplines. In a world where oppression of dissent and suppression of creativity is rampant, we believe that writing is a potent tool to educate, influence and inspire people. As mental well-being and social exclusion are pushed to the recesses of our mind, owing to the times, it becomes increasingly important to bring them to the fore. Through Artha, we hope to compel readers to think creatively, question fearlessly and explore boundlessly. Harnessing this indomitable spirit of inquisitiveness and the urge to contribute to the world in a meaningful way, Artha is an ardent expression, a reflection of humans' unquenchable thirst for knowledge, innovation, and progress and a sincere appeal for change.

With the threat of the virus lurking in every corner, Artha is a tribute to the stalwart might of the healthcare workers, migrants and people who've lost someone to Covid-19. The pandemic has brought our nation to its knees and although everyone has their own way of coping with it, we encourage you to seek little moments of comfort and respite in your daily life. There will be light at the end of the tunnel, and you will bask in its warmth; hope will reign supreme.



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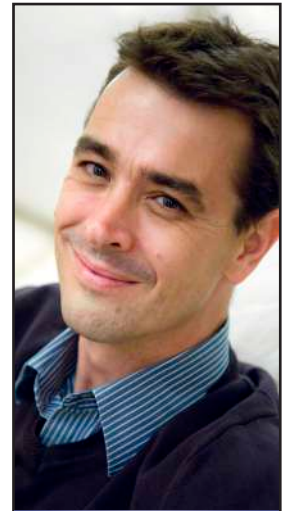
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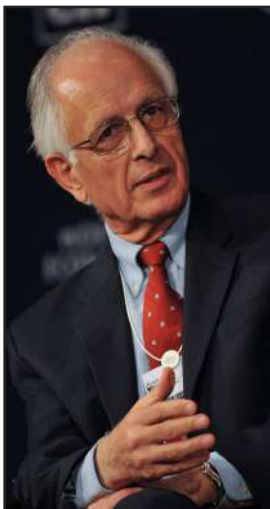
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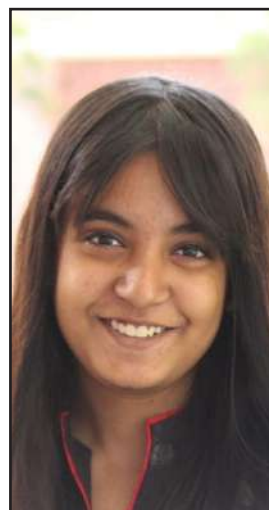
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INDIA UNBOUND



THE LABOUR LABYRINTH

BY RHEA BANERJEE AND SHREYA SINGH

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Migrant workers form an integral part of modern India's workforce. However, do they get the adequate social and legal protection from the government is a question worth pondering over.

The year 2020 has brought us a time unprecedented in the history of humankind. Amidst the COVID-19 pandemic, the deep and wide chasm between the haves and the have-nots, now so amplified, reveals how excruciatingly vulnerable some amongst us remain. One such class of people is the 'migrant workers' of the informal sector, fuelling the growth trajectory of this nation with their sweat and toil. The weeks in the immediate aftermath of the COVID-19-induced nationwide lockdown witnessed large numbers of migrant workers returning to their home states, in conditions highly susceptible to the spread of the virus. This not only makes us realise their destitution and plight but also evinces the sheer magnitude of dependence on the migrant workforce in the development process.

However, despite the fact that migrant workers have essayed an integral role in the country's economic ascent, images and videos documenting them languishing on the streets, hungry and worn and traversing hundreds of miles on foot to reach their homeland, is a testimony to the lamentable truth that the country's state policy-apparatus has solemnly failed them. This article underscores the challenges faced by migrant workers and also attempts to critique one of the major policy interventions planned for their protection - 'The Interstate Migrant Workmen Act, 1979' (referred in short as IMWA), which has now been amalgamated into the 'Occupational Safety, Health and Working Conditions Code, 2020'. The primary objective is to identify the lacunae that so far have precluded the seamless implementation of mechanisms that would

enable the migrant workers to lead a dignified existence in the labour force and provide policy suggestions to mend the same.

The Plight of Migrant Workers in India

According to the Census of 2011, 41 million workers in India migrate from rural to urban regions in search of employment. However, at the turn of this decade, the number remains exponentially amplified — estimates of the International Labour Organisation (ILO) suggest the existence of almost 450 million informal migrant workers in the country. Providing crucial industry to high-growth and labour-intensive sectors such as construction, manufacturing and urban services. This group of vulnerable daily-wage workers were in a parlous situation even before the pandemic struck. Mostly recruited through unfair and informal channels, underpaid and overworked, they are employed in environments, which hardly ever regard the standards of occupational safety and labour-dignity as mandated by the existing laws.¹ Data shows that these migrant workers largely belong to the socio-economically and educationally-backward communities, with Dalits and Adivasis making up to over 40 per cent of the migrant workforce.² Hailing largely from the backward states of the country, such as Bihar and Jharkhand, riddled with grave levels of poverty and inequality, it is their basic survival needs that draw them to the cities. However, the cities where they arrive with much hope, met out to them meagre pay, overtime and unreimbursed working hours and unsafe work conditions, which characterise their exploited labour. Leading a hand-to-mouth existence, it becomes extremely cumbersome for them

to sustain themselves and their families, without any constant source of income. Moreover, there also lingers the constant threat of being targeted by regional-chauvinist forces, masquerading to be *'the sons of the soil'*, determined to oust them from their jobs and evict them from their temporary dwellings. Amidst all these impediments, their continued struggle for survival speaks of their immense courage to stand for a dignified existence in an environment that treats them as nobodys.

As the COVID-19 containment measures were implemented, what came across as one of the most glaring failures of state policy was its complete marginalisation and ignorance of the millions of migrant workers, who had remained stuck in different states for employment purposes. As all economic activities came to an abrupt halt, the migrant populace was rendered jobless without any safety-net, whatsoever, to fall back upon. This led the ILO to report that the COVID-19 crisis would further entrap over 400 million migrant workers of the informal sector into the treacherous abyss of penury and destitution. Against this backdrop, this article strives to identify the possible causes behind such debilitating trends by re-examining the existing policies in place.

A Critical Analysis of the Interstate Migrant Workmen Act, 1979

Drawn up after repealing the Orissa Dadan Labour Act of 1975, the IMWA, which is now a part of the Occupational Safety Code, 2020, was enacted with the objective of preventing the exploitation of interstate migrant workers by contractors and to ensure fair and decent conditions of employment as required to uphold the dignity of the workers. The law mandates that all establishments hiring interstate migrants to be officially registered and contractors who recruit such workmen be formally licensed. It is also obligatory for the contractors to provide details of all migrant workmen to the relevant authorities. Furthermore, the Act provides for equal wages for migrant workmen, allowance for displacement, travel allowance and payment of wages during the period of journey. Besides, the contractors are also required to ensure a regular flow of payment, non-discrimination in employment, work conditions and treatment, provisioning of suitable accommodation, free medical facilities and protective clothing for the workmen. Essentially, the act was aimed at transitioning the large unorganised informal sector in the country to a more regularised one, wherein the rights of the migrant labourers are recognized and respected.³

Issues and challenges with the implementation of the IMWA, 1979:

The ceaseless dolour of the migrant populace makes it absolutely unambiguous that the implementation of the IMWA, albeit a well-meaning act, has remained riddled with significant loopholes. From a public-policy perspective, the efficacy of any labour law largely depends upon these three factors:

1. The inherent strength of provisions contained in the original act
2. Scope of organisations among the workers
3. Effectiveness of the enforcement machinery.

The act recognises an interstate migrant worker as *"any person who is recruited by or through a licensed contractor"*. This very definition, by virtue of its categorical mention of *"recruitment through a licensed contractor"*, makes the act intrinsically exclusionary in nature. In reality, most of the migrant workers are not routed through any licensed contractors, thereby depriving a large number from getting any benefit out of the Interstate Migrant Workmen (IMWA) Act, 1979.

Furthermore, the act is only applicable to establishments having five or more interstate migrant workers as employees, which again leads to the exclusion of a significant number of workers who work in small and unregistered establishments; thus also leaving a potential loophole that can result in a misrepresentation of facts concerning the documentation of the number of migrant workers in the country. Thus, migrants working in establishments with less than five migrant employees also cease to be 'migrants' legally, although they do deserve the pay and protection guaranteed to their counterparts under this act.

Thereafter, the act also requires establishments to undertake an onerous registration process alongside maintaining a record of all the migrant workers it employs and furnishing the government with that data. Since this is to be done without any adequate benefits in return for the establishments, the act further disincentivises compliance and makes it more expensive to employ migrant labourers. In India, many of these migrants— about 100 million in total, work seasonally and circulate between their rural homes and faraway cities for a particular part of the year. Their employment thus occurs on a contract basis, thereby leaving significant scope for firms to evade official registrations. In these regards, the act fails to ascertain the inherent strength of its provisions, which come with their own fair share of caveats.

When it comes to the extent of organisation among workers, the labourers suffer from a significant disadvantage because of the informality and the vast-expanse of the nature of their work.

With the suppression of labour codes in many states, in an attempt to bolster industrial growth after the pandemic, the strength of labour unions has further dwindled. Moreover, with re-migration to urban areas after the lockdown, labour supply has suddenly increased but demand remains less owing to a plummeting trend in consumption; further reducing the wage-bargaining power of migrant labourers.

Yet, the most significant aspect of any act is the efficacy of the enforcement machinery at work. In this aspect, it is evident that the Chief Labour Commissioners have failed at documenting the registration process and the executive machinery at large has succumbed to bribery and corruption. This is evident in the shoddy disbursement of jobs under the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA), which has experienced heightened pressures following the reverse-migration of labourers to rural areas. In fact, this framework is so deep-rooted that despite conferring the requisite rights to labours for their well-being through various other acts such as the Minimum Wages Act, Employment Insurance Act, Contract Workers Act amongst many others, migrant labourers yet bear the brunt of fleecing, manipulation and exploitation at the hands of the contractors. Furthermore, since the migrant workers per se do not comprise a significant vote-bank for the politicians, their grievances often get ignored from political agendas as well. In a nutshell, owing to a myriad of factors starting from the inherent lacunae within the act to bureaucratic dishonesty, red-tapism and political sluggishness, the act has largely remained ineffective in addressing the issues it was meant to deal with.

Recent Developments and Policy-Recommendations

Following the latest legislation, the 2020 Occupational Safety Code subsumes the erstwhile IMWA of 1979. The code defines an interstate migrant worker as - *“Workers who have migrated from one state or another on their will and have obtained employment, earning at most Rs.18000 per-month”*.

The code has dropped earlier provisions of temporary accommodation of workers near the construction sites and provided for a lump-sum amount to be paid by the employer to cover the costs of travelling to and from the native place. Another mettle of the act is that it provides for a portable ration scheme that allows the workers to choose which state they want to receive their PDS ration provisions in and it also provides for a toll-free helpline number meant specifically for migrant workers.⁴

These new labour codes have significant provisions which are remarkably reformatory particularly for the interstate migrant workers. However, it still applies to establishments with ten or more migrant workers employed. Thus, a host of several other reforms must also be ushered in to amend the exigencies the new labour laws will be unable to address. A substantial progress in securing the rights of migrant workers is seen in Kerala’s Migrant Workers Welfare Scheme (2010), which provides for accident/medical-care for up to Rs. 25,000; Rs. 1 lakh to the family in case of death; children’s education allowance and termination benefits of Rs. 25,000 after five years of work. When a worker dies, the welfare fund also provides for the embalming of the body and air transportation. This act is worth emulating all across the country.⁵ Furthermore, migrant laborers must be provided with direct benefit transfers

and food handouts, irrespective of their domicile state. Women in the informal-sector often get ignored from the welfare schemes available to their formal sector counterparts. Hence, it is essential that the government takes the initiative to provide maternity and childcare benefits (through cash and kind transfers) to the female migrant labourers, irrespective of the region/state they work/reside in. In this regard, it is important to identify areas dense in migrant and informal worker populace and ensure the creation of anganwadis, mobile schools and healthcare centres in those localities, which can be easily accessed by such workers.⁶ The government must endeavour to create a significantly large database of all migrant workers which shall help in evidence based policy making in future. It is thus important to incentivise establishments employing migrant workers to comply with the registration norms. Providing tax benefits or other advantages to firms honestly adhering to the process of registering migrant workers and with the implementation of the wage and safety laws meant for the welfare of informal workmen may serve to boost compliance. Migrant workers themselves must be allowed to register their employment at the relevant governmental agencies for receiving the benefits that they are entitled to and lodging complaints against their employers, if any. Their grievances must be dealt with by means of a specialised agency adopting a fast-track response system.

As much as securing migrant workers’ rights is crucial for their welfare, so is enhancing the quality of job opportunities available in rural areas through increased public expenditures on rural works and involving public-private partnership models in the same. Increasing the budgetary allowance for schemes like MGNREGA, utilising DBT channels for the payment of wages and bolstering the Micro, Small and Medium Enterprises (MSMEs) and Self Help Groups (SHGs) in these regions by means of financial inclusion, providing easy credit access and lesser paperwork/bureaucratic requirements may help in creating newer employment opportunities in rural areas and prevent the need for rural inhabitants to migrate to urban regions for employment purposes. Furthermore, it is important to invest in skill training through state policy intervention in order to better equip the migrant workers to the rapid automation of several industries and shield them from the structural unemployment emerging thereof.

Alongside the aforementioned measures, the government must augment and accelerate the process of creating a nodal agency specialised in dealing with migrant affairs. This agency must particularly aim at redressing the issues faced by migrant workers and synchronise activities of various ministries and public/private establishments in order to identify potential areas where migrant workers could be employed and supplement the workers with information about the same, besides also ensuring the proper implementation of the schemes meant for migrant workers’ welfare.

Availability of a cheap and largely informal labour force that toils to build the infrastructure that powers the

Indian economy is what has been driving the Indian economy since independence. For years, they have given India everything they could — working for minimum wages in appalling conditions keeping costs low to make domestic industries competitive and investment-friendly for generations. They provide cheap and flexible services to the rich and affluent in cities for the upkeep of their lifestyle, in return of only a paltry sum that does not even satiate their daily needs. These discrepancies, and an utter disregard for physical labour, is what perpetuates the rising inequality in this country.

In the absence of a migrant labour force, the Indian economy would come to a standstill. Ergo, it is time that the migrant workers be treated with the respect and dignity they deserve and laws passed for their welfare be implemented in letter and spirit. History stands testimony to the fact that migration will continue as long as there is hope, aspiration and an alternative livelihood option better than that available at home. The task now is to build back and this is only possible when built with a human-centred empathetic approach at its core.

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INDO-US PARTNERSHIP – REVAMPING SHALE PROSPECTS

BY MANISH VAID

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India's heavy dependence on crude oil imports requires urgent curbing due its skyrocketing prices as well as other geopolitical reasons. One path to tackle this urgency would be to adopt unconventional energy sources such shale gas. Read on to understand the role the United States of America (US) plays in such a scenario and the various challenges it presents.

The Prologue

India, at present, is confronted with dual headwinds due to rising crude oil prices coupled with escalated tensions¹ with Saudi Arabia and alarmingly rising cases of coronavirus.² Recently, despite Organization of the Petroleum Exporting Countries' (OPEC) decision³ to increase oil production by over 2 million barrels a day between May and July, which could offer some respite to sky-rocketing prices of petrol and diesel in India, New Delhi has decided to reduce oil imports from Saudi Arabia⁴ by 36 per cent. But actions like these can at best maneuver omnipresent geopolitical tensions inherent in crude oil trade only in a limited way.

Given India's heavy dependency on imported crude oil, it is high time to curb its oil imports the hard way, if at all the government wants to look at the target of bringing down oil imports seriously. In March 2015, PM Modi had set a target⁵ of curbing crude oil import dependence from 77 per cent in 2013-14 to 67 per cent by 2022. Instead, oil imports have seen a rising trend and were around 86 per cent as of March 2021.⁶ Besides, India has set a target to increase its share of natural gas in its energy basket from 6 per cent to 15 per cent by 2030 under its gas-based economic vision, however, this vision is heavily tilted towards cheap but rising liquefied natural gas (LNG) imports, which stood around 55 per cent of India's total gas consumption by the end of March 2021.⁷

Therefore, there is an urgent need to change this status quo, as India cannot afford to rely heavily on LNG imports indefinitely. It must step on gas through a renewed push

towards unconventional gas resources such as shale, coal bed methane (CBM), and gas hydrates, while also including hydrogen, later into the scope of its gas-based vision. This necessitates, inter alia, furthering its efforts towards augmenting domestic production of natural gas, including unconventional sources, which projects to outnumber India's conventional counterpart.

Shale gas is the natural gas that is trapped within shale formations, which are fine-grained sedimentary rocks that can be rich resources of petroleum and natural gas. Shale gas is produced through a process called 'Fracking'⁸, wherein a huge quantity of freshwater, along with proppants, is injected at high pressure into the reservoirs to break the rocks through horizontal drilling.

Partnering with the US

India's shale push was not just triggered by the shale boom of the US, but also with an understanding that shale gas would add yet another avenue⁹ of India-US energy partnership, which was formalised during the launch of bilateral energy dialogue in May 2005.

This dialogue was later strengthened further when India and the US agreed to enter a Green Partnership¹⁰, which includes cooperation in unconventional gas in 2009. On December 6, 2010, Memorandum of Undertaking was

Gas (MoPNG) and the US Department of State for cooperation, in shale gas resource assessment, technical studies, regulatory framework consultations, training, and investment promotion through the exchange of experiences and best practices and study tours. Later in 2017, given India's vision towards a gas-based economy, bills¹¹ were also introduced to enhance energy cooperation between India and the US, wherein issues regarding prospects of US energy companies investing in India and the role of India to reduce greenhouse gas emissions to combat climate change were also discussed.

Later, India stepped on the gas through forming a strategic energy partnership with the US, intending to gain an access to technical know-how¹², framing of its shale gas policy, and through increased LNG imports, coupled with technological advancement happening in LNG shipping. For sustainable SEP, both the countries later formed the US-India Gas Task Force¹³, to find new ways to tap India's unconventional gas resources.

Above-The-Ground Factors Still Dominant

While India initiated its gas hydrates program¹⁴ and came up with its CBM Policy¹⁵ in the same year in 1997, its shale gas policy¹⁶ was introduced in October 2013, after series of varying gas-in-place estimates made by agencies like Energy Information Administration¹⁷ (584 TCF¹⁸), Schlumberger¹⁹ (300-2,100 TCF), Oil and Natural Gas Corporation²⁰ (ONGC) (187.5 TCF) and Central Mine Planning and Design Institute (187.5 TCF). Earlier on January 25, 2011, India became the first country²¹ in Asia where shale gas was discovered outside the US and Canada in ONGC's first research & Development well RNSG-1 near Durgapur at Ichhapur, West Bengal.

Since then, India is grappling with the slow pace in its shale gas endeavors primarily due to above-the-ground factors, such as the availability of fresh water and land, which are scarce. These issues are highlighted well in one of the research studies conducted by The Energy and Resource Institute²² (TERI), which pointed out that by 2030, shale bearing areas such as Cambay, Gondwana, Krishna-Godavari, and the Indo-Gangetic plains would experience severe water stress. Notably, sourcing water for multi-stage fracking of a single horizontal gas well, which could consume several million gallons of water, would be a daunting task in these areas.

Besides, treating the wastewater generated out of shale business would be yet another difficult task for India due to its limited capacity of treating only around 37 per cent of its wastewater or 22,963 million liters per day (MLD), against a daily sewage generation of approximately 61,754 MLD, as per the 2015 report of Central Pollution Control Board.²³ Embracing shale business would require a complete overhauling of a wastewater treatment system.

Similarly, land acquisition in India would continue to remain one of the biggest challenges to shale gas exploration due to factors such as displacement of

people, groundwater contamination, methane leakage, etc.

Also, since the number of wells drilled in shale extraction far exceeds that of conventional gas wells, it would be difficult for exploration companies to acquire land without public hearing and consent. Because, unlike in the US, landowners in India do not have subsurface mineral rights, which disqualifies them to receive any lease bonuses and production royalties.

Interestingly, to extract the maximum benefits from its shale gas resources, the US, through its Energy Policy Act of 2005, exempted hydraulic fracturing fluid from being regulated by the Environment Protection Agency, by amending the 'Safe Water Drinking Act', commonly known as 'Halliburton Loophole'. India cannot afford to introduce similar such policy tools, as this would lead to strong protests, delays, or even cancellation of shale projects in the region.

Thus, it was due to reasons mentioned above and factors like technological breakthrough, (which significantly reduced the breakeven cost of shale production), favourable stable fiscal regime, developed gas pipeline network, and gas market that has helped the US to turn a gas importer to a gas exporter, with its shale gas reserves estimates increasing from 30 to 100 years. Therefore, replicating the success of the US remains a daunting task primarily due to the above-ground factors as aforementioned, as well as the changing dynamics on shale prospects in the US itself under the Biden Administration as mentioned in the following section.

Emerging Challenge

1. More clarity needed in US-India Task Force: While it became clear from elections campaigns of President Joe Biden²⁴ and Vice President Kamala Harris that in their push for aggressive reduction of methane emissions, they would ban new oil and gas leasing on public lands and waters to achieve economy-wide net-zero emissions by 2050, Biden Administration's Executive Order²⁵ (E.O.) 14008, Tackling the Climate Crisis at Home and Abroad, surely was one of the first moves towards a transition away from the oil and gas industry. This would mean that majority of US gas production would remain untouched, which could result in rising in the production cost of shale gas, the impact of which could be on costlier LNG exports to countries like India in the future, which so far has been able to diversify its both oil and gas imports through the US.

Further, while both the countries have already agreed to revamp²⁶ their SEP with the focus on low-carbon pathways and green energy cooperation, particularly on biofuels, hydrogen production, and carbon sequestration, through technology transfer, a new US-India Climate and Clean Partnership²⁷ announces the greater role of the greening of electricity and push for electric vehicles, while raising the cost of production of each barrel. Therefore, it remains to be seen as to how they would restructure their cooperation in the gas

sector under the US-India Gas Task Force if at all they revise the SEP.

2. Regulatory ambiguity: In 2018, the MoPNG amended the 'Petroleum and Natural Gas Rules' (1959) to include shale in the definition of 'petroleum' and placed both conventional and fracking under a common regulatory regime under 'Hydrocarbon Exploration Licensing Policy. Further, it approved the policy to permit exploration and exploitation of unconventional hydrocarbons under the existing production sharing contracts, CBM contracts, and Nomination fields. However, it also allowed such activities without conducting environmental impact assessment²⁸ studies or public consultations, which re-instigated tension in the Cauvery delta, after similar

protests during Great Eastern Energy Corporation Limited (GEECL) and ONGC's CBM ventures in the past. Interestingly, investments of over \$2 billion by GEECL in the Raniganj (South) block were rejected²⁹ by MoPNG on July 2, 2020, citing CBM and shale gas drilling, technologically two different activities, contrary to the HELP, creating regulatory ambiguity.

To conclude, while India's gas-based economy vision was triggered by the shale gas boom of the US, both the countries would do well to keep this vision alive with extended support through revamping of US-India Gas Task Force, the first such task force set up under India-US strategic partnership.

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INDIA – A PROMISE OF UPGRADE

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Over the past few years, India has been on the path to be a global superpower. Our performance even in the year of this pandemic gives both hope and worries. What are the factors that, nevertheless, obstruct the country's growth and prosperity?

"Never lose your capacity to love, even as life gives you its joys and sorrows. Never become jaded and cynical. If you find yourself becoming cynical, change something, don't give in to that corrosive feeling!"

These lines were recently tweeted¹ by Sridhar Vembu, the 54-year old founder of Zoho. A native of Tenkasi, a small village in Tamil Nadu, his company Zoho has completed 25 years of its operations as a global technology provider. Vembu's tweet essentially represents all that India promises today - the ability of *Bharat* to make a difference to India and its standing in the world.

India is at a juncture in the global stage that one can either marvel over how more than a billion people have managed to grow despite the country's inherent challenges or mock at how India's age-old challenges still continue to mar its growth.

At \$2.7 trillion, India is pegged as the world's sixth-largest economy² and the only lower-middle-income country in the top ten global economies. With mature and developed economies as its peers, India, among the youngest nations demographically, is under pressure to act and look like them. The pandemic has been a gruesome reminder of the quantum of work cut out for the country.

And the country seems to be in a catch-up mode at least in some areas. Despite the pandemic, the country built

a record 37 kilometers of highway per day for FY20-21.³ At \$580.3 billion (in early March of 2021), India holds the world's fourth-largest forex reserves - enough to cover around 18 months of imports.⁴ At \$72.12 billion its foreign direct investment (FDI) inflow is the highest ever for the first ten months of the year.⁵ GST collections crossed the record level of Rs 1.41 lakh crore in the month of April this year.⁶ Even the tractor sales in the country have hit a record for the year 2020.⁷ India now has a new education policy, new labour codes, digital toll collection and new metro rails being built in several Indian cities. At 18 million people, India has the world's largest diaspora population⁸ - supplying talent to the world and earning remittances for the country. The stock markets are ruling at near record-high levels. Foreign institutional investors (FIIs) have been pumping money into the Indian markets⁹ and fundraising through the Initial Public Offering (IPO) route is at a 13-year high level.¹⁰

It is little wonder then, that the promise of India's growth story is inherently the 'promise of upgrade' - as houses get electrified or get piped water, as slum dwellers upgrade to low-cost housing or as public schools and hospitals become better-equipped - economic and social value will be unlocked by the new consumption demand.

However, the factors that led India to become a \$2.7 trillion economy shall not be the same that will enable it to grow into a \$5 trillion one. For a large and imperfect democracy like India, slow progress can possibly be justifiable but not one that is slow as well as structurally flawed. Despite the progress on scale and speed, there

Reforms are the need of the hour in most spheres of public administration.

Closing the gender gap tops the list. The World Economic Forum's *Global Gender Gap Report 2021* ranks India 140th among 156 nations.¹¹ India slipped 28 places this year and emerged as the third-worst performer among the South Asian countries. Efforts towards boosting women's representation and welfare have been inadequate. A major area of growth that India promises is slated to come through the growth of half its population as it empowers itself.

Narrowing the widening gap between the 'haves' and 'have nots' is yet another challenge. Development and progress across India's length and breadth is unfortunately skewed. On the one hand, the country is home to the world's third-largest number of billionaires¹²; on the other hand, the country's per capita income is barely a lakh rupees.¹³ There is an inequity existing between India and *Bharat*, the educated versus the uneducated, the legally protected versus the legally neglected, the provided-for versus the deprived and the rich versus the middle class versus the poor. The genesis lies in overcoming the basic challenges of providing *roti, kapda* and *makaan* for all, offering adequate healthcare services, providing a social security net and a minimum standard of living to all. Incidentally, India does not have the means to fully do so without increasing its debt or widening its fiscal deficit. The pandemic has further laid bare the deficiencies of the Indian healthcare sector, social infrastructure and policy planning.

One of the discerning aspects of a strong economy is the way it values the lives of its people and redresses their grievances. India, for one, has fared poorly in this respect. A major challenge for India to overcome is the creation of a robust redressal system for its citizens and businesses. An effective grievance redressal system can lessen the burden on the judiciary and provide prompt services to the citizens in a democracy. For this, judicial and police reforms are needed. The various levels of government have to be transparent in their dealings, open to scrutiny and criticism and uphold the rule of law. People will have to be conscious of their duties as much as their rights, embrace change and innovation.

Technology has proved to be a solution for combating corruption, bringing in accountability and facilitating the

ease of business. In its 70+ years of independence, it is only in the last two decades that the country has been able to effectively leverage technology to achieve growth and scale.

For India, it is not a choice of speed versus accuracy – it is the tough task of achieving speed with accuracy as the country scampers ahead to assert its place in the global order. Half of India's population was born after 1991 - the year of the country's economic liberalisation. While the young minds are oriented to grow, the people who plan their future are in most cases much older and need to be oriented towards the growth of the young, aspirational India. More young, women leaders are needed to change things for the better.

India, as the world's largest democracy, holds a lot of promise as it progresses. A strong India can be a force to reckon with in Asia and manage to upgrade a seventh of humanity.

India's growth story lies somewhere in between the two assumptions of 'the future is inevitably ours' and 'the country is doomed for disaster'.

To a pessimist, India's progress is strewn with obstacles and to an optimist, these obstacles offer opportunities to grow.

Quite likely, India as a whole may uplift faster than India as some of its parts. Alyssa Ayres in her book *Our time has come* has quoted Raja Mohan saying, "we are going to be powerful in an aggregate sense before we are individually rich. India will be a major power long before fully overcoming many of its domestic challenges."

In stock market parlance, if India were a stock in the global market, it is quite likely to be that of a public sector undertaking (PSU) stock. Huge potential, sitting on good assets to monetise, expertise of doing business but shackled with bureaucratic baggage and years of neglect. Fast-track reforms on the ground can make it a multibagger. The FIIs are making a beeline to buy this stock. Would you want to invest in it?

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A BATTLEGROUND FOR INDIAN AGRICULTURE

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Migrant workers form an integral part of modern India's workforce. However, do they get the adequate social and legal protection from the government is a question worth pondering over.

It is almost a year now since the eruption of protests in Punjab after the current Central Government pushed the three farm laws, as ordinances on 5 June 2020. Soon after the approval of these laws by the Indian parliament, in a highly questionable manner in September 2020, movements spread to several other states and the mobilisation and resistance of the peasantry has acquired almost a pan-Indian character. For more than six months, three entry points to Delhi, namely Singhu, Tikri and Gazipur, have been continuous sites of protests.

The three laws, which triggered the protests are: The Farmers' Produce Trade and Commerce (Promotion and Facilitation) Bill, 2020; The Farmers' (Empowerment and Protection) Agreement of Price Assurance and Farm Services Bill, 2020; and The Essential Commodities (Amendment) Bill, 2020. For sake of convenience, let me call these three laws, in the order mentioned above, as Law I, II and III respectively and pin-point core objectives of each one of these. Law I removes restrictions on processes, agents and physical procurement for trade in farmers' produce, as mandated by Agricultural Produce Marketing Committee Acts (APMC Acts) across a large number states (provinces) in the country, allowing farmers and buyers to trade freely, without any requirement of licenses, commission fees, stock limits etc., and it also permits transactions through virtual platforms. Further, it is extremely important to note that since, mid-1960s the country has had a 'Minimum Support Price (MSP)' regime and procurement through APMCs are required to be at the announced prices. As

it happens, Law I remains silent on this, creating huge apprehensions amongst the farmers that proposed legislation may well be the end of the MSP regime sooner or later. Law II seeks to create an architecture and legal framework for 'contract farming' through prior stipulated terms and conditions (including a predetermined price) between a farmer and a buyer, outside the purview of the existing APMC Acts. Law III reconstitutes the list of the 'Essential Commodities' by removing several important produces such as cereals, pulses, edible oils, oilseeds, potato and onion, amongst others, most of these being central to food baskets across the country, and removing restrictions on their stocking and trade (including on exports). Of course I am abstracting here from several important details pertaining to the operational frameworks of the proposed laws, but the basic thrust of the intended changes in the forthcoming legal regime should be evident from these brief remarks.

At the most basic level, as hinted above, here is a contestation between two dramatically different perspectives: Laissez Faire versus Regulated Capitalism, specifically with respect to agriculture. However, as we venture further beyond this basic recognition into the complexities of the conceptual and empirical terrain, we necessarily need to wade into a large canvas consisting of several pertinent issues, which is not feasible in this brief note. However, it is quite clear that the government, and all its supporters (including a few 'well known economists and so-called agricultural experts') on the above noted legislative changes have nothing to offer to the discourse beyond crude market fundamentalism; on the other hand, the critics have

engaged with considerable seriousness and nuance, exposing the official claims and their vacuity, which have simply been stonewalled by the establishment. There is already a large literature, both academic and journalistic, on these issues; interested readers may look at a recent issue of *Frontline* and select contributions in the digital journal *The India Forum*.^{1,2}

Thus, there is an ongoing stalemate between the government and the farmers' movement: key demands of the movements is that the three 'black laws' must be repealed and the legal guarantee of the MSP, along the lines proposed by the National Commission on Farmers, headed by the well-known agricultural scientist, Dr M.S. Swaminathan, almost a decade and a half ago; the government has, in spite of twelve rounds of 'talks' with the delegations representing the movement, the last of which was held on 22 January 2021, has refused the possibility of scrapping the contentious laws, or to enact entitlement for the MSP (although promising to protect it 'in writing'). Effectively, there is no serious intent by the government to engage with the concerns that the movement has brought to the fore; on the contrary, throughout this period it has displayed an infinite appetite to discredit the on-going movement by using false narratives, misinformation and often being downright abusive.

There is little doubt that since independence from British colonialism almost seventy-five years ago, the country has not witnessed mobilisation of the peasantry on such a scale, and it is indeed ironic that the unprecedented protests by the farmers in Independent India has been met by unprecedented intransigence of the government.

Of course, it is difficult to foresee how the situation would pan out in the coming months but the protesting peasantry appears to be determined and resolute in its opposition to what it perceives as facilitating a near-total stranglehold of big business on Indian agriculture. There is no doubt whatsoever that large capital, both international and domestic, has been eyeing every aspect of Indian agriculture from 'farm to plate' and has been already pushing in the direction of industrial agriculture and supermarket chains as the dominant model of production to distribution. Sure enough, the larger context and the root causes of the current widespread restiveness go well beyond just the three laws, and I briefly discuss this issue later, but let me first flag immediate apprehensions and concerns of the agitating farmers.

Law I, as noted earlier, promises an easily accessible and barrier-free market for all farmers, which would ensure best possible outcomes for all. Farmers, while endorsing the importance of 'well-functioning markets', insist that a 'fair and free market' must not be held hostage by a clutch of trade cartels and agribusiness corporations, which is

what they pin-point as their key apprehension vis-à-vis this law. Central concern articulated by the movement vis-à-vis the Law II, which is often referred to in popular parlance the 'contract farming law', is along similar lines; it is feared that this Act will limit and constrain the operation of existing APMC Acts to the physical boundaries of the existing mandis (market yards), and it will facilitate a free play for corporate agri-businesses elsewhere. Further, there is a strong apprehension that given the huge imbalances in economic power between the corporations and overwhelming majority of farmers, presumed freedom of choice to get into contracts and trade in their produce, for any significant betterment in their lot, would be illusory for the bulk of the peasantry. Contrary to the official claims, it is felt that the degree of freedom would get curtailed, resulting in worsening of economic prospects for farmers, such as lower incomes, loss of assets etc., and even leading to new forms of bondages. With respect to the Law III, major apprehension of the movement is that it would result in dramatic strengthening of speculative forces in critical agricultural commodities, which are likely to depress farmers' income, while hurting large segments of consumers through higher prices, and thus result in worsening of food security. *What I have highlighted in the foregoing can be summed up as the most critical apprehensions in an overarching sense: huge asymmetry in economic power between agribusiness corporates and peasantry at large, in a context of pushing Indian agriculture further to a regime of unbridled market forces, nationally and globally.*

As mentioned right at the outset, although the Modi government's farm laws have been the immediate trigger for the current agitation by the farmers, the root causes for it have a longer history in the larger structural and policy context over the years. These indeed also have a lot to do with a range of issues intrinsic to the Green Revolution (GR) strategy itself, such as increased chemicalisation, choice of cropping patterns, depletion of water resources and other ecological challenges, which have contributed to falling productivity and incomes from cultivation over time, and raised serious question marks on the sustainability of various aspects pertaining to the GR. In this brief note, obviously it is not possible to engage with this subject any further. However, it needs to be stressed here that the overall macro-policy regime since the early 1990s that ushered in a neoliberal regime, has contributed to further worsening and aggravated already serious threats confronting Indian agriculture. Relevant issues have been analysed in great detail by several scholars working on this subject and there is a near consensus that transition to a neoliberal regime in India since the 1990s unleashed several forces leading to growing distress in the countryside.^{3,4}

As often noted, the most tragic manifestation of adversities confronting Indian agriculture has been mounting suicides by farmers, official count of which during the last twenty-five years is close to four hundred thousand (and this number is likely to be an underestimate). While it is not possible to even flag all

domestic and international, and thus to higher volatility in vector of prices. The net result has been that of sustained tendencies, during much of the neoliberal era, of mounting costs, falling farm-gate prices, downward pressure on income from cultivation, growing indebtedness etc.; in short, almost a three-decade long period of distress which has seriously threatened the very survival of overwhelming majority of the Indian peasantry. As noted above, such a conclusion is very strongly validated by the relevant scholarly literature, including the official reports in public domain, and we need not dwell on it any further here.^{5,6}

Before I conclude this piece, let me flag two critical issues very briefly, that are absolutely foundational to appreciate the deeper concerns, shared implicitly or explicitly by the ongoing movement, pertaining to agriculture being exposed to unbridled operations of the so-called free market. History of capitalism from across the world teaches us several important lessons in this respect; one of the most powerful lessons is that it leads to a gobbling of the small by the big, and inexorable march towards destitution and pauperisation of the peasantry at large, and finally to increased control of this sector by the corporate power. Of course, there are huge differences in actual trajectories of transition between countries of global North and South, and within each of these blocs, due to several key factors, including colonialism and imperialism, respective roles of the nation-states, class dynamics etc. Nonetheless, abstracting from all the important differences, the above noted tendency is a *universal* feature in a context of spontaneous capitalism, i.e. leaving the economy to the mercy of untrammelled logic of the market. In other words, farmers across classes, everywhere, are increasingly exposed to machinations and impunity of agribusinesses and corporate power. However, contemporary neoliberalism and concomitant forces of imperialism have facilitated international capital, mostly headquartered in the global North, to have a field day in the South through every possible channel, including aggravated predatory means to capture land and natural resources. In short, full blast of neoliberalism, manifested in 'accumulation through encroachment' (to use Prabhat Patnaik's phrase) is hurting agriculture and farmers in the South much more dramatically than in the North, and there is huge evidence to corroborate these outcomes for almost half a century.

The second issue that needs to be flagged here pertains to a massive myth regarding trajectories of feasible and desirable economic/occupational transformations. There are frequent theological sermons from prominent neoliberal policy establishments, that optimal strategy of development for any country is one which ensures exit for most farmers/workers from agriculture and the countryside, to get absorbed in a whole range

of industrial and other occupations in urban areas; 'successful transition' in global North is typically held as a template for the South. As it happens, not only neoliberal voices, but also many others tend to get starry-eyed about the prospects and possibilities of the trajectories that materialised in the North. There is indeed a large critical literature exposing the vacuity, and in fact undesirability for various reasons, of such prescriptions.^{7,8} Simple point is: such claims are seriously innocent of relevant knowledge of history, and deeply flawed in their analysis of trajectories of occupational/economic transformations for the South, in the present and for future.

Contrary to much of the received wisdom, it seems much more of a robust view, as many progressive scholars have repeatedly emphasised, that agriculture and farmers must not be exposed to the full blast of spontaneous capitalism. There is overwhelming evidence that the ascendancy of neoliberalism, everywhere in the world, has increased the stress of the farmers. In India, for instance, it is quite clear from the official sources that real income and consumption across all classes in rural India have tended to come down in recent years.⁵ Further, several studies have shown that farm-gate prices, globally, have been under tremendous pressure, in real terms, from the mid-1980s onward.⁹ Countries in the global North pump in billions of dollars as direct income support for their farmers, and through multiple subsidies to their agriculture. Recent estimates suggest that, on an average, the subsidy support per farmer in the US is over \$60,000 each year. European Union dishes out close to \$100 billion to its agriculture, and approximately half of it as direct income support to farmers. China today, where a substantial segment of the population is dependent on agriculture, has become, in absolute terms, the biggest subsidy provider to its agriculture, and the relevant figure was \$212 billion in 2016.⁹

In short, farmers have now been abandoned to the unbridled market fundamentalism in countries that are supposed to be at the top of the ladder, economically speaking, even if agriculture in many of these countries has progressively been pushed to the logic of the market and stranglehold of agribusiness corporations. But even if farmers get a degree of protection in these countries, capture of agriculture by corporate power has several profound costs which include massive damage to the environment, or more generally, planet Earth, and hence everything connected to Right to Life, dignified livelihoods etc. Farmers' protest in India is thus not only against the laws that hurt the hands feeding the country, or simply about survival of the peasantry, but much more. It's a profound battleground organically connected with multiple and vital correlates of our well-being.

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HECKSCHER OHLIN MODEL: A CASE IN INDIA

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The Heckcher Ohlin model analyses international trade on the basis of factors that a country is abundantly endowed with. The case of foodgrain exports in India doesn't seem to align with this model. Read on to understand this deviation.

Introduction

The Heckscher Ohlin model is an International Trade model developed by Eli Heckscher and Bertil Ohlin which goes ahead of the Ricardian model of comparative advantage and analyses international trade patterns on the basis of endowments of the trading countries.

The original 2x2x2 model assumes -

- Identical production technologies in both countries
- Constant Returns To Scale
- Different technology is required to produce different commodities
- Factors of production are perfectly mobile across the sectors

A number of conclusions have been drawn from the model in the form of theorems, but the main result of the model (known as the Heckscher Ohlin Theorem) is that *countries tend to export goods whose production is intensive in factors with which the countries are abundantly endowed.*

The factor with a large supply is called the *abundant factor* and the factor with a relatively smaller supply is called the *scarce factor*. One more conclusion that can be made from the model, and which will serve as the main theme of this paper, is about the long-run effects of international trade on income distribution: *owners of a country's abundant factors gain from trade, but owners of a country's scarce factors lose.*¹

Since the 1930s, many economists such as Paul Samuelson, Ronald Jones and Jaroslav Vanek have

made notable contributions to this model in the form of extensions. While the role of differences in capital to labour ratio among nations guiding international trade remains unchanged throughout these extensions, considerations like tariffs, as present in the real world scenario, were included with the aim to increase the predictive power of the model.

The model has been applied to real world scenarios. Though there have been exceptions in the past, they have been addressed by a number of economists. This paper analyses the applicability of the model in the case of India's agriculture output market (food grains, in particular) due to the important nature of the commodity. Food is an essential commodity for sustenance and its consumption is seen as an important measure of poverty. Thus, we shall be focusing our efforts on this commodity.

India's Case

In most developing countries of the world, agriculture accounts for a large portion of the production. However, a substantial amount of the agricultural output is used up in self-consumption by the producers for which there is no accounting. This leads us to believe that the actual output is even higher than what the records state. On average, 30 per cent of the total output in *low-income* countries like India with large populations, is agricultural produce as per the World Bank. This proportion falls to 20 per cent as we move to *middle-income* countries and further drops to a range of one per cent to seven per cent for developed countries.²

It would make sense for low-income countries to be capable of exporting their agricultural output to developed countries by virtue of the fact that a higher proportion of their total output is agricultural produce, as compared to developed countries. Further, the high population in these low-income countries would suggest that labour (or more aptly “agricultural labour”, as we shall see through data shortly) is an *abundant factor* in these countries as compared to developed countries.

The above claims can be substantiated by the fact that developing countries often act as the main exporters of primary products. Despite this, India acts as an exception, with its attempt to diversify its export composition away from primary products.

Looking back, the Heckscher Ohlin model and the Heckscher Ohlin theorem would suggest that agricultural labour in the aforementioned *low-income* countries should be better off (relatively to capital owners) due to the sheer abundance of these factors and the massive proportion of total output their commodity covers. But as we know, specifically for India, that is really not the case.

We shall proceed to break down India’s production and export strategy to get a better understanding of why the *abundant factor* is worse off. India’s emerging services sector and skill-biased technological change have surely induced an increased inequality between unskilled and skilled labour. However, this paper shall analyse the exception solely through the lens of the Heckscher Ohlin theorem.

India’s Background (A Brief Introduction to India’s Agricultural History)

Agriculture in pre-independence India can be characterised by low productivity and as a risky, unstable venture. There existed a three-way relationship consisting of *Zamindars* (landowners), who had to pay a fixed amount to the British Government as tax and were free to take any amount of output from the *Tillers*. Often, the Tillers were fired by the Zamindars as by doing so the Zamindars could increase the profit portion they received by having a bigger share of the output crop. This created massive job insecurity among the Tillers. Apart from this, they were forced to produce commercialised goods that had high demand in Britain, forcing the Tillers to buy food grains from the marketplace. This commercialisation put immense pressure on Tillers who were barely making ends meet by growing crops for sustenance. As a result, there was widespread indebtedness among future generations. After the partition in 1947, the country’s Jute industry centre (East Bengal) went into the newly formed Pakistan, which further worsened the situation.³

The heavy dependence of Indian agriculture output on monsoon rains makes it vulnerable to famines in cases of droughts or improper irrigation. The Bengal famine (1770 and 1943), the Doji bara famine, the Great Famine of 1876–1878 and the Chalisa famine have

been attributed to droughts, policy failure and inaction of the British Government.⁴ Agricultural labourers and rural artisans have traditionally been the worst hit by famines.⁵

The contribution of the British towards the development of infrastructure is heavily debatable, including the introduction of railroads. The extension of the railroad by the British, however, aided in eliminating massive famines in peace times.⁶

The above discussion of the state of agriculture in colonial India provides us with a few key points to take home. It is clear that food insecurity and job instability were two of the prime failures on part of the policymakers in the agriculture system under colonial rule. Therefore, since independence, there has been an extensive focus on enhancing food security.

At the time of independence, the contribution of agriculture and allied activities was roughly around 50 per cent of the nation’s national income and out of the total working population, nearly 72 per cent was engaged in agriculture.⁷ Agricultural policies in India from 1947 to the mid-1960s witnessed remarkable reforms. Institutional changes, development of irrigation projects and strengthening of cooperative credit institutions addressed the pitfalls of the agriculture system under British rule in India. Abolition of intermediaries (Zamindars) and provision of land title to cultivators with the aim of increasing agricultural production made major contributions to agrarian reforms. In an attempt to regenerate agriculture in India, Intensive Area Development Programmes were initiated along with Community Development Programmes and decentralised planning. Despite these reforms, India’s dependence on foreign aid for food remained the same.⁸ In the early 1960s, it became evident that the increase in population outgrew the increase in grain production⁹ and thus India’s reliance on food imports to meet its domestic needs was heavy. Nevertheless, consequent droughts in the years 1965 and 1966 catalysed the Indian government to rework its agricultural policy aiming towards becoming self-sufficient in terms of food security. Policy reforms were initiated with a focus on using disease-resistant wheat varieties along with improved knowledge of farming practices to boost productivity, which led to the inception of India’s Green Revolution.¹⁰

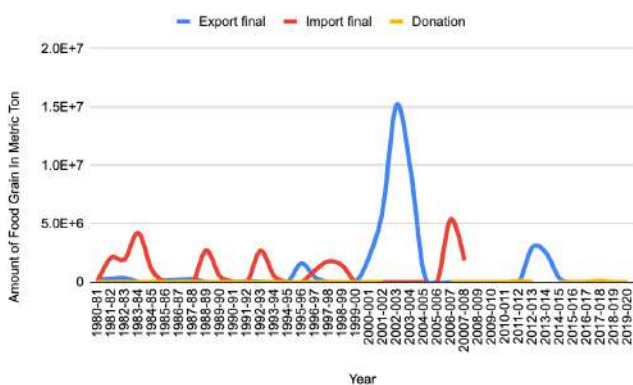
As a result, India was able to achieve self-sufficiency in food grains. In the early 1980s, India started witnessing a diversification into non-food grain output. As a result, there was a speedy growth of fisheries, milk, poultry, etc. due to which there was an accelerated growth in agricultural GDP during that period.¹¹ The agriculture sector during this period was supported by a considerable increase in subsidies, while the public sector spending in agriculture for infrastructure development started declining in real terms. However, the trend of investment by farmers was on the rise.¹²

In the post-liberalisation period, there were no direct

reforms in the agriculture sector but it was indirectly affected by exchange rate devaluation, deprotection of industry and liberalisation of external trade. Challenges of competitiveness were faced by Indian agriculture due to the opening of the domestic market to international trade.

Trend of Foodgrain Output, Exports, and Wages

The previous section gives some important pointers about the history of agriculture in India. With the help of these pointers, we shall now analyse the trend in agriculture output, exports and food security. For the purpose of this paper, we shall focus on the trends of foodgrains only. The export trend for agricultural products will paint a completely different picture than expected as that data set would include non-food grains along with other products that are not necessarily affordable and essential for sustenance, such as sugarcane.



As is clear from the diagram, up till 2000 India’s foodgrain imports mostly exceeded its exports, but there was a surge of exports in the period 2000-2001 to 2004-2005. (Diagram not complete due to incomplete data set)

The following diagram shows the trend of real average agricultural wage as opposed to real average unskilled labour (non-agriculture) wage from 1998 to 2011. The plight of agricultural labour becomes clear from the line graph.



We can infer that India has never been generous with its exports of foodgrains except for the mentioned period.

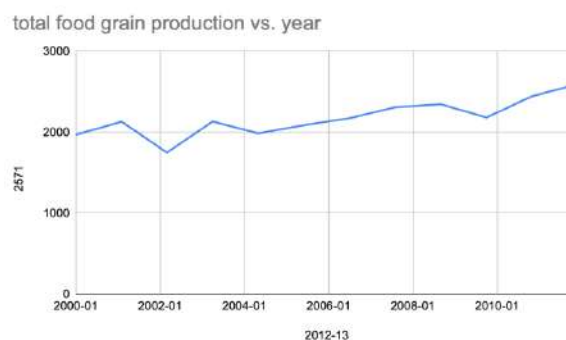
Moreover, even though there has been some increase in the average wage in the agriculture sector, it has always been lower than that in the unskilled labour sector. This result does not add up as unskilled labour has a smaller

aggregate demand as compared to agriculture labour as its product has only domestic demand.

Data from the Ministry of Statistics suggest that in the year 1999-2000, 93.2 per cent of the net domestic product in agriculture came from rural areas. It is also a well-known fact that agriculture is mainly practiced in rural areas in India and around 50 per cent of the population in these areas is dependent on it.¹³

The table below shows the percentage of the population below poverty. Still, 28.3 per cent of the rural population is Below Poverty Line (BPL), out of which the agricultural labourers belong much more to the marginalised community (as seen from line graphs representing average real wage).

Year	Percentage of People Below Poverty Line in Rural India
1973	56.4
1983	45.7
1993	37.3
2004	28.3



Source: RBI Website

With a consistent rise in food grain production since 2004, one would expect the wages to increase according to the Heckscher Ohlin theorem but that doesn’t happen. Exports have been on a decline ever since the peak in 2003-2004 period. One would think that if the foodgrains are not being exported, they are being consumed, but that too is not the case for India. As pointed out by Patnaik (2011)¹⁴, the per capita food grain absorption in India has fallen from 200 kg per person per annum during British rule to 156 kg per person per annum in 2008. His paper presents arguments given both towards diversification of the consumption basket and against it, and the author agrees with the latter counter arguments.

The question is, where does this increase in foodgrain production go?

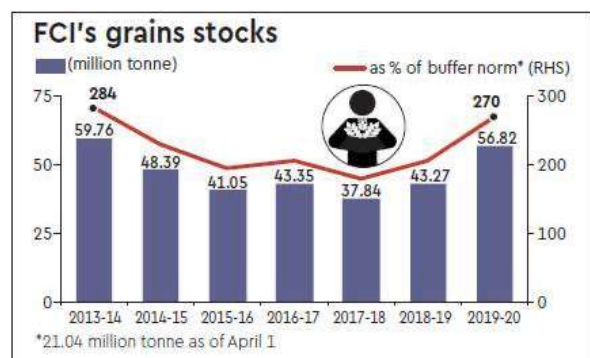
“The developing countries were told that food security, based on self-sufficiency in food grains production, was passé in a modern globalized world, even for large countries with poor populations. Rather, they would benefit from specializing in the non-grain crops in which

they had a 'comparative advantage' by increasing their exports and purchasing their grains and dairy products from Northern countries that had surpluses of these products."¹⁵

This free trade model and export specialisation that developing countries were encouraged to take up has now been explicitly discredited. But unlike many other developing countries that fell prey to this scheme, India's food procurement and public distribution system (PDS) has not been completely dismantled and has the potential for protecting poor consumers. This would require higher crop procurement prices. In India, spending on implementation of the Food Security Act and provisioning of food grains (rice and wheat) through PDS is close to one per cent of its GDP, which should have led to better nutritional outcomes but empirical data suggests otherwise.¹⁶ Retention of this system could have been a blessing but its inefficient usage has proved to be a burden for the producers.

Increasing inefficiency in India's food stock accumulation, with foodgrains accumulated being 2.7 times the buffer norm in its official reserves,¹⁷ could be the reason for the ill workings of the Heckscher Ohlin model.

Following figure shows FCI grains stock as a per cent of the buffer norms-



Source: Financial Express, (Mishra)

This indicates the fact that even though the production of a commodity (foodgrains in this case) is increasing and its factor resource is also abundant, that factor isn't being exploited for maximum benefits.

Even though the retention of PDS should have contributed towards the betterment of agricultural labour economically and nutrition-wise, its focus on food availability eliminated potential gains of wage increase through export.

This is unlike what the Heckscher Ohlin model predicted.

Conclusion

Foodgrains in the case of India have not served as a source of income and poverty alleviation since the results of the Heckscher Ohlin model don't apply to a commodity that is a necessity and is universally demanded (i.e by all humans for sustenance). Universal demand and the necessary nature of the commodity does not allow the factors of production to benefit from its rising production as much.

In the case of a necessary commodity, an economy might prefer having a large buffer of that commodity to avoid facing problems during a crisis. In such a scenario, the supply to the foreign market will be hindered as a major part of the produce/output will be procured by the government with the aim of disaster mitigation. This becomes much more evident in India's case, a country with numerous experience with famines.

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TO EV OR NOT TO EV: THE POLITICAL ECONOMY ANALYSIS

BY MEGHNA NAIR

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As India moves towards an electric vehicle revolution, are consumers and the humongous auto industry ready to change their ways?

When Elon Musk presents us with the opportunity to either go to the moon or buy his electric vehicle (EV), one can't help but think - are those the only two alternatives available to us today? As exciting as it is to envision a life on the moon, for those of us that choose to stay back – accepting an electric future may be the only way forward.

Governments around the world are working to kickstart a transition that promises reduced emissions and cost benefits for the economy. EVs are cheaper to build and they reduce a government's import dependence on fuel. They may also be cheaper to own, especially in a country like ours – where nearly 70 per cent of urban dwellers travel less than 10 km daily.¹ But for a segment that forms less than one per cent of all auto sales in India, there is a long way to go.²

Global EV deployment has primarily been driven by government mandates – with nearly 17 countries committing to zero-emission vehicles (ZEV) in the coming decades.³ Last year, the United Kingdom (UK) committed to phasing out the sale of all its internal combustion engine vehicles (ICEV) by 2030. The Indian experience is slightly different. Our government has only announced its ambition in achieving 30 per cent electrification of all vehicle sales by 2030. The seriousness of this 30-by-30 commitment is yet to be seen.

Disincentives as incentives

Igniting a market shift towards sustainable mobility

requires more than just promoting EVs. Consumers are comfortable with their fossil-fuel fired cars and may find these more convenient to own. Therefore, globally this transition has relied primarily on discouraging the incumbent ICEV industry. This is what we refer to as 'disincentives as incentives'. By disincentivising tailpipe emissions, old vehicles through scrappage policies, levying higher taxes on ICEVs and their fuel, governments hope to convince car owners and prospective buyers that the grass really is greener on the other side. Countries like China levy registration restrictions and driving bans on ICEVs – neither of which apply to EVs. Registration taxes in the Netherlands are subject to the CO2 emissions of a vehicle.⁴ Closer to home, Delhi's EV policy recommends using a 'feebate' – a mechanism through which the surcharge levied on highly polluting ICEVs funds incentives provided to electric vehicles.⁵ However, for the Indian government to disrupt its incumbent auto industry may be more challenging than you think. Disrupting an industry that is the fourth largest in the world (soon to be third largest), that forms 7-8 per cent of the country's gross domestic product (GDP) and employs 35 million people, raises a lot of political questions.⁶ Transitioning an industry of highly successful incumbents will not just depend on whether it makes economic and environmental sense, but also sense for the larger political economy to do so.

Dialling down fuel taxes – an easy choice to make?

Fuel taxes form the largest source of income for the government. Therefore, electrification of transport in India is likely to have a significant impact on its revenue. The petroleum sector contributes 21 per cent to the

Centre's tax revenue and about 10 per cent to state revenue.⁷ In January 2021, taxes made up nearly 62 per cent of the price of petrol in Delhi.⁸ Dialling down on such a significant income source, as necessary as it may be, poses some tricky political questions regarding its alternatives.

Jobs lost or jobs gained?

A transition as drastic as this, which involves phasing out an existing industry, needs to be carefully executed. It must be considerate of those whose interests are embedded in traditional practices, especially those vulnerable to the risk of losing their jobs and technologies. A manufacturing process that traditionally involved 20,000 parts looks to be replaced by one that involves only 6,000.⁹ EVs and their batteries both require less manufacturing labour. Skills that are highly specific and contextual, especially those involved in the auto industry's supply chain need to be re-calibrated. Today, nearly 90 per cent of the auto sector's components are produced domestically.¹⁰ When faced with an EV transition, workers and regional governments both face uncertainty and the possibility of reduced employment.

Change is the only constant

As bleak as this may sound, the reality is not as bad!

With increasing electrification in mobility, the electricity sector, which is currently dependent on subsidies, will have to find ways to make up for the loss in taxation revenue from fuel.

An industry that enjoyed subsidies of about INR 98,000 crore in 2018-19, must be better utilised towards contributing to public revenue – in due course of time. In addition to this, once electric vehicles have been shifted from the margin to the mainstream, existing tax exemptions must gradually be phased out to derive larger revenues. Road pricing too presents an alternative and viable means of income for the government.¹¹

While measuring the effect that an EV transition has on employment numbers, there is a need to look beyond just the direct jobs lost and created. Realigning

employees involved in existing supply chains to the final assembly line will include planning and skill development. Both the government and industry must jointly lead this effort. A smooth transition to electric vehicles will require creating several new EV related services – especially in charging. To avoid going from being an oil-dependent country to a cell-dependent one, EV batteries too present an enormous employment opportunity. Integrated into the circular economy, battery recycling is expected to aid job creation in a big way. The economy will also stand to benefit from an increase in jobs in the electricity sector.

A country that imports 87 per cent of its crude oil needs stands to benefit fairly well by cutting down on its oil dependence. Petroleum forms nearly one-third of India's total imports – which an EV transition promises to change. If the 30-by-30 soft target is achieved, the oil import bill stands to drop by nearly 15 per cent, which in itself is incentive enough to push for.¹²

EV drivers that benefit from the lower total cost of ownership of their vehicle, capital and operational, will benefit from a higher disposable income – a win for them and the economy.¹³ Additionally, for the industry, the EV sector presents a \$177 billion opportunity in vehicle production, \$12.3 billion in battery manufacturing and \$2.9 billion in the creation of public charging infrastructure, each of which will eventually spiral into larger jobs and business opportunities for investors – thanks to the investment multiplier.¹⁴

In conclusion

The impending green transition, especially in the transportation sector, is more than justified by its many benefits. However, such a shift is not sans winners and losers, raising important political considerations for the government. The government that traditionally favours incumbents and large industry giants will have to find ways to look after everyone's needs, including its own. This can be done through a carefully executed, phased plan that gradually but firmly kickstarts the transition. Constant consultations with industry – the old and new, will help policymakers set medium-term ZEV targets with good near-term checkpoints. Policymakers must be firm yet realistic in their signals – thus giving industry, its workforce, and consumers the time to prepare and realign.

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REMAKING THE MID-DAY MEAL

BY SHAGATA MUKHERJEE AND MAHIMA SONI

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While the Mid-Day Meal scheme has come a long way since its inception in 1995, the road ahead remains a long and difficult one to tread. Backed by empirical research and immersive analysis, will the novel strategies suggested below help propel India smoothly onto the next leg of this journey?

The Mid-Day Meal (MDM) Scheme, a centrally sponsored public program in India, addresses two of the most important Sustainable Development Goals (SDGs) adopted by the United Nations in 2015: 'ensuring zero hunger' and 'improving quality of education.' The MDM scheme aims to universalise primary education by increasing the enrolment rates and attendance as well as by improving educational and nutritional outcomes among Indian children. Despite the MDM scheme's tremendous reach of about 11.59 crore students across schools in India, its impact has been widely debated in policy circles and the media (Chatterjee, 2014).^{3,6} Therefore, to study the scheme's effectiveness, we conducted primary research with 668 respondents (students, parents, and school authorities) across nine low-income schools in Mumbai. All the schools in our sample were similar and comparable across most observable characteristics, except that four had a provision to the MDM scheme while the other five did not.

Our study found that students studying at schools having access to MDMs have significantly higher learning outcomes than those studying at schools that do not have access to MDMs (Chakraborty & Jayaraman, 2016).² However, we did not find any impact of MDM on the nutritional outcomes of the children as measured by their Body Mass Index (BMI). Contrary to our expectations, we found that the BMI of the children in MDM schools is not significantly different than that of the children in non-MDM schools (Dreze & Goyal, 2003; Vermeersch & Kremer, 2005).^{5,7} To further investigate

why MDM was not improving the nutritional outcomes of the children, we conducted qualitative interviews with the children and their parents. One key finding from our interviews was that while over 70 per cent of the parents belonging to the non-MDM schools typically express the desire to have an MDM scheme in their children's schools, only 36 per cent of the children with access to MDM consume it daily. This discouraging consumption figure explains why the BMI of the children in MDM schools is not significantly higher. We also identified two major reasons for it. On the one hand, parents voiced concerns about the hygiene and the quality of the food served. On the other hand, the students were discouraged by the monotonous menu of the MDMs, which for our sample schools consisted primarily of different variants of 'khichdi' (made of rice and lentils) every day. Moreover, while this menu fulfilled the daily calorie requirement, it lacked the micronutrients essential for a child's growth and development. Only one school in our sample provided chikki or fruits like apples and bananas in MDMs but that too only once or twice in a fortnight.

To increase the effectiveness of the MDM Scheme, we propose several nudges and other behavioural interventions to increase the regular consumption of the MDMs.

As children resume school after the COVID-19 pandemic, ensuring that the MDMs served adhere to the accepted standards of quality and hygiene will be paramount.

To eliminate human contact while serving and to increase uptake, the meals can be provided in gamified and attractively packaged boxes that can include small games and puzzles. The boxes can also include photographs of other children consuming MDMs, creating a social norm around MDM consumption. Moreover, school authorities can send weekly personalised messages in local languages to parents about their child's frequency of MDM consumption in the past week. Such messaging can enable the parents to monitor and encourage their children to consume MDMs regularly.

The menu of the MDM scheme can be redesigned to introduce a variety of foods and improve the micronutrient content in it by including seasonal fruits, fortified milk with vitamin A and D (Bresnayan, 2017), nuts, and eggs (or soybeans as a vegetarian alternative) to combat micronutrient deficiencies and the 'hidden hunger' among children (Dreze, 2015).^{1,4} To improve the quality of the MDMs, we must ensure a clean and

hygienic environment at the centres where the meals are prepared. Moreover, posters containing behavioural messaging in local languages, such as '*If your child is consuming the meal prepared by you, would you follow all the sanitation protocols? If yes, then please ensure that you also follow the same sanitary standards while preparing the MDM because someone's child will be consuming the meal prepared by you,*' can be put up. Additionally, to increase the accountability among the MDM cooks, regular inspections of the centres by parents and teachers can be arranged. Given that the poor quality of food is one of the major deterrents to consuming MDMs regularly, introducing these interventions can likely increase the MDM uptake. With about Rs 11,000 crore of the annual budget being allocated towards the scheme and its potential benefits, it is imperative that the policymakers address the scheme's existing challenges and improve its effectiveness and impact.⁶

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A HELPING HAND FOR THE HANDICRAFTS

BY AVANTIKA BHUYAN

National Writer, Mint Lounge

What was once the hallmark of the rich Indian heritage is today swaying on the edge of oblivion. Will the advent of the pandemic and the increasing digitisation serve as another nail in the coffin of the Indian Handicrafts industry or open up hitherto unexplored opportunities?

36-year-old Deepak Devangan is a resident of Palari, a village in Chattisgarh. He crafts beautiful items out of bamboo and bottle gourd and covers them with intricate designs. He remembers the pre-pandemic era fondly when he would hold regular workshops and be an enthusiastic participant at the periodic exhibitions organised by the Dastkari Haat Samiti. Life has altered dramatically today. 90 per cent of his production has halted. *“We are a group of 10 people who work together. Due to the pandemic, we haven’t been able to meet regularly. Also, transportation of raw materials is a problem,”* he adds. Currently, he bides his time doing *“chota-mota kaam”* in the farmlands of the village itself.

His work saw an uptick in the months of January and February— making Deepangan optimistic of some sort of return to normalcy— but the second wave of the Covid-19 pandemic has squashed those feelings. His family comprises two children, a wife, parents and two brothers. *“My elder brother has a shop in Chitrakoot where he would sell the handicrafts made by me. But now, there are no tourists and hence the sales are slacking,”* he adds.

Many such stories abound in the handloom and handicrafts sector, which is believed to employ 10 to 15 crore people, thus becoming the second-largest source of rural livelihood after agriculture. According to a report published in March 2021 by the Indian Brand Equity Foundation (IBEF), India is home to more than 3,000 craft forms, with artisans working with papier-mache in Jammu and Kashmir, *thangka* in Ladakh and Himachal Pradesh, *chikankari* and *zardozi* work in Uttar

Pradesh, blue pottery and block printing in Rajasthan, *ajrak* and kite making in Gujarat among others.

“With this wide range of craft skills and the number of artisans in the country, India has the potential to make this sector a multibillion-dollar industry. [In fact], handicraft exports from India reached Rs 25,706.3 crore (\$3.5 billion) in 2019–20,” states the report. However, many problems have hampered the growth of this sector over the years, namely inaccessibility of funds, low penetration of technology, absence of market intelligence and poor institutional frameworks for growth. *“In the last three to four years, craft communities have been particularly impacted by economic upheavals through demonetisation, Goods and Services Tax (GST) and market slowdown,”* mentioned Durga Venkataswamy, a Hyderabad-based social entrepreneur in a March 2020 interview to The Voice of Fashion.

And now the pandemic has further compounded the problem. Covid-19, with its pall of uncertainty, has affected the craftspeople badly.

The past year brought with it not just covid-19, but also floods and cyclones in the craft-rich areas of Kerala, Assam, Odisha, West Bengal and more, creating a double whammy of sorts for the artisans.

Suddenly they were faced with stockpiles, minimal cash flows and no demand. *"Additionally, digital inequity in the rural villages as compared to the urban areas has pushed these artisans to the periphery without allowing them effective access to the virtual world,"* states the 'Covid Impact Report of Living Heritage Practitioners of West Bengal and Western Rajasthan during 2020-2021,' which was published by Banglanatak dot com, a social enterprise working across India for pro-poor sustainable development using culture-based approaches.

With no fairs, public festivals or large weddings, the craftspersons have nowhere to sell their wares. The past year has also seen the cancellation of major exhibitions such as Delhi Craft Council's Kairi and the curtailment of Dastkar's annual BONANZA craft sale. The youth from families, which have housed generations of craftspersons, are shying away from their ancestral profession even more so now. They see the uncertainties plaguing the sector at this moment and want to move towards a more stable job. There is a need for some drastic steps to instil a sense of pride in the youngsters.

Some help has come in the form of e-commerce portals, which are connecting the consumers directly with the craftspersons. Take, for instance, the India Handmade Collective, which was launched in November 2020 as an e-commerce platform for Indian handicrafts. *"The collective describes itself as a 'social enterprise' but works exactly like an e-commerce clothing portal such as Myntra, Jacob and so on. The only difference is that, instead of selling multinational clothing labels, it offers sustainable, handmade and ethically produced goods by small scale manufacturers on sale,"* states a December 2020 article in The News Minute. It further adds that even once the lockdown was lifted, the demand was still slack and the shops still empty. *"For these weavers and spinners, bigger online markets were not an option as they ask for a 10 per cent listing fee and a 30 to 40 per cent commission on the products. So that avenue was cut off,"* elaborated Malini Kumar, co-founder of The India Handmade Collective, in an interview with The News Minute.

However, Jaya Jaitly, founder and president of Dastkari Haat Samiti, feels that e-commerce platforms can only supplement offline exhibitions and not be a substitute. For instance, the kind of sale that Dastkari does at a 10-day craft bazaar can't be matched by virtual marketplaces. *"At our exhibition in Dilli Haat that takes place every January, we usually do a Rs 5 crore sale. At the physical bazaar, the craftspersons can showcase a wide variety of products, while on the e-commerce platform, they can put up only one or two items. However, in present times, there seems to be no other option,"* she says.

So far, the Ministry of Textiles, Government of India, has not announced a bailout package for artisans. But a lot of not-for-profits and civil society organisations have come to their rescue. Sustainable Environment and Ecological Development Society (SEEDS) is one of them. Founded in 1994, the organisation focuses on building

the resilience of people exposed to disasters. And now, a lot of craftspersons are benefitting from SEEDS' Tribal Entrepreneurship Development Initiative.

Malini, 39, works at a small unit located in the Chembuthara area of Meppadi Panchayat, Wayanad. Exhibitions such as Gadhika, conducted by the Kerala government, have offered her a major source of income. However, there have been no such exhibitions and orders since the pandemic outbreak. But she is full of praise for SEEDS' initiative. *"I have been making products such as bamboo pens, pen stands, and candle stands for many years. But I have always faced two major problems: availability of material and marketing of products. However, with the training provided, I have learnt to make innovative products and hopefully will also find a better marketplace for them,"* she says.

Measures instituted at the Dastkari Haat Samiti centre around adding a personal human touch. Besides providing rations, the organisation has constantly been in touch with the artisans and checks in on them regularly. *"Financially, they are not in the doldrums. The tight-knit community has ensured that people helped one another. Although the rural areas were not as affected by the pandemic as the urban ones, they are desperate to engage with the customers and market their products,"* says Jaitly. She finally got permission this year to hold the annual Dastkari Haat Craft Bazaar at Dilli Haat in the capital between 1 and 15 April. The crowds, of course, were not of the same magnitude but the response from the *karigars* was overwhelming: 140 of them showed up with new stuff.

However, the rising intensity of infections made the organisers nervous about the artisans' well-being and so, by the 15th, most were requested to go home. *"This second wave is spreading faster. I called artisans in Kutch, and they said that earlier no one was catching the coronavirus, but now people are getting infected,"* she says. However, craftspersons are willing to carry on making their beautiful products as long as they get the requisite raw materials. Many are reaching out to customers directly through WhatsApp. Jaitly hopes that Dastkari Haat Samiti's marketing website will be up and running by the end of the month so that some of the products can be exclusively showcased there. *"They send such touching messages: 'that you have always been there with us, and we will always be there with you.' They are so cheerful and resilient through it all,"* says Jaitly.

Banglanatak dot com has also been in touch with artist hubs and enterprises on a regular basis to provide possible support towards their physical and emotional wellbeing. In the process, the organisation has also realised some interesting aspects that make these artistic hubs so resilient and positive. *"Factors supporting such resilience include the use of local and exclusive traditional skills and capacities, the utilisation of low energy processes of production and the sustenance of the traditional collective structures of work and living,"* states the organisation's report.

When the first wave of the pandemic struck, the organisation started doing FaceBook lives with traditional visual and performing artists in Bengal and Rajasthan. *“The idea was to keep them engaged. We also conducted Zoom meetings between teachers and disciples,”* says Amitava Bhattacharya of Banglanatak dot com. *“In the first wave, the covid influence in rural Bengal and Rajasthan was negligible but the lockdown influence was more.”* When the unlocking process began, the organisation requested ‘Incredible India’ to promote rural Bengal to domestic travellers. As a result of this, nearly 1.26 direct sales between the artisans and the customers took place.

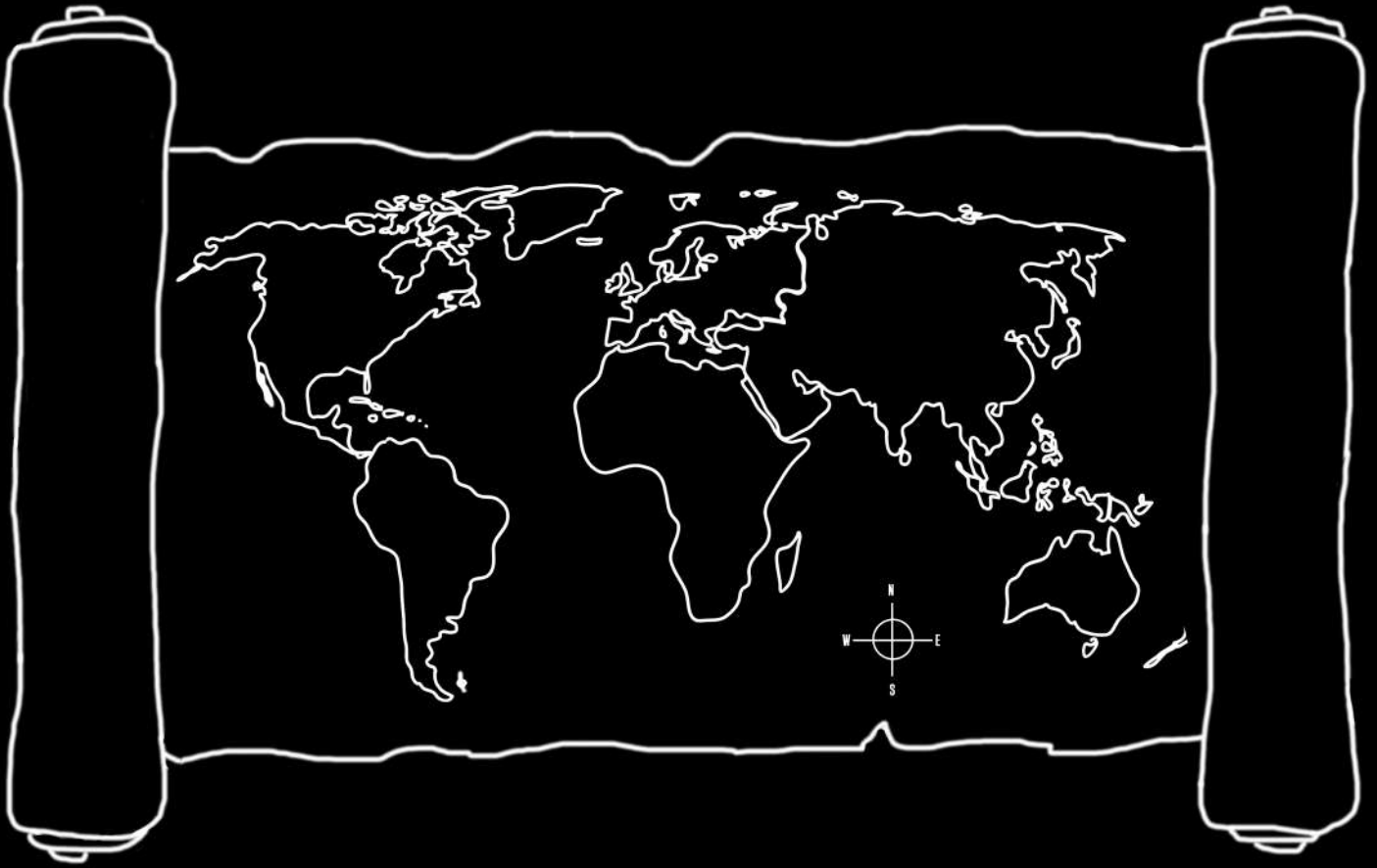
“In Bengal, for handicrafts, sales happen between August and Holi. The average income of each craftsperson’s household is around Rs 12,000 to Rs 18,000. So, it is not a sunset industry by any chance. The main problem during the first wave has been lack of engagement and the mental trauma due to uncertainty,” adds Bhattacharya. In order to boost their confidence, the social enterprise started training the village youth remotely on social media and other virtual platforms so that they could reach out to the buyers, audience and the world at large.

For instance, in the Patachitra cluster, the artists have carried out online classes on demand for audiences in London, Paris, Hong Kong and Sweden. Due to the high brand value associated with this hub, the Patuas have managed to receive and fulfil small orders during the lockdown through phone and other digital avenues. *“Many of the Patuas have also depicted the pandemic and its impact through scroll paintings, narrating the difficult times as experienced and imagined by them. Between May and August 2020, five leading artist-entrepreneurs of the village accomplished a total sale of Rs 0.35 million,”* states the report. However, the second wave has brought not only the fear of the lockdown but also the fear of the infection itself. This needs to be tackled now.

Several organisations have tried to suggest the way forward for the craft sector in white papers and surveys. For instance, a report titled ‘Impact of Covid-19 on Artisans and Crafts Enterprise Part 2: A study to understand the extent of the impact of Covid-19 on the business and livelihood of Craftmark members’ by the All India Artisans and Craftworkers Welfare Association (AIACA) calls for faster inventory liquidation through augmentation of online sales and marketing platforms like the dedicated e-commerce marketplace for rural and tribal regions being developed by Tribal Cooperative Marketing Federation of India (TRIFED) and the government-run Government e-Marketplace (GeM). While recently, the government announced the onboarding of 50 lakh artisans on this portal, there is a need to expedite the process so that there is a faster conversion into concrete business opportunities. *“In addition, any digital onboarding can be stressful and cumbersome, especially for small-scale artisans. Therefore, concrete steps need to be taken to make the integration hassle-free with appropriate components for training and capacity building for the smaller artisan segment,”* the report states.

It also recommends creating a centralised knowledge bank or information repository for free access, which would detail the standard operating procedures, tender advertisements, occupational health and safety measures, government schemes and so on. This would be a one-stop-shop for all concerns of the artisan community.

Manu Gupta of SEEDS feels that one should focus on long-term interventions and not just short-term measures. *“We should come up with ways of advancing skill development and of creating a supply chain that is resilient to such events. Last year, we got a lot of advice related to the ways in which the artisans could pivot to other activities such as making masks. But these are not sustainable activities and are only one-off events. We need to strengthen the ecosystem with what they know well,”* he adds.



WORLD UNFURLED

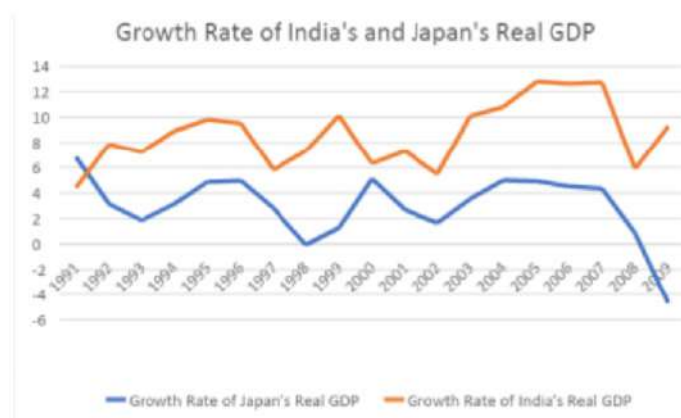
ABE'S ECONOMIC ODYSSEY

BY RITIK GOEL

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The volatility and interconnectedness of macroeconomic variables have befuddled many a great man. Using popular models to parse, probe and analyse Shinzo Abe's policies, the article strives to answer the question: Will Abenomics stand the test of time?

Shinzo Abe, Japan's longest-serving post-war Prime Minister stepped down from his position citing "health reasons" in 2020. When Shinzo Abe took over as Japan's Prime Minister in 2012, he assured people of recharging a stagnant economy and making Japan an ideal place for doing business; a task that was indeed cut out for him. The graph below reveals that in the two decades preceding his appointment, Japan's economy grew just over 3 per cent on average. India, on the other hand, which was miles behind Japan just three decades ago, is now ahead of Japan, at least in terms of growth rate, as India grew over 8 per cent on an average in the same period.¹



Source: The World Bank

Abe's economic policy was popularly called 'Abenomics'. It focused on three aspects, called 'three arrows' of

Abenomics: easy monetary policy, increased fiscal spending and structural reforms. This article, through the case study of Abenomics, attempts to ascertain to what extent are the core macroeconomic theories consistent with real-world policymaking. Do these policies help policymakers make effective macroeconomic policies? How do these policies and their impacts differ in the long run and the short run? Are these models able to explain how real-world scenarios work? These are some of the questions we look to answer through the case study of one of the biggest economies of the world. This article will focus on Abe's cabinet's monetary and fiscal measures.

The Idea of Quantitative Easing

As evident from Figure 1, Japan was severely impacted by the global financial crisis of 2008 and in this regard, the ideas of increasing spending and liquidity seemed reasonable.

The first model we use to study Abenomics policy is the IS-LM and AD-AS framework. The basic IS-LM and AD-AS framework below tells us how quantitative easing or increased money supply leads to a higher output, lower interest rate, and a higher price level in the economy. IS-LM equilibrium depicts the combinations of interest rates and output levels for which the commodity market, as well as the asset market, is in equilibrium.² Allowing prices to vary, we can represent this simultaneous equilibrium through a downward-sloping Aggregate Demand (AD) curve and an upward-sloping Aggregate Supply (AS) curve, both of which are drawn in the price-output plane.³ This model is highly useful in studying the merits and effects of monetary and fiscal policies.

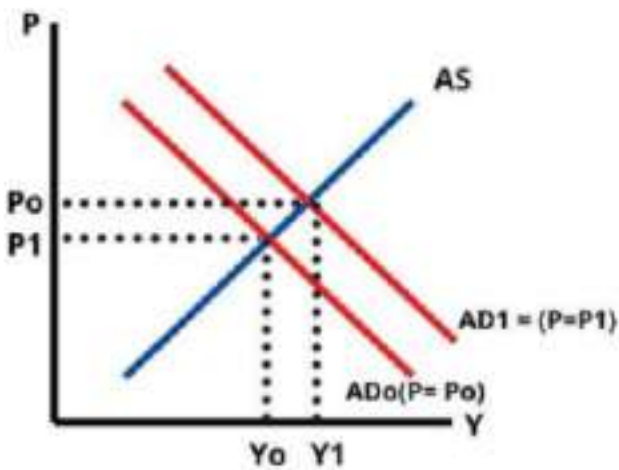
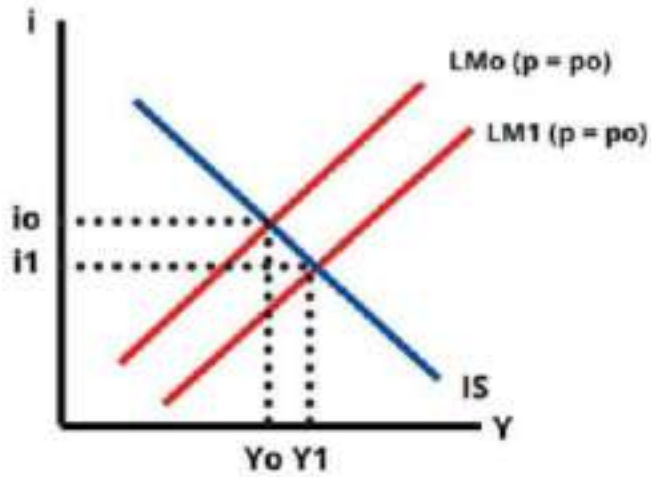


Figure 2

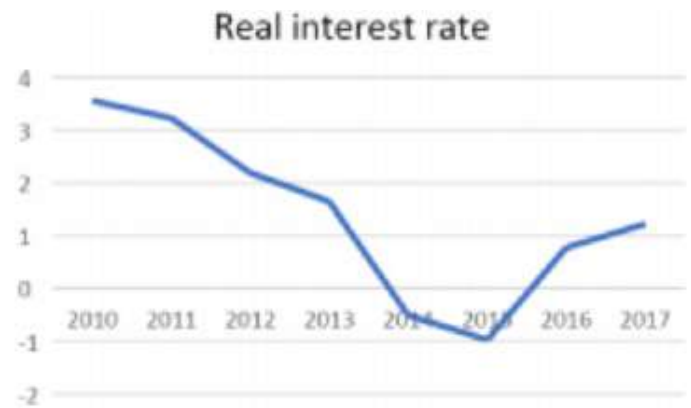
An easy monetary supply shifts the LM curve rightwards (due to an increase in the real money balance M/P , which leads to a rise in the interest rates (in the IS-LM framework) and price levels (in the AD-AS framework).

This high inflation policy was sought on the back of persistent deflation that Japan had experienced over the last decade. Hence, the government executed its easy monetary policy by an open-market purchase of bonds worth 60-70 trillion yen per year in 2013 and expanded the purchase to 80 trillion yen per year from 2014 onwards as per the Bank of Japan.⁴ As the graph below shows, throughout the decade before Shinzo Abe became Japan's Prime Minister, the inflation (consumer prices) was very low, even negative on several occasions, but following a policy of quantitative easing, the inflation rates picked up. However, the recovery was short-lived as there was a sharp drop in the inflation rate post-2014, bringing it back to the low levels it was at earlier. Therefore, as the AD-AS framework suggested, the economy did experience inflation, but the impact was short-lived.



Source: World Bank
Figure 3

The real interest rate saw a sharp decline too (as suggested by the IS-LM model). However, its decline too was short-lived. Data from the World Bank database suggests that it started falling during the early stages of quantitative easing (refer to the figure below) but post-2014, it has been on an increasing trajectory.



Source: World Bank
Figure 4

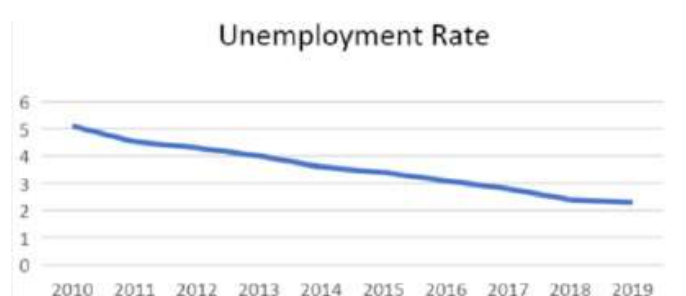
Hence, the twin ideas of bringing inflation to normal levels to induce consumption and lowering interest rates to enhance investments were successful but the results were short-lived. The reason behind inflation falling again could be the contradictory consumption tax policy that Japan took up and that behind interest rates rising again could be the series of fiscal reforms that Japan undertook. However, these will be discussed in the later sections. Before we discuss them, it'd be prudent to focus on another key variable: unemployment.

The next economic model we use is the Philips Curve relation. We can use this equation to study the relationship between unemployment and inflation. Economic variables tend to be interrelated and therefore while studying the merit of a policy, we shall analyse all the key variables it can potentially affect. In this case, any attempt to influence the inflation rate would have a bearing on the unemployment rate, like the Philips curve suggests:⁵

$$\pi_t - \pi_{t-1} = -\alpha(u_t - u_n) \tag{1}$$

This form of the Philips curve is widely accepted by economists after its early incarnations fell apart. ‘ u_n ’ is the natural rate of unemployment, or more specifically in this case, Non-Accelerating Inflation Rate of Unemployment (NAIRU), because it is the rate of unemployment required to keep the inflation rate constant. Moreover, it is evident from the negative sign that there is an inverse relationship between the variables. Therefore, increasing inflation rates can see unemployment rates falling in the economy.

This relation is consistent with Japan’s data from 2010 onwards. The unemployment rate has been steadily declining since 2014, even when the inflation rate starting falling post-2014.



Source: World Bank
Figure 5

This emphasizes a well-thought-out plan by the Cabinet. The falling unemployment rate is a step in the direction of overcoming recession (courtesy of the rising employment levels in the economy). Therefore, the first part of the analysis suggests that the core of macroeconomic theories allowed Japan to overcome its rough economic patch by achieving its two main objectives:

- a) Overcoming persistent disinflation, even if it was short-lived.
 - b) Coming out of a period of recession.
- In fact, both of these objectives were achieved simultaneously.

Consumption Tax

As mentioned above inflation rate was higher, courtesy of an easy monetary policy, but only for a short while. A plausible reason for this could be taking measures to boost investments that were taken on the fiscal side, such as the measure to raise the consumption tax from 5 per cent to 8 per cent in 2014. The idea was to induce increased savings which would translate to increased investments. So, at the cost of short-term stagnation, long-term growth was sought.⁶ The policy, however, was like playing with fire as Japan was already undergoing a recession.

As the data from World Bank Database suggests, Japan’s nominal Gross Domestic Product (GDP) contracted significantly post the global financial crisis of 2008, and just as it started to pick up, Japan encountered one of the worst earthquakes and tsunamis in the history of the country in 2011, leading to a large contraction in

GDP. Japan approached 2015 with a downward growth trajectory and during the same time, consumption tax was hiked, which did not do any favours to Japan’s GDP over the next few years and also hurt the plans to overcome the deflationary trends in the economy.

Until this policy, the ideas were consistent with Japan’s major objectives. However, the policy for increased saving and reduced consumption, which aimed at boosting the economy by promoting investments at the expense of consumption, seemed controversial. Private Final Consumption Expenditure formed roughly 55-60 per cent of Japan’s GDP in the last 20 years. Since Japan’s GDP was so heavily dependent on consumption expenditure, a move that could potentially affect it negatively was a risky one. Therefore, if Japan was willing to take this risk, purely to boost investment, purely to boost investment, it should have shored up against the possibilities of slipping back into recession, rising unemployment levels and deflation; all of which would reverse the impact of the monetary policy. This is exactly what happened as after a brief period of rising inflation, Japan started experiencing deflation again (Figure 3). Clearly, this policy was mistimed.

Fiscal Reform

We saw above how the plan of raising inflation was reversed owing to a mistimed consumption tax policy. Shinzo Abe’s government was still determined to help Japan overcome an economic recession by increasing fiscal spending. In the first year of his term, Shinzo Abe announced a stimulus of 10.3 trillion Yens for building infrastructure such as roads, buildings, bridges and so on. He further announced a 5.5 trillion yen package in 2014.

Moreover, as the government claimed, raising the consumption tax was also meant to raise funds for public investment (Taghizadeh-Hesary, 2014).

This policy seemed to have far-reaching consequences for Japan, which can once again be understood by using the IS-LM model. The model tells us that increased government spending, through a rise in public investments and consequently, interest rates, can crowd out private investments. In the event of a fiscal stimulus, the IS curve shifts out to the right. The output should have risen to Y2. However, following the shift, the interest rate also rises, private investments fall and output rises to Y1 only.

This clearly explains why real interest rates rose after 2014 even though they were falling until then (Figure 4).

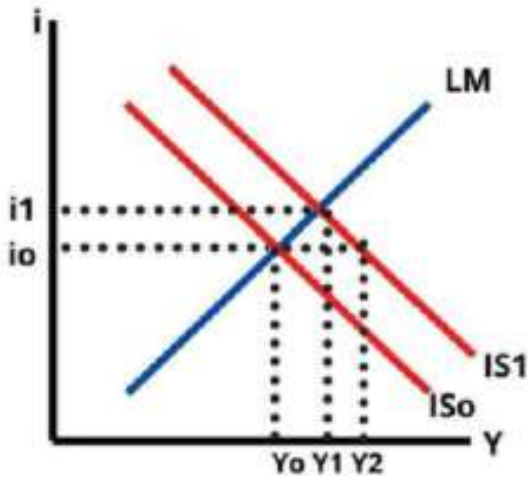
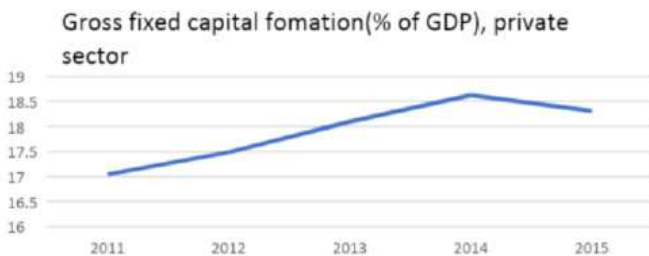


Figure 6

These rising interest rates led to crowding out of private investment in the economy as the following graph suggests:



Source: World Bank
Figure 7

As we can see above, the proportion of Gross Fixed Capital Formation (GFCF) in Japan’s GDP was rising but post 2014, it fell considerably. Hence, not only were the initial positive impacts of quantitative easing reversed, but the very plan of raising investment in the economy fell apart. They fell instead of rising. This turned out to be catastrophic.

These are powerful results. They tell us how policies can backfire if not followed up with the correct future course of actions. Japan’s successful attempt at lowering interest rates and rising inflation levels were defeated by a poorly executed set of fiscal policies like the consumption tax. Perhaps, the time lag between the two sets of policies should have been higher. There is not an iota of doubt that fiscal measures such as infrastructure spending are key to output growth as the Keynesian multiplier tells us but what went wrong for Japan was the timing of these policies.

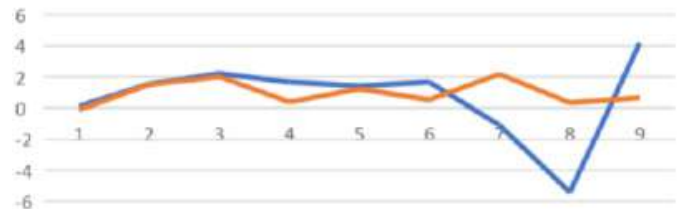
“ The consumption tax seemed highly contradictory, as on the one hand, Abe’s cabinet was trying to get Japan out of a recession and on the other hand, it was essentially risking another recession to enhance investment levels. ”

Moreover, investment levels should have been allowed to rise with the falling interest rates as they were until 2014 (Figure 7). An attempt to tinker with the fiscal side of the economy only made matters worse for Japan.

How Does the Growth Rate Look Now?

It’d be interesting to compare Japan’s overall growth performance during the nine-year period of Abe’s reign (2011-2019) with the corresponding nine-year period before he took over Japan (2002-2010). The corresponding growth rates have been presented in the figure below. A simple growth rate regression model reveals that the real GDP of Japan grew by about 0.24 per cent during 2002-2010 and by 0.46 per cent during 2011-2019. A massive improvement is clearly not evident.

Growth rate of Real GDP during 2002-2010 and 2011-2019



Source: World Bank
Figure 8

Moreover, if we include time dummies to differentiate between the performance during 2011-14 and during 2015-19, we obtain the following regression:

$$\text{Log(Real GDP)}_t = \beta_1 + \beta_2 t + \beta_3 D_{2t} + \beta_{4t} \cdot D_{2t}$$

Here, $D_{2t} = 0$ for 2011-14, $D_{2t} = 1$ for 2014-19.

It was found that the coefficient of $t \cdot D_{2t}$ was statistically significant. More specifically, growth rates during these periods did indeed differ. During 2011-14, it was 0.79 per cent, and during 2014-19, it was -0.3 per cent. This reiterates what we have observed till now. The initial set of moves on the monetary side were highly efficient and hence, the good performance during 2011-14, but a mistimed and poorly executed set of fiscal policies post 2014 reversed all the good work as the growth rate turned negative.

One good thing to write home for Shinzo Abe was an improvement in the fragility of growth under his reign, that is, it has become slightly less volatile. During Abe’s reign, the variance of growth rate was significantly lesser than the variance during 2002-09. It was confirmed by a two-sample variance F-statistic test. However, this does not improve things for Japan as the overall picture still looks grim.

Conclusion

The 66-year-old has now stepped down mid-way through the battle with Covid-19. He was forced to do away with

Covid-19. He was forced to do away with Tokyo Olympics 2020 and as he leaves, Japan is in its worst economic crisis since the Second World War. The new person-in-charge will have his task cut out much like Abe had. Besides the COVID-19 challenge, Japan has one of the highest public-debt ratios in the world and the confidence in capital markets is low.

Japan had ambitious goals and it set out on the right path but what hurt it was the set of mistimed economic policies. They were not thought out well and their long

term effects were not taken into consideration. All this emphasises the complications of economic policymaking: you try to influence one variable, a series of other variables get affected. However, throughout the analysis, it was observed that all the major policies and their outcomes were consistent with the key macroeconomic theories that were used in this assessment. None of the models failed to explain the working of Japan's economy. They explained why Japan was partially successful when Abe took over and why things went from bad to worse when he left.

References:

[1] *The purpose of this brief comparison with India is just to highlight the lacklustre performance of the economy of Japan during the last two decades. This is analogous to comparisons that are often drawn between India and China to highlight how China raced past India despite being far behind it in economic performance and how India's uninspiring economic performance ensured it was left behind.*

[2] *In this diagram, the author has ignored the impact of open-economy variables such as imports and exports to keep the analysis simple.*

[3] *An increase in output leads to an increase in the employment levels in the economy, and as more labour is hired, wages rise and they are reflected in the higher price level in the economy.*

[4] *Open market operations are one of the most widely used monetary policy techniques. The purchase of bonds by the central government from the public increases the money supply with the public and vice versa.*

[5] *As prices tend to rise in an economy, that rate at which they are rising, that is the rate of inflation, is also affected and therefore, it has been studied in this section.*

[6] *Widely accepted Economic growth models such as the Solow Model and the Harrod-Domar Model suggest that investments lead to capital accumulation and this capital accumulation is what can drive economic growth.*

GAUGING GROWING GHANA

BY SHIKSHA MODY

Undergraduate Student, Shri Ram College of Commerce

Having soldiered resiliently through multiple crises, Ghana today is the leading African economy across a multitude of economic and social indicators. Read on to unveil the strategies and policies behind Ghana's immensely successful developmental run.

I think Ghana is a good example of what can be done with stability and openness."

~ Mr Diwan, the World Bank country director in Ghana.

Around three decades ago, Ghana was in a crisis: impoverished and suffering from a famine. It was on the verge of economic collapse. Today, the West African nation has witnessed an unparalleled resurgence. It was predicted to be the world's fastest-growing economy in 2019, and it did expand with a real GDP growth estimated at 7.1 per cent. High growth momentum since 2017 has placed Ghana among Africa's ten fastest-growing economies.¹ However, like any other Sub-Saharan African country, Ghana has endured a series of ups and downs throughout its journey. So, what went into making the gold coast the golden reality that it is today?

Ghana was the first country in sub-Saharan Africa to achieve its independence from European colonial rule. The Gold Coast marked its independence on 6 March 1957 and Kwame Nkrumah became the first Prime Minister of the country. Nkrumah adopted the policy of state-directed economic growth. However, most of his colossal projects collapsed when the price of Cocoa, the chief export of Ghana, dipped. The heavy financial burdens created by Nkrumah's development policies and the dream of a consolidated Africa created new sources of opposition. There was widespread corruption in the economy that led to the concentration of money and power in the hands of a few, thus hindering the economic growth of the nation.

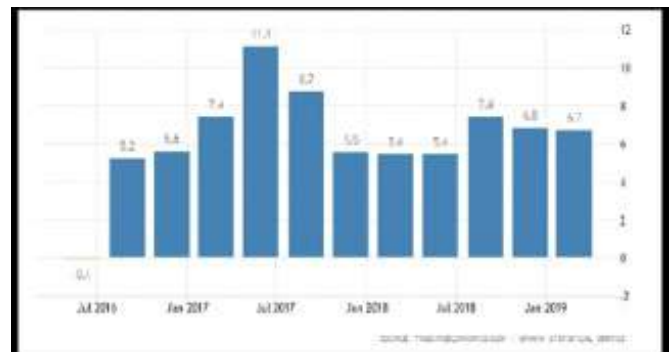


Figure 1

Between the 1960s and the 1980s, Ghana brooked political instability and consequently, spent the next 30 years under military rule. The military instability even continued in 1981 when President Ilimian was ousted in a military coup led by Lt. Rawlings. As political instability grew, the economy witnessed a sharp decline. However, in 1992 with the introduction of a new constitution, Ghana adopted a multi-party system and finally, it was able to mould itself into a relatively robust and fully functioning democracy. Ghana has been seen as a success story in establishing and upholding democracy and peace, not only in West Africa but in the African continent in general. According to the Global Peace Index report 2020, Ghana has been ranked the most peaceful country in West Africa and the third in Africa.² The country has successfully held seven consecutive democratic elections since the inception of the Fourth Republic. The sustained existence of a sound democratic government and absence of coups has provided much-needed stability to the nation. Stability accompanied with rapid economic growth has helped strengthen

investments and develop strong relations with the United Kingdom, the United States, the European Union and other emerging powers such as China, India and South Africa.

The government launched the 'Economic Recovery Program' (ERP) in 1983 with support from the World Bank and the International Monetary Fund (IMF). It was an important structural adjustment programme that aimed to liberalise the economy and increase investment. The structural adjustment programme, which was moderately successful, led to increased growth rates due to an increase in total investment and provided a boost to the economy.

Freedom of Speech and Expression has always been considered to be a fundamental part of the Ghanaian economy. Ghana ranks 27th in the World Press Freedom Index and stands 3rd in Africa after Namibia and Cape Verde.³ Ghana has an active media environment where journalists continuously unveil corruption, bring out the incompetence of the authorities, report crime and hold people in power accountable for their deeds.

Radio is the most used source of information in Ghana. This has helped the community members to keep a check on the elected representatives. The members use these radio programmes to make their voices heard. This pushes those in power to work for the betterment of the masses. Despite having a diversified cultural background, the people of Ghana showcase unparalleled unity.

The ability of the people to identify themselves as a community having a common identity has helped Ghana successfully evade any civil disturbances or internal conflicts.

A transparent system, political stability and good governance have all amalgamated to pull the economy out of the crisis.

Another major reason for the growth of the Ghanaian economy is its increasing exports. In the past years, there was a substantial reduction in the red tape which made it easy for foreigners to open their businesses, leading to an increase in foreign direct investment (FDI). Unlike its African counterparts, Ghana also facilitated import-export by simplifying the process of filing legal documents and other compliances. Ghana is one of the biggest exporters of cocoa, gold and oil. The launch of crude oil production at the Jubilee oil field in 2011 combined with a strong performance of the gold and cocoa sector boosted Ghana's real GDP growth to 15 per cent in 2011 and 7.9 per cent in 2012.⁴ Ghana expects to sustain this growth with an ever-expanding service sector, and a continuous flow of FDI brought in by the prospect of increasing oil and gas production. The recent boom or to put it in the words of the IMF, "*Skyrocketing economy*", witnessed by Ghana is commendable. It

speaks volumes about the endeavours of the nation and its people. However, to what extent is this boom, founded on the exploitation of resources, sustainable and equitable?

This boom was led largely by strong growth in the mining, petroleum and agriculture sectors and a sustained expansion in forestry and logging, says a World Bank report. In April 2019, the World Resources Institute (WRI) showed that Ghana was one of the top ten countries increasingly losing patches of its rainforests.⁵ The rainforests are being cleared for growing cocoa crops, a significant commodity of export for Ghana. In 2015, Ghana witnessed a substantial decline in its growth due to declining commodity prices. Such increasing dependence on its natural resources puts a big question mark on the sustenance of its current growth rate. The incident points to one of the fears of the policymakers i.e. the "resource curse". The resource curse, also known as the 'paradox of plenty' or the 'poverty paradox', is the phenomenon wherein countries with a plethora of natural resources may end up having less economic growth or even worse developmental outcomes than the ones with fewer natural resources. The resource curse occurs when a country diverts all of its production means to a single industry, such as oil production and fails to provide for the investments in other major sectors. At times, the resource curse can also be an outcome of the corruption prevalent in the economy. In the words of Mr Diwan, "*Oil production should be approached with open eyes since the social impact could be huge.*"

Another problem with the current growth of the Ghanaian economy is the inequitable distribution of the gains. The effect of growth on poverty reduction has slowed down over the years. The largest fall in poverty rates, 2 per cent a year, was witnessed during 1991–1998. However, between 2012 and 2016, the poverty rate declined by only 0.2 per cent per year.⁶ This might be the outcome of a reduced focus on the agriculture sector (in which the majority of poor households are engaged), the limited availability of job opportunities in the emerging services sector, and the capital-intensive industrial development. The problem intensifies for the people in the rural area who endure both a poverty crisis and an urban-rural divide.

The Ghana government, in the wake of the above problems, has taken steps towards sustainable and holistic development. One of the biggest cocoa-producing countries, Ghana, has signed the Joint Frameworks for Action with 33 of the world's leading cocoa and chocolate producing companies in 2017. They have agreed to incorporate significant policy changes and investment commitments that will improve forest governance, bring down deforestation risks, focus on forest restoration and help boost the cocoa farmers' livelihoods. The action plan further aims to strengthen the sustainability of cocoa supply for the future. Moreover, Ghana has been at the forefront in the implementation of the Sustainable Development Goals (SDGs) in the Sub-Saharan Region. The building up of economic and social institutions has helped in the

furtherance of development and progress as well as the implementation of the sustainable development agenda in the country. Ghana has successfully made advances in education by providing more schooling opportunities. Significant reductions in infant and child mortality rates coupled with access to improved water sources have also significantly improved the health conditions in the country.

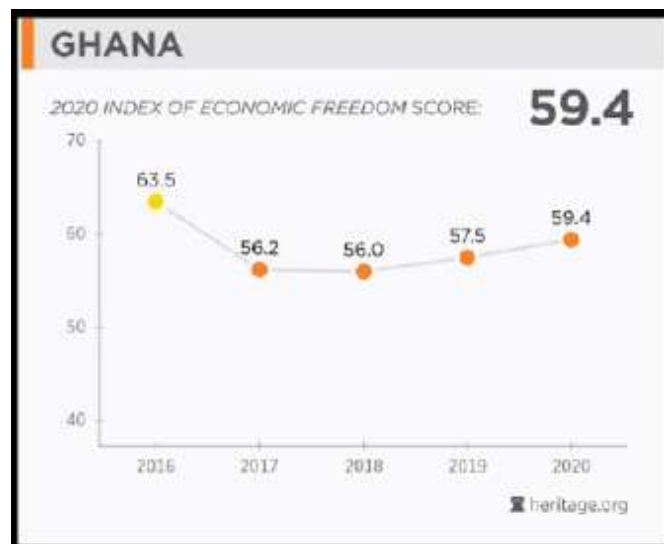


Figure 2

Ghana has been ahead of its African counterparts for decades. Whether it was attaining independence from the European colonial rule or being the first one to launch a cellular network in Africa, Ghana has been at the helm. Ghana has a lot of laurels attached to its name. It is undoubtedly a promising economy and outlays a model that can inspire other countries. A perfect blend of good governance and sustainable development, it is a real example of how development and sustenance can go hand in hand. However, the road ahead for Ghana isn't a smooth one. Ghana witnessed a dip in its growth in 2020 owing to the Covid-19 pandemic and a trade shock due to slumping oil prices. The declining exports and increased health expenditure are expected to widen the fiscal deficit. Ghana must overcome these challenges so as to not stray from its promising path.

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INSIDE SOCIAL CORPORATISM

BY MEHUL JOSHI

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Most debates centred around market structures involve ideas of capitalism and socialism. Being starkly different ideologies, one wouldn't easily understand a mechanism that incorporates the two. Read on to analyse whether the Nordic Model fulfils such a mechanism.

An age-old constant in the discussion between a capitalist and a socialist is the argument about the feasibility of socialist ideas to which the socialists proudly point to the Nordics - their comrades. The capitalist disagrees, mockingly pointing out to the socialist that the Nordics are free-market welfare states and how it does not meet their 'standards of socialism'. The disagreement persists. Be it the proud comrade who gleams at the Proletariat being heard, or the capitalist who sees a competitive economy with little to no restrictions, the Nordic model sounds like a paradise to both the belligerents of a never-ending ideological war.

Scandinavian countries are a block of nations in Northern Europe comprising Norway, Finland, Denmark, Sweden and Iceland. Even though there is diversity between these countries, any overarching economic analysis is enabled by the virtue of their shared demographic and economic success story. Sit back as we analyse the tripartite social contract that Nordics made decades ago, which continues to be the core reason for their stability.

In the 1950s, Social Democracy Parties emerged across Scandinavia and the Nordics adopted welfare-oriented policies such as old-age pension schemes and unemployment benefits intending to improve the quality of life.¹ The goal was to ensure the universalisation of these measures. The 30-year period until the 1980s witnessed merriment all across, but then came the inevitable economic slowdown. In response to the same, the economy had to be opened up to more competition

and tighter fiscal measures were introduced. This gradually led to the formation of a hub of public welfare that advocates for free-market principles.

At its core, social corporatism is a system of tripartite dialogue between the labour unions and the employers/ industries in a mandatory discussion moderated by the Government. The idea is to bring all grievances existing between the workers and the owners out in the open and finding a middle ground through involvement regardless of social standing. The structure works on a concept that a vast majority believes exists only in utopian societies: mutual trust. Taylor while giving the Principles of Management elucidates how harmony, not discord, is the necessary prerequisite of a smooth functioning mechanism. He floats an idea of a mental revolution wherein the workers realise that the owners have the workers' best interests in their mind while making decisions and the owners accept that the workers are dedicated and trying their best to help reach the corporation to its maximum potential. Although rare to achieve, the Nordics largely managed to secure this mental revolution due to the homogeneity of the population.

The Nordic model came into existence mainly due to the existence of equality, homogeneity and harmony in the population and the size of the population itself. The Nordic society was quick to adapt from a semi-feudal agrarian economy to a massive welfare state. This was enabled by the rise of independent peasants, while the gap between the erstwhile nobility and peasantry was bridged peacefully without dissent.

In order to meet the finances of running a massive welfare state, taxation becomes of key importance in these countries.

These countries run some of the highest personal income tax rates prevailing across the world. The tax system runs on three planks in these countries: personal income tax, value-added tax and corporate tax. Sweden², one of the leading Nordics, charges as low as 29 per cent of income but most of its population (anyone earning over 32,000 euros) pays an average of around 49 to 60 per cent of their income in the form of taxes to the State. It is intriguing that this tax rate is not progressive but rather follows a flat rate, post a pegged value. The Swedes peg this value at 1.5 times the average income of the country at a staggering 56.9 per cent. This system intrinsically runs on the socialist principle of taxing heavily for maintaining a state-funded essential services network at the same time, ensuring incentive for the people to earn more by stabilizing the tax at the highest tax rate.

Despite the huge revenue collections, the state has a responsibility to organise essential services like education and healthcare within not just the budgetary constraints but also upholding the quality standards that suffices the expectations of taxpayers. The Nordic tryst with education and healthcare is a shift from *laissez-faire* to complete state control. Pre-1990, these sectors were largely governed by decentralised structures, with the units being given a free rein in management and delivery of these services.³ Post-1990, these countries tightened control and centralised the structure with the State approving and deciding the amount to be given as grants and funding. Moreover, evaluation of performance and efficiency were introduced in the regulatory mechanism. The State released basic funding, post which any additional funding was based on performance.

Other than securing quality education and healthcare, an incumbent responsibility on these welfare states is ensuring post-retirement protection. The primary conundrum with pensions is the ever-mounting cost of extending these payments universally. With life expectancy higher than ever and a properly functioning healthcare system in place, the government's expenditure on pensions has been ever-increasing with large proportions of the population ageing and hitting the pension eligibility age. Moreover, the average years of schooling and higher education have increased with the increment in the quality of these services. This further narrows the current workforce by delaying the arrival of a new workforce in the market.

In Norway, the workers can retire between the ages of 62 to 67, since their contractual early retirement pension (AFP) is dependent on employment earnings. Post-2011, the Norwegian Government has introduced a system whereby each year the worker defers filing the claim for pension, their pension amount increases. This enabled the workers to file for early retirement but choose when their benefits kick in i.e. continue working

and deferring the claim. The result of this policy was that the number of applicants for early retirement shot up by 20 per cent, but the proportion who continued working after the age of 62 increased by 13 per cent⁴. The story of Norway⁵ represents the rethinking of the pension system which breaks the traditional relationship between filing for pension and retirement.

Although the measures with respect to AFP pensions does bring a tangible change in extending the years of involvement in the workforce, the problem still remains that an ageing population inversely impacts worker productivity. The capabilities of workers are impacted differently which makes a general policy response difficult to achieve. Despite having lower productivity to the younger sections of the workforce, the older sections of the population continue to enjoy a higher wage. This is majorly due to their social capital in the Nordic machinery which depends on the discourse between workers and corporates. This market imperfection is feared to lead to the faltering of the social contract.

This model of growth has been long hailed and presented as a story of success across the globe. Ask any high schooler - Which countries have the best quality of life and prosperity? The answer will be a consistent mention of the Scandinavian countries. The reason for this wide appreciation is because the Nordics consistently top the charts on Human Development Indices or Equality measures. More importantly, they achieved this your-next-door-class-topper image without explicitly identifying with any political block or ideology. So while Fox News writes an angry piece about how "*Bernie is lying when he says Norway is Socialist*" or more subtly pro-capitalism media saying that "*Sorry but the Scandinavian Model isn't Socialist*", what they choose to hide from the general masses is that this is not a capitalist state either. More importantly, when Senator Bernie Sanders points to Denmark in his campaign speeches or when Alexandra Ocasio-Cortez hails the Scandinavian Model in her birthday tweet, it is not misrepresentation but rather an acceptance of a trade-off. Acceptance by the Social Democrats (SocDems) of corporates who do not hold an unfair share of power and are not fundamentally oppressive; is in its truest essence, a mixed economy.

Now the question that your average free-market capitalist will ask you is why are Sanders and AOC anti-market then. Simply put, in the status quo, the Nordic model is not implementable in the United States. The Nordic Model needs the corporates to come in the same power position as workers which requires the State to actively devalue these corporations.

When the sun sets over another day of worker exploitation into the night of never-ending darkness, it is not about knowing the right answers, it is about asking the right questions.

Creating a level playing field is extremely necessary to roll out a system that would remove the protections the masses hold against exploitation currently. Moreover, the Nordics were able to construct the welfare state largely because of homogeneity in their population. Homogeneity ensures a key element for any reform: trust. When the people can trust their government enough to know that it would look out for its interests, that is when the State gains an impetus in its power and holds over its interests, that is when the State gains an impetus in its power and holds over its population. Our systems are not ready to shift overnight to a new mechanism altogether; they are not supposed

to be. Gradually, increasing government spending on education, healthcare and taxation is needed. Recreating the world Nordics built cannot be executed by proclaiming the announcement of a new era of reforms. It needs a fundamental change in the direction of the policies of the government.

The Nordic Model does not need a label; no one except the privileged is bothered. We need academicians and economists to ponder over how this model can be implemented in countries that do not have a strong essential services framework or are not homogenous.

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IS AGRI-TRADE SUSTAINABLE?

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Over the years agricultural trade policies have been dictated by comparative advantage with respect to production costs. Does the adoption of sustainable agricultural practices call for a relook into the global trade regime?

The emergence of global value chains (GVCs), rising income levels and demand across the world has led to an unprecedented rise in the share of international trade in global economic activity. At the same time, international trade has contributed to global biodiversity loss¹ and around 30 per cent of global threats to species.² International exchange of agricultural products has been one of the primary reasons behind the high social and ecological footprint of trade- accounting for 50 per cent of habitable land use, 70 per cent of freshwater use, and 78 per cent of the global ocean and freshwater pollution.³ Around the world, it can be observed that agricultural production has not always adhered to the best ecological practices, thus explaining why the sector's carbon and water footprints have been so high.

Most countries today are more dependent on food than they were two decades earlier.

“With the agriculture sector being highly dependent on the natural environment, trade in agricultural products have multiple feedback mechanisms that affect the environment.”

This puts international agricultural trade policy at the heart of sustainable agriculture and the overarching Sustainable Development Goals (SDGs). While imports of food help several countries ensure food security, current practices suggest that cheap food is actually

expensive in terms of the social and environmental costs it entails.⁴ Therefore, unless countries implement their agriculture and trade policies in a manner that is sensitive to their external environmental footprints, the global agenda for sustainable development will cut a frustrated figure.⁵

Patterns of international trade rely on comparative advantage, which is reflected in the relative prices of goods as the basis of arbitrage between trading partners. The relative price of goods, in turn, is dictated by several factors such as resource endowments, competition policies, government subsidies and taxes. Coupled with these factors, comparative advantage is also largely influenced by environmental regulations and standards. Quite often, countries utilise these tools to influence the competitiveness of their export sectors, and at times faulty understanding or implementation results in a conflict between trade competitiveness and environmental sustainability.⁶

Analysing the current trade regime

Analysis of whether free trade in agriculture and sustainability are compatible starts with the rules of the World Trade Organisation (WTO). They form the basis of the bilateral and multilateral free trade agreements that countries sign with each other. In the language of the WTO, the trade rules serve to protect the principles of national treatment and non-discrimination.⁷ Exemption clauses in the WTO structure authorises discrimination when it is for a 'legitimate' purpose. But such exemptions must be based on scientific evidence. This is the fundamental principle of the various agreements

under the WTO on various forms of trade. An important component of trade in agricultural products is the Agreement on Agriculture (AoA) that was signed during the Uruguay Rounds of the GATT (General Agreement on Tariffs & Trade) and came into effect in 1995 with the formation of the WTO. It focuses on three main issues: market access, domestic support (reducing subsidies to domestic producers) and export competition (limiting the distortions in agricultural trade caused by government intervention and subsidies). The AoA put domestic and trade policies of the WTO members under the ambit of international rules for the first time. However, the whole process of examining whether the policies are trade distortionary or not depends upon the functioning of the Dispute Settlement Body (DSB). Unfortunately, the DSB has been rendered ineffective by the blocking of the appointment of new judges to the Appellate Body (AB). This is only one of the many concerns with the current state of the global trade regime characterised by the WTO.

The objective of AoA was to promote a fair and free market-based agricultural trading system. But the global agricultural trading system is far from being perfect; moreover, it has not been equitable. In fact, agricultural protectionism has not gone down despite attempts made during the Uruguay and Doha rounds of the WTO, and a large share of it is accounted for by the developed countries. For example, the AoA called for a reduction in domestic support towards the agriculture sector across developing and developed countries. But a study of eight developed and twelve developing countries have shown that the developing countries face a restricted policy space in terms of providing support to their farmers, who are predominantly poor, while developed countries continue to provide trade-distorting support to their farmers.⁸ While this has had adverse impacts on the livelihoods of farmers in the developing countries, who are already restricted by the small size of their landholdings, subsistence farming, lack of institutional support and marketing facilities, the AoA has also led to unequal ecological exchange. In a recent study of 41 countries (20 rich and 21 poor), it was shown that the AoA had a disproportionate impact on the poor and rich nations. Impact of trade on four variables - nitrogen concentration, phosphate concentration, carbon dioxide emissions from cereal production and carbon dioxide emissions from dairy and meat production - were examined. Estimates suggest that wealthier nations have lowered their agrarian pollution by importing rather than producing crops that have higher toxic fertilisation and ecologically impactful production methods.⁹ Furthermore, several studies have also shown that the impacts of climate change, a significant share of which is caused due to unsustainable agriculture, will also disproportionately fall on the developing and less developed countries.¹⁰

Despite the claims that free trade leads to gains for all, it is still unclear whether free trade can promote sustainable agriculture. Firstly, one of the channels through which it can be promoted is the labelling of products that are made ethically and sustainably. But even then it would

depend upon the presence of ethical consumers, who, at the moment, suffer from a phenomenon known as the attitude-behaviour gap.¹¹ Secondly, trade can promote sustainability if farmers, in both developing and developed countries, are incentivised to adopt sustainable production techniques that preserve soil health, do not lead to water scarcity and so on. However, addressing this will require customised policies for the farmers in the developed and developing worlds because the root cause of unsustainable agricultural practices in these two different categories of countries is largely different.¹² Only a coordinated effort through global governance can facilitate such a process of policymaking. And unlike the AoA, which was led by the developed nations, primarily the United States and the European Union, the challenges presented above demand a new agreement or framework for international trade in agricultural products. One which is convergent with the principles of sustainability and will require acknowledging the growing importance of developing and less developed nations in global agriculture and food systems. On the whole, as argued by Moon (2011), agricultural sustainability is not congruent with the current free trade regime that emphasises achieving short-term benefits through competition in terms of production costs that are lowered through large-scale production, standardisation, uniformity and undervaluation of the natural capital.¹³

The WTO in its current state is preoccupied with achieving liberalised trade and fails to acknowledge the diverse and complex nature of the modern agricultural food systems and thus, does not promote sustainable agriculture. A well-functioning trade market for food is undoubtedly crucial for addressing the problems of food security in future, especially because growing population and climate change will have complicated impacts on agricultural productivity across the world. But, prior to that, it is imperative that efforts are taken to mitigate the impacts of climate change on agriculture in vulnerable regions and regulate unsustainable agricultural practices. Therefore, the challenges associated with agricultural production and trade must be addressed through a global governance system that captures the dynamics of the food system more holistically than the WTO in its current state.

This would require changing some of the existing rules, or at least modifying them to meet contemporary requirements. Although it may not be the best time for multilateralism, given the backlash it has been facing worldwide¹⁴, it is still our best bet against the inherent problems of the global agriculture and food system. Global problems will require global coordination even if the interventions required may be local, regional or national. In fact, transnational cooperation at the global level is necessary to avoid the 'free rider' problem associated with the provision of global public goods like food security, sustainability and climate change, which are intrinsically are intrinsically linked with agricultural

production.

Reorienting the focus of global trade

One cannot deny the importance of trade in ensuring food security across the world, but under free trade, the welfare gains from cheaper imports may be outweighed by the costs of irreversible environmental degradation. However, overcoming this challenge would require identifying the unique problems associated with agriculture across the world. Moon (2011) has identified four heterogeneous groups of countries based on the nature of problems in their agriculture sector and export/import status. Table 1 suggests that promoting sustainable agriculture cannot be done following a one-size-fits-all approach. Addressing the problems of the respective groups require unique interventions.

Table 1. Four major groups based on agriculture issues

Category	Example Problems
Developed and net exporter (A)	U.S., E.U. • extensive subsidies <ul style="list-style-type: none"> • industrialized monoculture • rent-seeking special interest groups
Developed and net importer (B)	G10. • small farm holdings <ul style="list-style-type: none"> • import-dependent
Developing and net exporter (C)	Brazil, Argentina, Malaysia, Thailand, Vietnam. <ul style="list-style-type: none"> • agriculture production encroaching tropical rainforests • loss of ecosystem services
Developing/LDCs and net importer (D)	South Asia, Sub-Saharan Africa <ul style="list-style-type: none"> • poor infrastructure • low productivity • food security

Even the WTO acknowledges the diverse nature of problems and has mechanisms like the ‘box system’ and the ‘special and differential treatment’ (SDT) provisions in place.^{15,16} However, both these mechanisms have failed to be practically useful for the developing and the least developed countries (LDCs).

The focus of the global trade regime has been too myopic due to its emphasis on liberalised trade as an engine for

growth. Had agricultural trade liberalisation not been such a contentious issue, the Doha development agenda would have concluded on a positive note. Instead, global trade rules must allow adequate policy space to each of the four groups of countries to address their respective challenges related to the agriculture sector. The WTO must be reformed to include provisions that allow for a coordinated approach for dealing with transnational problems associated with agricultural production. In this context, it is necessary to emphasise that the objective of the WTO should be to promote fair trade. Neither free trade nor import-substituting nor inward-looking policies can be successful in solving complex global problems like those associated with agriculture. In this regard, both proponents and opponents of liberalised agricultural trade have got it wrong.

Fair trade can be promoted by incorporating policies that rely on scientific estimates of the ecological and social footprint of agricultural commodities across value chains. Goods should be levied additional charges based on the footprints of their production processes. Consequently, the comparative advantage would be determined by lower ecological and social footprints and not just lower costs of production. This would perhaps drive trade towards patterns that are more sensitive to the ecological and social concerns surrounding them. The WTO, however, would have to continue playing its regulatory role to ensure that the information on ecological and social footprints are authentic and that countries do not illicitly lower their footprint labelling. But at the same time, countries belonging to each of the four groups should be given adequate policy space to lower the harmful footprint of their production process through measures that suit their unique socio-economic characteristics.

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[7] The rules are responsible for addressing the following issues of international trade:

- *Discrimination: Non-discrimination is the underlying principle in this case. It is mandatory for all members of the WTO and GATT to treat products from all member countries in the same manner and no less favourably than its own domestic goods or goods from their Most Favoured Nations (MFNs).*
- *Exemptions: Certain measures are exempt from GATT rules, especially ones that are related to the protection of the environment (human, animal, and plant life in particular) as well as measures relating to the conservation of exhaustible natural resources.*
- *Barriers to Trade: WTO's Technical Barriers to Trade (TBT) Agreement ensures that all technical regulations, standards and procedures are non-discriminatory. It also ensures that the technical regulations do not create obstacles to trade.*
- *Transparency: WTO and GATT rules aim to make the process of agricultural trade more transparent by:*
 - *Increasing consultations with stakeholders*
 - *Providing timely information and notifications to stakeholders*
 - *Providing a time frame that is sufficient for the stakeholders to adapt and transition to more ecologically sustainable practices*
 - *Providing capacity-building assistance as well as technical assistance to developing countries.*

[8] Sachin Kumar Sharma et. al., "Revisiting Domestic Support to Agriculture at the WTO: Ensuring A Level Playing Field," Working Paper No. CWS/WP/200/56, Centre For WTO Studies, Delhi (2020).

[9] William Ash and Nikolay Anguelov, "The Environmental Impact of the GATT Agreement on Agriculture: An Evaluation of the Disproportionate Short-Run Effects in Rich and Poor Countries," 77th Annual MPSA Conference, International Political Economy Section, Environmental politics session (April 5, 2019).

[10] For more details refer to Moon (2011), page 19.

[11] Roshan Saha, "Sustainable Consumption: A big gap between consumer attitude and intent?" ORF Expert Speak (April 2, 2021). Accessed at: <https://www.orfonline.org/expert-speak/sustainable-consumption-big-gap-between-consumer-attitude-intent/>

[12] Industrialised agriculture in developed countries has led to high chemical usage, overuse of irrigated water, soil degradation etc. At the same time, in developing countries like India and China, the small size of landholdings, low income of farmers, poor returns from farming and poorly planned government support prices have led to poor crop choices that do not suit the agro-climatic zones and inefficient use of natural resources. Thus, the cause of the nature of unsustainability is different for developed and developing countries.

[13] Wanki Moon, "Is agriculture compatible with free trade?" *Ecological Economics* 71 (2011).

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[15] See "Domestic support in agriculture: The boxes." Available at: https://www.wto.org/english/tratop_e/agrie/agboxes_e.htm

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THE NIGHTMARE ON WALL STREET

BY ANANYA DHANUKA

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Can conventional theories justify the volatile behaviour of stock markets in the 21st Century? Or should we accept investor irrationality and evolve?

The Efficient-Market Hypothesis (EMH) forms the foundation of Modern Financial theory. It assumes a perfectly efficient and rational market, free of the problem of epistemology. It states that asset prices in a stock market fully and correctly reflect all available information. This is often defined in three degrees such that prices reflect not only historical price information but also all publicly and privately available information relevant to a company's securities.¹ The direct consequence of this is that stock prices cannot be influenced by factors other than true information pertaining to the actual state of the company.

This hypothesis makes 'beating the market' a non-existent phenomenon. The market is assumed to be efficient to the extent that investors cannot speculate changes in prices and outperform it. It also assumes that an investor who is rational forms rational expectations based on complete information and then maximises expected utility given those expectations. The market need not be 100 per cent efficient all the time since prices take time to adjust. The hypothesis allows for random or 'chance' occurrences occasionally as long as in the long run, the prices revert back to the norm.

While this is widely accepted and applied, it also attracts a fair share of criticism. This is rooted not only in academic discourse, where increasing research in human psychology begs to differ, but also in the practical world, where present stock markets have become extremely volatile due to irrational factors. By allowing for 'chance events', the EMH undermines its own theory by market inefficiencies.

As far as investors are concerned, they are seldom

rational beings as assumed in conventional theory. Their interaction with markets is subject to two causal factors: limits on processing ability (i.e. deciding how to process the information rationally) and limits on attention (i.e. deciding what piece of information is important enough to process).²

Several events witnessed in recent years, especially in the year 2020-21, bring out the inadequate practical applicability of the EMH, both due to asset pricing and investor behaviour. This brings to the forefront that EMH does not fully reflect the market realities. Consequently, this paves the way for behavioural finance and its principles to step in and provide adequate reasoning for the occurrence of these bizarre events.

One of the major pieces of evidence for the claim is an event that shook Wall Street. An exponential rise in share prices of GameStop, the world's biggest video game retailer, caught the attention of the entire world in January 2021. It was especially surprising because, over the past two years, its share price had sunk to as low as five dollars.

Encouraged by influential bullish posts on a subreddit named 'wallstreetbets' on the popular social media site Reddit, GameStop's shares soared 1000 per cent as millions of small investors hoarded the stocks. It was concerning because GameStop was swimming in debt.

This unprecedented situation perplexed many and raised important questions on Wall Street. If the firm was in losses, why were investors behaving in an inefficient manner by buying more? If prices always revealed true

and complete information, then why did GameStop's price surge to \$483 from \$5?

The answer is rather simple: Investors are *Homo sapiens* and not *Homo economicus*. They suffer from systematic behavioural and cognitive biases. These events stand to prove that these psychological phenomena pervade the boundaries of rational and efficient market conduct. Robert Shiller (2003)³ captures the picture perfectly when he writes,

“Excessive volatility in price changes occur for no fundamental reason at all, such that it seems they occur because of such things as “sunspots” or “animal spirits” or just “mass psychology.”

Purchasing stocks based on price momentum is known as herd behaviour in the behavioural finance arena. The influential traders on Reddit effectively utilised herd mentality to raise the prices. The intent behind the GameStop frenzy was to carry out a short squeeze as a revolt against the big hedge funds, who had extensively shorted the stocks. Whether these series of events actually led to substantial losses for the big institutional investors remains a question.

The argument here is not to challenge the intent of the retail investors' actions. Many have hailed them as “using the spells of Wall Street against them”. Wall Street manipulates the market by using financial tactics, and having a strong grip on investor sentiment (essentially translating into behavioural finance) behind closed doors, while the investors did it publicly. The concern here is the ease with which an ‘efficient’ market can be manipulated to meet the predilection of both, mobs of retail investors and the oligopoly of institutional investors.

Retail investors managed to create a ‘GameStop Bubble’ by creating an environment that closely resembles the initiation of a mass financial one. This bubble was fuelled by the availability heuristic. The increasing number of investors purchasing these shares led to ‘cascades’ in which everyone wanted a piece of the pie. Investment fashion and fads, and the resulting volatility of speculative asset prices, appear to be related to the capriciousness of public attention.⁴ One would question whether people even realised the risks they were undertaking. However, investors were caught in a sunk cost fallacy i.e. they continued a behaviour or endeavour as a result of previously invested resources (time, money or effort).

Beyond exhibiting the core principles of behavioural finance, the investors portrayed the perplexing psychology of gambling. A tendency to gamble, to bring on unnecessary risks, poses a challenge while understanding human behaviour under uncertainty. This is because it means we must accommodate not only

risk-averse behaviour but also risk-seeking behaviour. The complexity of human behaviour exemplified by the gambling fallacy has to be taken into account in understanding the aetiology of bubbles in speculative markets.⁵

The speculative trading of GameStop shares is not an isolated incident. Over the past years, social media has often drastically impacted stock prices. Elon Musk, one of the world's richest men and the CEO of Tesla, has been at the epicentre of several such instances. Bitcoin's value jumped by more than 20 per cent after Elon Musk changed his personal Twitter bio to “#bitcoin”, fueling speculation of greater buying. On another occasion, Musk tweeted, “Use Signal”, which led investors to buy stocks in a frenzy, resulting in a 200 per cent rise in the prices of the new digital communication app. However, it also led a small fraction of investors to accidentally buy shares in Signal Advance, a completely unrelated firm, sending its stock up 1000 per cent. His tweet, “I kinda love Etsy” led to stock prices of the online craft marketplace subsequently soar by nine per cent. His tweets on Dogecoin have led to considerable volatility in its valuation. This is not all. He jumped on the bandwagon and tweeted, “GameStonk!” to fuel the already rising tide.

How can a person's personal tweets on a social media platform influence market prices by such a margin? Can we call investors epistemically rational when they purchase the wrong stocks in this mass frenzy?

These instances are a hard blow to the efficient functioning of markets. The concentration of power to influence stock prices is a wake-up call for both regulators and conventional finance academics. The Halo Effect, a behavioural bias, is visibly apparent in these reactions. Halo effect is the phenomenon whereby evaluators tend to be influenced by their previous judgments of performance or personality. The impact of Musk's tweets has led to research papers analysing its correlation with the volatility of short-term cryptocurrency returns and volume. Lennart Ante (2021)⁶ refers to this as the ‘Musk Effect’. The abnormal trading activities and increasing volatility of prices require and demand behavioural justifications.

Speculations rather than productive investment have become the fuel of the stock market. However, conventional wisdom would claim that these speculative events are short-lived and prices return back to the norm. Any agent in the financial sector would want to avoid this excess volatility but there are subsequent behavioural biases preventing price stability. The investors who gain or lose in a tide of speculative activities, fuelled by social media, suffer from Cognitive Dissonance and Regret Theory. This translates to the idea that there exists inconsistency between what people believe and how they behave. Thus, this ends up encouraging them to engage in actions that will help minimise feelings of discomfort. This results in people rejecting or avoiding new information that may prove their actions to be false or harmful.

Regret Theory means that people fear the feeling of regret in the face of losses made due to bad investment decisions and therefore continue to hold on to losing stocks.

Another path to restore efficiency in the system might originate from regulating manipulations arising from social media, since that plays on behaviour rather than logic. The problem here is that the U.S. Securities and Exchange Commission (SEC) also has restrictions. Traditionally, manipulations are illegal if people created a false sense of volume and interest, or spread false information to drive a stock price up (or down) in the form of a pump-and-dump scheme (Bruce Brumberg, 2021). Whether the hype created on social media, where the intentions and information were clearly stated, will invite regulatory action remains unanswered.

The frequency of such occurrences is concerning, given that the root cause is highly questionable. Firstly, it creates instability in the overall functioning of the system. Secondly, there are windfall capital gains and losses, which are unaccounted for. More often than not, the small investors are the most impressionable and the most vulnerable. Lastly, there occurs a frenzy of retail investor trading based on 'social influence' rather than on financial evidence and rational reasoning.

Behavioural finance has been successful in breaking down the behaviour of investors that leads to the occurrence of 'speculative bubbles' in the market. Investor attention in the market seems to vary through

time. Major crashes in financial markets appear to be a phenomenon of attention, in which an inordinate amount of public is suddenly focused on the markets.⁷ Michael Burry too has sounded the alarm on speculative stock bubbles and their rise as gamblers take on too much debt.

Erratic investor behaviour has become rampant and begs to question the validity of the Efficient Market Hypothesis. While the evidence¹ for criticising the EMH is abundant, there is empirical evidence suggesting its efficiency as well. It is also crucial to realise that although the aggregate stock market appears to be wildly inefficient, individual stock prices do show some correspondence to efficient market theory.

Overall, the leaks of inefficiencies in the rational market system are plugged by the ideals of behavioural finance. The most important lesson from this analysis is that investors need to look into the insights provided by psychology as a means to scrutinise their own decision-making in order to remain rational. While adopting a model, in whatever tradition, it is essential to acknowledge the limits of the model, the rationality of its approximations and the sensibility of its proposed applications.⁸ Neither of the theories, in their current form, serve to provide a sufficient explanation of the real market functioning. However, they have the potential to do so by complementing one another and painting a more realistic picture.

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GREEN FINANCE COMES OF AGE

BY GAGAN SINDHU

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With an impending climate crisis facing the world, prioritising sustainability becomes a non-negotiable part of every human endeavour. Given its burgeoning growth, India's successful adoption of green finance becomes decisive in ascertaining whether the economy capitalises on or capitulates to the climate crisis.

Green finance represents one of the greatest opportunities of our times. However, until recently, it was not really mainstreamed but had rather remained on the margins of the financial ecosystem. The pandemic appears to have changed that and has caused the greening of finance to come under sharp focus. It now looks poised to become one of the central pillars of the global financial ecosystem.

The World Economic Forum defines green finance as “any structured financial activity – a product or service – that’s been created to ensure a better environmental outcome”. If looked at from a slightly wider perspective, green finance, sustainable finance and climate finance can all be said to fall under the same broad umbrella, with energy transition playing a key role in driving them.

The Centre for Energy Finance at the Council on Energy, Environment and Water (CEEW-CEF) estimates that \$200 billion will be required by 2030 to fund India’s renewable energy (RE) generating capacity targets. CEEW-CEF further estimates that a similar quantum would be required to achieve NITI Aayog’s 2030 vision for electric vehicles (EV) penetration. Even more will be required for associated storage, transmission and charging infrastructure for both RE and EVs. Add the amounts (yet to be quantified) that will be required to fund India’s recently announced National Hydrogen Mission, and we are talking in excess of a trillion dollars in the coming ten years.

“ A pandemic-driven greater realisation and focus on green means that sources of capital are themselves more actively seeking out green. ”

The more developed international markets have certainly shown the way. Globally, 2020 saw green bonds crossing the cumulative \$1 trillion issuance mark since they first emerged on the scene in 2007. The year of the pandemic also saw Tesla cross Toyota in terms of market capitalisation in July 2020. In another three months, i.e. by October 2020, Tesla stood at two times Toyota’s worth and in a further three months, i.e. by January 2021, Tesla had eclipsed Facebook in terms of value. Just this month, Bank of America announced that it would invest \$1 trillion towards environmental business initiatives by 2030, thereby more than tripling its earlier \$300 billion commitment made only two years ago. This is the pace at which momentum is picking up for green.

Moving to India, the sheer scale of the opportunity is equally what makes it a challenge. To put it into perspective, the aggregate market capitalisation of all the companies listed on the Bombay Stock Exchange (BSE) was estimated to be \$2.75 trillion a couple of months back. This means that the energy transition will require funding over the next decade in the order of more than a third of the aggregate value of every publicly traded company in the country. Suddenly ten years does not seem like a long time anymore. So where will this money come from? And what can be done to

catalyse the process?

What this means from a funding perspective is that no single source of capital by itself will be sufficient enough to meet the challenge. Infrastructure in India has traditionally been bank and Non-Banking Financial Company (NBFC) financed, with only the most highly rated entities capable of accessing cheaper capital via the domestic bond market. But, the capital requirements for the next decade dwarf what the domestic banking system can meet by itself. It is important to point out here that the overseas bond markets have been very receptive to issuances by Indian RE developers. The first three months of 2021 alone saw overseas bond issuances aggregating to \$1.75 billion by Greenko, ReNew and Hero Future Energies. But, the irony here is that these same developers are not able to access capital from the domestic bond markets due to its extremely credit-sensitive nature. Interventions that open up the domestic bond market to RE developers can be a key catalyst in adding a complementary source of capital to fund the energy transition. Specifically, a limited-period and subsidised credit enhancement of INR 4,543 crore (\$649 million) as proposed by CEEW-CEF, and spread over five years, has the potential to open up the domestic bond market to developers. It could mobilise capital 16 times the subsidy amount, thereby debt financing a doubling of India's solar capacity.

However, fully tapping traditional and large-scale sources of finance is not enough. For example, the transition to EVs is expected to be led by vehicles in the

low-cost, high-volume end of the spectrum. Financing this transition means overcoming the continued reluctance of traditional sources to fund EV purchases. This reluctance stems primarily from concerns surrounding technology and the lack of depth in the secondary market. More importantly, this reluctance has also led to two financing barriers. First is a lack of choice in terms of financing. Second, where finance is available, it is costly. The setting is thus ripe for new financing business models to emerge that reflect the disruptive nature of the mobility transition itself.

Funding for green hydrogen will need to be thought of in an altogether different manner. Putting capacities up in a sequential manner may be the answer here, with those that cater to export markets leading the way. This opens up possibilities of direct financing from pools of capital from the destination countries, which could play a catalytic role in spurring economies of scale.

Whichever way one looks at it, the energy transition is well and truly underway, and green is poised to assume a central role in the global financial ecosystem. India is a key player in the global energy transition and happens to be one of the few countries which appears set to exceed its 21st Conference of the Parties (COP-21) commitments. The opportunities for green finance straddle across market segments and delivery points and are there to be seized by market participants on both the demand and supply side of the financing equation.

PAX INDICA: DHURVA JAISHANKAR



INTERVIEWED BY CHIRAG BANKA AND MAITHILI SHARMA

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Technology, by nature, is one that breaches geographical barriers, even more so, ones based on blockchain. How do you think diplomacy in the future will adapt to a certain sense of powerlessness on this front?

Technology, in some ways, is the new buzzword in geopolitics. Suddenly, it has garnered a lot of interest from policy and governmental institutions. Governmental institutions are starting to set up strategic divisions focussing on the geopolitics of technology. The Ministry of External Affairs has also set up a new division: NEST(New, Emerging and Strategic Technologies) for the same purpose. Several countries such as Denmark and Australia have appointed designated ambassadors for this. Now, why is this the case? Technology has always been a factor in geopolitics, and major technological breakthroughs have led to shifts in global power, often, to very significant ones. In the last century, computer and nuclear technologies have been significant in the determination of war and peace. In some ways, it is a natural progression that there should be a focus on science, technology, research and innovation. But it goes beyond this as well. In recent times, due to the nature of economies and economic competitiveness, countries with a technological edge will reap significantly more benefits than those who don't. These technological competitions that are being discussed have high implications when it comes to the relative growth rates of countries.

I would warn about some of the buzzwords that are being thrown around. A part of it is being done deliberately to gather attention towards certain things. All these are certainly quite useful technologies but

they have specific applications and the idea of such technologies single-handedly revolutionizing everything is a little glorified. Technologies like cryptocurrency give an idea of altering the nature of traditional currencies, but there are also many reasons to be sceptical of such outlandish things. Even then, I would highlight some key technologies that will be very significant and have a high level of potential in the future. First is the increase in the technology of the telecommunication space, with the advent of 5G and even 6G in the next decade or so. Another is the increasing importance of technology in the space of cybersecurity against foreign interference and sabotage. And the third is automation like those of artificial intelligence and machine learning, which will play a significant role in shaping the future. The focus on these clusters of new and emerging technologies is increasing and how these could impact the national economies.

The common belief is that it is unfair for the Global North to have caused trouble with regards to pollution & climate change on their way to become developed and now, expecting the Global South to not follow the same path. Do you think there is a multilateral solution to counter this issue while ensuring climate justice?

This has been a long-standing issue since the 1980s and 1990s in particular. There was a growing awareness about the problem of climate change and finding a solution required global cooperation. The idea of a common but differentiated responsibility emerged with the Kyoto Protocol. The developed world had a greater responsibility, having developed previously but also having greater resources to address the problem than

the developing world. This process eventually led to the Paris Climate Treaty, where every country put forward voluntary commitments. The thinking underlying all of that was that India would not be expected to do exactly the same as the United States or Australia, at least on a per capita basis.

Things went haywire partly because of the US withdrawal from the Paris Climate Treaty under Donald Trump and they have now come back in, under Joe Biden. It was realised that the Paris commitments are insufficient and countries can certainly do more. This has led to talks of doing something more ambitious, that is Paris Plus. This shall be enabled by technological developments, renewable energies, and innovation in the transportation sector. There will be a summit in November of this year in Glasgow, Scotland, where we will be renegotiating these targets and there will be another round of what commitments the countries are able and willing to make.

I think the Indian position here is quite clear. Further commitments can be made, so you can take a constructive approach towards this. The developed world has to help to subsidize the green and sustainable transition of the developing world economies. The big negotiations that will take place over the next six months will largely concern those financial mechanisms. And in this case, India will play a leadership role given it is one of the largest developing world economies and the issues it faces will be very similar to issues that countries in Africa, Southeast Asia and Latin America will face. So, there are two things that one should look for - what kind of commitments will be made by countries beyond Paris, and if they can be adequately compensated for; and the second thing is a long term commitment to what is called net-zero emissions. China and Japan have already made such commitments, and it will be important to know if India can make a commitment of that sort. There is a bit of a problem with that as sometimes these long term commitments are so much in the long term that they don't really mean much. But the notional commitment will at least go some way in focusing people's minds onto what is actually required. And for India even if this transition takes four or five decades, it will be huge. It will require significant changes in the transportation sector, wide-scale electrification of the industrial sector, renewables coming on line much faster, and it will require fossil fuels to fall to about five per cent of India's energy. So, this will be a massive transformation if it happens, but it will take several decades.

Recently, Russia's Foreign Minister described relations with the US to be worse than during the Cold War era. With India's dependence on Russia for strategic defence imports and a growing closeness with the West, how do you think we ought to balance the narrative?

India and Russia are both large and autonomous countries. It is natural that there will be some commonalities and some international cooperation and certain areas of difference as well. The major advantage is that there is no scope of

natural friction between Russia and India, i.e. no border dispute with them and that has led to a very cooperative relationship between both nations, even during the cold war, although the social, cultural and economic links have been weak. But there are some areas of difference - Russia's differences with the west are much more existential than India. You can see this in Ukraine or Georgia where the interests of Moscow are quite different from the interests of the US or Western Europe. India's primary issues lie with China and Pakistan but not with the west. The real challenge is that the Russian relationship with the west is getting so competitive that it is leading to a much closer relationship with China. The Russia-China relationship has been at the best since the 1960s. As Russia and China are engaging more in terms of energy, ballistic missile defence and intelligence, along with India's own differences with China, this is spurring the concern. Both countries should preserve their positive cooperation while perceiving that there are some existential challenges that run counter to each other. For example, in Afghanistan, Russia has taken a position against the western military presence while India has benefited from that same military presence. But even then, I don't think that it could lead to a fracturing of the bilateral relationship. 2+2 Dialogues have been happening and attempts are being made to revive the relationship.

Development is becoming part of ideological competition between the two top powers in the world. China and the US are both seeking to defend or widen their zones of influence. How do you think multilateral institutions can work to prevent the development agenda from being a victim of these geopolitical tensions?

I ascribe to a slightly different view than what is premised in the question, which is that multilateral institutions function as a result of the behaviour and actions of the sovereign states. So, the United Nations (UN), International Monetary Fund (IMF), the World Bank or any other multilateral institution is not in a position to impose its will on particularly large and powerful countries like the US and China - their effectiveness actually flows from the cooperation between the US and China. So, if you look at it that way, it presents a somewhat pessimistic picture about the future of international institutions. Assuming the US-China relations become more competitive in the future, this will mean that these institutions will begin to hold much less power. But that does not mean that all institutions are doomed. However, we will see these institutions starting to become more ineffective.

Let us take the example of the UN. The US and China are both members of the UN Security Council, so unless there is a commonality of agendas, they will veto each other and that will make the UN Security Council less effective. I would look at it that way, rather than looking at multilateral institutions as being the factors that will dampen the competition. And that again does not bode very well for the global development agenda since there will then be competing development

agendas and narratives for the world. But if there was to be new leadership in one of the two countries, that might significantly shift the agenda. So barring a sudden change in one or both countries, we will see weakening international institutions going forward. This may create opportunities for countries like India or even for sub-regional or topical cooperation with one or both of those countries. So you will see areas where India will cooperate with China more than it will with the US and also the other way round given the differences India and China have with each other.

The Washington Consensus of the US has a few distinctive features, one of them being the global military supremacy of the US. The other feature has been a neo-liberal economic agenda, which is now being increasingly criticized within the United States claiming that the US has not been the biggest beneficiary. If the contribution to global growth under the Washington Consensus was to be your metric then China has been the number one beneficiary, the second has been the US and India a distant third. The Chinese model that is emerging is obviously looking very different. It is not driven by a sense of equity. There was a conception that China would become more of a consumer market, and the manufacturing would shift out of China to places such as India, Africa and Southeast Asia. However, this has not happened, partly due to continuing Chinese support for state-owned enterprises and the provision of subsidies for manufacturing. So, China has a very different policy which is in conflict today with the Washington Consensus, ironically from which China has benefited significantly.

Next, regarding the Quadrilateral security dialogue (QUAD). What, according to you, are the challenges that it could face in the next ten years, in establishing peace and stability in the Indo-pacific region. Do you believe there is a strategic over-reliance on QUAD by India?

On the second part; until the summit took place in March this year, there were two simultaneous criticisms going on that it was too provocative and securitised and also that it was not doing enough. Therefore, I don't think that the idea of strategic over-reliance on QUAD is present. There is surely a lot of hype about it in the media but the answer would be still fairly no. As far as the challenges are concerned, the most primary challenge that the QUAD will face will come from within the QUAD countries. Each country has their own sets of challenges whether it is economic, military, social or cultural differences and obviously, their ability to align with the other member countries. There is a concern about over-commitment and under-delivery which is always present with any new institution. The Shanghai Cooperation Organisation (SCO) was once touted as the Eurasian NATO and it has hardly grown into that. Currently, the biggest initiative is vaccine distribution and production and this is the biggest test case for their enhanced cooperation in the future. Some of the agendas that it can delve deep into are deepening its security cooperation that benefit all four parties,

widening their agendas and including more economic and technological aspects to it. It should also seek to concretely help non-Quad members in various ways and start coordinating with multilateral institutions.

While some countries like Vietnam took advantage of the global averseness towards China-dependent supply chains due to the global pandemic, India too seems to have a fair chance of establishing itself as the next manufacturing hub with Production Linked Incentive schemes, Special Economic Zones and more. Is there a way forward for India to still ride this strategic wave?

Yes and no. Is it possible? Yes. Will it happen, at least at the scale some hope for? I think there are reasons for scepticism and caution. And I suspect that we would see some significant progress, perhaps in some states but not on a nationwide level. And I will give you the reasoning behind this. Vietnam has been able to take advantage of a lot of manufacturing and supply chain movement partly because of the fundamentals of its economy. So issues like infrastructure, land acquisition, stable investment regime, being part of the necessary trade agreements and sufficient human capital are the essential ingredients that they look for before establishing a manufacturing hub somewhere. Now if you run that list through India, you will see that India does not meet all the criteria, at least not fully. Some areas are obviously better than others. But again there are questions about sufficiently trained human capital, difficulties in land acquisition, the unsteady investment regime and there are concerns also about the constantly changing regulations. Infrastructure is an area where we have seen a concrete improvement. But even then if you take the example of power, now the generation capacity is there but the distribution capacity is still very limited. So when you take all of this into consideration, it makes it more difficult to make the case that manufacturing should move to India. Obviously, some of it is happening organically, so it is not all gloom and doom.

This is actually benefiting some states. States like Maharashtra, Tamil Nadu and Andhra Pradesh are better prepared and have a better environment for attracting that investment in manufacturing and will probably be the beneficiaries. However, other states are not doing as much. So that hunger to go out and compete for investment which would bring jobs does not exist. So is it theoretically possible for India to take advantage of the change? Yes, absolutely. Will that opportunity be seized? It is very hard to see India seizing it with two hands. And I suspect the result will be India seizing a lot of these opportunities one-handed which is better than nothing, I suppose.

To end with where we are right now - vaccine diplomacy has become a key talking point, with the government claiming that it has generated a lot of soft power by doing so. However, the WHO-supported Covax has, till now, struggled to bring about equity in the distribution; with rich countries at the front of the line, having made bilateral agreements with manufacturers. How do you see this situation playing out?

There are two or three elements related to that. One issue is agreements that all governments have entered into with vaccine manufacturers and private companies. There is pressure, particularly among western suppliers to meet their contractual obligations. We saw, for example, the Serum Institute of India got into agreements with Brazil, Morocco and the UK as part of the AstraZeneca production and obviously felt obligated to meet those contracts. That is one dynamic in play. There is a second dynamic in play, which is the countries using the vaccines produced on their soil for export. We have seen India donate around eight million doses, even more than that now to selected countries, often very small amounts to each country for key persons like health care professionals and so forth. And it is a small thing that goes a long way. India today is manufacturing three to four million doses of vaccines a day and if it has donated eight million vaccines, that is roughly its three days' supply. So the narrative about why India was donating vaccines when it could use them back at home is short-sighted and also not in proportion to the donations. India still is vaccinating more of its people than it has given it to others. The third element is the multilateral efforts, Covax primarily. Some countries are donating financially like Germany and the US, but are not doing sufficiently with respect to donating vaccine doses. And countries like Canada have been criticized

for being at the front for receiving the vaccines when it should be going to more lower-income countries. India has been doing its part, it has been providing a sizable number of vaccines for Covax. This has benefited India financially and that will help with India's own vaccine payments rollout. So these issues are getting somewhat conflated and there are contradictory tensions associated with that.

It is too soon to say whether India's vaccine exporting efforts have had any soft power effects, particularly since what has happened subsequently may have eroded a lot of that soft power given the worsening situation in India. There was a very recent survey conducted in Southeast Asia on the ten ASEAN countries' attitudes to the other major powers. One country where India featured reasonably well was Myanmar, which at that time was the only country in SouthEast Asia that had received vaccines from India. And that suggested to me that vaccine diplomacy has had some effect on public opinion towards India and its response to the coronavirus. Now, that is just one example, and it is unclear whether that translates everywhere. But it does seem like this was one case where India's goodwill had some positive effect on how people in Myanmar saw India's role in Covid.



**ECONOMICS
MAXIMISED**



CULTURAL CONTOURS AND ETHICAL ALLEYS

BY BHAVYA PANDEY

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Lying at the intersection of a myriad of disciplines, a true understanding of economics calls for an appreciation of both science and society. What roles do cultural and ethical values play in composing the economic basis, structure and development of a society?

Economic development encompasses the notion of the welfare of the people in terms of higher incomes and better standards of living. This income or standard of living may not be equal within or across nations. By virtue of its definition, the term ‘economic development’ entails the ideas of the management of economic systems, the socio-economic development of the society as well as the socio-economic development of regions.

Since society is a vivid, patchwork tapestry of experiences, cultures, and ethical ideals, the extent and progress of economic development hold varying connotations for the different threads of this tapestry.

There is a general acceptance that culture and ethics, and their construed ‘systems’ in a society, do have a hand in directing and anchoring the economic development of the society. Cultural shadowing entails understandable apprehensions—that of implied criticism of a particular culture¹—and thus is yet to be factored into the design and system of economic policy. As we embark upon the global strive of creating a post-pandemic world, newer and more inclusive approaches to policy-making are bound to be developed. These approaches can be assisted by leveraging the relationship between culture and economic development and hence, a paradigm

shift towards propounding ‘culture-factored’ policies becomes contextually imperative. Historically, one of the first strands of behavioural economics, which emerged in the 1970s, touted that people make biased judgements that are often grounded in their cultural exposure.² Keeping this in mind, newer approaches to policy-making can attempt to address the prevalence of, for instance, the long withstanding caste system in India, which is one of the reinforcers of economic inequality, through a confluence of behavioural and cultural aspects. On the backfoot, however, it is true that cultural factors are not all that can make our woes of economic recuperation cease to exist; albeit, they are relevant when we craft our responses to these woes.

Defining and Disaggregating “Culture”

The issues with relating culture and ethics with economics arise at the interpretation of the concepts that mark the contours of what is defined as ‘culture’ and good ‘ethical’ practices. The more all-encompassing the definition, the less helpful it tends to be in explaining the patterns of development.³ Economists have had many hands at defining culture, either as an identification of causal relationships i.e. “customary beliefs and values that ethnic, religious, and social groups transmit fairly unchanged from generation to generation”⁴ or as a shared trait i.e. “culture consists of habits that are shared by members of a society.”⁵ It has even been defined as a derivative of learning: “shaping a repertoire or ‘tool kit’ of habits, skills, and styles from which people construct ‘strategies of action.’”⁶ A lot of times, these approaches are largely dictated by the aim to identify and categorise behaviour. While economists

have recognized that decision-making is not always rational and consistent, they have had a hard time factoring the rationale behind this into their models, especially when looked at through the lenses of cultural inclinations and ethical behaviour. From this vantage point, developmental progress depends on changing not only incentives but also mindsets, cultural misappropriation and ethical practices, “— *any discipline that has to do with human behaviour needs to take into account how humans think and how society, history, and context shape this thinking.*”⁷

Due to the underappreciated impact of facets such as cultural mindsets or practices, we have struggled to rope in culture while addressing and delineating real-world phenomena through microeconomic or macroeconomic approaches, and have also made little room for culture-oriented or ethics-backed interventions in terms of policy-making.

The other set of issues that arise at the intersection of economic systems and culture stem from the fact that culture is not a constant. The malleability of cultural outlooks open up spaces and bottlenecks for economic development, if target goggles are donned while making policy decisions.

Channels through which Economic Performance can be Impacted

*“Culture is found to affect economic performance through two channels; cultural traits that stimulate individual motivation, and traits that develop social capital in the population.”*⁸ The ways in which these two channels manifest themselves in the cases of different social contexts is an interesting notion that many economists have worked to uncover and empirically establish.

“A researcher’s view of human and social action determines the degree to which culture is considered influential,” said Max Weber. He identified four ways through which humans rationalize during the decision-making process: (1) instrumental rationality, (2) value and belief-based rationality, (3) habits and traditions and (4) emotions. As a consequence of instrumental rationality not being the only or even the most important influence on human action, culture has to be acknowledged as a significant social phenomenon regarding economic matters.⁹

In view of these ideas, Maridal’s (2013) empirical research importantly highlights the following insights on the major trajectories in which culture affects economic prosperity:

1. By the level of achievement motivation revealed through the attitude towards consumption, work, and individual autonomy.
2. By the belief in certain moral and philosophical ideas that support the achievement-motivated values identified in the first trajectory.

3. By the belief and adherence of moral behaviour that produces honesty and extends altruistic behaviour outside the boundaries of the family or kinship. This is crucial in developing a more impersonal system of social trust and the modern market economy.

This research finds that community-oriented values are 1.8 times as strong a factor as formal education is in determining economic growth. Furthering this theme, Japanese economist Yoshihara Kunio wrote, *“One reason Japan developed is that it had a culture that embraced success. The Japanese attached importance to material pursuits, hard work, saving for the future, investment in education and community values.”*¹⁰

A parallel case study by Harrison underlines how anthropological factors affect human behaviour and in turn impact cultural nuances, which have further been correlated with economic prosperity and growth — both at an individual as well as a societal level:

“It will come as a surprise to many—it did to me—that, at least according to Angus Maddison’s data, India under the Mughals accounted for more than twenty per cent of the world’s GDP in the early 18th century, principally because of textile and agricultural production. That fact, coupled with the economic success of many Diaspora Indians, including those who have migrated to the United States, suggests the presence of Universal Progress Values in Indian culture.

India is a country of numerous ethnic and religious groups—it is, for example, the second-most populous Muslim country (after Indonesia). Which groups are major participants in and beneficiaries of the economic surge? What is the effect on the majority of elements of the society that do not participate directly in the modernizing sectors? What is the effect on women whose subordinate role in India is underscored by the fact that more than fifty per cent of Indian women are illiterate? These are among the many questions raised by the incipient Indian “miracle.”

Guido Tabellini, an Italian economist, in his study of Economic Development in the regions of Europe used data from the World Values Survey for trust, control of one’s destiny, respect for others and obedience to measure culture and its impact on economic development. He concluded that these cultural traits are strongly correlated not only with the economic development of European regions but also with the economic development and institutional outcomes in a broad sample of countries.¹¹

Cultural Relativism and Going Forward in Accounting for Culture and Ethics in Economic Policy

In view of these observations made in various cultural contexts across the world, cultural relativism, the theory that each society or culture must define its own values and that cultures are neither better nor worse, only different,¹² is an apt notion that summarises the arguments made by many ‘culture economists’ such as

Harrison and Weber.¹³ It makes economists who believe in the assumptions of rationality and incentives take a step back and relook at instances (such as that of India deconstructed earlier) where multicultural economies respond varying to economic incentives and opportunities that are, in fact, available to all. It is true that anthropologists and sociologists participate in the craft of project designing and policy-making to ensure that these nuances, which lie at the centre of a complex Venn diagram depicting society, economy, anthropology, behaviour, and psychology, are represented in the process; however, their focus has rarely been on

leveraging the knowledge of these nuances to bring about a cultural change or even an economic change by leveraging the values of culture or ethics.

Incorporation of cultural analysis and cultural change into the mix of policy and project design factors may significantly accelerate not only the pace of economic development but also the nature of it. Furthermore, the ethical representation of economic dilemmas in decision making can be instrumental towards making this growth equitable and inclusive in nature.

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YOURS DISHONESTLY

BY AASTHA JHA

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The interpretation and analysis of fraud through a cost benefit analysis has led to major shortcomings in public policy. The real question however is, how can conscience be evoked to decrease frauds in society?

Billy Joel hit the nail on the head when he sang, “Honesty is such a lonely word. Everyone is so untrue.” But in expressing his regret over deceptions of love, he probably didn’t fathom just how pervasive dishonesty is in an economic sense.

Most of us would deny having engaged in actions that come under the label of ‘fraud’. And why wouldn’t we? Personally, the label immediately paints a picture of Akshay Kumar in *Special 26*. As much as I enjoyed the acting, I’d like to believe in my disinclination towards looting a jewellery shop even if it involves the thrill of doing it under the nose of the Police Chief.

The traditional economic theory behind decision-making, namely the cost-benefit analysis, suggests that a fraud measures potential gains as well as the probability and cost of being caught. This is known as the Simple Model of Rational Crime (or ‘SMORC’).¹ Often, this theory is used to understand and predict the actions of serious criminals such as those involved in bank robberies.



The rational cost-benefit approach discusses only external factors such as risk, potential punishment and material reward. It dissolves the role of internal traits, namely human conscience. Consequently, the policies framed to limit crimes focus on increasing costs.

The lack of conscience associated with dishonesty and fraud is the primary reason why we wouldn’t want our identity to be tied to the same. Personally, I think the presence of a conscience automatically makes me *not* a fraud.

Unfortunately, Dan Ariely, a renowned behavioural economist at Duke University disagrees. The following discussion is going to be largely based on excerpts from his book, “The Honest Truth About Dishonesty”.

Ariely attributes our everyday behaviour to two opposing motivations: We wish to view ourselves as honest, value-driven people but we also wish to make as much money as possible or other materialistic goals that help us ‘advance’ in life. In order to ensure these motivations achieve consonance, we employ what Ariely calls “cognitive flexibility” - the ability to minimise the extent of our cheating in order to still view ourselves as wonderful human beings.²

In one of his experiments, Ariely presented a sheet of 20 Math problems to 141 Carnegie Mellon students. They were given five minutes to answer as many questions as they could following which they would receive one dollar for each correct answer. The two conditions included a *control group* and a *shredder group*.

Students in the *control group* had to submit their answers to the experimenter who would correct their answers and award them cash accordingly. However, *shredder group* participants were asked to check their answers themselves according to the answer key provided at the end, report the figure to the experimenter, and then

shred their answer sheet without showing it to the experimenter. It was only revealed later that the shredder was fake.³

This condition provided the perfect opportunity to add a few extra “right” answers to their total score for a few extra dollars.

The results were fairly counterintuitive. Most people didn’t cheat to the maximum amount even though the act of shredding should have assured them that they had no chance of being caught - almost no one claimed that they answered all questions correctly and most people changed their results by only one mark.

Thus, acts of dishonesty aren’t solely determined by a cost-benefit analysis. The nature of the act is influenced by our conscience too. Most people cheat only a little. Very few cheat to the maximum, even when it is clear they have the opportunity to do so.

However, is the aggregate effect of these minor dishonesties really that minor? The results of his experiment reveal that *most* people cheat. Even if the individual impact is minor, the aggregate impact is bound to be substantially large. Thus, our conscience plays an important role in determining the level of negative impact.

Several factors determine the extent to which our conscience is pricked while committing a dishonest act. We shall now discuss one such factor in detail.

One of the most interesting parts of Ariely’s book discusses the inverse relationship between cheating and liquid cash. In one of his experiments, the previous condition that involved payment in cash was replaced by tokens, which could later be exchanged for real money. This additional step resulted in a significant increase in cheating.

Our willingness to cheat increases as we gain psychological distance from the action. Thus, as we gain distance from direct cash, it becomes easier to perceive ourselves as doing something other than stealing. This also explains why so many of us have little problem taking home pencils and other stationery from school/work even though we’d never feel comfortable taking the equivalent amount of money in petty cash.⁴

Ariely elucidates the above phenomenon in less trivial settings: *“In that light, a decision to cheat in areas such as financial services, where the ultimate benefit is cash but there are many degrees of separation (e.g. manipulating an interest rate benchmark which changes the price I get on a trade which affects my profit which affects the size of my bonus), might not feel like cheating at all.”*

Similarly, virtual payments are a great convenience but Ariely’s research suggests that one should worry about how much easier it becomes to steal the farther people get from using actual money.

These behavioural patterns might well be linked to occurrences on macroeconomic levels.

A recent report by Deutsche Bank on digital economies in Europe, found that profit-driven crimes are not eliminated by a cashless economy. Looking at the case of Sweden, which has managed to turn almost completely cashless, the report finds that cases of credit card fraud have increased, and counterfeiting as well as bank robberies have decreased, in the same period that the country gradually phased out the use of cash.⁵

Closer to home, one might analyse this proposition with regards to demonetisation in India. In all the commentary that followed its implementation, one of the recurring ideas was that of a cashless economy and thus the eradication of black market.

This narrative was challenged on various grounds. One was on feasibility, with people questioning the lack of adequate infrastructure to ensure a smooth transition from cash to cashless forms of exchange. Others raised the possibility of an increase in the threat to one’s privacy and data.

However, one seldom came across an argument that questioned the very wisdom of shifting to a cashless economy. After demonetisation, digital transactions went up from Rs 71.27 crore in October 2016 to Rs 123.5 crore in the two subsequent months. More than 27,000 cyber crimes were reported in the first half 2017, according to data released by the information and technology ministry. If the 2017 data were extrapolated for a year, it would be an almost ten per cent increase in cybercrime, highest in recent years. The average jump in the previous three years stood below 1.5 per cent. “Almost all financial institutions, banks and online transactions are vulnerable to cybercrime. Digital wallets such as Paytm and BHIM, which gained prominence after demonetisation, were found unsafe during research,” said an IIT Kanpur research in 2017.⁶

It must be stressed that the existence of such an unintended consequence by itself doesn’t make a cashless economy an undesirable prospect. It becomes pertinent to ask whether some of the individuals indulging in digital crimes would have been reluctant to cheat when cash was involved. Since establishing such a cause-effect relationship is nearly impossible, it makes sense to proceed on the assumption that *some portion* of the would-be criminals would fall within this category.

Having acquired sufficient knowledge that testifies the importance of conscience and minute dishonesties, we shall now observe how the findings of Ariely’s research against the Simple Model of Rational Crime (or ‘SMORC’, i.e. the cost-benefit analysis as viewed by traditional economists) can help us frame more effective policy solutions.

According to the United Nations Office on Drugs and Crime (UNODC), global money laundering transactions are estimated to be between \$800 billion and \$2 trillion

per year. More importantly, studies by the Association of Certified Fraud Examiners reveal that companies lose nearly five per cent of their revenue each year to employee and executive fraud. Back home in India, the cost of electricity stolen alone amounts close to 15,000 crore. All over the world, several initiatives have been taken to curb dishonest practices. More efficient surveillance networks, regular audits and unexpected raids are being carried out. Along with this, harsher punishments are being devised. However, the rate of fraud has been increasing despite these efforts

Ariely's insights can be applied to better interpret this data.

1. The aggregate loss to the economy isn't solely rooted in serious crimes. Millions of defaulters that cheat very little, when added up, create significant negative impact.
2. Policy decisions, situated around increasing the size of punitive measures, surveillance and so on, need to be accompanied with greater focus on internal factors. One needs to accept dishonesty as pervasive. Encouraging/rewarding seemingly small acts of honesty and emphasising upon the problematic nature of seemingly small deceits will lead to a shift in our perception of morality. Ariely's experiments and subsequent insight here seems deceptively simple: he says that reiterating basic principles of honesty before engaging in a potentially harmful activity might be enough to dissuade most people from being dishonest. If simple acts of dishonesty begin to violate our conscience more strongly, the role of authority will automatically decline.⁷

The purpose of this paper isn't to claim that Ariely's research and the subsequent adoption of the results to macroeconomic occurrences is flawless. As Ariely works through various experiments in an attempt to isolate aspects of SMORC and thus demonstrate its incompleteness, one can't help but question the

experimental design. For example, Ariely claims that because the use of a shredder (a tool that cuts down the cost and chances of being caught) leads to negligible change in the level of dishonesty, the role attributed to external factors must be scaled down. However, he fails to acknowledge that an environment with money (such as in this experiment) might cause one to assume latent monitoring, even if it isn't clearly visible. Our conscience isn't completely disconnected from our fear of punishment (costs). Moreover, the assumption that the results achieved from a particular sample set are applicable across cultures poses generalisation issues as well.

Nevertheless, Ariely has done a good job in convincing us that the level of dishonesty one engages in is not *purely* a cost-benefit analysis and that most of us contribute significantly to the larger negative impact on an economy. Reserving the label of 'fraud' for the *very few people* who cheat *a lot* shouldn't turn us blind to the negative effect caused by *most people* cheating *a little*.

The vast majority of parents in society as a whole try to inculcate the virtue of honesty in their children. Presenting an honest face as a parent at all times might lead to insufficient discussion on the few occasions wherein one is dishonest. If the dichotomy in people's lives can be exposed and actively worked towards, dishonesty levels can perhaps come down. It's important to acknowledge that most frauds are a result of occasional behavioral aberrations in an otherwise honest individual.

Even the most-wanted frauds start with a single 'harmless' theft which over time grows into a size too large to be dismissed as behavioural aberration. Imagine Dragons perfectly captured cognitive flexibility with "*I feel something so right doing the wrong thing*". One must constantly work towards expanding the scope for what triggers our conscience and do our bit to create a more honest society.

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FAITH AND FREE LUNCH

BY MANYA GUPTA

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Ever since the evolution of modern civilizations, religion has been an integral part of human life. Read on to see how religion and economics have aided each other in their evolution over centuries.

“Economists and calculators are beginning – just beginning – to acknowledge the transcendent. Economics and Religion is a landmark on a spiritual journey. It will not perhaps surprise people that economists have something to say about the economics of religion since economists believe they have something to say about everything; what is surprising is that religion has something to say about economics.”

– Deirdre N. McCloskey, the University of Illinois at Chicago, US¹

As a common practice, when we talk about any specific economy or economics in general, the first few terms that come to our mind are usually economic indicators such as income, prices, growth rate, literacy rate, mortality rate and so on. It is rare to see someone draw a link between economics and religion at the very first instance. However, many researchers have investigated the role of religion across multiple facets of human existence. As surprising as it sounds, religion and economics play an important role in shaping each other. Religion is considered the most important non-economic factor that constructs the basic institutional infrastructure of a society. The economy affects the religious practices of each society too.

The general problem that we come across while discussing the relationship between economics and religion is how appropriate it would be to speak of them as separate domains. This is because such distinctions were and are not part of our everyday life. The term economy

has been in use since the fourth century B.C. when it was first used by Aristotle to describe the relationships among members of the domestic household. However, people have become accustomed to speaking of the economy only in the last two centuries or so. Despite the commercial expansion of his time, Aristotle believed and wanted to show that human wants and needs are not unlimited and the resources are not scarce. Centuries after, Aristotle witnessed a great expansion of trade, profit-making and eventually, price setting by market forces along with the appearance of large-scale manufacturers. However, ‘the economy’ became fully thematised as a relatively autonomous realm of human life only, as recently, at the end of the 18th century.²

It was Adam Smith who laid the foundation for the economic analysis of religion. It all began with his book ‘*An Inquiry into the Nature and Causes of the Wealth of Nations (1776)*’, which is an examination of conditions that led to the Industrial Revolution.

“In his book, Smith applies his innovative laissez-faire philosophy to several aspects of religion, stating that religious organisations are subject to market forces, incentives and competition, just like any other sector of the economy.”

However, Smith’s fundamental contribution to the modern study of religion was that both religious beliefs and activities are rational choices. Just like people

respond to costs and benefits while performing any commercial activity, people also respond to religious costs and benefits in a predictable and observable manner. People choose a religion, and the degree to which they participate and believe, based on their analysis of the religious costs they incur and the benefits they enjoy. He argued strongly for separation of the Church, i.e. religion and the State, as according to him, it would allow competition, thus, creating a plurality of religions in the society. By having no preference for one religion over others and permitting all religions to be practised, the lack of State intervention creates an open market in which religious groups are able to engage in rational discussions about religious beliefs. State monopoly on religion or oligopoly among religions would lead to zealotry and the imposition of ideas on the public, whereas in an open market for religion, one would find moderation and reason.³

However, Max Weber was the first person to identify the relationship between religion and economic behaviour in 1905. The economics of religion is not only concerned with the relationship between economics and religious behaviours, but also the application of the techniques of economics to the study of religion. He proposed that the advent of modern capitalism was possible only because of the Protestant Reformation that triggered a mental revolution. According to him, it was the protestant ethics of emphasising hard work, thrift, honesty and deferred gratification that ignited the Industrial Revolution in Western Europe.⁴

Almost a century after Weber's work, researchers have again started exploring the importance of religion in explaining the prosperity of nations. Scholars try to relate religion to fundamental institutions that have been shown to be conducive to growth, instead of correlating it directly with economic prosperity. For instance, Putnam (1993), in his study of development across Italy, suggested that the reason behind strong Catholic tradition, which emphasises the vertical bond with the Church and tends to undermine the horizontal bond with fellow citizens, is the prevailing lack of trust towards others in the South. Both La Porta et al. (1997) and Inglehart (1999) have found some evidence for this theory in a cross-country study. Similarly, according to Landes (1998), Spain failed to develop in the 16th and 17th century because of the culture of intolerance diffused by the Catholic Church that forced some of the most skilful people out of the country. Lastly, Stulz and Williamson (2001) attribute the low level of creditors' protection present in Catholic countries to the anti-usury culture pervasive in the Catholic tradition.

Thus, there are two ways in which the correlation between religion and economic outcomes can be interpreted - a feature intrinsic to religion that affects growth, or a feature correlated to religion but not religion itself, like fundamental institutions, which affect growth.

However, the existing cross-country literature is criticised for its inability to distinguish between the two

explanations. This problem is termed endogeneity bias.

Social scientists and historians also argue that the economy, especially in the Western World, during the long period from the ancient Greek Civilisation to the nineteenth century, became disembedded from the societal fabric. Thus, by the late nineteenth century, the economy was standing apart from the rest of the society and operating according to its own natural laws. This has been termed as the naturalisation of the economy and was a crucial aspect of the nineteenth-century diagnosis of secularisation, i.e. the decline in the significance of religion in modern society.

Thus, from the above arguments, it can be stated that religion actually has a two-way interaction with the political economy. When religion is viewed as a dependent variable, the central question that arises is how economic development and political institutions affect religious participation and beliefs. However, when it is viewed as an independent variable, the central question is how religiosity influences economic performance by affecting individual characteristics, such as work ethic, honesty and thrift.

As a dependent variable, the theories of religion can be broken down into demand-side and supply-side models. However, economists instinctively combine the two approaches. An important analysis of religion as a dependent variable is the secularisation model. As per this model, economic development leads to a reduction in the rate of individual participation in formal religious services and personal prayer, decreases religious beliefs and diminishes the influence of organised religion on politics and governance. This argument finds its roots in John Wesley's (1760), the founder of Methodism, sermon on 'The Use of Money'. Extreme views on secularisation can be found in Hume (1757 [1993]) and Freud (1927), who viewed religious beliefs mainly as reflections of fear and ignorance. Thus, they predicted that advances in education and science, and movements away from the vicissitudes of agriculture and towards the greater economic security of advanced, urbanised economies would lead to a decline in religion across the globe. In Marx's (1859 [1913]) analysis, the decline of religion has been stated as one of the many manifestations of a broader trend toward modernisation.⁵

On the other hand, in Max Weber's '*The Protestant Ethic*,' religiosity was viewed as an independent variable that could influence economic outcomes. According to him, religious beliefs foster traits like work ethics, honesty, trust, thrift, charity, hospitality and so on, and these traits have an impact on the economy. Thus, greater religiosity holds the potential to spur investment and economic growth by enhancing these traits. A key point about religion in the Weberian framework that sets it apart from the other frameworks is that religious beliefs are what matter for economic outcomes. This approach contrasts with a social-capital or cultural perspective in which the networking associated with attendance at formal religious services could be what promotes growth. By viewing participation in formal religion as

just one of many ways to build social capital or to form a communal culture, it is often deemed that this alternative perspective trivialises religion. For Weber, houses of worship were not merely forms of social clubs, but also institutions that were responsible for economic outcomes, and thus, economic growth. The special feature of religion that he highlights is its potential influence on beliefs that reinforce particular traits and values.⁶

In the last two decades of the twentieth century, empirical as well as theoretical research into the relationship between religion and economics has experienced a rebirth. The causation runs both ways. While some analyse the effects of religious practices and identities on the various economic activities, others analyse the effects that economic incentives have on religious observances and institutions. Both these lines of research have yielded strong results and have significantly influenced and improved our understanding of the relationship between economics and religion.

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BAD IS GOOD?

BY KESHAV TODI AND NIKUNJ KHETAN

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With the pandemic further deteriorating the banking systems across the globe, the burden of dealing with stressed assets has got heavier. Do banks need a helping hand to bear the burden and move forward?

A gardener always makes sure to chop off and trim the parts of a plant that are withering and weak. He does so because those bog down the plant's growth. Getting rid of them is essential for the growth and development of the plant to its full potential.

Numerous instances of bank failures and rising Non-Performing Assets (NPAs) in the banking system gave birth to the concept of 'Bad Banks' - a guardian angel who has the bank's back and gets rid of the withered leaves from the bank's branches, before the apex institution needs to step in.

“**'Bad Bank' is a misnomer, given that its only purpose is to rescue other ailing banks.**”

A bad bank, simply put, is a bank that purchases stressed assets and different non-liquid holdings of other banks and financial institutions, so that it can be cleared off from their balance sheets enabling banks to focus better on their regular operations at hand, while the bad bank deals with recovering those assets. The assets that bad bank purchases are typically below its book value. It tries to recuperate as much value of the loan as possible. It restructures those loans and sells them to investors willing to purchase them. Now, while the banks face a loss on book value when selling their unwanted assets to a bad bank, they have a benefit behind it. It transfers

the hassle of loan recovery and liquidates the otherwise illiquid asset. It essentially helps the banks to cut short losses and direct attention to their lending operations.

The terms stressed/toxic assets and NPAs, though used interchangeably, are not the same. NPAs refer to those loans whose principal or interest payments have remained due for a period of 90 days. Whereas, stressed assets of a bank include all loans that are non-performing, have been restructured and have been written off by the bank. Bad banks take over all the stressed assets of the banks and try to liquidate them.

History

The evolution of bad banks took place in 1988 in the United States of America. Mellon Bank, which was incurring losses and had to be recapitalised, set up another bank called the Grant Street National Bank (GSNB). The purpose of that bank was to take over the toxic assets of Mellon Bank, liquidate those and eventually get liquidated itself. GSNB liquidated bad loans worth \$1.4 billion at a discounted value of \$640 million. Not long after the creation of GSNB, Mellon Bank started making profits. The concept of bad banks became popular after governments saw the success of Mellon Bank. The U.S. government, in 1989, set up its own asset management company called the Resolution Trust Corporation to liquidate stressed assets that were declared insolvent.¹

Different countries have different jargons for their own bad banks, but their purpose remains the same – separation of toxic assets from the performing ones and

then dealing with the bad ones in a specialised manner. While the U.S. called it an asset management company, Japan set it up first by the name Credit Co-operative Purchasing Company (CCPC) in 1992. Even Europe has been quite successful in adopting the bad bank approach -Sweden being the first to establish two of those in 1992. Most of the bad banks in countries such as Spain, Germany, Ireland etc. came up after the global financial crisis in 2008, when the banking systems took a huge hit across the globe.

Structures

As stated earlier, the ultimate purpose of a bad bank is to deal with the toxic assets of banks. But the way it is done varies as per the needs of different institutions. It is not necessary that a bad bank is created as a separate legal entity. It could be created as a separate business entity within the bank as well. The off-loading of stressed assets from the bank's balance sheet is more desirable, but at the same time has many complexities as compared to keeping the assets in the bank's balance sheet. Based on these, there are four basic types of bad bank schemes – on balance sheet guarantee, internal restructuring unit scheme, off-balance sheet special purpose entity and bad bank spin-off.²

On Balance Sheet Guarantee:

In the case of a guarantee scheme, the bad loans remain on the balance sheet of the bank. Either the government or some other institution gives a guarantee that the book value of these stressed assets will not go below a particular value. Simply put, an institution covers for the loss in case the borrower defaults. Given that the bad loans continue to appear on the bank's balance sheet and there is a transfer of only a limited amount of risk, this model is the least desirable, with the only upside being that there isn't any requirement of huge capital upfront.

Internal Restructuring Unit Scheme:

In this model, an internal unit is set up within the bank whose sole job is to manage those stressed assets. Setting up such an internal bad bank acts as a signal for the market and is more beneficial if the financials of the performing assets of the bank are reported separately. The efficacy of this model is questionable, especially in India, as the stressed assets are being managed by the same administrators under whom they got created in the first place.

Special Purpose Entity:

Under this model, a Special Purpose Entity (SPE) is created to which all the stressed assets are off-loaded. These assets are generally securitised and sold to different investors. Off-loading of assets is a complex and expensive process but is very efficient as compared to on-the- balance sheet models. This model works best for homogeneous assets.

Bad Bank Spin-Off:

The most familiar and also the most effective one, this model involves setting up a separate legal entity that has

a banking license and services the unwanted assets of more than one bank in most cases. It ensures maximum risk transfer but is considered as the '*last resort*' given the efforts involved in meeting the regulatory requirements. Such full-fledged bad banks generally involve the role of the government as funding may not be readily available for them.

Funding

A bad bank has got two major costs – acquisition costs and operational costs. The assets that a bad bank acquires are mostly undertaken in the form of debt security or equity, and therefore, working capital is needed only to the extent of the operational costs. This funding may be provided by the government or other public institutions and funds may also be contributed by the banks themselves.

Disposal of Assets

The most important point of contention in the entire discourse on bad banks is the disposal of the assets that the bad banks have taken up from other banks. There are certain crucial decisions that have to be taken when dealing with toxic assets. If these assets are held long enough till maturity, they might further deteriorate. Thus, the management of bad banks would have to conduct negotiations to restructure or reschedule debts and then sell them off. Some assets require active management, like an incomplete infrastructure project that might have to be completed to increase its value, while some assets have to be passively managed and recovered with time. The owners of bad banks benefit only when these assets are efficiently disposed of.

Constructive Impact

A bank without NPAs is rated highly by credit rating agencies, borrowers, investors, depositors and the like. Hence, any bank with a growing amount of NPAs will want to clean up its balance sheet, making bad banks an important entity. Moreover, once the bad loans are transferred to these bad banks, it becomes easier for the management of a bank to focus on the core function, thereby leading to its development and growth. The toxic assets are now being managed by those who specialise in the task and thus, there is the speedy recovery of those assets, which otherwise would have added to the bank's losses.

Downsides

Setting up bad banks is a complex process. One incorrect decision related to the transfer of assets, funding of the bank or disposal of assets may lead to huge losses.³ Thus, a strong legal framework is extremely necessary, which most countries lack. The operational costs of bad banks are very high given that specialised workers have to be recruited for its management. The transfer and management of assets is a costly affair as well. In their paper, '*Bad banks: A proposal based on German financial history*', Ulrich & Ilgmann talk about the fire

sale externality⁴ that bad banks create when toxic assets are transferred to them. This transfer leads to a reduction in the overall market value of those assets, prompting other banks to sell them, pushing the prices further down, thereby forming a vicious cycle of sorts. While bad banks help the banks in clearing their balance sheets, at the same time, it may make some banks more reckless in their lending practices.

The Fragile Indian Banking System and Bad Banks

The COVID-19 pandemic didn't just harm the physiological health of the people of India, but also the health of the economy. With the imposition of a strict and long lockdown across the country, even the biggest of firms had to face shutdown, and joblessness became rampant. Those with jobs also had to face harsh pay cuts. The costs of business and living barely got nicked though. This created the perfect recipe for default on debt. People and institutions, with loans big and small, were unable to pay back their borrowings. Even otherwise, the Indian banking system had not been having a great run. It has been infirm for the last few years, long before the pandemic hit. NPAs were already a nuisance, and multiple mergers had to be conducted to support the weaker banks. The public also had to witness withdrawal caps - not once, but on multiple occasions. The lending market, hit further by the pandemic and its tandem moratoriums, was infested with NPAs. As part of its Financial Stability Report released in January 2021, the Reserve Bank of India published that the gross NPA ratio might rise from 7.5 per cent to 13.5 per cent by September of that year.⁵ Such projections led to tremors in an already fragile condition of the banking system in India. A bank failure, or worse, a run on the banks, is the last thing that the Indian economy wanted.

As business processes resumed and the job markets re-expanded, the economy was on its path of recovery. But the path was steep and would take time. Time, which the banking system could not afford. Thus, the need for bad banks was not only acute but also urgent.

There have been attempts by banks to stand back on their feet and do damage control. Methods such as loan restructuring, interest waivers and rebate incentives have been implemented to recuperate as many funds as possible, and maintain some liquidity. However, in no way could these substitute the need for a bad bank.

The Indian banks had restructured many assets, even the unviable ones, during the extended forbearance period after the global financial crisis, and that led to the window dressing of their accounts. When the forbearance period ended in 2015, the NPAs started to pile up. The government has tried to tackle the problem of rising NPAs by various means such as the Asset Quality Review (AQR) to clean up the banks, reforms in the Securitisation and Reconstruction of Financial Assets and Enforcement of Security Interest Act, 2002 (SARFAESI Act), the Insolvency and Bankruptcy Code (IBC) and other stringent reforms.

Finally the government, in the 2021 budget, proposed the setting up of an Asset Reconstruction Company (ARC) and Asset Management Company (AMC) to consolidate and take over the existing stressed debt, and then manage and dispose of the assets to Alternate Investment Funds and other potential investors for eventual value realisation.

An ARC is the first aid that the injured system needs. Alone, it might not be able to heal its beneficiaries completely, but clearing balance sheets and providing quick liquidity, leaves them strong enough to continue work. In the words of Uday Kotak, the Managing Director of Kotak Mahindra Bank, *"bad banks can address this issue (of NPAs) in a transparent manner and get the credit cycle back in action."*

Efficacy in India

A point that was unanimously agreed on by both supporters and opposers of the idea of an ARC or a bad bank for India, was the boldness of the move. Considered the most esteemed and revered mind when it comes to banking in India, Dr Raghuram Rajan has been a critic of bad banks. In his book *'I do what I do'*, he writes, *"I just saw this as shifting loans from one government pocket to another and did not see how it would improve matters. Indeed, if the bad bank were in the public sector, the reluctance to act would merely be shifted to the bad bank."* This view is common among a lot of financial experts across the country. Some even go to the extent of terming it as a *"window dressing"* exercise, with no real benefits. There is also a belief that, unlike an ARC that is managed by the private sector, a public sector ARC will pay too high prices for bad loans and non-liquid holdings. It will also be unable to have the expertise in staff required to negotiate with the private sector. All in all, taxpayers of the nation will have to bear the brunt of the banks' mistakes. Ownership of the bad bank is therefore a matter that deserves great care and attention. Public Sector ownership in India is proving to be a major magnet of criticism. India does have 29 private ARCs, but they have not been able to take up bad loans at an aggressive pace due to the lack of capital. Supporters of bad banks stand by it, primarily stating the gravity of the NPA issue, and how a bad bank would be the best available way to bring liquidity and repayment cycles back on track. Former RBI governor Duvvuri Subbarao termed a bad bank as *"not just necessary but unavoidable."*

Conclusion

One thing that can be said with certainty, after deep thought and deliberation, is that bad banks are a temporary recourse and not a permanent solution. They are a remedial measure and not preventive in nature. They provide emergency aid that banks need but does not solve the chronic and systemic inefficiencies of those banks. The measure is definitely helpful, but the ailing banking systems across countries need a lot more reforms to be back on track.

Therefore, another question of prominence is the intended tenure of such an organisation? Should it be just a short term recourse or do governments want to keep it as a fallback mechanism for banks in the long run as well? In future, we would not want to applaud the performance of bad banks as that would imply the perpetual existence of stressed assets in the system.

Along with tackling the existing issue of toxic assets, it is imperative to monitor the lending practices of the banks to ensure that loans are not given aggressively and there is no zombie lending or restructuring of unviable projects. That is when the banking plant will bloom and be kept free of drooping leaves.

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AN ECONO-ENTROPIC BOND

BY DHRUV LOWE

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Economics is well known as an all-pervasive social science that can impact a plethora of other fields. Ever wondered if it can have peculiar relationships with physics and thermodynamics?

Physics is the study of the universe and all that is encompassed in it, from subatomic particles to supernovas. Among the infinite heavenly bodies that spread across this ever-expanding universe, there lies one blue orb, our home. Back on Earth, we have developed convenient mechanisms to go about our day-to-day lives, i.e. markets and economies. Can a field that studies just about everything that exists in nature also apply to these systems that we have created for ourselves?

At the fringes of the economic discipline lies thermoeconomics, largely ignored or disregarded by the majority. The studies conducted up-to-date may be grouped into two broad categories – the ones which attempt to establish formal mathematical models of the economy in analogy to thermodynamics, and those directly applying thermodynamic laws to economic processes.

The study of thermodynamic theory is founded on four fundamental laws – the zeroth (so termed because it was the last to be formally stated but being the most fundamental, it had to precede ‘the first’), thermodynamic systems in equilibrium show transitivity; the first, total energy is constant i.e. it can neither be created nor destroyed; the second, entropy always steadily increases with time; the third, absolute zero temperature ($-273.15\text{ }^{\circ}\text{C}$) cannot be reached.

Entropy goes by many definitions and interpretations, being mentioned in fields such as sociology and

independent areas such as probability and information theory. In the most common sense, it is a measure of disorder or chaos. The notion of entropy is primarily associated with the Second Law of Thermodynamics. This law, obviously, is not only limited to the definition stated above. It also asserts that a natural thermodynamic process runs only in one direction, and is not reversible. For example, heat always flows spontaneously from hotter to colder bodies and never the other way, unless external work is performed on the system itself. In terms of entropy, the Second Law of Thermodynamics states that the entropy of an isolated system never decreases, because isolated systems always evolve towards thermodynamic equilibrium – that is, towards a state with maximum entropy.

The Second Law was applied to economic analysis for the first time by the Ukrainian-Russian scholar Sergei Podolinsky. In his work, *Human Labor and its Relationship with Energy Distribution*, published in 1880, he proposed a new definition of human labour on the basis of this physical law. However, his approach was not understood and appreciated at that time.

Another Way to Approach Ecological Economics?

Fast forward to almost a century later, when the Romanian-American economist Nicholas Georgescu-Roegen published his work on *The Entropy Law and the Economic Process*.¹ According to Georgescu-Roegen, humankind with its economic activity is the most significant contributor to entropic degradation by the increasing rates of extraction of natural resources and elimination of wastes into the environment.

During the period preceding the publication of Georgescu-Roegen's works dealing with entropy, economists, influenced by the Great Depression, tried to elaborate upon the models of long-run growth associated with a smooth and uninterrupted (crisis-free) functioning of an economy. These were models within the framework of Keynesian economics (Harrod–Domar model), or neoclassical models, in which technological progress was regarded as a crucial factor of long-run economic growth (Robert Solow model). Nevertheless, despite the differences in their approaches, the models of growth had something in common - the introduction of a special 'golden' formula to ensure the steady growth of an advanced capitalist economy. In some ways, such a system in economics resembles a hypothetical perpetual motion machine in mechanics. Just as a perpetual motion machine can do work indefinitely without an energy source, the mentioned 'golden' ratio (as a warranted growth rate in the Harrod–Domar model or the golden rule of capital accumulation in Solow's model) can help an economy grow smoothly without recessions. However, the idea of a perpetual motion machine in mechanics was disproved by the law of entropy.

Similarly, Georgescu-Roegen, using the thermodynamic theory, criticised the numerous theories of growth that were popular at that time. In his opinion, although all production processes do not obey the same economic laws, all economic processes, like any biological processes, are subject to the Entropy Law. Therefore, by invoking the Second Law of Thermodynamics, Georgescu-Roegen incorporated the idea of entropic degradation as a fundamental constraint on all economic activities.

Entropy in Business

A Bloomberg study in 2013 found that most businesses — as many as 80 per cent - fail in the first 18 months alone. In fact, recently released data by the US Bureau of Labour Statistics² reveals that only 25 per cent of private sector establishments make it past the 15 year mark. One can attempt to understand this with an analogy to entropy.

Information theory provides that entropy is fundamentally a probabilistic idea: for every possible "usefully ordered" state of molecules, there are many more possible "disordered" states.

Just as energy and the universe at large tend towards a less useful and more disordered state, so do businesses and organizations in general.

Rearranging these molecules, or business systems and people, into an 'ordered' state requires an injection of external energy. This process often unravels in bureaucratic organisations when people fail to see

beyond their individual responsibilities and disregard how their interactions have an impact on the bigger picture.

Business operations are fairly susceptible to the impacts of entropy. Employees may disregard their training, lose interest, cut corners and ignore protocols. Equipment may break down, become inefficient or obsolete with time. Products may become outdated and simply fade away. Even the most well thought out business strategies cannot prevent an eventual entropic slide towards chaos. In thermodynamics, entropy is a law; in social systems, it is a mere tendency — albeit a strong one.

The few that manage to last more than 15 years invest time and money to minimise entropy. They provide regular staff training, hire qualified and competent management, ensure proper oversight and monitor reports of successes and failures. Anything less will most definitely lead to problems and potential loss of revenue. By ignoring these necessities, a business will eventually reach the point of maximum entropy, the threshold beyond which a system ceases to exist - bankruptcy.

Fortunately, this is where the differences between social and physical systems appear. A business can reverse the impact of entropy by adapting to a constantly shifting business landscape. However, as stated in the Second Law, such is not the case with thermodynamic systems.

Viability of a Perfect Competitive Market

Since among many other definitions, entropy is a measure of disorder, it is natural to consider whether such a notion is applicable to analyze market structures, especially the most disordered one - perfect competition.

In general, the well-established modern interpretation of a market with perfect competition corresponds to the following basic conditions- a very large number of independent sellers; there is perfect knowledge among all participants; a homogeneous product; a single firm is said to be a price taker because no single firm can influence the market price, taking its price from the whole industry; there are no barriers to entry into or exit out of the market.

Even though modern economics recognises the impracticality of such a market, this structure continues to set a peculiar benchmark. A perfectly competitive economy uses the limited amounts of resources available in a way that maximises the consumer and producer surplus and efficient use of limited resources necessitates both productive efficiency and allocative efficiency. However, this can be questioned if we apply the definitions of entropy to the study of economic structures and processes. The fact is that we can primarily characterise perfect competition as the state of maximum entropy.

In thermodynamics the calculation of entropy is based

on Boltzmann's formula for an isolated system at thermodynamic equilibrium which is stated as follows:

$$S = k \cdot \ln W$$

where k is the Boltzmann constant ($k = 1.38 \cdot 10^{-23}$ J/K) and W is the number of distinct microscopic states consistent with the given macro-state (like a fixed total energy E). This formula is a mathematical representation of the relationship between entropy and the number of ways the particles (atoms/molecules) of a thermodynamic system can be arranged.

Maximum entropy occurs when all of the possible states of a system are equally probable. Similarly, in the case of a market with perfect competition, since all sellers in the market offer identical goods at the same price, the buyer is indifferent about which seller he approaches. This means that a firm in such a market cannot have constant customers. The probability that a consumer B1 will buy a certain product from a seller S1 equals the probability that he will buy the same product from another seller S2 or from another seller S3 and so on.

The general number of combinations of consumer distributions between sellers (firms), if -

Number of sellers = n , Number of buyers = m
Then the number of such combinations $N = n^m$

For example, if we have the situation of a pure monopoly, the number N , regardless of the number of buyers, always equals one. But the number N is maximised for a market with perfect competition where both n and m

are very large.

This is in accordance with Boltzmann's probabilistic formula of entropy, considered above, because the maximum of the entropy function is the logarithm of the number of possible events, and occurs when all the events are equally likely.

A market with perfect competition is totally disorganised and unstructured. It is a chaotic and unsystematic market. That is why it is a short-lived (with a minimum density of time) formation. Due to its chaotic and unstructured nature, such a market cannot be considered as a system. This means that in achieving the maximum level of entropy, a system ceases to exist. Thus, a perfectly competitive market characterised by the maximum level of entropy cannot exist.

The purpose of these efforts, to draw parallels between two disciplines that seem to have nothing in common, is to enable the transfer of insights from one area of scientific inquiry to another. However, this does not imply that economic theory complies with thermodynamic laws in all scenarios. As Tania Sousa pointed out,

“the formal equilibrium considered for the consumer problem is not the thermodynamic equilibrium of the consumer. The thermodynamic equilibrium of the consumer would be a dead consumer.”³

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OLD IS SILVER

BY WOLFGANG FENGLER

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People claim that the youth is the future when, in fact, the older population is not only increasing exponentially, but is also rich. Is it time to say ‘Old’ is going to drive the future of our economies?

In just a few days, I will be turning 50. This is a significant milestone for me: looking backward half a century and taking my first steps into the “silver economy” (according to an extended definition). The good news is older people are no longer at the periphery of the economy. In fact, silver consumers are likely to play an important role in the post-COVID-19 recovery.

Everyone above the age of 50 is part of the broader silver economy. In this article, however, I want to focus on *seniors*, those 65 years old and above.

Seniors are now significant players in the economy and their role will get even bigger in the 2020s.

Since older people tend to have both high incomes compared to younger cohorts (especially in OECD countries, thanks to old-age pensions) and high needs (if only on account of medical and specialized care), they are major consumers. Seniors are also growing rapidly in number: There are currently 750 million seniors in the world, and that figure will cross the 1 billion mark by 2030.

Because of these two reinforcing trends, their share in the consumer class—defined as everyone spending at least \$11 per day—is growing rapidly. The consumer class is expected to grow from 3.9 billion in 2020 to 5.6 billion by 2030, with each age group contributing almost uniformly to this increase (by 41 percent on average). The only group whose contribution will grow significantly faster is the senior group (whose representation in the consumer class will surge by 66 percent from 459 million to 760 million).

Seniors are the wealthiest age cohort in the world, together with older professionals (45-64 years). This shift toward wealthier older people is not because old people are inherently richer but because rich countries are older and poor countries are younger. Until 2030, the silver economy will gain even more absolute strength because the number of seniors is growing by 3.2 percent every year (compared to 0.8 percent of the whole population). Many of the world’s “new seniors” will be in Asia and less wealthy than the current average.

However, seniors will remain the wealthiest age group, together with “older professionals,” as 76 percent of them will be in the consumer class (compared to 66 percent on average, see Table 1). By 2030, they are projected to spend just under \$15 trillion (in 2011/PPP), up from \$8.7 trillion in 2020.

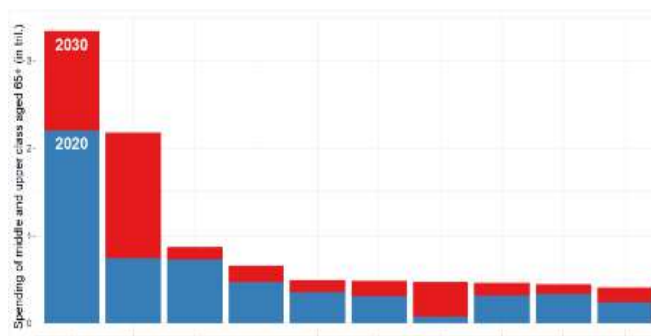
Table 1. The global consumer class is growing older (millions)

	2020	2030	absolute change	% change	% of age group in consumer class (2030)	% of consumer class at total (2030)
Children (0-14 years)	728	1008	280	38%	53%	18%
Young adults (15-29 years)	858	1185	327	38%	63%	21%
Professionals middle (30-44 years)	890	1206	316	36%	69%	22%
Professionals old (45-64 years)	1000	1402	402	40%	76%	25%
Seniors (65+)	459	760	301	66%	76%	14%
TOTAL	3935	5651	1626	41%	66%	100%

Source: World Data Lab; Note: Consumer class is defined as spending \$11+ (2011 PPP) per person per day, which includes the Middle Class (\$11-110) and the Upper Class (\$110+)

Geographically, the silver economy will shift from the OECD economies to emerging markets, especially to Asia. Today, the total year spending power of silver consumers is relatively equally distributed across Asia, North America, and Europe (\$2.3 trillion each). By 2030, Asia’s share will have grown significantly as its seniors are expected to spend over \$5 trillion each year.

Still, because they are relatively richer and relatively older, Western economies will remain the top “silver economies” into the next decade. Asia will have only three countries in the top 10, but two of them are growing rapidly. In China, silver spending will triple from \$750 billion to \$2.1 trillion, overtaking Japan where senior spending has already plateaued at \$900 billion. India will make a dramatic entrance into the group with an expected surge in silver spending from approximately \$100 billion to almost \$1 trillion (on par with Russia, the U.K., Brazil, and Italy—see Figure 1).



Source: Katharina Fenz, World Data Lab

There is a popular saying according to which it’s always better to be young, rich, and in good health than old, poor, and sick. I do not dispute its evident validity and yet, I am relieved by new research that you can grow young as you get old. As I slowly enter old age, I can be confident in saying that we old folks never had it so well in history and that we are truly the future of the economy.

POLICY AND POLITY: ARUN MAIRA



INTERVIEWED BY ABHEYA ARORA AND KHUSHI KAPOOR
Undergraduate Students, Shri Ram College of Commerce

A distinguished management consultant and an author, Arun Maira is the former India Chairman of the Boston Consulting Group and also a former member of the Planning Commission of India.

Academicians and policymakers have been debating changing the economic paradigm from “trickle-down” to “build up” economics. What are the issues with the “trickle-down” approach and what measures should India take towards adopting a “build-up” one?

This question leads to the question of what must change in the paradigm of economics to make life better for everyone in India as well as make our environment sustainable. Those days, when I was in the Planning Commission, we were getting 10 per cent growth and saying we are the fastest-growing free-market economy in the world, China being faster than us but they were not democratic. But we were having the most unequal growth. For a country with the largest number of young people in the world, who expect to get decent work and decent incomes, so that they can spend on things that will then make the market boom, and save some that will then enable investments to be made in the public infrastructure, they weren't having enough jobs. So a country that needs far greater employment opportunities was having the least number of them per unit of growth. So there was definitely something wrong in the paradigm of the economy.

Now what has been happening in the last 30 years is that the wealth inequalities have increased manifolds. During the pandemic, this problem has become very acute. The stock markets have boomed and the wealth of the wealthy have become alarmingly higher. Whereas many people at the bottom have just lost jobs and incomes. In an enterprise, how is profit generated? By the work done. But what workers get out of the surplus

is just some wage. We need to change the design of the economy whereby some of that surplus must be given back to the workers as their wealth, not just as wage. The workers must be the “shareholders”, as a broad concept, in the profits of the enterprise. This should be the design of the microeconomy in which people by their work are recognised as wealth creators. The concept of “trickle-down” has allowed wealthy people to make more wealth and grow the size of the pie, but one part of the pie is increasing more, and the other parts, which belong to the poor, are diminishing. To keep the wealth circulating in the economy, it must be in the hands of people at the bottom. Thus, we need a “build-up” process as the pace of “trickle-down” has been too slow.

You have mentioned before that it would be wise for countries to maintain sufficient ‘economic distancing’ amongst themselves. Do you intend to imply that the merits of globalisation are now fleeting away?

Globalisation is a very broad word. We've had globalisation back in ancient times but many things have changed since then. Firstly, transportation developed and it became easier to send things around. For example, bigger ships could carry more things to trade goods in larger volumes that were being traded before, and then we got airplanes and people could fly easily from one place to another and come back within a few days. The connection among people and between production sites and consumption sites increased because of transportation. What has happened is that we have gotten too far in trying to move things from one

place to another but the infrastructure is not capable of coping up with it anymore. This is the situation of physical globalisation. Coming to the financial side, exchanging money has become very easy electronically. Moreover, the idea that you must drop trade barriers and barriers to the movement of money because it will be good for the whole world has taken charge. Thus, money has been sloshing around the world greatly. Now we have got financial globalisation along with large trade globalisation and this is where the problem starts. During the pandemic, to protect ourselves, we were imposing boundaries between different parts of the global system. We have gone too far with this concept of “boundarylessness”; we need boundaries. We got this whole idea of free trade and reducing barriers but we need to make the economy less risky and more stable. The system designed for an economy should allow it to be able to look after the needs of their own people, with policies that are good for their development, and they should not be forced to adopt the policies of the strongest countries at that time.

Given the massive disinvestment strategy of the government, do you think the private sector in India is ready to carry out the responsibilities of social development, above and beyond their profit motive?

The question is whether the private sector considers social development as its responsibility. If by the very definition, its purpose is to produce more wealth and value for its investors, then it's not even its responsibility and it is not even going to try to do it well. This is a problem especially in a country like ours that needs much greater social development in areas such as healthcare, education and the informal sector. Big corporations don't think it is their responsibility, and since they are listed on the stock exchanges, they are driven to concentrate on just producing more surplus for the investors and accounting for it properly. Even though they claim to be responsible corporations, in their actions, by choice and by compulsion, they are not responsible for social development. At this stage, we have to consider that the private corporations are not the right vehicles or the right institutions, as designed and as they operate, for resolving the issues regarding the progress of the people of India. Ideologically, the government is inefficient while the private sector is not, which is an infection we have also got. We are finding it hard at this stage of development to design a new model of the economy in which there are new models of enterprises that are not exactly like the present successful businesses that find it hard to go beyond their profit motive. We are stuck in this paradigm.

As a policymaker who has worked in both the private and public sector, what role can the private sector play in the policy implementation paradigm of the country, which is largely ridden with inefficiencies in the status quo?

Economists think of the economy as a machine. They use terms like inputs, outputs, rate of inflation etc. but they are not getting it right. We have had crisis after crisis in

the last 15 years and economists have not been able to predict it. So far the businessmen have been celebrated as the wealth creators; those who seem to know how to use resources efficiently. So people thought let's do away with the government and privatise, like Reagan and even Thatcher had said, and eventually, India caught the “Washington disease”. The policy paradigm that India is into is “let's make it easy for investors to do business and then the economy will be alright.” Whereas a public servant's job is to make life easy for people who may not have any income at all. So it is a conversation between people who think very differently. In policymaking, the private sector comes in to tell the answer to the government who respectfully listens to them because it believes that they have the right ideas, and if it listens to the private sector, they might invest in the country as well. And the idea that the private sector's way is the way to do it just grows. Basically the challenge is that both sides, the government and the private sector, need to listen to the people. It is for the sake of the people that the government exists anyway. The private sector says they are responsible for all the people but they don't even listen to them or ensure there is trust. They produce the things that people don't really need and advertise them to grow their businesses. So the policy-making space requires a lot of deeper listening, and the people whose thoughts and needs all must listen to, whether the private sector or the government, the bureaucrats or the economists, are the poor, and see how the policies are going to give benefits to that person.

You have often spoken of the need for corporates to measure success in terms of impact and not just profits. So, how do you propose this message is actualised by companies for genuine purposes and not just for marketing?

The word impact has become a big marketing slogan. But the first question that you have to ask is, impact on what? You have to ask, whatever you're doing, will it produce the desired impact on the lives of the people who have the least? A corporation measures itself by the financial measures i.e. its profits. If the corporation is responsible for the condition of the people and the condition of the environment, you have to ask, how often do you measure this? How accurately do you measure this? And how often do you account for this? Your stock reports are required every quarter. How frequently and how accurately are you putting out reports of environmental impact and your social impact? Some don't even do it at all because the business of business should be only business. Some who have started to do it, do it reluctantly for the sake of appearing responsible. They don't bother to manage it accurately. And why is accuracy required? Like I said, unless you ask the people who are suffering the consequences of the bad conditions, you won't know what to measure. So, this has to change. Moreover, both GDP and corporate profits are insufficient measures of the health of enterprises and economies. We need broader scorecards, and the scorecards need to be created with the participation of the people.

In the recent past, many government policies have faced resistance and opposition from sections that are purported to be beneficiaries of that policy. Do you think in a vibrant democracy such as ours, the sphere of public policy shouldn't exist in isolation from the general public?

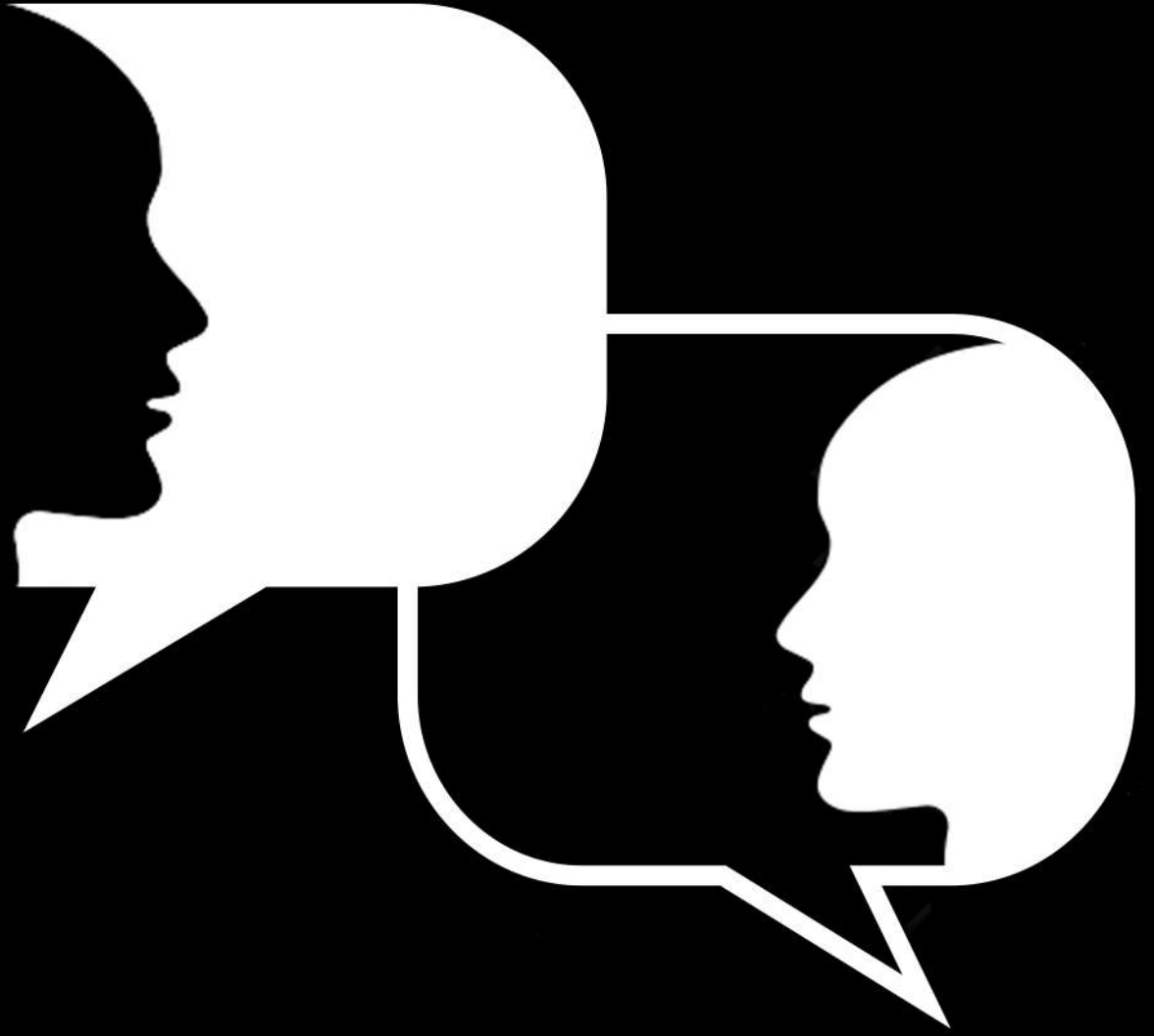
The question is, how can you tell the beneficiaries that what we are doing is good for them? People sitting in ivory towers say that this is the problem and that the beneficiaries don't understand it. Maybe we haven't explained it to them well enough. Since what you're doing is supposed to be beneficial for them, they have to tell you whether what you did as a policy worked or not. To have a successful policy, you have to decide what should be the outcome of this policy? And the outcome of the policy must also require that people feel it is the right policy, is made with the right motivations of the experts, and then they'll help you to implement it. Listen to the realities that they experience all the time. And they may have good ideas.

For the sake of good economic policy, we need much greater listening to people who are not like ourselves. Experts should be listening to people who they think are common people, uneducated and unexposed people. Also, we should learn to listen to people who we think are wrong, because they have another idea. Unless we listen, we won't understand the system of which all of us are a part. Unless we have a harmonious society, we cannot have a good economy. The time has come to recouple the economy with society. At the moment, it seems to be as if society serves the growth of the economy. It should be the other way around - the economy has to serve the health of society.

Having held impactful leadership positions in both the public and the private sector, how do you think the public and private entities can better interact with each other in our country's context in order to foster growth and productivity?

It starts with humility. Each of us is a small part of a very large and complex system. The institutions and the government have a role; the corporations and businesses have a role; the civil society organisations and NGOs also have a role in the governance of this complex system. Unless all three actors work together, we will not improve the health of the system. The 17th Sustainable Development Goal talks about working in better partnerships. Thus, it is necessary for the local stakeholders to work more cooperatively and play their roles in their own system.

There is this book called *Systems of Survival*. It's a dialogue on the moral foundations of commerce and politics, by Jane Jacobs, and she's an urban economist. She wrote this book as a conversation between a person from an NGO, an academic, a corporate business person and a person from public services, about how they think differently. They feel what they know is the right thing, and they have got arguments for it. But when they have a real conversation about what's the purpose of an NGO, what's the purpose of a business, what's the purpose of the government, you get insights that you cannot produce results on your own. You need the other actors, and therefore you need to cooperate with them. And to cooperate with them, you have to understand and listen to each other.



**THE FIRING
LINE**





VOX POPULI

With life being encoded into a series of 1s and 0s, possession of data begets unrestrained power. As humanity, owing to both choice and circumstance, increasingly inhabits the digital space, the tussle between the common man and big tech giants continues, with one question looming large in the foreground: Should data be democratised?

FOR

In the digital era that we live in, the manufacturing prowess of a country does not decide the economic power it possesses. Further nudged by the pandemic, it will be the use of technology and Artificial Intelligence (AI) that will determine the hierarchy in the coming years. At the core of developing AI systems lies the colossal amount of data that is collected from consumers across the globe. And the access to most of this data lies with the Big Tech companies, whose first mover digital platforms have gained vastly from network effects.

Such concentration of data raises serious concerns as we undergo a transition to the information age. The answer to this is fairly simple - data democratisation. According to a report by a committee set up by India's government on governing non-personal data, led by Infosys' co-founder Kris Gopalakrishnan,² data that is collected from the community can be called 'community data', which the entire community should legally own. So even if a big corporation is collecting non-personal community data, it is bound to share that, under a legal framework, with say a start-up that requires it for its own growth. Thus, data hoarding does not remain the key competitive advantage but its efficient analysis and usage in business practices gain more prominence.

Data, being a non-rival good, can be easily democratised, and if not, developing countries will not have enough resources to develop domestic technology and they will become economically dependent on the U.S. and China for their digitalisation needs. Data sharing under a regulatory framework is the need of the hour, for the internet was developed to become the global tool for communication and not for the creation of silos.

AGAINST

As our world gets increasingly digitised, consumer data has become the new oil. In the pandemic, internet consumption per capita has risen dramatically. This means internet-based corporations have greater access to our data and the potential to influence it through the powers of AI.

The core tenet of data democratisation relies on sharing and distribution of non-personal data. The most important problem revolves around the limitations of anonymising data. The Gopalakrishnan Committee Report has acknowledged that even after anonymisation, there continues to remain a risk of re-identification. In a given dataset, even if the names of individuals were omitted, if attributes including ZIP code, gender and full date of birth remain, re-identification is possible by cross-linking it with publicly available registries such as voter lists, leading to specific individuals. India does not have the legal framework available to implement this without making its citizens vulnerable to exploitation. Aadhaar, India's universal identification system is supposed to be 'secure', containing complete information about a person and yet the government has failed time and again in plugging the data leaks. So, it isn't unjust for us to call this proposal of data democratisation, in the Indian context, a barbaric dream.

India requires domestic innovation and tech incubation to challenge western monopolies. Providing western tech firms with Indian consumer data will only expand and amplify the power they already possess. India has to develop the legal framework to protect private data (Personal Data Protection Bill, 2019 has not yet become law), and then move on to dream about implementing the complicated structures of data sharing within the ambit of non-personal data.

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PROGRESSIVE MUCH?

Progressive taxes are often justified on accounts of equitability. However, research suggests that the correlation between an equal society and progressive taxation isn't necessarily positive. Read on to understand opposing perspectives on the same.

FOR

The fair distribution of tax burden has long been a central concern in policymaking. The progressive tax system, which is based on the taxpayer's ability to pay, has been the most viable option in ensuring greater income equality and a better social security net.

Take the example of Slovenia. For decades, Slovenia has had one of the lowest inequality levels in the world. This has been a result of the policy of progressive taxation and welfare systems. The low inequality equilibrium has persisted over the last 50 years.¹

Research displays the allocative properties of progressive income taxation when individuals care about their relative income. It proves that introducing a progressive income tax can yield a Pareto improvement if pre-tax income is fairly egalitarian. This enables one to examine the connection between optimal tax progressivity and the standard measure of income inequality, the Gini coefficient. Introducing a small progressive income tax yields a Pareto improvement whenever the Gini coefficient of the distribution of pre-tax income is lower than a critical level.

Since progressive income taxation lowers individual working hours through the traditional incentive channel, tax progressiveness makes the rat race less agonizing. A small tax can yield a Pareto improvement since the poor gain from redistribution while the rich gain from lower costs of the consumption tournament. For the rich to be better off under tax progressivity, the onus of financing redistribution has to be sufficiently small, which is the case if the distribution of pre-tax income is fairly even.² Hence, a progressive taxation system coupled with robust public expenditure on education, healthcare and infrastructure can play a pivotal role in reducing income inequality to a great extent.

AGAINST

As counterintuitive as it sounds, taxation in general and progressive taxation, in particular, can deepen economic divides due to heterogeneity and occupational hierarchies among agents in the economy. In the real world, low-income agents work for relatively fixed wages under the owners of capital. When taxation is reduced on the low-income agents and increased on the high-income earners, low-income agents increase consumption at the stores owned by high-income earners. Consequently, the initial blow to the disposable income of the rich is set off by this increased spending by the poor, which adds to their income. The high-income agents further interact with each other, increasing their spending in each other's stores. What follows is a skewed multiplier effect: income increases, multiplies and concentrates at the top while the poor are left with a mellow, one-time increase.³

Another caveat results from the fact that economic inequities are as much a consequence of wealth inequalities as they are of income inequalities. For instance, the Netherlands, a country with a sturdy social security system, high tax rates and strong employment predictions, is still the most unequal place on earth. A lot of the Dutch wealth is inherited, having been passed down through the generations. The wealthiest families haven't earned incomes in centuries and thus income taxes, which do not affect wealth, remain largely futile in bridging the gap between the rich and the poor. This inherited wealth only compounds in the market over time and further exacerbates wealth concentration.⁴ Lastly, high tax rates are also related to problems of compliance. As progressivity increases, much like Laffer's proposition, total revenue for the government decreases, which further chains the government's ability to provide tax relief to the poor.

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COUNTING THE UNCOUNTED

Domestic work done by women continues to dominate a major share of their time and effort. As discourse around feminist economics intensifies, should we include the hard labour or drop it in GDP calculation?

FOR

In developing countries, women work ten times as much as men. If the hours of unpaid labour done by women worldwide were paid at minimum wage, they would be worth at least \$10 trillion—more than the GDP of China.¹

While the global value of unpaid domestic labour by women is around 13 per cent, in India, the number is almost 40 per cent of its current GDP.² In considering this labour as legitimate work, the benefit to India in terms of its GDP figures is almost self-evident.

While only 30 per cent of the active age group in the labour force is composed of women, about 70 per cent are men.³ Hence, the gender dividend that can be attained by mainstreaming the valuation of unpaid women's work in the national accounting data will be higher.

Recognition plays a major role in empowerment, and for more than 150 million women in the country, the recognition of their primary occupation as legitimate work is such that it provides them with a claim to equality within the patriarchal Indian household that only acknowledges the work done by men.

By addressing the growing need for care and the economic need of creating new jobs, lives can be enhanced across the economic spectrum. Creative programs incorporating formal training for developing career ladders, strong training programs and quality jobs for domestic workers will benefit not only the workers but also the employing families and the economy in general.

Once recognised as work, this field of unpaid domestic labour, that is dominated almost entirely by women, can become one where women can ask

for some degree of parity in terms of the time and energy spent on it which is essential for gender equality.

AGAINST

On the face of it, adding monetary value to household work creates a sense of dignity and financial independence. However, the idea of monetising household work raises four essential issues:

First, compensating only women for domestic work would reinforce gender stereotypes, and may deter women from taking employment outside the home. Moreover, it's a known phenomenon wherein women forgo formal work due to labour time demanded by household activities.⁴ Monetisation of the household work shall further incentivise women to remain in the rut of aiding others instead of exploring their own potential and interests. Further, the policy might exacerbate male entitlement if it requires men to pay their wives for household work. Second, this policy may lead to exclusion and inclusion errors as it may exclude women who are not full-time homemakers in low-income groups but include homemakers from higher-income groups.⁵ Many women in the lower-income bracket are expected to carry out both household and professional work to sustain their families. They might not come under the purview of domestic workers as easily. Third, given women's limited control over household resources, it might be difficult to ensure that they derive benefits from this compensation; only 38 per cent of women owned a house/land and 53 per cent used a bank account in 2015-16.⁶

Finally, quantifying and monetizing the colossal breadth of household activities accurately would be a complex and resource-intensive task, considering the subjective nature of caregiving. Instead of monetising household chores, women must be supported with quality education, access to professional opportunities, gender-sensitive and harassment-free workplaces, and attitudinal change within families to make household chores more participative. Women must be encouraged to build an independent identity outside the confines of their homes, thus paving way for truer choice.

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TECH-À-TÊTE



WORLD WAR WEB

BY ARPITA RATHI

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One conception of the Internet is to claim that it is beyond effective regulation, because its effects are not constrained by borders. How, by whom and to what extent should the Internet be regulated?

The National Information Network of Iran, Red Cubana of Cuba, Kwang Myong of North Korea, Clean Network Mission of the United States and many more. Similar to how countries resort to measures to protect their physical borders from threats, real or perceived, these countries have also sought to protect their borders online. This phenomenon termed ‘splinternet’, often dubbed as a cyber-balkanization, is gradually gaining traction as governments around the world are seeking to fence off their internet to create more restricted and domesticated versions.

As the global internet stands on the verge of splintering into tiny bubbles of national networks, the pendulum is swinging to the other side of a ‘cyber-land grab’ idea from the laissez-faire approach. The utopian idea that the internet is borderless is thus challenged by these centrally controlled design systems which question how, by whom and to what extent it should be regulated. While the move is pitched as defensive, the ultimate consequence is control – control over what one can see, what one can access, what one can learn and what one can spread.

First coined in 2001, the term splinternet was first used by Clyde Wayne Crews to describe his concept of “parallel internets that would be run as distinct, private and autonomous universes.” Innumerable reasons are accorded by governments across the world to justify the steps they take, ranging from overshadowing tech companies to national politics and religion. However, with such a connected and interdependent world like ours, this digital balkanization of the internet will have

far-reaching consequences on a plethora of stakeholders including international unions, data enterprises and individual consumers among many others.

The most sophisticated examples in this context are that of China and Russia, where the internet is heavily surveilled and regulated by the State. The Great Firewall of China makes the Chinese Internet different from what most of us are used to seeing. Services we essentially cannot live without like Google Search and Maps are completely banned and replaced by Chinese alternatives like Weibo, all in the name of cyber sovereignty. Russia has enacted the Sovereign Internet Law that allows the government to dictate what its citizens can see online and partitions itself from the rest of the world. While China and Russia may be the biggest internet disruptors, they are certainly not the only ones.

Actions by governments around the world seeking greater control over individuals, information and local economies have led to a fractured Internet. Data storage within the borders is also a core contributor in this regard. Ironically, many of the new data localization policies fall under the broader cybersecurity legislation that involves elements of censorship, especially with regard to controlling the anti-government rhetoric.

Another reason why countries have started to adopt a walled-garden approach is political self-preservation against big-tech companies. These companies, having amassed cash, resources and political clout at unmatched scales, have become adept in regional lobbying. Fear of becoming less important has, thus, contributed to internet isolationism. Moreover, if isolation is driven by political self-preservation, it will

affect all nations and not just those with a history of authoritarianism. Social media was used by Russia to interfere in both the US presidential election in 2016 and the UK's Brexit referendum in 2016. In January 2019, Facebook announced that it had removed a vast Iran-led manipulation campaign designed to promote the government view of the Middle East.^[1]

Moreover, there have been surging efforts by countries to protect their government and contractor technology systems against cyber risks in their supply chains. Supply chain is the key frontline in cyberspace and can be excessively complex for contemporary technological products. That opens opportunities for the adversaries to sneak in hacking vulnerabilities in these systems that these nations can later exploit. It is, therefore, no wonder that governments want to ramp up their digital walls in order to de-risk their supply chains. The U.S is putting in its efforts by blocking foreign tech providers from competing for contracts in strategically important sectors. Russian Anti-Virus firm, Kaspersky Lab, despite presenting its innocence, has been accused of national security risk breach and is banned from federal use. The proposed legislation would do the same to Chinese telecoms giants Huawei and ZTE, with the former already seeing a deal with AT&T fall through after pressure from Washington.^[2]

The internet has now evolved from a sub-cultural data project from the 1970s for the U.S military into the public domain that it is today. Fragmentation of the same into multiple ecosystems along the lines of national interests can prove fatal to its universal aspects.



The Internet, which derives its power from openness and connectivity, is simplistically a great tool for democracy. However, what it can also be perceived as is a potential threat to the iron-clad political control – too open, too free and too challenging.

Technology and information spread across the globe but so do dangerous notions. That's exactly why China's internet looks a lot like the West's internet – just without Facebook, Wikipedia or any other freewheeling information sites.

As the internet turns 50, the global vision that it animated is under threat. An attempt to balkanize it not only poses a potential threat to the democratic movement but also makes denial of international access more likely. Soon, data will not be able to reach from one place to another without virtual customs and checkpoints.

Moreover, as we see instances of drawing up these undemocratic digital borders increase and each country endeavouring to create a national 'intranet', businesses could find themselves standing at a cross-fire. Even though it might look like a soothing opportunity, compartmentalization may lead to more ways to control demand as well as supply and possibly even stifle competition. However, it could do more harm than good. With the internet divided, these businesses will have to adapt their planning and metrics to fit the new environment. Expansion sounds like too much work when heavy costs of compliance come into the picture. Increased regulation means disruption of operations for many.

Certainly, the economic considerations of full-scale internet isolationism cannot be avoided. Broader benefits of a standardised web like that of collaboration, global reach and economic growth might come under significant threat. The agility, flexibility and resilience of the internet might receive a blow when network interconnection decisions are made based on political factors rather than technical considerations. Even though the free ideals that build the world wide web might be at odds with the political agendas of governments, the economic consequences of the same need to be gauged appropriately.

Political wars are progressively being fought in a digital space. As internet fragmentation takes precedence, it would be a mistake to assume the online experience to be uniform. Necessity is the mother of invention and these significant cybersecurity interventions are just the beginning. This scenario calls upon a new playbook delineating the basic rules of the game based on economic rationale and digital human rights protections for all governments. Only then can global power games take place within reasonable limits, and only then can we create a better version of the internet.

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TO TECH OR NOT TO TECH

BY ARAV DALWANI

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With the ever-increasing developments in the field of automation, the need of answering the age-old debate grows direr: Can technology and labour coexist and complement each other?

John Maynard Keynes once warned us of an economic problem that would come to profoundly afflict humanity in the future, like a new disease. In his essay, “Economic Possibilities for our Grandchildren”¹, he foreboded that we would hear a great deal about the problem of technological unemployment in the years to come. Today, technological innovation rightly seems to have become a double-edged sword: while it may bring benefits and improve efficiency, it quite likely could create adversities in the lives of a sizable portion of the populace. Novel economic reforms will thus be needed to counter this challenge and meet the needs of the millions displaced.

The idea of technological unemployment and job displacement can be traced back to David Ricardo, who saw the substitution of human labour with machinery as being extremely injurious to the class of labourers.² Automation and technology impact wage levels at the micro-level and the structure of employment at the macro-level. In fact, workers have long been disrupted by new technology, as evidenced by the rise of ATMs and the use of tractors in agriculture. Although history has shown us that technological innovation ultimately brings greater wealth and productivity, we must consider the needs of those harmed in the interim by Artificial Intelligence (AI), robots and disruptive technologies.

The adoption of these technologies is beneficial for firms and producers as it serves to reduce internal production costs, especially in the developed world where the cost of labour is comparatively high. Automation can bring significant economies of scale, thus increasing output

while reducing production costs for the firm. Nissan, for example, was able to reduce the time it took to move on from product design to production by half with the help of an automated system. Lockheed Martin implemented the usage of augmented reality and AI in the construction of new spacecrafts, leading to a drastic reduction in the number of technicians and shifts required to finish the work.³ The same level of productivity and output would have been hard to obtain if these firms continued using manual labour. Thus, at the crux of the issue is the idea that technology, AI and robotics replace the workers in the tasks that they previously performed, thereby creating a formidable displacement effect.

This does not mean that the labour market is doomed to have widespread unemployment in the future. Throughout history, periods of innovation and automation have often ultimately led to increased aggregate labour demand and wages.

“ The issue in present times is that the displacement effect is more profound than the counter-balancing reinstatement and productivity effect. ”

A Massachusetts Institute of Technology study found that the average displacement of jobs from 1947-1987 was 17 per cent, while the average reinstatement with new opportunities was 19 per cent. However, from 1987-2016, the mean displacement of 16 per cent was significantly higher than the reinstatement rate of 10 per cent within industries embracing automation.⁴

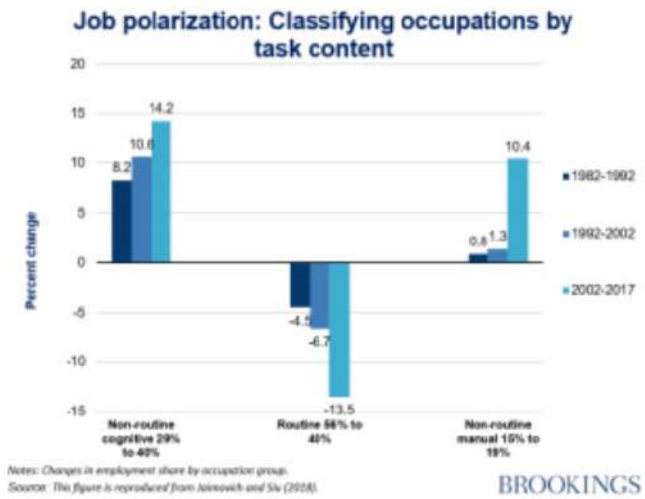


Figure 1: Change in Employment by occupation group in the USA

The implication of this innovation-driven job displacement is that it causes skill-biased technological change, where technology tends to benefit well-educated and higher-skilled workers over others. The automation potential for occupations requiring a college degree is 24 per cent, while for those with less than a high school diploma is 55 per cent. Lower and middle-skilled individuals are thus much more susceptible to losing their employment, and this is particularly true for middle-skilled jobs where routine or repetitive tasks are performed. For example, a person with a degree in computing or management (like an MBA) would find himself with better job prospects as automation has increased the demand for such non-routine cognitive work. On the other hand, routine jobs such as switchboard operators and cashiers have a relatively high elasticity of substitution and are much more likely to be displaced (as seen in Figure 1) and lose their wages. Consequently, the middle portion of the wage distribution has hollowed out as these displaced routine jobs are largely middle-skilled in nature and occupations have become more concentrated at the bottom and top of the wage distribution.⁵ This profound change, known as job polarisation, would exacerbate the already pervasive issues of wealth and income inequality worldwide.

Additionally, in various sectors of the economy, the jobs that are created due to the adoption of new technologies are far different from the ones that were eliminated. Automation of the Audi car factory in Ingolstadt in Germany, for example, displaced assembly line workers but opened up opportunities for robot technicians. The mismatch between the skills required for these two jobs would not only slow down the adjustment of employment and wages of workers but also hold back potential productivity gains. While automation and AI are projected to create millions of new jobs, the key issue is this structural unemployment arising from the mismatch of skills offered by workers and those demanded by employers.⁶

The recent introduction of ‘so-so technologies’ in addition to skill-biased technological change, for

example - self-checkout systems and automatic customer service – have deepened the implications of job displacement, especially for lower-skilled workers. MIT researchers found that these so-so technologies bring lower productivity gains and lower wage growth than expected.⁷ These technologies replace existing workers without bringing any new job opportunities and productivity, unlike automation and AI which are known to create new jobs.

Moreover, in periods of recessions and downturns, the job polarisation caused by the technological change could lead to jobless recoveries.⁸ This is because firms have a strong economic incentive to undertake automation as employers are forced to slash payrolls and lay off some workers. Many companies may turn to technology such as Robotic Process Automation and manufacturing robots to automate middle-skilled, routine occupations. This technological change that replaces routine jobs has contributed to the jobless recovery phenomenon that was experienced in the past three recessions of 1991, 2001 and 2008, as many of these jobs were permanently eliminated. A similar pattern of job disruption is likely to emerge for such workers from the COVID-induced recession which would be a possible explanation for the high and persisting rates of permanent unemployment seen in many countries.⁹

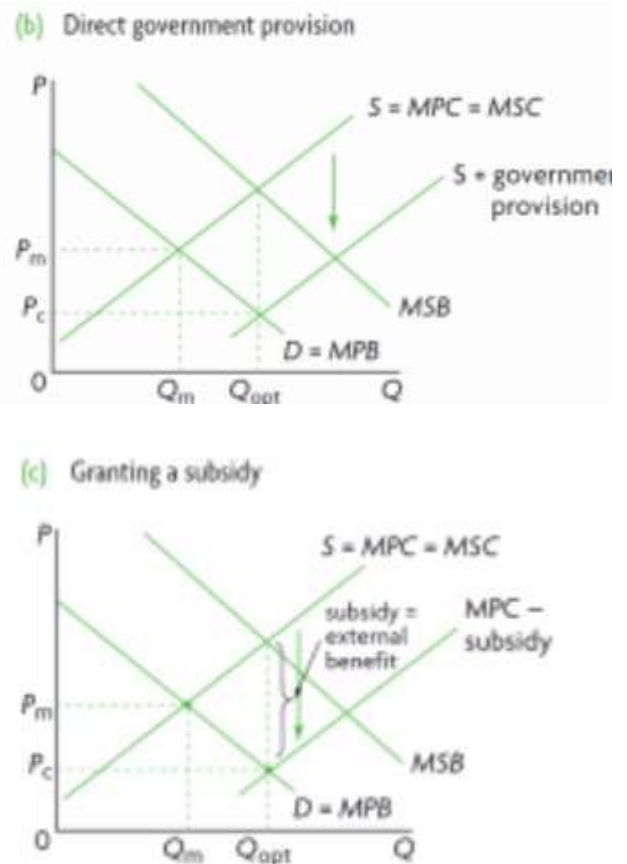


Figure 2(A) and 2(B)

It is therefore quite clear that we must pay heed to the call for action and implement policies designed to balance out the job displacement caused by technology. Intervention from the government should focus on

fit new tasks and opportunities by investing in vocational training. This should be done through subsidized or free-of-cost (wherever possible) education that brings displaced or vulnerable workers up to speed with the requirements of fields like computing, finance and management. Through such subsidization or direct provision of education or online education, governments would in fact be encouraging positive externalities of consumption and moving towards allocative efficiency (fig 2 (a) and (b)). Simultaneously, businesses should be given incentives to take a lead in on-the-job training and upskilling of workers to deal with workplace changes, instead of laying them off. We have already observed the power of Massive Open Online Courses (MOOCs) platforms – Coursera, EdX and Udemy for example. It would serve governments well to collaborate with such platforms as an economical yet impactful way of bringing affordable education to displaced workers while also running reskilling programs like Singapore’s SkillsFuture Initiative or Germany’s apprenticeship programs.

At the same time, labour agencies should be tasked with actively aiding the re-employment and acquisition of new skills by displaced workers. This could be achieved by implementing policies that mandate businesses to provide unemployment benefits to any worker displaced by new technologies for one year and ensuring that workers receive some income support until they are re-employed. This transition support would give essential protection to the lower socio-economic strata of society and restore labour mobility in workforce transitions. While most countries already provide unemployment compensation, governments may also consider providing limited targeted transfers to workers displaced for comparatively longer periods

to help such individuals meet ends.

Job displacement can actually be mitigated by paying careful attention to the tax code and its impact on automation. The idea of a robot tax has gained popularity among those who view automation as creating negative externalities, but such a policy could impede economic growth and hinder the development of further opportunities. Instead, governments should seek to adjust their tax system to address flaws and imbalances that currently exist. In the United States, for example, researchers found that the tax system favoured excessive automation because of the high effective tax of 28.5 per cent on labour and low taxes of 5 per cent on software and equipment. Such policies favour excessive automation and encourage firms to adopt so-so technologies to automate tasks while using less labour, even when it is not efficient or optimal. Governments should therefore review and revise their tax systems to eliminate distortions and factor in unemployment data, to strike a balance between labour and automation.¹⁰

On the whole, the fact of the matter is that every great period of innovation has produced job displacement, but technological progress has not failed to generate new employment opportunities.¹¹ Keynes’ concern about technological unemployment was mainly about a “temporary phase of maladjustment” as the economy adjusted to higher levels of productivity. However, society would find itself stretched if technological innovation raises the fortunes of the skilled while the millions displaced for a long period in the interim cling to waning opportunities and are unable to make ends meet.¹²

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AN OMNISCIENT EYE

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Known for its radical, and often controversial policies, China is toying with a social experiment that is unprecedented in both scale and scope. With dystopian connotations and far-reaching implications, would The Social Credit System find acceptance in a world that is largely steering towards greater individual autonomy?

Ever wondered how it feels to live in a place where each action you perform gets watched and weighed by someone sitting somewhere? This would look similar to the dystopian world that George Orwell has created in his popular novel *Nineteen Eighty-Four*. Set in the remote nation of Oceania, the novel shows the life of people who live under the shadow of an all-seeing and all-hearing leader named Big Brother. Nevertheless, for a very long time, all this had been a mere work of fiction, distant from reality. But not anymore. After a series of speculations since 2014, China is now all set to see the rise of a citizen monitoring system. Is this something that can change the face of the Chinese economy within a few years or just another dystopian Chinese dream?

The Social Credit System (SCS), as it is called, is undoubtedly the most ambitious social science experiment undertaken in the 21st century.¹ It has been conceived by the Chinese government to access, monitor, and regulate the behaviour of individuals, corporates, and government bodies in the country and assign them a credit score. Much like a video game, some actions fetch you a higher score while others lower your score. This score can later be accessed by anyone anytime to gauge a person's trustworthiness and can also be used to avail a range of privileges and facilities. Though the Chinese government was all set to get this implemented nationwide, even by the end of 2020, the SCS continued to remain a far-fetched dream. While the State is already popular for its outlandish rules such as a national guideline on child names and the popular One-Child Policy, the Social Credit System is especially critical as it

can directly impact about 17% of the global population¹ by quantifying a subjective item like human behaviour.

Ever since Mao Zedong founded the People's Republic of China in 1949 under communist ideals, China has not been able to rise to the level its founders had envisioned. Fundamental flaws in Chairman Mao's initial policies had resulted in food safety scares and a crawling growth rate during the 1960s. This made the future rulers of China realize that developing a strong and open Market was key for faster growth. Though China opened its economy to international trade in 1978, there had been various strategies to make the market advantageous only for the Chinese. It was in 1990, that Lin Junyue, a researcher at the Chinese Academy of Social Sciences proposed a system of credit scoring to regulate market frauds.² This proposal was disregarded initially, but by 2014 the government realized that all existing systems of governance in China were insufficient to solve a brimming domestic issue: the erosion of trust in the government among the local citizens. Believed to be inspired by Lin's proposal, the National Development and Reforms Committee (NDRC), the Nodal agency for SCS, made the declaration of the Social Credit System in 2014. The declaration envisioned SCS as an effective means of enhancing social integrity, promoting mutual trust and reducing social conflicts, all of which were urgently required for building a harmonious socialist society.³

It is hence clear that the Chinese government has historically had only one aim i.e. to 'make China great again' (and all their policies can be seen as means to this

end). As mentioned earlier, the SCS was due to get on the ground in 2020, but we still do not know if that has happened. The final form of how this system would be is hence largely unknown. Since 2014, however, China has been doing a set of regional pilots in its key cities including Beijing and Shanghai.⁴ An inquiry into these regional pilots would help us understand what the state has in mind.

The Social Credit System has been compiled as a policy with two main components — real-time data collected through the 50 million AI-enabled cameras⁵ (about one for every two citizens!) installed across the country and discrete data held at various governmental levels — which will be integrated into a single server. A 2014 briefing by NDRC heralds for interlinkage and interconnection of all data sources ranging from public transport to E-commerce websites. And this can probably become the world's largest population data set. The government has already compiled a list of about 1,000 actions that are socially desirable and socially unappealing. Actions including blood donation, charity work, abstinence from religious activities and of course, praising the president on social media will raise your score. But not paying taxes, spreading hoax news, violating court mandates, jaywalking, and participating in protests are all frowned upon.

The data is just one side of the coin, the rest are a set of carrots and sticks.

“As the popular economic theory goes, ‘Men respond only to incentives’, the Social Credit System also has a list of rewards and punishments the score can get you.

A good credit score can fetch admissions at premium universities, priority consideration at government offices and even tax concessions. Conversely, the scheme also has plans to place large billboards along highways and have bulletins on television to display details of low-scorers. A low credit score can put a person on a flight and train travel ban. It is not a joke that 17.5 million flight tickets and 5.5 million train tickets were revoked by the companies between 2014 and 2018 as the passengers had a low credit score.⁶

A system of assessing people's worth and assigning them scores is not a new scenario. The United States of America (USA.) has had a very effective system to weigh a person's creditworthiness before offering him a loan. China too has many loan monitoring systems in the private sector like Sesame Credit and AliPay. However, the proposed SCS is different from all these as it also gauges the behaviour of business, legal and government entities along with the laymen in order to achieve transparency, effective governance and environmental protection. And it also goes beyond the general definition of credit to gauge your daily life behaviour. In fact, it is already seen that public trust

in the judiciary (which is not independent and often ridiculed for being biased) has risen after the SCS began penalizing any contempt of court judgements. The SCS thus also proves to be a very well laid out and intricately designed policy that can enable the government to ensure a root-level penetration of its mandates, loyalty from citizens, smooth functioning of the market, and thereby push China to be the most robust and well-functioning economy.

Though the policy seems to be a well-planned one, it is not free from glitches and has already overshot its initial schedule. As seen earlier, the system is already on trial in all major Chinese cities. The pilots, however, were independently developed by each city's council and hence vary largely among regions.⁷ This incongruity among the samples is the primary reason for the absence of a national data centre and a national level guideline in the country. The 13th Five Year plan (2017) had urged for the 'informatisation' of data with a novel and indigenous Artificial Intelligence and Big Data-based technology. However, the whereabouts of this technology that can automatically grade citizens is still unknown. A data handling exercise that utilizes real-time data of 1.6 billion people each day is impossible with the capabilities of any available supercomputer right now.

Above all these, the most striking accusation levelled on SCS is the looming possibility of SCS becoming a threat to personal liberty and privacy. It is already clear from the NDRC that speaking well of the president and the party can increase your score. Then, in such a paradigm, it is impossible to expect someone to speak against any of the governments' actions.

“The regime is already infamous for its stringent censorship rules and SCS will be a cherry on the top, allowing the government to closely monitor people's actions and to punish them when needed.

Although the whole ambit of Personal Liberty in China is beyond the scope of this article, it is critical to note that these prospects of the SCS, if unaltered, can become the most efficient and foolproof mechanism to 'sew the mouth' of millions.

The Social Credit System grew out of China's plans since the 1990s to legitimize the market through a credit marking scheme. However, the system has grown from its initial attributes, becoming a comprehensive one that oversees all aspects of human behaviour. The projected goals of this policy are undoubtedly the most pressing and it also seems to be the best option to achieve them in the shortest time. It also satisfies the government's interest in improving governance with ultra-modern technology. However, the scale and impact of this can be counterproductive; for instance, if the database containing sensitive information gets leaked or hacked, there will be irreparable consequences with respect to

the benefits received by individuals being driven away and the system losing its legitimacy. The proposal has already received brickbats from the western media. The optimal option for China right now will be to revamp its policy, understand the status quo and analyze the

real need for such a system in the ‘age of expression’. Will the Social Credit System make China an economic heaven or an Orwellian world? Only time will tell...

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DEEP DECEPTION

BY CHIRAG BANKA

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Disinformation and hoaxes have evolved from mere annoyance to high stake warfare for creating social discord and increasing polarisation. Now, it takes the form of a new tool to spread computational propaganda and disinformation at scale and with speed.

The human race has witnessed the advent of artificial intelligence (AI) with advancements in technological capabilities in the recent past. The pace at which these technologies are developing is so fast that it is sometimes threatening as well. New threats are increasingly on the rise and have the potential to lead us into catastrophic times. One such threat is 'deepfakes'. Deepfakes are synthetic media that are made using advanced technologies such as machine learning and artificial intelligence, portraying people doing something that they never actually did. With the help of deepfakes, the creator is able to do away with the line between reality and imagination. This technology gives the creator godlike powers wherein they can create anything virtually and bring non-existent notions into reality.

The word 'deepfake' comes from a form of artificial intelligence that can train itself to perform tasks called 'deep learning'. Deepfakes are recently being used for nefarious purposes such as scams and hoaxes, celebrity pornography, election manipulation, social engineering, automated disinformation attacks, identity theft and financial frauds. While this may seem to be a lot, it is just the tip of the iceberg. Deepfakes can shake governments, incite protests and spread propaganda as well as hatred. With such power in one's hand, this list will always be inexhaustive.

But how are deepfakes created? There are various methods to create deepfakes. One system that is widely used is known as a General Adversarial Network (GAN). It is used to create faces that do not exist otherwise.

Firstly, algorithms are developed using various networks and photos, which then engage in an interplay of labelling, clustering and classifying.¹

The dangerous part is that these algorithms, once developed, can learn from themselves and get better every time an action is carried out.

Another system used is an AI-backed system known as an encoder, which is used in face swapping or face replacement technology. To create a convincing deepfake swap, thousands of photos are required and a wide range of characteristics are to be considered. Needless to say, high-end computers are required to create convincing swaps but there is a horde of deepfakes available made by standard computers and smartphones as well.

As deepfakes multiply and their numbers increase exponentially, automatic detection will become necessary. Scientists say that a time will come when these deepfakes won't be distinguishable from authentic content and it is alarming to note that a 'deepfake supremacy' could take place within the next ten years.

The main areas where deepfakes pose the highest threat are the political and the corporate. So far, much damage has not been caused but seeing how the quality of deepfakes is going to increase in the future, it can be predicted that deepfakes could become the highest security threat by 2035. Deepfakes can bolster fake news and could have far-reaching consequences.

security threat by 2035. Deepfakes can bolster fake news and could have far-reaching consequences. For example, there is a video of the former United States (US) President, Mr Barack Obama, talking about deepfakes. The truth is that this is not really Mr Obama, but the person in the video looked and sounded exactly like him. As people's trust in information erodes, they might share it less on social media, but on the downside, even sound information could be withheld.

Deepfakes can also be used to execute social engineering wherein people are tricked to transfer money based on deepfaked audio or video material. High profile scams are also carried out using successful deepfake models. In 2018, an executive of a United Kingdom (UK) based energy company was scammed of \$3,00,000 when he received a fake phone call from his boss asking him to transfer emergency money. Deepfake phishing and financial scams are only going to increase in the foreseeable future. In a deepfake phishing attack, criminals use synthetic audio to mimic the tone, inflexion and idiosyncrasies of chief executives or other employees.² Then, they ask for money transfer or access to sensitive data. In a financial scam, such videos can make a victim appear to say things they never even said. Criminals could share a face-swap video that falsely depicts a CEO making damaging private comments, causing his/her company's stock price to fall, while the criminals profit from short sales. It can be used to spread propaganda and sway public opinions by posting fake videos of leaders, CEOs and other influential figures. Nowadays, even one post is enough to inflame people on social media. Such fake videos, if released, would get viral in no time and create a controversy bubble. Social media sites such as Facebook and Twitter have banned the use of deepfakes but now, even these sites are not able to distinguish between what is real and what is fake. Nevertheless, deepfake technology threatens to drastically increase the number of realistic fake videos in circulation on social media. Thus, it threatens to exorbitantly increase the associated costs. These costs could range from hiring expert personnel to identify and remove such videos, to developing indigenous software to tackle the problem. Machine learning can make it possible for almost anyone to create convincing fake videos of anyone doing or saying anything. There are applications available on the internet such as Fakeapp and Zao that help users to create such content for free albeit on a lower level. User-friendly softwares can be downloaded from the Internet along with online tutorials on how to use those softwares. Something that also draws concern is the fact that something authentic can also get dismissed by the larger public thinking it is fake.

India has raised the alarm in the international community against the possible misuse of AI by bad actors, both State and non-State, to disturb global peace and "fuel misinformation, divisions and political instability".³ Speaking at the United Nations Security Council on the topic, "Peacebuilding and Sustaining Peace: Contemporary Drivers of Conflict and Insecurity", India highlighted how tools like AI deepfakes and 3D printing

could be put to nefarious use. "One side effect of the use of deepfakes for disinformation is the diminished trust of citizens in authority and information media" reported Europol (European Union Agency for Law Enforcement Cooperation) and the United Nations. The Internet is flooded with increasingly AI-generated spams and fake news that are built on bigoted texts, fake videos and a plethora of conspiracy theories. People might feel that a considerable amount of information, including videos, simply cannot be trusted, thereby resulting in a phenomenon termed as information apocalypse or reality apathy.

After taking a look at the threats deepfakes pose, one wonders whether there exists a way to tackle this situation. Not really, unfortunately. Deepfakes are made through the use of AI and there is not really a way to uproot this disease from its source. As time passes, its threat will only increase. While we all hope that one day a concrete solution will be available, we have to take some precautions as an individual, as a corporation or even as the government. Poorly made deepfake videos may be easy to identify, but higher quality deepfakes can be tough. As an individual, one should look for certain telltale characteristics such as unnatural eye movements, face morphing, lack of eye blinking and bad lip-sync, which can potentially give away such videos.⁴ Accenture has identified a three-step process to tackle the threat of deepfakes for businesses and corporations. This includes employee training and awareness, detection models and response strategies. Training should focus on how the technology is leveraged in malicious attempts and how this can be detected; enabling employees to spot deepfake-based social engineering attempts. In organisations, executives need to start taking cyber security more seriously and need to begin integrating it with their core data processes. They should work towards making holistic programmes and focus on user training for such programmes.⁵

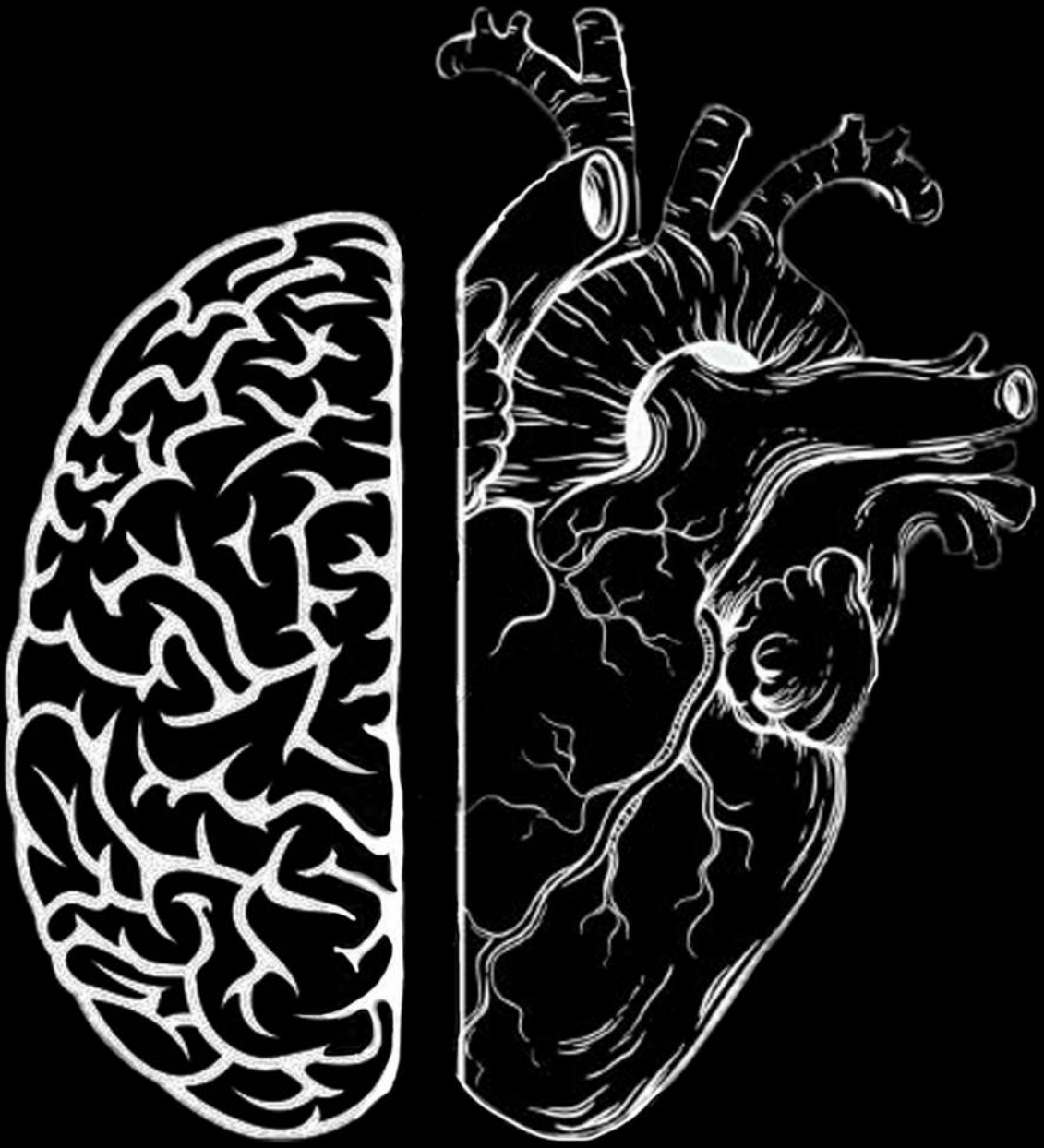
There are generally two solutions suggested by experts: using technology to detect fake videos and improving media literacy. By feeding computer examples of realistic videos as well as deepfake videos, researchers are trying to train softwares to detect the common differences that usually crop up and learn to detect that automatically. The same AI that was used for making those deepfakes can now be used to detect them. But by the time a video is detected as fake, the damage is already done. That is why media literacy and self-awareness is paramount at the threshold. The ultimate aim is to develop social and educational infrastructure to counteract the effect of deepfakes, rather than to instil general scepticism.⁶ Deepfakes pose a threat to the polity, society, economy, culture, individuals and communities. Policymakers should keep all the aspects in their minds before making any major decisions. On the legal front, India does not have a specific legal provision against deepfakes. On the macro level, we need to see some specific government initiatives in this area. There are some provisions in Section 500 of the Indian Penal Code, 1860 and Section 67 of Information Technology Act, 2000 but they are barely adequate.

Clearly, deepfake is the greatest threat to the idea of genuineness and truth in this era. It blurs the line between truth and falsehood. The year 2020 has seen the most number of deepfake fiascos owing to the

sudden shift to digitisation. However, deepfakes are still at a pretty nascent stage and the world should take all steps possible to uproot this problem from its source.

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THE MIRED MIND





THE ECONOMICS OF LONELINESS

BY ESHITA BHAT

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Mental health issues are on the rise. One often focuses on the harms this creates on an individual. However, what's the cost of suffering from such issues for the economy as a whole? Read on to understand the economics of loneliness and how one can reduce such costs.

Solitude is considered as an enriching space for self-discovery and the genesis of remarkable ideas. It is arguably one of the safest spaces where the mind can run free without the imposition of situational morality. However, there exists a mutated form of solitude where an individual loses sight of who they are in the moment, let alone realising their potential. Thus, an idyllic understanding of loneliness is abhorrent, especially, when we are to study it in the context of the fast-paced modern world that is filled with roadblocks that come in the way of realising an individual's potential.

As the world succumbed to social isolation, the economy crashed in more ways than one. Supply chains snapped, stock markets crashed, planes were grounded and store shutters had to be lowered. However, the physical manifestation of lockdowns was not the only evil. People, the lifeblood of the planet, its economies and social systems witnessed newfound levels of stress and mental agony- traits commonly known to be detrimental to work performance.

In a country like India, mental health statistics were disappointing even before the pandemic. The World Health Organisation estimates that mental health problems cause 2443 disability-adjusted life years (DALYs) per 1,00,000 people. India's economic loss due to mental health conditions between 2012 and 2030 is estimated to be \$1.03 trillion!¹ Needless to say, if we fail to analyse this problem and work on solutions, we stand to lose more than our peace of mind. Humankind, through the centuries, has pondered over

life and purpose thereof. It has struggled to survive over generations through the harrows of wars, diseases, famines and so on. Yet somehow, it has thrived and grown as one whole. To quote Henley, we have done this with a head that is bloody but unbowed. From the years of toil and turmoil, one can derive one of the most remarkable conclusions: if experts from an array of fields were to agree upon a single facet of human existence, it would be that humans are social beings and the value of social interactions, if taken away from man, may drive him into a spectrum of restlessness far too unsettling and upsetting to view.

We find the proofs of concept in the thoughts of different prominent authors:

- (a) In the Aristotelian belief that humans are social animals,
 - (b) In Jean Jacques Rousseau and his idea of a collective will, based upon social contracts between individuals,
 - (c) In Adam Smith^A, laying the foundations of modern-day economics upon the Division of Labour between workers and addition of individualistic talents into one umbrella specialisation and
 - (d) In the Keynesian analysis of government expenditure as a catalyst to spring aggregate demand into action.
- Theoreticians have always attempted to delve deeper into the gains that emerge from social interactions. For, without interactions, there are no transactions, and sans transactions, there is no economy.

Human interaction, thus, drives economies, sustains political systems and nurtures and keeps sane the most perilous beast of them all—the human mind.

Many have known of the catastrophic impacts of loneliness. Perhaps that is one of the many reasons we find excommunication as a common practice in the olden times- like the one which led the prodigal Dutch philosopher Baruch Spinoza to write against the theologies of the very faith he was supposed to head, as a frontrunner! In the present times, this excommunication persists in the transformed form of cancel culture and may take a dangerous form of loneliness. While we are connected more than ever before, with webs of networks interlinking and lighting up at every node, like a spiderweb growing and glowing, the instances of people feeling lonely continue to increase. Detailed studies into the factors that precipitate loneliness show that a majority of the population claims to feel lonely; it is a recurring pest hosted not only by the aged or the bereaved but by a wide variety of people.²

One ought not, however, get dissuaded from accepting confinement as a requirement for growth and sanity! Solitude can, in many ways, be therapeutic. The ability to manoeuvre oneself out of a social context can offer much catharsis and mental peace. However, there remains a deep stigma associated with solitude because of its amorphous nature. We do not know what precise duration of being alone is good. That question is so subjective that obvious and subtle forces around us have convinced us that being lonely is necessarily bad. However, at this point, we must differentiate loneliness and isolation. Voluntary, short-period removal of oneself from social interactions for pondering, ideating, grieving or removing oneself from toxic situations can be considered 'net positive loneliness'. While defining the exact time frame for such a definition would be a blasphemous attempt to equate the perks of human nature, for the sake of this distinction, we focus on the aspect of the agency. In cases of 'net positive loneliness', the individual 'chooses' to isolate themselves, a key feature.

On the contrary, we analyse- net negative loneliness- a form of isolation imposed either by the people around the individual or the mind itself. Even though we consider the mind itself to be the perpetrator of such forms of loneliness, we separate its identity from the individual. It is because loneliness may be self-imposed, but it remains, in its true nature, a figment of the subconscious which finds its way to the conscious. These concepts are examinable under an economic lens. Net positive loneliness can render someone feeling stronger, healthier and even inspired, thereby increasing their relative productivity. Its counterpart, on the other hand, can make one unmotivated and devoid of energy. As stated, net negative loneliness is generally perceptual. However, it may be a veritable issue for those individuals who have no living friends or relatives. While many have pondered the reasons that cause loneliness, there is no exhaustive list of factors. It may stem from trauma, conflict of opinions or even degrading behaviour owed to socio-economic factors³ such as poverty, malnourishment, race, ethnicity and gender. Among the hustling, younger segment of the population, many believe that loneliness exists because of material

fascination, i.e. the drive to own material possessions and demonstrate them. This fascination leaves many, who cannot replicate the behaviour because of their lack of means, feeling outcast from a cultural movement everyone is partaking in. Whatever be the cause, its long-term impact has been arduous to quantify and hence, this issue has not received a lot of attention in mainstream policy debates.

Loneliness imposes a heavy burden on health and social care service. It also acts as an impediment to the productivity of the economy through spiked illnesses and deaths. The additional social costs like those on criminal justice, rehabilitation and public welfare are an added blow. These costs are to be borne by taxpayers of the countries themselves. By 2030, mental health will cost us \$16 trillion!⁴ This whopping cost is divisible into two branches- the direct cost in medical treatment and the indirect costs in welfare, education, law and order and most significantly, loss of productivity.

The best way to combat this problem is to minimise the triggers and improve intervention and protection. As per the National Mental Health Survey of India, 7.39 per cent of individuals in the age group of 18 to 29 years suffer from mental health issues. The lifetime persistence rate for the same is 9.54 per cent.⁵ For a country like India, which prides itself in being the youngest nation in the world, mental health issues in this age group is a big concern. With many experts calling for a more holistic approach to mental health, the foremost step is awareness. Early intervention has been proven to be effective in not just prompt diagnosis of the individuals concerned but also in providing a sense of confidence to the health care providers, thereby improving their overall morale and effectiveness.

However, intervention, whether early or not, would require a goal congruence between several parties. On the micro-level, this includes psychiatrists, psychologists and social workers. On the macro-level, it means the government, educators, employers and the society at large.

The host of studies conducted by "first world" countries including Australia, Canada, Finland, France, Ireland, the Netherlands, Sweden and the USA, reveal the vastness of this economic cost. We see economists calculate the impact of investments by measuring the return of intervention mechanisms per unit of money invested. This benefit may accrue as an opportunity cost to the people themselves, their family members, housing associations and the health system (in this case, the NHS). In a study by Willis et al, among three peer groups in South London who provided a controlled environment for carers and people with dementia to socialise, an SROI of £1.17 to £5.18 was generated per £1 of investment.⁶

The care for loneliness by investing in appropriate solutions is a much more feasible alternative than overburdening the health, criminal justice and other systems. According to a 2020 Globe News Wire report, rehabilitation for substance abusers is a \$42 billion

industry.⁷ It is estimated that the per prisoner cost of incarceration in the US is upwards of \$30,000.⁸ A study by doctorate students of Washington University in St Louis finds that every dollar spent on incarceration generates ten times its amount in social costs. This study estimates the cost of incarceration in the US to be \$1.2 trillion, approximately six per cent of their GDP!⁹ It is agreeable that not all of these inmates have committed crimes because of loneliness or despair. But, many of these crimes are preventable if the focus is on welfare rather than punitive action. People can be saved from chronic illnesses, suicide and so on by providing ready help. Some examples could be fast responding helplines or discussion forums that promote expressing internalised emotions. Psychological interventions in required cases can also put an effective end to the growth trajectory of said loneliness.

In India, support mechanisms are ostensibly weak. According to WHO India, for every 1,00,000 people in the country, there are 0.3 psychiatrists, 0.07 psychologists, 0.12 nurses and 0.07 social workers. The number is visibly low if we seek to develop a robust healthcare system. In high-income countries, this number is more than 70 per cent (cumulative number of mental health workers per 1,00,000 persons).¹⁰ The global application of such health standards will inevitably take longer than expected. Much of the studies on the 'Economics of Loneliness' were based on sample environments of developed nations, with far advanced social structures that are still strong enough to pick the burden of providing support mechanisms. Hence, an inevitable

gap between first and third world nations shall exist.

For developing countries that struggle with the barest of social indices, the additional need for mitigative structures for loneliness may halt their execution machinery.

One of the highest efficiency mechanisms that can curtail the problem of loneliness is collective social change. One way could be the three-step process of reaching out, talking it out and working it out. Society must endeavour to protect the interests of those around them by constantly checking in on peers, establishing regular communications and gauging issues that may be troublesome and having open discussions about them. This simple act of deliberate and meaningful interactions is indeed a priceless move, for it saves lives as well as millions for the economy!

The world is a palpable pell-mell of dysfunctions, devastations and dismay. People are constantly impacted by the growing mismatch between faster web networks and slower peer networks. This phenomenon results in information overloads that may be difficult to process, leaving someone feeling incapable. Drawing an effective end to this problem is not just a morally correct decision, but an economically sound one too and one we must not be too Tardy about starting.

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THE ELUSIVE EQUILIBRIUM: EGO

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An unexplored relationship, mental health and economics, pervades all boundaries to impact us at a micro and macro level.

When Ananya lost her job last month, she responded by buying three tubs of ice cream. As her initial shock over the loss subsided, along with the level of ice cream in the tub, she decided to make the most of it. She signed up for guitar classes, she bought thousands worth of baking equipment online, she attended motivational seminars; in short, Ananya was the perfect customer for the profitable segment of the economy that thrives on grief and disappointment. However, as days passed and her savings dwindled, Ananya found herself getting despondent by the hour. She found herself increasingly unable to stand her friends, who did nothing but complain about their boss and the job that involved a bonus of only 45000 rupees. She withdrew further into herself and a sort of unshakeable inertia started to take hold of her. Ananya used to moonlight as a web-comic designer but as anxiety for the future enveloped her, the quality of her output declined and she found herself incapable of concentrating or caring.

Ananya's story provides an insight into the curious, bilateral relationship that economics and mental health share: bad economics reinforces bad mental health and vice versa. While this particular relationship was traditionally overlooked, in the last few decades studies in this area have yielded some important and concerning results. Growing research into the economic consequences of adverse mental health suggests that depression and anxiety cost the global economy one trillion US dollars annually and will cost 12 billion days between now and 2030 if more isn't done. Mental health disorders, which account for almost 30 per cent of the global non-fatal disease burden and afflict 10 per cent of the population, have dire consequences for socio-

economics, in terms of monetary losses, increasing inequalities and death due to preventable diseases.^{1,2} According to projections made by the World Economic Forum in 2011, mental ill-health will account for more than half of the global economic burden attributable to non-communicable diseases by 2030, at six trillion US dollars. In the light of these facts, it becomes difficult to ignore the large economic impacts of mental ill-health. Additionally, this relationship between economics and mental health is particularly evident during times of severe crises. Research by Antti Uutela unveils the association between the Asian economic crisis and the extreme increase in suicide mortality in Asian countries during that period, noting that "for every 1% increase in unemployment, there was a 0.79% rise in suicides at ages younger than 65 years, and a 0.79% rise in homicides."³

On the other hand, the flip side of this relationship is well explained by Martin Knapp and Gloria Wong: "economic disadvantage is associated with a greater likelihood of mental illness, possibly through greater exposure to risk factors (e.g., social exclusion) and poorer access to protective factors (e.g., education), or a complex downward spiral (e.g., entanglement of poverty, treatment costs, employment difficulty...)." ⁴ Poverty, for example, leads to situations of extreme mental distress and emotional stress, which in turn can lower motivation levels, create a sense of impending doom and stoke pessimism about the future; all of which have pernicious effects on productivity and thus can expedite the route to dismal economic prospects. Poverty, or economic setbacks in terms of job losses, has also been correlated to increased feelings of loneliness, lack of functioning social lives and instances of casual ostracisation by the community members. These social offshoots of adverse

economic consequences exacerbate mental health problems, creating a persistent and self-perpetuating vicious cycle.

An interesting facet of this bidirectional relationship is how bad mental health can sometimes lead to good economics (at least for some agents). As seen in the story above, several people, particularly those belonging to the middle and the upper classes, are susceptible to impulse buys and increased consumerism as a means of coping with stress.

“*Decision making here is guided by the need to feel instant gratification instead of the forces of rationality.*”

This makes the consumers less likely to see through gimmicky schemes and low-quality products, making it immensely beneficial for some producers. Similarly, increasing mental health problems in developed countries provide for another illustration of the inverse relationship that mental and economics share. For the most part, however, the relationship between economics and mental health is direct and mutually reinforcing.

Interestingly, and also somewhat alarmingly, the effects of bad mental health have repercussions bigger than just economy-wide productivity losses. Mental health economics isn't solely a macro concept, it is just as much a micro concept. Economics, at its very essence, examines consumer choice. It treats individuals as rational agents who, given certain constraints (budgetary, time and so on), try to optimise their utility. However, a compromised mental health may lead to making choices under emotionally charged states and severe duress, and these choices may thus be far from optimal. Our emotional states affect our decision making and it is not difficult to see how this can translate into suboptimal economic choices. In his seminal paper titled 'The Relevance of Nash Equilibrium to Psychiatric Disorders,' Dr Patokos argues that “...intrapersonal perceptions might enter an individual's utility function, and hence, be decisive on this individual's actual choices.” To show how mental health is relevant to economic decision making, we use a game-theoretic analysis. Before proceeding though, it's essential to state two important caveats: this analysis extends the scope of traditional game theory to involving solely one person (as opposed to two), albeit two players are constructed by delineating the person between the 'doing self' and the 'thinking self.' Secondly, the property of Nash equilibria that requires a coincidence of beliefs that players hold about one another is emphasised. In Dr. Patoskos' words, “An individual is in a Nash equilibrium if his or her beliefs are consistent with his or her actions. Given that discordance between beliefs and behaviour is a typical cause of psychiatric disorders, individuals who are not in Nash equilibrium are likely to be affected by such disorders.”

I take a slightly tweaked version of Dr Patoskos' original example to explain this point.⁵

We return to Ananya's story. Let's say Ananya has two choices now: to apply for a new job at XYZ company and to not apply. Let's assume that she chooses the first option with a probability 'p' and the latter with probability '1-p.' However, owing to her 'thinking self,'— which is a culmination of her beliefs about her capabilities and measures of success, essentially trying to answer the question 'could I get the job?'— Ananya has beliefs about what 'p' would amount to. Let these 'beliefs' be summarised by 'q.' If $q=1$, then Ananya is confident that she'll get the job, if $q=0$, she is certain that it'd be a no-go. It's essential to note that q doesn't reflect the actual reality of p; q is not an accurate measure. Ananya is free to underestimate or overestimate herself, which again, is a result of her prevailing mental health at that point in time.

Since utility is a direct consequence of her choice and her choice is influenced by her beliefs, modelling utility as a function of her beliefs is possible. Now we see what happens when her utility function is based on her beliefs. (This is the utility function used in Dr Patosko's paper and first appeared in the Bravery Game proposed by Geanakoplos et al.)

Let u (getting the job) = $2-q$

u (not getting the job) = $3-3q$

If q is greater than 0.5, say, $q=1$, Ananya is better off applying for the job as $(2-1=1)$ is greater than $3-3(1)=0$. If q is less than 0.5, say for example $q=0$, Ananya is better off not applying for the job as $(3-0)$ is better than $2-0$.

Given this, Ananya will prefer to apply for the job if $q > 0.5$, implying that she is confident she'll get the job. If $q < 0.5$, she will not apply for the job. Ananya's “*preferences are affected by a need for self-confirmation and a sense of psychological grief that would lower [her] utility if [she] thought*” of herself as capable of the job but didn't get it instead.

A nash equilibrium occurs in cases where beliefs are confirmed (i.e. $p=q$). There are, thus, three cases:

1. $P=q=1$: Ananya is certain she will get the job ($q=1$) and she does so with probability 1 ($p=1$).
2. $P=q=0$: Ananya is certain she doesn't qualify for the job and she chooses to not apply.
3. $P=q=0.5$: Ananya thinks she may or may not get the job and she applies arbitrarily, by flipping a coin or throwing a dice.

It's interesting to note that $p=q=0$ yields Ananya the maximum utility of 3, which seems to imply that she'd be better off not believing in herself. However, her beliefs cannot be changed on her whims; she cannot make herself believe something just because she wants to believe it. Thus, issues like confidence, esteem, and so on, which are often a direct consequence of

a person's mental health, become germane in this context. The beliefs directly influence the outcome of the game and are an important determinant of the Nash equilibria that Ananya would end up choosing. Since the Nash equilibria are the optimal outcome of a game and present a strategy from which the players have no motivation to deviate and *"since the very notion of being in a Nash equilibrium involves beliefs being consistent with actual behaviour, it is interesting to notice the analogies and assert that predicaments such as low self-confidence, self-delusions, or inaccurate self-knowledge are all instances of Nash disequilibria."*

The intersections between mental health and economics, however, do not end here. It's heartening to note that economic interventions have a far-reaching impact on mental health. A WHO study suggests that returns from investing in improved mental health are fourfold: for every one US dollar invested in ameliorating mental health facilities, particularly in the treatment for depression and anxiety, gains worth four US dollars in the form of increased productivity and better health are reaped. Further, on a BBC show, Dr Ashraf discussed the importance of understanding the links between economic productivity and mental health saying: *"It's not an either-or; it's not 'let's focus on mental health interventions' vs. 'let's focus on economic interventions.' Both have their corresponding effect on the other."*⁶ The big economic battles of today's day and age- the battle against poverty, the battle for equitable healthcare, the battle for economic equity- all stand to gain as much from mental health interventions as from economic policy actions.

Any article that deals with mental health and game

theory, however, would be incomplete without a mention of John Nash, a Nobel prize laureate who made significant contributions to game theory. In a 2007 speech at the American Psychiatric Association's annual conference, Nash reflected on his history of mental illness (schizophrenia) and provided a silver lining in the dark painful clouds of mental illness. Looking at insanity from an economical lens, he stated that insanity was a consequence of deviating from established social patterns, and likened it to being 'on strike' against the largely accepted definition of rationality and reality. He stated how insanity is often just diversity and how diversity and dissent are essential for human progress. *"So a possible, but perhaps questionable, inference is that humans are notably subject to mental illness because there was a need for diversity in the patterns of human mental functions,"* Nash said. It's this discomfort, according to Nash, that pushes people from suboptimal Nash equilibriums and forces them towards better Nash equilibriums. It's essential for our survival.^{7,8}

Even so, the pain of mental illness can not be justified on any grounds, even evolutionary economics. While effective treatment will lead to a myriad of positive economic benefits, It's vital that we start seeing treatment as an end in itself as well. Millions of people like Ananya suffer from depression and isolation on a daily basis. It's important to remember that people like Ananya are Homo Sapiens, and not Homo Economicus; we, as economists or students of economics, as policymakers or mental health professionals are Homo Sapiens and not Homo Economicus. Necessary interventions leading to a world with sturdier mental health will have positive ripple effects for both us and our economy.

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ON THE GRIND

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With productivity being put at the forefront of the human endeavor, people today are always running – towards their goals and away from themselves. Caught in this rat race, are we simply running in circles?

‘Finding the true meaning of one’s life’ is a goal that everyone sets out to achieve. Renowned psychologist, Abraham Maslow, categorizes self-actualisation as one of the highest needs of human motivation. He defines self-actualisation as a state of fulfillment and reaching one’s potential—it is the desire to become the best version of oneself and accomplish all that one possibly can.

In the 21st century, the idea of self-fulfillment necessarily translates into a function of attaining ‘success.’ Our minds have been ingrained with an idea of success that takes the shape of materialistic accomplishments in a highly competitive world. A race begins in this paradigm. How does one win the race? What is the metric by which one is considered successful? How does one manifest this path to success? Well, you must continuously work more than everyone else whether you enjoy the work or not, eliminate distractions and push your emotions to the sideline. The toil will be worth it eventually, all your problems will subside and you shall achieve the world of glamour you dreamt of.

The modern answer to surviving the arduous road to success has been captured by the phrase ‘rise and grind and hustle.’ Hustle culture is the societal standard that tells us that we can only succeed by exerting ourselves to the maximum capacity. It is a 21st century phenomenon where the highest-paying jobs lie in the knowledge economy.

Hustle culture has transformed #TGIF (Thank god it’s Friday) to #TGIM (Thank god it’s Monday) in a bid that work is the be all and end all of human life.

In its most extreme form, hustle culture propagates that sleep, lunch breaks, entertainment and even multiple washroom breaks is for the weak.

It is important to realise the prevalence and influence of this narrative. Enhancing productivity as a personal goal sustains an entire economy of books, podcasts, gurus and so on. The hustler is not seen as an unhappy or disconnected person who is close to burnout, but as someone who is challenging themselves. Your commitment to ‘hustle’ is calculated by your personal sacrifices and struggles. Hustlers are therefore put on a pedestal, perceived to be inherently heroic and on the fast track to success.

Marissa Mayer claims to have had 130-hour work-weeks at Google and often sleeps under her desk. Jack Dorsey, who is a co-founder and the CEO of Twitter, claims to work sixteen-hour days, while sleeping for only four hours every night. Goldman Sachs employees work for an average of 95 hours a week. Elon Musk is rumored to have worked 100-hour workweeks for the last 15 years. This glorification of enduring suffering has exacerbated the influence of Hustle Culture.

Do the hours you put into labour have a direct and proportional relationship to the output produced? More importantly, is there a *human factor* at play that seems to be overshadowed in the hue and cry of toiling?

The American Journal of Industrial Medicine published

a research revealing that the risk of heart diseases increases by 42 per cent if a person works for 61 to 71 hours a week and further jumps to 63 per cent if the working hours are increased to 71 to 80 hours a week. Clinical professor Dr. Michael Freeman discovered that 72 per cent of the 242 entrepreneurs studied reported mental health concerns including depression (30 per cent), ADHD (29 per cent), anxiety issues (27 per cent) and bipolar diagnoses (11 per cent).¹ Over one third of all American workers are diagnosed to be chronically overworked— a condition that increases the risk of clinical depression and a drop in performance. In fact, sleep deprivation has been labelled a public epidemic by the Center for Disease Control. Sleep deprivation is said to cost American companies approximately \$411 billion in lost productivity. According to a 2018 study, about two-thirds of the 7,500 employees studied reported feeling burned out by their work.² When the physical and psychological consequences of burnout include heart disease, insomnia and depression, you begin to question the true worth of this ‘toil glamour.’

Conventional labour supply theory in economic literature assumes that people allocate hours to work and leisure to maximize utility. However, many people feel weary or exhausted by too much work or too many hours of work. For example, Galinsky et al. (2005)³ reported that 44 per cent of US workers often or very often feel overworked. The Japanese government’s Ministry of Health, Labour and Welfare interviewed 11,010 Japanese male regular employees and found that more than 55 per cent felt either a high or an extremely high degree of fatigue. If, according to standard labor supply theory, people rationally allocate hours to work and leisure to maximize utility, it is difficult to explain why people work to the extent of damaging their health. Here, overwork is characterised by a state in which workers allocate long hours to work to the extent of it leading to a deterioration in their mental health.

Hence, one must examine the existence of non-pecuniary (not related to money/material itself but can include the anticipated emotions derived from it) utility that influences people to overwork in the hope of maximising non-conventional personal utility, which may result in detrimental impacts on their mental health. More specifically, we explore the non-pecuniary rewards from work, such as self-affirmation, personal growth and anticipated satisfaction along with consumption and leisure that are taken into account while allocating the hours worked.

One possible explanation comes from an experiment undertaken by The Research Institute of Economy, Trade, and Industry (RIETI). The results of the experiments undertaken to examine the relation between three variables, i.e. labour hours, anticipated job satisfaction and mental health, indicate that the influence of the length of work hours is different between anticipated job satisfaction and mental health. More specifically, working for extremely long hours may result in an increase in non-pecuniary utility (higher job satisfaction) and a decrease in utility with regards to mental well-

being (deterioration of mental health).

Thus, people recognize their mental health deterioration when they work long hours; however, they simultaneously tend to overvalue job satisfaction from non-pecuniary factors which arise with hours worked. By extension, when workers underestimate the risks of mental health, they may choose to work an extreme number of hours, which in turn negatively impacts their mental health. This may be due to overconfidence and overestimation of the positive feelings of job promotion.

Even though it sounds counterintuitive, being overconfident often leads to people holding erroneous beliefs regarding their threshold for work, making them assume it doesn’t impact their mental health as much. Often, their underestimation of such mental health risks causes them to continuously push their limits. DellaVigna (2009)⁴ identified *overconfidence effect* as one the major causes of erroneous understanding and beliefs. This cognitive bias creates a pattern of deviation from rational thought. Consideration of one’s abilities as better than average is compounded with insufficient assessment of potential negative outcomes such as health issues. Weinstein indicated that people systematically underestimate the probability of experiencing health problems due to unrealistic optimism. Sandroni and Squintani (2004)⁵ found strong evidence that people often underestimate the risks of attendant activities that they believe are within their control (e.g. driving or financial planning) or that reflect their self-image (e.g. health).

With regards to overworking, workers overestimate their ability to withstand the negative effects of working long hours. The fact that people are likely to hold incorrect beliefs about the risks of mental health and to work longer hours due to overconfidence and projection bias is worth noting.

Along with the internal factors, one must note the external factors that lead to the overestimation of positive feelings derived from working overtime and the undervaluation of mental health impacts. The glorification of hustle culture, the hierarchical power structure in companies and the ‘harsh reality’ of being easily replaceable, all of which are continuously shoved down one’s throat, create a cycle of guilt and inadequacy; subsequently leading to the adoption of an approach that maximises utility by foregoing our mental wellbeing.

“We idolize creativity, but worship productivity.” This is the inherent flaw in the addiction to hustle. To stimulate creativity and experience deeper connections within oneself, it’s important to rest and introspect occasionally. Since underestimation of mental health risks is a prevalent phenomenon of human nature and the society as a whole, educational and regulatory interventions are needed. Such initiatives must be centred around educating both workers and employers about the negative impacts on mental health due

to overworking and subsequent decline in marginal productivity. Similarly, interventions must help counter the belief wherein one anticipates 'actualisation' of oneself through continuous hustle. Encouraging

consistency along with breaks to rest and engage in activities that help us connect with ourselves is the need of the hour.

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ALL WORK, NO PLAY

BY ABHEYA ARORA AND KANISHQ CHHABRA

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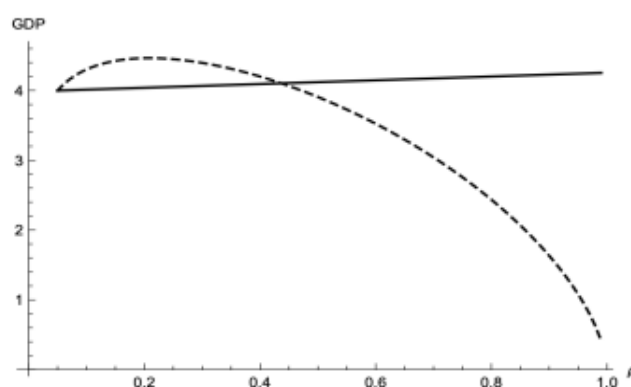
As the COVID-19 pandemic took the world by a storm, offices all across closed down and employees flocked to their homes. When the Work From Home culture spreads all over, how does mental health fare?

Stanford Economist Nicholas Bloom said, “Without this historic switch to working from home, the lockdown could never have lasted. The economy would have collapsed, forcing us to return to work, reigniting infection rates. Working from home is not only economically essential, it is a critical weapon in our fight against COVID-19 – and future pandemics.”¹

The flexibility of ‘where the work can be done’ is a major characteristic of the increasing Work From Home (WFH) culture. The concept has been around since the 1980s and has expanded with the growth and spread of the internet. The outbreak of a pandemic pressed the accelerator on the adoption of remote working. WFH has become a necessity in view of the global pandemic, but this time can be utilised to analyse its effects on the economy in order to make decisions for the future of remote working. In the context of WFH, the most highlighted impacts have been on economic growth on a macro level and on mental well-being on a micro-level.

Gross Domestic Product (GDP) is one of the most crucial economic measures. It might not be the most adequate measure of a country’s success but it is the most used one. The impact of WFH on the GDP of a nation varies in the short term and long term. In the short run, it is monotone as the workers predominately work through their homes. It results in an oversupply of offices. The intermediate sector is unable to cope with the change in a short duration. There are requirements for fresh investments in Research and Development. Thus, in the short run, with an increase in adoption of remote working, the rise in GDP is slow and monotonic.

In the long run, the GDP share can be seen as a bell-shaped curve. With an increase in the share of WFH, GDP initially rises, but after a certain point, it begins to fall. The increase in GDP on the onset of WFH culture can be largely attributed to the increase in workers’ productivity coupled with the availability of extra time due to a cut down in commuting time and other non-productive activities. Beyond a level, a larger share of home workers leads to a fall in the strength of knowledge and information spillovers. This proves to be detrimental to long-run innovation and growth, causing the GDP to take a downhill path.²



GDP as a share of WFH; short-run (solid line) and in the long run (dashed line)

Source: weforum.org

The fast adoption of WFH has adversely affected the income distribution in the economy. There is a general agreement across literature that WFH largely features

highly educated workers. According to Nicholas Bloom, the shift could exacerbate income inequality in the economy. Those working in professional and managerial jobs can acclimate to remote working but those on the other side of the spectrum will take a big hit. People with low levels of education and working in non-professional jobs are less likely to perform adequately in the world of remote work. Thus, it is easier for high earners to continue and adapt to WFH but low paying jobs witness a significant drop in both earnings and employment level. As a result, WFH makes the rich richer and the poor poorer. WFH not only worsens income inequality across different pay groups but also exacerbates it across various jobs and countries. It is to be noted that not everyone can work from home. A lot of jobs such as jobs in retail, logistics, transport, etc, cannot work from home. This was demonstrated in 2020 when a large number of people encountered unemployment or a substantial drop in their incomes because their jobs were not suited to remote working. For jobs, for which WFH is possible, there are other hurdles. Researchers at the Massachusetts Institute of Technology (MIT) studied the ease of transitioning to WFH for thirty countries. Developed countries like Belgium, Canada and Sweden with good internet connectivity and wider access performed better than developing countries. Developing countries faced impediments in terms of the reach of the internet, the strength of internet connectivity and the prevalence of large intergenerational families, which make it difficult to work from home. This will result in developed countries flaring better while at the same times will worsen conditions in developing and underdeveloped nations.³

Working in an office space leads to the creation of numerous small and complementary jobs such as cleaners, cafeteria joints, transport services, etc. These small jobs and businesses have faced a disastrous situation with WFH being implemented. It is also these office spaces that contribute to the growth and development of large metropolitan cities. Hence, the economy in terms of both existence and survival of small businesses, and growth of the city centres will be stalled.⁴

On an individual level, variations in productivity coupled with mental health have taken a toll on people. Productivity of labour and efficiency of work has been a primary topic of discussion with respect to remote work. WFH has been known to increase productivity in the short run but it is also known to stifle creativity and hamper team bonding. Among experts, there is no clear consensus on the topic.⁵ WFH might have an adverse impact on productivity due to an overlap of work and family responsibilities or a positive impact due to lack of distractions and flexible working hours (Rockmann and Pratt 2015). This claim is supported by researchers at the Norwegian University of Science and Technology. According to them, "On one hand, some people become more efficient in their new work setting of a home office because they have fewer distractions and work becomes easier to prioritize. On the other hand, others become less efficient due to lower motivation and lack of daily

structure." As contradicting as it may seem, it is said that increased flexibility in people's work schedule has resulted in less flexible work life. The university stated it as the flexibility paradox. WFH provides wider flexibility for working hours but it also provides less flexibility in terms of collaboration and teamwork. According to the university, this flexibility paradox is largely related to a "greater need for structure, planning and clear communication in the digital modality." The researchers at NTUN said that "the threshold for making small and necessary clarifications with collaborators is significantly higher in the digital realm." They concluded that the flexibility to fulfil one's work commitments is therefore decreased and can adversely affect the quality of work.⁶

Another argument states that WFH eliminates the productivity benefits that arise through in-person interactions in the workplace. The benefits of agglomeration economies that is productivity is directly related to the density of economic activity, has been concluded and found out in various studies. The success of agglomerate economics can be, to some extent, attributed to knowledge and information spillovers through in-person communication among skilled workers.⁷

Although in terms of productivity a clear answer hasn't been found, the results on the impact of WFH on people's mental well-being has been more one-sided. The impacts of mental health during the pandemic can be divided into three primary constituents: fear/ anxiety of a disease outbreak, indirect effects of lockdown measures and the socio-economic fall-out. The consequences of mental health have affected all age groups: children and adolescents (disruption to schooling), adults (unemployment, poverty, debt) and elderly people (isolation). But the segment of the young people aged 18-28 is a group that has been particularly affected, and is at high risk for developing poor mental health, due to higher stress of unemployment and income stability.

The WFH culture has brought two most prominent psychological issues: isolation and burnout. Around the world, corporations are worried about the efficiency of their remote workforce, performing tasks at home. With household distractions, it may feel impossible to stay focused on tasks, so corporations apply more pressure to maintain productivity. However, underperformance should not be a concern for companies- overperformance is damaging the output of teams working remotely.

The irony of the WFH scenario is that remote workers work longer hours than their in-office colleagues, even without incentives or monitoring. These long work hours contribute to bonuses, but can also lead to higher rates of worker burnout, which can eventually cause long-term health problems and career regression.

The population's psychological health has clearly declined due to a high burnout rate, which is visible from higher levels of stress and anxiety. For instance, take the case of Belgium. The prevalence of anxiety doubled, increasing from an average value of 11 per cent in 2018 to a value of 23 per cent in April 2020, with younger, unemployed people, and people living alone showing higher rates of anxiety and depression.⁸ There is a need for effective health interventions to be scaled up due to the impact and consequences of the pandemic: high economic costs, high burden of mental ill-health and high mental distress.

Initiating policies like a fifteen-minute break between meetings and having free days each month can help tackle the psychological pressure of being online round the clock. Scheduling small scale meetings can also improve mental well being, by giving participants more space to engage with their colleagues and have their contribution acknowledged. Helping employees maintain a boundary between their personal and professional lives is equally essential. To maintain this balance, the American Psychiatric Association's Center for Workplace Mental Health recommends keeping a regular and planned schedule, with planned breaks from screens.

With many parts of the world under lockdown, prolonged isolation is also causing anxiety, depression and loneliness. Quarantines, social distancing and policy measures needed to slow the spread of the pandemic are inherently against human nature. The scale of the lockdowns has been unprecedented. Research into other kinds of isolation offers some insights regarding the likely effects on mental health. According to a review of the psychological effects of quarantines, some studies suggest that their impact can be so severe that it can result in a diagnosis of post-traumatic stress disorder (PTSD). The condition, which may include symptoms such as flashbacks, hypervigilance and nightmares can last for years.⁹

The potential psychological impact of COVID-19 should not be understated. Prior to COVID-19, anxiety and depression disorders were estimated to cost the global economy US dollars one trillion each year in lost productivity, with unemployment being a major risk factor.¹⁰

With the pandemic ravaging countries, isolation - contact restrictions and economic shutdown - has completely transformed the psycho-social environment, disrupted the care of those with existing mental health or substance abuse disorders, and placed a greater segment of the population at risk of developing mental health disorders.

Corporations and governments need to take the responsibility of ensuring that the workforce remains psychologically fit during these troubled times. In the short term, an increase in health spending in many countries is required. This can be financed through the reallocation of currently available resources, with a proportion allocated to mental health. Investment in mental health interventions will require an exhaustive assessment of existing health and service-use outcomes in clinical practice to determine which practices should be further developed and which discontinued. Resource allocation to mental health will require continuous monitoring of requirements, and assessment of quality and efficiency to ensure that interventions are not implemented based on affordability alone.¹¹

The psychological trauma of this pandemic cannot be effaced, but it can be eased. A broad range of resources and clinical services are needed to adequately address the anticipated mental health impacts, both for enhancing psychological resilience in healthy individuals and for treating the direct and indirect consequences of the pandemic. The world should take the collective mental suffering of COVID-19 seriously. Steps to reduce it costs little and can benefit not only individuals but society as a whole.

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ON THE PERIPHERY



TRIGGER WARNING

Trigger Warning: Mentions of Discrimination on Protected Attributes

This section encompasses the nuances of discrimination and maltreatment faced by members of marginalised communities. The articles may include pieces of the lived experiences of these communities and might act as triggers of trauma/lived experiences. Reader discretion for the same is advised.

MISSING WOMEN IN FORMAL WORK

BY RIA KASLIWAL

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With the chasm between male and female employment showing no signs of closing, it becomes imperative to bring India's workforce under the microscope. Read on as the article explores the gendered response to employment that emerges at the intersection of culture, patriarchy and social norms and paves the way for a more equitable society.

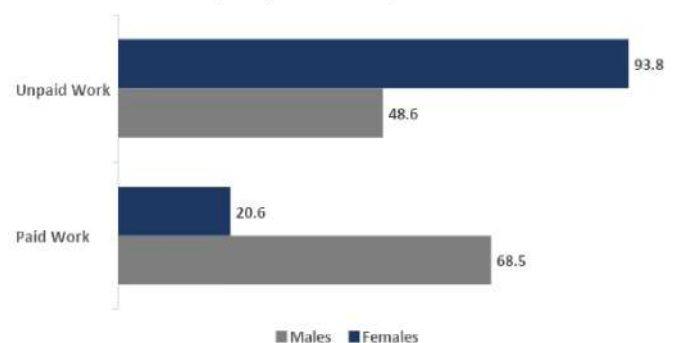
India slipped 28 places from 112 to 140 in the World Economic Forum's Global Gender Gap Report 2021. A year of the pandemic led to the widening of the gender gap by 4.3 per cent points for India. A major and continuing attribute of this expanding gender gap is the fall in economic opportunities for women leading to a decline in their participation in the formal workforce.¹

As per data from the World Bank, the Female Labour Force Participation Rate (FLPR) in India has fallen from 30.27 per cent in 1990 to 20.8 per cent in 2019.² Some tried to explain away this fall in FLPR by indicating that women could have left the formal workforce to attain higher education and to some extent, it is true. As per the findings of the All India Survey of Higher Education, Female Gross Enrolment Ratio in higher education increased by 5 percentage points, from 44 per cent to 49 per cent between 2011-12 and 2018-19.³ However, the increased number of women enrolled in higher education still cannot account for the extreme case of 'missing women in formal work' in India. The question thus arises - where are the women?

To investigate this case of 'missing women in formal work,' the first question that emerges is: if women are not engaged in 'work in the formal or informal economy,' what are they engaging their time in? For this, we refer to the findings of India's first-ever time-use survey.⁴ Albeit there are a few caveats to the methodology of this survey,⁵ it is still a useful way of learning about the nature of the activities that men and women perform, i.e. the nature of the sexual division of labour in our country.

According to the findings, only 20.6 per cent of women aged 15-59 years were engaged in paid work as compared to 70 per cent of men in the same age bracket. While this gap is enormous and reflective of the estimates by the Labour Force Participation Rate (LFPR), the bigger difference comes in unpaid work. While 94 per cent of all women surveyed in the age group of 15-59 years, participated in unpaid work, only 49 per cent of all men in the same age bracket engaged in unpaid work (Figure 1).

Figure 1: Percentage of Males & Females (aged 15-59 years) Participating in Paid & Unpaid Activities

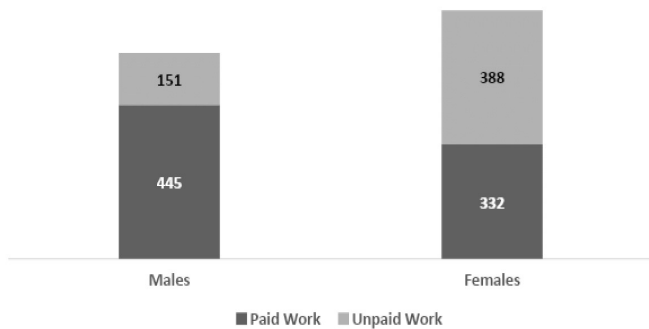


Source: Time Use Survey 2019, MOSPI

Although the percentage differential for unpaid work is extremely wide, there is a further discrepancy in the hours spent engaging in this unpaid work. An Indian woman, on average, spends over 21 per cent of her time on unpaid work, especially caregiving activities and domestic chores like cleaning and cooking. On the other hand, an Indian man, on average, spends just 5 per cent

of his time on such unpaid work.

Figure 2: Time spent in Paid & Unpaid Activities (in minutes per day) by Males & Females (Aged 15-59 years)



Source: Time Use Survey 2019, MOSPI

As evident from figure 2, women spend more time performing unpaid labour than paid labour on any given day. If one were to count both these work categorisations on the basis of minutes contributed per day, it would be clear that women outperform men. In fact, on the basis of several estimates, it is reported that if women's work was recognized correctly in the LFPR, the Female Labour Force Participation Rate would be 81.6 per cent as compared to the Male Labour Force Participation Rate of 76.7 per cent.⁶ But the formal economy does not recognise the unpaid care work performed by women.

The sexual division of labour, emerging out of patriarchy, dictates women's role in society and compels them to believe that women are primarily responsible for performing unpaid care duties at home.

Performance of such unpaid care work by women allows families to not pay for these essential activities formally, thereby permitting expenditure on the consumption of other 'productive' goods and services instead.⁷

Thus, even though unpaid care work provides a substantial subsidy to the formal economy and is vital for any economy to survive and thrive, it is not recognised as 'work.' This leads to the invisibilisation of women's work.⁸ Additionally, while the formal economy is made to run on the backs of women, who perform these unpaid care tasks, the extreme burden of carrying out this care work leads to women's time poverty.⁹

Time poverty, in its most trivial sense, means a dearth of available time to allocate to entirely personal needs like recreational and social activities. The issue of time poverty for women arises from the immense burden of performing unpaid labour at home. The range of unpaid work and the time needed to carry out the same limits women's time and agency and thereby their ability to make choices. It keeps them from pursuing higher education, increasing their skill levels and attending

to their own wellbeing while especially hindering their ability to pursue formal employment opportunities.¹⁰ Thus, the time poverty emerging from the gendered responsibility of performing unpaid labour at home erects a major obstacle in women's ability to contribute directly to formal paid work and constitutes a key role in the case of 'missing women in formal work'.

The issue of time poverty becomes an even larger constraint for poorer women. While richer sectors of the society can still outsource some caregiving activities, in the absence of public care infrastructure, it is impossible for poorer women to do so. This, thus, closes the doors of formal work for them. Additionally, not being able to undertake formal work further disallows these women from having a source of income, thereby leaving them even more disempowered and with even less agency.¹¹

For women, who, despite all these hurdles, somehow manage to engage in paid employment, the double burden of paid and unpaid work creates a deeper nexus of time poverty, and is often referred to as the 'double shift.'¹² Furthermore, the unreasonable and widespread acceptance of domestic work and caregiving as being part of a woman's duties with no efforts made to redistribute this unpaid work burden leads to sexist behaviours at formal workplaces, as largely indicated by the huge wage gap prevalent in our country. Indeed, the estimated earned income of women in India is only one-fifth of men's earned income.¹³

The case of 'missing women in formal work' has become even more urgent to address, especially since the pandemic has proven to be extremely detrimental to women's social and economic wellbeing. With no substitutes for care available in the lockdown, women are being drowned in caregiving duties. As per estimates, the pandemic increased the burden of unpaid work on women by 30 per cent.¹⁴ Additionally, the pandemic also unleashed a secession with women being forced out of the formal workforce. A study reveals that 4 out of every 10 women who were working prior to the lockdown, lost their jobs during the lockdown.¹⁵ Thus, the issue of women's time poverty, gender pay gap and declining FLPR are extremely important to address if India aims to achieve an inclusive, rapid and all-round development of its economy. The estimated monetary value of the unpaid work performed by women in a year accounts for 3.1 per cent of India's GDP.¹⁶ Hence, this is evidently an area worth capitalising on.

The way to enhance women's economic empowerment, however, is not just via explicitly increasing female employment opportunities. Although necessary, this would only lead to a rise in 'recognised' jobs in the formal sector. With the issue of catering to unpaid care work still present, such a rise in FLPR would only increase the burden of the 'double shift' on women. Thus, what is needed is the adoption of the 3Rs approach which involves Recognising, Reducing, and Redistributing the unpaid care work done by women in all areas of policymaking.¹⁷

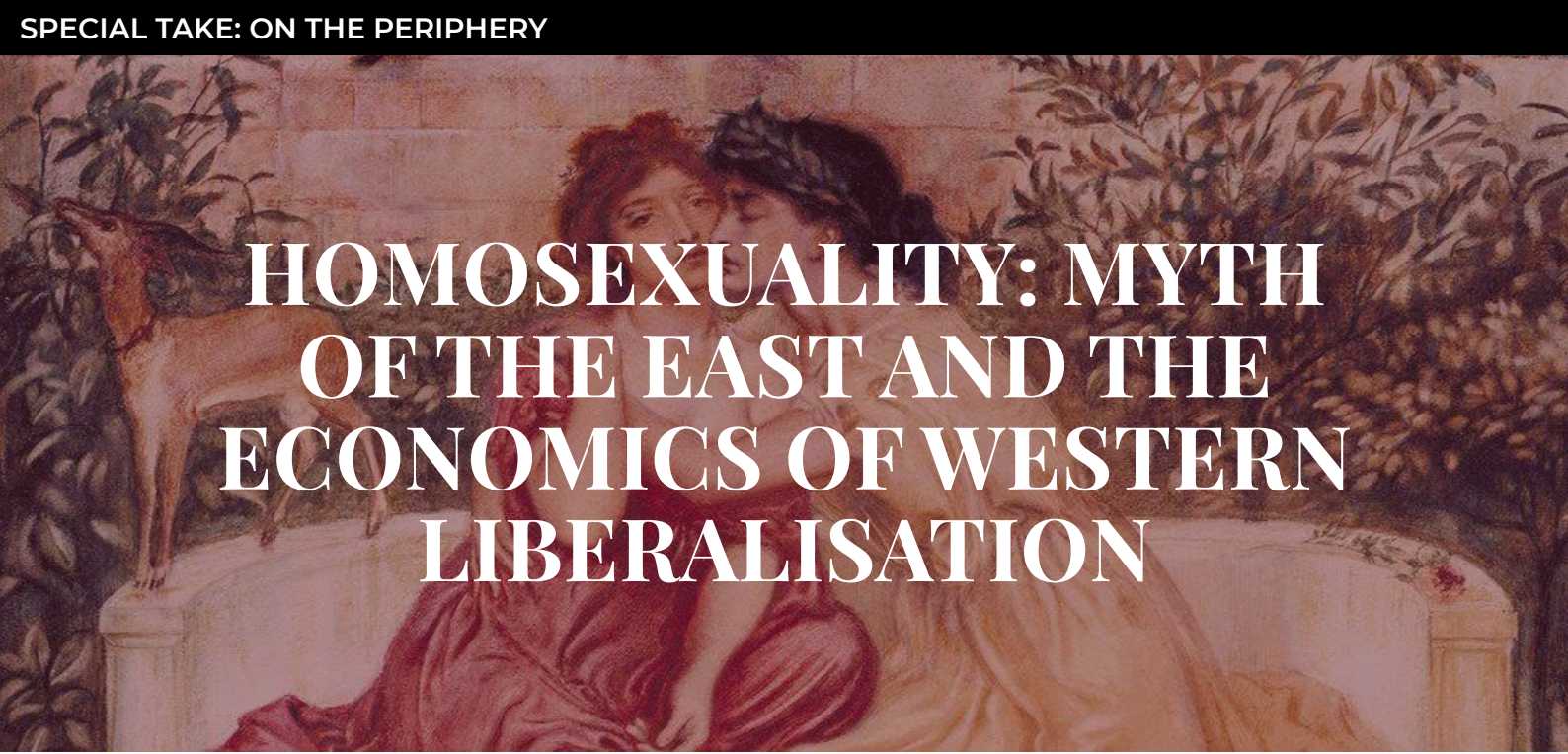
The best way to implement a system that allows the adoption of 3Rs and facilitates women's work is through investment in public-sector care infrastructure. In the absence of public-sector care provisions and private-sector affordable care services, women are left to bear the burden of care activities. This inevitably pushes them out of the workforce. However, if alternative arrangements for childcare and household work were made available, women will find it much easier to come out of the time poverty they experience and pursue formal employment. As per reports, public investment of just two per cent

of India's GDP in the care economy could not only generate 11 million jobs for a country that's facing acute joblessness but could also increase women's economic and social welfare as they venture out in the formal workforce.¹⁸

Thus, the case of 'missing women in formal work' emerges from the hurdles India's patriarchal society constructs by dictating women to be solely responsible for performing unpaid care work. Only by adopting the 3Rs approach can India tackle the root of the issue and advance as an equal society.

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HOMOSEXUALITY: MYTH OF THE EAST AND THE ECONOMICS OF WESTERN LIBERALISATION

BY ISHITA AGGARWAL AND PARINEET KAUR CHOWDHURY

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The West is often adulated for being socially progressive and liberal, while the East is denounced for harbouring a conservative ideology, especially with respect to the LGBTQIA+. However, history and economics prove otherwise.

The first thing that comes to one's mind when they think of a nation with a high degree of 'acceptance and tolerance' is the United States of America (US). Homosexuality, in particular, is widely accepted in the 'West' whereas Eastern countries are often considered to be too 'backward' or 'regressive'. However, do we credit the West too much and wrongly blame the East? Why is it that colonizers get to claim themselves to be more liberal, being the root cause of the problem themselves? This article aims to establish the history of homosexuality in the East, and progressively emphasize the reason for greater acceptance in the neoliberal west, the apparent upholders of tolerant values and ideals.

The fragile culture wars over homosexuality in the Middle East paint a portrait of starkly juxtaposed cultures claiming to let precedence bear priority over the issue. However, strictly judging by precedence, the region upholds a complex history, one that suggests corruption due to the West instead of what is currently claimed. Although not widely acknowledged or discussed, same-sex relations were widely practised across the Middle East, with evidence of it in art, literature and culture.

In the history of Islam, from the mid 10th century until the 1500s, there existed a 'conventional pattern of homosexual relations' (Marshall Hodgson). Moreover, Khaled el-Rouayheb argued that early Arabic literature (1516-1798) has stark evidence of casual and empathetic allusions to homosexual love and relations.

The claim that homosexuality is alien to Indonesian culture is also a gross mischaracterization of historical

evidence. Widely regarded as the Javanese Kama Sutra, Serat Centhini—commissioned and partially written in the early 1800s by the crown prince of the Mataram Surakarta Kingdom, who would later become Solo's sovereign Pakubuwana V—details sex between men (gemblak) in Ponorogo, and the existence of warok (butch gay men) and jathil (effeminate gay men) in the East Javanese town. Other ethnic groups inhabiting Indonesian islands were also extremely tolerant of homosexuality. The Bugis people of South Sulawesi, for instance, recognize five genders: makkunrai (cisgender female), oroané (cisgender male), bissu (androgynous), calabai (transgender male) and calalai (transgender female). In fact, the bissu was considered to be superior to all other gender types and was highly respected.

In Thailand, Kathoey or 'ladyboys' have always been prevalent in the Thai society and culture as a 'third gender' and Thai Kings had male as well as female lovers, while in ancient China, Lan Caihe, one of the Eight Immortals in the Taoist pantheon is depicted as a sexually ambiguous being. History has taught us that homosexuality existed vastly across various indigenous cultures.

Indian history; both culture and religion is replete with undeviating and allusional references to the existence of celebration of transgenders as well as same-sex relations. The temples of Khajuraho and Mughal chronicles have distinct depictions of homosexuality while fluid sexuality was present in ancient and medieval India. The chapter "Purushayita" in the Kama Sutra a 2nd century ancient Indian Hindu text mentions that lesbians were called "swarinis", gay men as "Kiblas" and also talks about the "third gender". While the Kama

Sutra has distinct references to homosexuality, ancient celebrated epics the Ramayana and Mahabharata are also ingrained with homosexual figures. In Ramayana, after the death of King Dilip, Lord Shiva himself is said to have appeared in the dreams of King Dilip's two wives' who on his suggestion made love to each other and one of them gave birth to the Kingdom's heir. Mahabharata, on the other hand, has a transgender warrior names Shikhandini who was responsible for the death of Drupada. Devdutt Patnaik and other academicians have noted that the "Markandeya Purana" has the story of "Avikshita" son (or daughter as they would have preferred) of a king who refused to marry because he (/she) believed that he (/she) was a woman.

These are a few of the various instances of homosexuality present in multiple cultures across the east. The stark shift in culture, therefore, is a direct function of the advent of colonial regimes. Michael Foucault's interpretation of the emergence of the concept of homosexuality as 'the psychological, psychiatric, medical category of homosexuality was constituted from the moment it was characterized'. He argued that, from the 18th century, the beginning of the persecution of peripheral sexualities entailed

"an incorporation of perversions and a new specification of individuals. As defined by the ancient civil or canonical codes, sodomy was a category of forbidden acts; their perpetrator was nothing more than the juridical object of them. The nineteenth century homosexual became a personage, a past, a case history, and a childhood, in addition to being a type of life, a life form, and a morphology, with an indiscreet anatomy and possibly a mysterious physiology. Nothing that went into his total composition was unaffected by his sexuality." (Foucault, *The Will to Knowledge*, 42–43)

This helps us further develop the basic tenet of this paper:



Homosexuals weren't vilified until the identity of homosexuality and associated bigotry was introduced via the West and imposed on cultures and nations.

Before it, homosexuals were a part of society and accepted widely. It's important to not confuse the ideation of homosexuality with its existence; this article simply aims to establish that until homosexuality was birthed as something different, it was accepted widely and never differentiated upon.

How then were these cultures corrupted and why is it that till date, resistance against homosexuality exists?

As homosexuality became a distinct category (largely due to European influence) around the 19th century in the Middle East, the associated stigma and discrimination began forming root. European ideals and 'morals' that highly condemned homosexuality also started affecting

not only the Middle East but also other colonized states. European travellers complained about the openness with which men kept romantic and sexual relations with other men in the Ottoman Empire and similar radicalization against homosexuals was being done in Iran and India. (El-Rouayheb, *Before Homosexuality*, 92–93) According to Afary, in the Middle East '[The] notion of modernization now included the normalization of heterosexual eros and the abandonment of all homosexual practices and even inclinations'. (Afary, *Sexual Politics*, 162–163)

In India, as argued by historian Manu Bhagavan, current rigid sexual laws are inherited from the British who introduced these notions and outlawed them, including article 377 which was very recently struck out. Indian mythologist Devdutt Pattanaik agrees with this analysis: "The British reinforced this view by creating the 'sodomy' law, referring to the biblical city of Sodom that was destroyed by God as it was rife with sexual deviations. Subjects of the British empire, Hindus included, were keen to distance themselves from all such things vile; they were determined to prove themselves pure, even if it meant wiping out or denying their own legacy."

An even better analysis to prove the West's role in the vilification of homosexuals is that Indonesia, never really criminalized homosexual acts since the Dutch never banned it as the British. Balinese women also walked bare-breasted, unhindered by society's oppressive norms against women. However, ironically, it was after Indonesia's independence that cultural changes in the name of post-colonial nationalism came about. Sukarno, Indonesia's first president, feared that a great nation like Indonesia would be seen as 'primitive' because of such traditions as openly expressing one's sexuality.

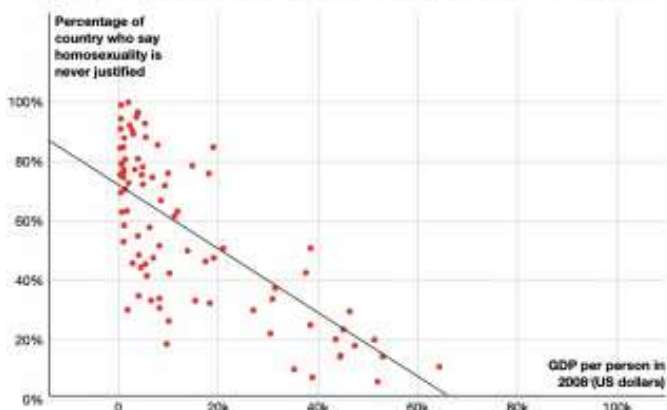
Why then, do Western nations (mostly) in status quo pride themselves on being liberal and accepting of homosexuality, being the primary perpetrators of the issue? We will now derive a correlation between wealth and acceptance and provide causation to support our analysis. Further, before we move ahead, let's keep in mind that these 'Western' nations became rich by virtue of colonising and looting wealth from various countries and after imposing regressive norms and introducing homophobia, ironically now claim themselves to be more modern and accepting.

In any country, the degree of acceptance is a function of various factors like economic wealth, religiosity, education levels, laws and so on. According to a 2019 Pew survey, the wealthier a country is, the more accepting is it of homosexuality. This holds true for most countries, regardless of their Eastern or Western culture. For instance, Japan is the third-largest economy in the world and it's far more accepting than countries like Greece, Poland or Israel. Popularly known for being the happiest countries in the world, the Nordics display a significantly high degree of acceptance for homosexuality and gender expression. Unsurprisingly, they are some of the richest countries in the world. The US has a 72 per cent acceptance rate when it comes to

homosexuality. Canada champions LGBTQIA+ rights and has been the most progressive nation, including being one of the richest.

The logic behind this positive relationship is quite intuitive. In a prosperous nation, citizens enjoy a high per capita income with basic needs such as education, healthcare and nourishment fulfilled. Hence, with the basic sustenance needs fulfilled, people focus on realising higher needs of self-actualisation, identity and individuality.

Residents of countries with a lower GDP per capita are more likely to say that homosexuality is never justified.



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Source: Association of Religious Data Archives (2011) and World Values Survey (Waves 4, 5 and 6) [Get the data](#)

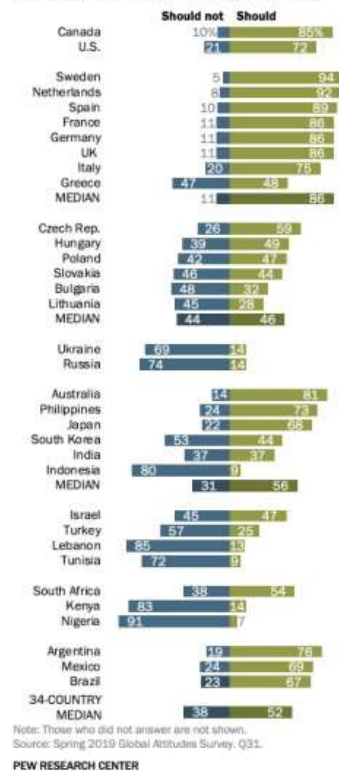
Figure 1

On the other hand, in poorer countries like Uganda, Kenya & Myanmar, the LGBTQIA+ community is subject to discrimination and persecution. People in poorer nations have a strong need to adhere to social norms in order to ensure basic survival. This emphasis on group loyalty and tradition makes people in these countries view homosexuality as highly problematic and a threat to their heteronormative society. Similarly, Ukraine, a relatively poor country in Europe, continues to discriminate against the LGBTQIA+ population with instances of violence and hostility committed against the community.

Evident from figure 1, there exists a clear correlation between the GDP per capita and the degree of acceptance of homosexuality across the world. Although outliers would always exist and other factors also contribute to a society's progressiveness, it's clear that richer countries tend to be more accepting and tolerant of different sexualities and gender identities. As the GDP per capita goes on increasing, the percentage of people who believe that homosexuality is never justified goes on decreasing.

Acceptance of homosexuality varies across the globe

% who say homosexuality ___ be accepted by society



Note: Those who did not answer are not shown. Source: Spring 2019 Global Attitudes Survey, Q31.

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We thus, witness a strong relationship between wealth and acceptance. Other factors, of course, do have a major bearing too, for instance, political inclination and religious beliefs, however, we also see wealth as one of the major indicators.

This brings us to our final conclusion: 1. The myth regarding the East being regressive needs to be tackled in its root cause. We need to identify that these cultures aren't inherently vile and DON'T need Western approval of progress. 2. The so-called progressive West needs to acknowledge the damage done to the world and it's time we recognise the benefits it accrues out of being the coloniser and actively try to minimise worshipping 'western ideals'.

It is extremely important to note that this article doesn't aim to discredit the years of sacrifice and battle that LGBTQIA+ activists have fought to be able to achieve multitudes of progress to secure rights. Neither is it in any way claiming that wealth is the only reason for acceptance, a majority of the credit will and has to be accrued to the millions fighting for it every day. The aim of this article is simply to recognise the context in which different nations are now vilified for being too regressive and try to identify and understand the sources of discrimination and continue the struggle against them.

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ABILITY IN DISABILITY

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A concern since the times of the Mahabharata, differently abled people have been viewed differently. Can the costs of this exclusion finally put their plight in perspective?

Mahabharata is known worldwide as the greatest Indian epic that has answers to life's most complex questions; it sheds light on all aspects of life from love, marriage and familial ties to war, treachery, enmity and salvation. However, a less discussed and pondered over subject is the concept of disability that has played an instrumental role in shaping Mahabharata's narrative. Dhritarashtra, who was blind by birth, was never crowned the king of Hastinapur and merely sat on throne as the interim ruler as his younger brother, Pandu, who did not have any physical impairments and who was initially crowned the king, decided to forego the grandeur of palace life and embrace austerity. Nonetheless of being under the tutelage of the invincible and ingenious warrior, Bhishma, who trained Dhritarashtra in administration, management, decision-making and delivering justice, Dhritarashtra was not crowned as the king because of his disability. His prowess and caliber was questioned and he was compelled to give away the throne to Pandu, who was better trained to be a warrior than a king.

Dhritarashtra's character is often demonized and he is largely perceived as a king whose conscience was trampled by his seamless love for his sons and his desire to crown Duryodhan, his eldest son, as the king of Hastinapur. However, this extreme desire that obscured his ability to see through his son's wickedness was a result of being treated as inferior and weak even after he sat on the king's throne. The treatment meted out to Dhritarashtra is a manifestation of how since ancient times, people with disabilities have had to struggle to prove their worth and mettle in the society. Thousands

of years later, nothing has changed as people with physical impairments continue to fight against society's stereotypes and prejudices, determined in their resolve to get a life of dignity and reverence.

The Status Quo

Around 15 per cent of the world population or one billion people live with disabilities, making people with disabilities (PWD) the world's largest minority.¹ According to the World Health Organization (WHO), this figure is increasing by the day due to population ageing and the increase in chronic health conditions. Despite comprising a significant proportion of the world population, the needs and grievances of PWD are not given adequate attention, thereby precluding them from enjoying a minimally dignified life, wherein they can comfortably access their basic needs and assert their fundamental rights. PWD are often subjected to physical, social, economic and attitudinal barriers that curtail them from growing into self-reliant, self-assertive and fully functional individuals. This discrimination and exclusion from mainstream society has adverse effects on the well-being of PWD.

A report by the International Labour Organisation (ILO) suggests that PWD tend to experience high unemployment and have lower earnings as compared to people without disabilities. They are often relegated to low-level and low-paid jobs with little or no social and legal security, and are segregated from the mainstream labour market which adversely affects their self-confidence and self-esteem.²

In India, for instance, as per a study by the National Centre for Promotion of Employment for Disabled People

(NCPEDP), of the 70 million PWD, only about 100,000 have succeeded in obtaining employment in industry.³ Lack of employment opportunities coupled with social discrimination and infrastructural constraints push the PWD into abject poverty and destitution. The World Bank estimates that 20 percent of the world's poorest people have some kind of disability. A report by WHO expounds on this study by pointing out that there exists a positive correlation between disability and poverty and that usually the PWD live under worse conditions than the non-disabled people.⁴ With little or no access to nutritious food, clean drinking water, sanitation, healthcare services and proper housing, PWD are often left to rot under pitiable conditions. A report by the United Nations (UN) suggests that in 37 countries, most of which are developed, PWD are on average more than three times as likely as persons without disabilities to be unable to get healthcare when they need it. The primary reason for lack of access to healthcare is the inability to afford it. For instance, in Sri Lanka, in 2016, 29 per cent of PWD versus 9 per cent of persons without disabilities were not able to afford the cost of a health-care visit. In addition to this, because of extra costs such as medical care, assistive devices and personal support, the cost of living is higher for the PWD as compared to the non-disabled people, which further reduces the share of the income that they can spend on fulfilling their other needs.

Access to financial services, which has been recognized as key to lifting people out of poverty, is usually inaccessible to PWD. As per a report by the UN, data from developed countries indicated that as of 2017, 28 per cent of banks and 12 per cent of automated teller machines were not accessible to people on wheelchairs.⁵ In addition to this, access to education, which is a prerequisite to get a decent job in the organised sector, is also often out of reach for children with disabilities. According to the United Nations Educational, Scientific and Cultural Organization (UNESCO), 90 per cent of children with disabilities in developing countries do not attend school and according to a report by the United Nations Development Programme (UNDP), the global literacy rate for adults with disabilities is dismally low. Lack of access to education implies lack of employment opportunities that leads to penury and deprivation, which further causes low self-esteem, thus leading to depression and anxiety, thereby entrapping PWD in a dungeon of despair and agony. To add insult to injury is the vulnerability of PWD to violence and abuse. Research indicates that violence against children with disabilities occurs at annual rates at least 1.7 times greater than for their peers without disabilities. Another study points out that PWD are more likely to be victims of violence or rape and less likely to obtain police intervention, legal protection or preventive care.⁶ This oppression and ostracism further worsens the physical and mental well-being of PWD and makes their inclusion in the mainstream society a far-fetched dream.

The cost of exclusion of PWD not only falls on individuals, but also on the society as a whole. According to estimates by the ILO, the exclusion of PWD costs up

to 7 per cent of a country's GDP annually.⁷ There is a growing body of research that validates previous findings on social exclusion of the PWD leading to huge economic costs for countries. For instance, the United Nations Economic and Social Commission for Asia and the Pacific estimated that if PWD were paid the same as their able-bodied peers, the GDP of the Association of South-East Asian Nations (ASEAN) could increase by one to seven per cent in a year.⁸ Another study on the costs of exclusions in low and middle income countries revealed that in Bangladesh the exclusion of PWD from the labour market resulted in a total loss of \$891 million per year and in Morocco, income lost due to exclusion from work was estimated to result in national level losses of about \$1.1 billion.⁹ Lack of access to education to children with disabilities also leads to huge economic losses for a nation. For instance, in Bangladesh, reduction in wage earnings due to lower levels of education among PWD was estimated to cost the economy \$54 million per year. In addition to this, limited or no access to proper healthcare services can have deleterious effects on the economy. Poor health can lead to low educational attainment, which in turn is strongly linked to lower lifetime earning potential.¹⁰ It can also reduce job productivity and can lead to job losses or forced reduction in working hours. Needless to say, it is in the interest of the society to grant PWD an equal status and create an inclusive space for them where they can grow and thrive.

The Road Ahead

Despite numerous international treaties and agreements, PWD continue to struggle for recognition and acceptance in society. They are often victims of stereotypes and discriminations that preclude them from entering the mainstream society, thereby pushing them on the periphery. However, the ramifications of this exclusion are both economically and socially very costly and hence, it is high time that governments and private organizations enter into serious partnerships that convert the costs of exclusions to gains from inclusion. In

other words, the need of the hour is to capitalize upon the resourcefulness of PWD and maximize their contribution and participation in the community.

Research shows that tapping the potential of PWD by including them in mainstream society creates substantial economic gains for countries.

For example, it is estimated that in Pakistan, rehabilitating people with incurable blindness would lead to gross aggregate gains in household earnings of \$71.8 million per year. Empirical evidence from high income countries also shows that employees with disabilities have greater retention rates, higher attendance and better safety records and matched productivity compared to employees without a disability. These savings can

generate substantial gains. In the US, for instance, earnest efforts by companies like Walgreens and Verizon to employ significant numbers of PWD saw gains such as a 20 per cent increase in productivity and a 67 per cent return on investment, respectively.¹¹ By facilitating employment for those who can and are willing to work, countries can increase national productivity, widen the tax base and reduce expenditure on unemployment benefits. Thus, countries should primarily focus on generating employment opportunities for PWD. This can be done by initiating programs that advance the participation of PWD in the labour force by supporting and financing training and rehabilitation services needed for PWD to work. Governments must also focus upon building PWD-friendly workspaces to encourage PWD to work and serve as assets to the economy.

Additionally, promoting inclusive education can have substantial gains for countries. In China, for example, estimates indicated that each additional year of schooling for PWD leads to a wage increase of 5 per cent for rural areas and 8 per cent for urban areas. Over the years, several countries have enacted legislations and implemented policies to create an inclusive learning environment for children. For example, Iraq developed the National Project of Comprehensive Educational Integration that aims at improving the quality of education provided to children with disabilities. Similarly, Vietnam established the National Action Plan for Education for All with a provision for equal educational opportunities for children with disabilities.¹² However, more needs to be done to ensure that no child with disability is left behind. Schools should be more sensitive towards students' diverse needs and work towards catering to those needs to the best of their capacity. They need to equip themselves with assistive technology and devices to support children with disability while simultaneously ensuring that the cost of education is affordable to students from all economic backgrounds. Building the capacity of teachers in inclusive education is essential to meet the needs of students with disabilities. For example, a school in Finland provided opportunities for teachers of students with disabilities to share knowledge on methods for inclusive education and for mainstreaming equality among students. In a nutshell, educational institutions need to earnestly strive towards uprooting all physical, social and financial barriers that prevent children with disabilities from seeking quality education as education is a prerequisite for employment, which is the key to uplifting PWD.

To minimize the costs of exclusion and provide PWD with equal opportunities, there is also a need to strengthen healthcare systems that play an instrumental role in empowering PWD. Medical professionals should

be given proper training to enhance their abilities to provide care for PWD and public-private collaborations should focus on making health-care facilities more accessible and affordable to PWD. Establishing rehabilitation services and home-based care is another crucial step in the right direction. Studies have shown that Community-based rehabilitation (CBR) programmes that aim to enhance social inclusion for PWD and their families have a positive impact on the well-being of PWD. Countries such as India and Afghanistan are cases in point. Most importantly, laws should be enacted that prohibit discriminatory practices in health insurance and promote health insurance schemes offering coverage for assistive products and rehabilitation services. Besides, PWD should be allowed to take control over their health-care decisions, on the basis of free and informed consent.

Further, improving access to banking and other financial services, including mobile banking, and ensuring accessibility for PWD in overall financial services is vital to financially uplift and empower PWD. Physical barriers, travel barriers or time restrictions can pose as serious hindrances for the financial inclusion of PWD and hence, targeted policies need to be formulated to facilitate PWD's inclusion in the financial world. Digital technology has the potential to be a great equalizer.

Several social protection schemes such as disability grants and benefits have already been put in place in many countries and have also yielded positive outcomes. For instance, a study in Johannesburg, South Africa, showed that the disability grant was used in 50 per cent of cases to cover PWD's essential needs. However, there is still scope for revising policies to initiate far-reaching reforms and create a radical change in the lives of PWD. An intersectoral and 'twin-track' approach is needed to find pragmatic solutions to the problems faced by PWD. Intersectoral refers to the collaboration between multiple government departments, private sector and disability organisations, while 'twin-track' refers to the programs that are both 'disability targeted' i.e. specific initiatives to empower PWD and 'disability mainstreamed' i.e. addressing inequalities between disabled and non-disabled people in all general development initiatives. This will enable social and economic policies to become more interlinked, thereby allowing disability to be integrated into development programs aimed at addressing poverty and exclusion.¹³

With persistent and concerted efforts at the national and international level, PWD will certainly be able to carve a niche for themselves in this world. For decades, they have endured violence, exploitation, abuse and

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DEBUNKING THE SOCIALLY-COGNIZANT CAPITALIST

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“The bourgeoisie cannot exist without constantly revolutionising the instruments of production, and thereby the relations of production, and with them, the whole relations of society.”

-Karl Marx, The Communist Manifesto

Since time immemorial, humanity has been riddled with division and discord. The evolution of human society from a primitive to a complex and organised system witnessed the rise of unequal power structures. These structures eventually crystallised and formed the basis of modern-day society: the oppressive capitalism that dominates public discourse and life. As conversations around gender, racial, ethnic and sexual minorities intensify, how does capitalism factor in?

From Colonialism to Capitalism

According to Utsa Patnaik, a researcher at Jawaharlal Nehru University (JNU), Britain owes India about \$45 trillion dollars as reparation: an amount that is not only a nod to the drain of India’s wealth under the British rule but also one that highlights the missed potential for wealth generation in the present as well as the future.¹ While the figure quantifies the monetary losses, the true cost of oppression, in terms of trauma (which is often passed down through the generations and is hence termed transgenerational trauma), internalized inferiority, subservience and productivity losses remain largely beyond the realm of economic measuring. A look at British imperialism within the Indian context provides a gateway into analyzing the perturbing relationship between capitalism and colonialism and a means for examining the common thread between the two: institutionalized oppression that is at the heart of their existence.

Capitalism, the way we see it today, is largely a product of

the Industrial Revolution in Europe, which was notably founded on the back of slave trade and colonialism. The colonized and the enslaved were part of the plantation system. Under this system, they worked for minimal pay, often under inhuman conditions, for landlords who ‘owned’ them. In a bid to undercut each other, and generate larger profits, the landlords used corporeal punishments and wage cuts. The plantation system emerged as one of the first instances of modern-day capitalism owing to the fact that it was driven by a profit motive. The landlords often reinvested these profits in slave-trading companies and used it to fund technological start-ups — actions that further cemented this system in society. While oppression became central to the existence of this capitalist machinery, it was not enough to sustain it. Without invading new markets, the existence of capitalism was threatened. This problem was largely circumvented by annexing new nations and exporting capitalist ideologies, a fact that is deeply revealing of the expansionary nature of the capitalistic system.²

The history of colonialism spills beyond just economic and physical oppression to psychological and mental oppression as well. Through colonialism, Indians internalized and subsequently, inherited deep-seated feelings of inferiority and alienation, which further stoked feelings of self-sabotage and self-hatred. This, in some measure, made and continues to make them ‘easier to influence and oppress’. The oppression in the plantation system feeds into modern-day capitalism where the boss infantilizes the workers, putting forth a narrative that without his guidance they would be lazy, unmotivated masses at sea. Oppression under capitalism

indigenous workers against the foreigners—a divide and rule policy of sorts directed at keeping the proletariat fractionated and subservient.³ Further evidence of oppression can be found in the marked departure from hitherto widely-accepted family values wherein adults and children were seen as important contributors to society, instead of being pigeonholed as ‘burdens’ or ‘dependents.’ Oppression, however nuanced and layered, remains an immutable element of capitalism today.

Changing Relationship between the Sexes

Engels, in the Communist Manifesto, argues that the shift from the primitive commune based system of production to a capitalist economy had first disrupted and eventually eroded women’s position in society. With the industrial revolution in Europe, and the proliferation of monopolized means of production, the ties between men and women began to change. With the increasing demand for labour in factories and a shortage of the same, instances of polygamy shot up and so did the preference for a larger number of children. This behavioural shift led to a strong correlation between production and reproduction, with men almost exclusively being relegated to the former and women being pushed into the latter. As production processes became more complex, women were further sidetracked, strengthening the notion that men have greater rights to go out and work. As noted by Temitope Fagunwa, *“The roles capitalism fashioned out for women during the earliest phase therefore were that meant for ‘housewives and mothers’. Under capitalism and patriarchy, the role of women increasingly became ‘bearing and rearing’ the next generation of labourers to support capitalism.”*



Capitalism increasingly commodified labour, shaping a society where unpaid labour was inherently devalued and thus, unpaid labourers too, became categorically less valuable.

Capitalism emerged as a chiefly male (cis-gendered white male, to be specific) dominated space, where a particular form of masculine identity, i.e. that of being an aggressive, decisive, competitive, goal-oriented and violent person paved the way for a form of social Darwinism wherein power was legitimised to those showing these attributes. Capitalism thus emerges as an extremely gendered form of production.⁴

Conjugated Oppression

From an Indian perspective, the application of ideas of oppressive capitalism is never discussed in public discourse at length. The Global South (refers to all lower-income countries on one of the global ‘North-South’ divisions) has seen the prevalence of labour exploitation by the means of appropriation of both surplus and labour in the production process. Marx never explicitly

mentioned conjugated oppression but provides an essentialist take on this topic. Any specific forms of appearance and essences need to be co-theorised as ‘concrete universals’. Analysing wage labourers as a class means understanding all the concrete determinations and particulars that constitute living social groups such as social relations of race, gender and sexuality. This boiling down of systemic and structural differences between individuals reduces them to class differences. But Marxists fundamentally disagree by recognising the differences between individuals and varying levels of oppression faced by them. They believe that principally, in order to mobilise and bring about a change in the current capitalist order based on the supremacy of the bourgeoisie, there is a need for solidarity between classes.

‘Conjugated Oppression’ refers to multiple forms of oppression at work simultaneously [Philippe Bourgois (1988)]. Bourgois explains this as ethnic discrimination and class differences ‘interacting explosively to produce an overwhelming amount of oppression that is more than the sum of the parts’. Even though ethnic discrimination is largely based on ideological differences and class disparities rising from economic relations among the proletariat, the interaction of the axes of race, caste or sexuality with the economic relations is co-constitutive and forms the level of oppression faced by individuals. Hence, conjugated oppression is a result of their standing along both axes and is subsequently inseparable from capitalist accumulation.

In India, the interaction of the axes is rarely studied by leftist scholars but the correlation exists. Dalits, Bahujans and Adivasis (DBAs) are some of the most sidelined social groups of the country but there are nuances to this idea as well. Dalits have been shunned by the higher classes as ‘untouchables’ and dehumanised as ‘polluting’, ‘impure’ and ‘filthy’. Dalit women have been subjected to sexual violence and exploitation, beatings and killings in order to subjugate them to the system by the majority. Adivasis, on the other hand, historically had been living away from the mainstream settlements, isolated from the society in terms of their practices and beliefs. But when they interacted with the ‘mainstream’ of the structure, they were treated in ways similar to *Dalits*.

Ignoring the correlation between class divide and economic identity is faulty and misconstrued. With the decline of agriculture as a major contributor to the Gross Domestic Product (GDP), its share in employment also gradually declined. This was not offset by industrial growth but rather by the construction and service sector. According to an International Labour Organisation (ILO) report, a whopping 81 per cent of India’s labour force works in the informal sector. These workers operate in the small-scale informal sector, informalised employment in the formal sector or informal agriculture. The informal sector is marked with low wages, no job security, no health benefits and no ability to unionise among others. Unsurprisingly, the poverty level in this population is also soaring high.

Adivasis and Dalits continue to find themselves at the bottom of the social paradigm. The historical caste oppression inevitably continues in the manner of employment as well — while Savarnas enjoy the benefits of the formal sector, DBAs are largely left with no option but to engage in the informal sector.⁶ The linkage between oppression and capitalism, according to Lerche and Shah (2018), stands on three principle basis: historical inherited inequities of power which enable dominant groups to gain control over DBAs in the capitalist economy, super-exploitation of the labour class (i.e. the undercutting of the local labour force by more vulnerable of their kind enabling the control and cheapening by capitalists) and the overarching conjugated oppression⁶.

The Way Forward: A Marxist Perspective

Karl Marx, in one of mankind's most influential political works, the Communist Manifesto, proclaims that the history of all hitherto existing societies is the history of class struggles. Simply put, his vision is criticised by social groups as largely 'reductionist' and dismissive of the existing diversity in forms of oppression. Acknowledging the faults and privilege within the working class is extremely important.

A man toiling in a factory still holds patriarchal power over his wife and family.

This power in itself can be lessened by the subjugation faced due to the lower class but cannot be dismissed. The Marxist objection to intersectionality as a 'divisive

force' is problematic because it questions the structures that are created to counter oppression that all Marxists may or may not have faced. But the harm done to social movements and the greater struggle against oppressors by identity politics cannot be sidelined either.

Nancy Fraser, a left-wing feminist economist, bemoaned the shift to identity politics in her work *Fortunes of Feminism: From State-Managed Capitalism to Neoliberal Crisis* and criticises the impact it had on the movement: "Whereas the '68 generation hoped, among other things, to restructure the political economy so as to abolish the gender division of labour, subsequent feminists formulated other less material aims. Some, for example, sought recognition of sexual difference, while others preferred to deconstruct the categorical opposition between masculine and feminine. The result was a shift in the centre of gravity of feminist politics. Once centred on labour and violence, gender struggles have focused increasingly on identity and representation in recent years... the feminist turn to recognition has dovetailed all too neatly with hegemonic neoliberalism that wants nothing more than to repress socialist memory."

The question that now arises is how do the fragmented proletariat and other oppressed classes ever break through these structures that subjugate them. The privileged sections of many oppressed groups have chosen to stay silent on worker oppression given their vested interest in the current power dynamics. These are differences that cannot be ignored while finding a middle ground. Despite all that has been said, class remains an immensely powerful uniting force within the oppressed classes. The only way forward is recognition of worker's oppression and the injustices done by the bourgeoisie.

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PASSING THE RED ALLEY

BY SRISHTI JAIN

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India's sex workers, though constituting an integral part of its informal sector economy, are rendered voiceless under patriarchal power structures. How can governments all across uplift these groups?

The term “informal economy” became prevalent in the 1970s as a label for economic activities that take place outside the domain of official institutions. They stem from the rise of self-employment and casual labour. In recent years, prostitution has increasingly been recast as a form of “sex work” with over 800,000 sex workers in India. However, unofficial figures place these figures far higher.¹

The legal statute overseeing the rights of sex workers in India is The Suppression of Immoral Traffic in Women and Girls Act (1956), amended in 1986 as The Immoral Traffic Prevention Act (ITPA).² The very name of the Act makes clear a social attitude about sex work as immoral.

According to this, while sex workers can carry out their trade in private spaces, they cannot legally solicit customers in public places nor engage in forms of pimping, hotel services or rings of sex workers. So while prostitution, per se, is legal, a plethora of activities surrounding it like public solicitation, brothels, kerb-crawling, minor sexual commerce, trafficking, pimping and pandering, are illegal. The moral uncertainty that engulfs this practice is increasingly bringing out the question of its formalisation.

Why do Women Enter the Market?

Irrespective of the channel of entry into the world of prostitution, the primary reason for women to opt for such a profession often comes from their poor economic condition. Based on a pan-India survey conducted by the Centre for Advocacy on Stigma and Marginalisation

(CASAM)³, entry into sex work for money needs to be subtly differentiated across two basic divisions. First, workforce generated from labour markets economic factors may have driven their decision to look out for more lucrative professions. And second, when direct entrants mention coming into the industry for money, they basically want to derive some livelihood income out of sex work.

	Mode of entry into sex work ¹³						Total
	By Self	Forced	Sold	Cheated	Devadasi ¹⁴	No reply	
Women entering directly into sex work	805	83	104	68	31	67	1158
Percentage of total	69.5	7.2	9.0	5.9	2.7		
Women with prior experience of other labour industries	1086	132	64	172	45	29	1488
Percentage of total	73.0	8.9	4.3	11.6	3.0		
Women with sequence of other work identities but sequence of entry unknown	259	23	9	30	2	3	326
Percentage of total	79.4	7.1	2.8	9.2	0.6		

Source: Pan India Survey of Sex Workers by CASAM, spanned over two years surveying 3000 women in sex work.

The Current Status of Sex Workers in India

The Indian political approach has been to try to achieve a mix of various methods, with a careful balance between views that sex work is immoral, that sex trade is exploitative, and that sex workers' rights need to be safeguarded.

Criminalisation

Section 8 of ITPA penalises sex workers for drawing the attention of potential customers from a visible, conspicuous site, whether on a street or from a private

dwelling.⁴ The criminalisation of soliciting is one of the most obvious legal challenges for sex workers, who faced court hearings, arrests, and convictions on a routine basis. Sex workers are detained even when they are not soliciting. Most pleading guilty find themselves in a vicious cycle of criminalisation, as the burden of providing proof rests on them.⁵

Social security and support

Sex workers have voiced the need for inclusion into social protection schemes and to partake in broader campaigns and forums requiring rights for the unorganised workforce. However, income generation programs at the district level are made conditional to sex workers giving up sex work, a condition that many sex workers reject. Another factor that impedes participation in income generation schemes is that sex workers are obliged to be part of self-help groups within their village or areas. Many sex workers participating in such self-help groups have reported being victimised and marginalised by other SHG members.

The challenge of documentation

Stigma related to their work and identity and the uncertain nature of work prevents sex workers from accessing identification documents, essential to accessing entitlements. For instance, in 2009 it was reported that only 20 per cent of over 5000 sex workers in Delhi had a voter’s ID card.⁶ Sex workers recount that they are humiliated and asked to provide sexual favours in return for obtaining these documents. Landlords refuse to issue rent receipts or rental agreements.

Growth Trends in the Economy on Legalization (GDP)

Global statistics have shown that the sex industry, has been accountable for boosting the country’s growth index. Netherlands has displayed a significant rise in the prostitution revenue, of \$800 million that forms up to 0.4 per cent of their GDP (2000-2005).⁷ The credit for this goes to the thriving sex tourism and the successful creation of employment. It is also important to consider that in Bangladesh from the onset of legalisation of the industry, its contribution was a mere 0.0001 per cent or \$24 million to the total GDP.⁸ This disparity is due to vast variations in the contextual factors of the two countries. While the individual economic returns of a prostitute in Bangladesh are, in fact, relatively greater than those of any full-time earning profession, a strong social stigma pertaining to prostitution cancels out the industry’s relative growth which is concentrated among women who are either Below Poverty Line (BPL) or trafficked.

Mapping this trend on India (under the assumption of the Netherlands model which subsumed a parallel aim of law enforcement to that of India) it is seen that the prostitution sector, with annual revenue of \$8.5 billion cumulates up to 0.03 per cent.⁹ However, similar to the Bangladeshi model, the present-day context of the industry in India would restrict the expansion of the prostitution industry despite the resultant boost in

the GDP. This implies that the increment in the growth indices would be redundant to the industrial expansion. Though it is also important to factor in the taxes liable to be paid by the prostitutes and the job creation for the supporting economies, this percentage contribution is relatively insignificant in comparison to the present scenario as it would remain concentrated in a limited area.

Economic Costs of Legalisation

The national debate on the legalisation of prostitution placed high importance on its role in the prevention of the HIV/AIDS epidemic which peaked in India in the 1990s and early 2000s. India’s National AIDS Control Organization (NACO) reported commercial sex workers as one of the most crucial of these high-risk groups with an increased prevalence of 2.6 per cent. The economic ‘trade-off’ between personal income and condom usage plays an imminent role in elucidating this. The substantial rise in demand and supply (which supposedly aggravate on formalisation) as well as the rising percentage of voluntary entry into the industry, has made the prostitution sector highly competitive. There is an array of factors potentially impacting the economic returns of a sex worker such as ‘physical attractiveness, age, experience and so on’.

By keeping the relative discrepancy in these factors constant, one can assess the correlation between condom usage and the personal income of the sex worker. This function can be elucidated by relating price to the set of characteristics $P = P(X, S)$, where P stands for the price per sexual act charged by the sex worker, X includes the attributes of the sex worker, and S is a variable that denotes whether the sex worker practices safe sex. On tabulating the data from the reports on returns to the various aspects and forming a trend line, we get a figure similar to Table 1.

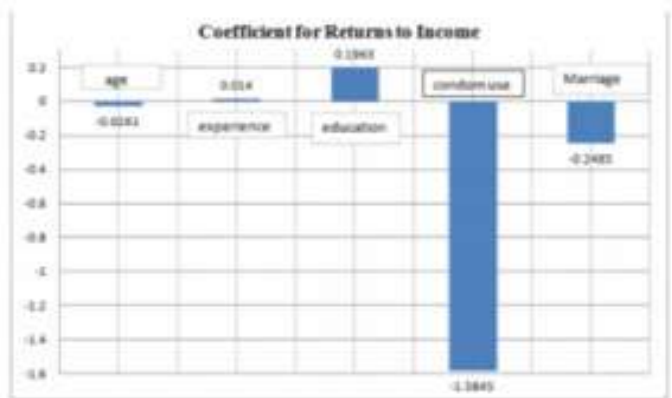


Table 1
Source: Rao, V, Sex Workers and the cost of safe sex

The graph displays a sharply and substantially negative impact of condom use on prices. The figures indicate a loss of up to 79 per cent from the original income. The greater the condom resistance of the client, the lesser is the price per act paid. Therefore, the sex workers are induced to provide compensation for the demand for safe-sex practices which forms a strong discouragement against practising safe sex which has an adverse

influence on the contraction of HIV.

The same model prevails in Bangladesh; however, HIV prevalence there is as low as 0.1 per cent. This is because a high proportion of the reported sex work in Bangladesh takes place within brothels (due to legality and high marginalisation) as against 11 per cent of independent prostitution. Thus, the brothel owners and procurers, who have adequate sex education fix prices per sex worker which are more often than not, non-negotiable. (Ullah Asan, 2005). As per past reviews of Government Expenditure, controlling the HIV epidemic required an aid of \$700 million from the World Bank along with budget expenditure and a massive drop in the labour force.¹⁰ Thus, the economic cost of legalising prostitution remains high.

The sex workers employed currently do not engage in other forms of work, not only because of social reasons such as being marginalised but also because the sex industry earns them a fair level of income.

The average prostitute in India is paid \$120 per month, while brothels of certain areas receive one million customers every month.¹¹ The sex workers charge a higher premium which is agreeable by the clients because the service involves high-risk factors such as the possibility of a penalty as well as other unambiguous costs. On the formalisation of prostitution, this high-risk factor effectively disappears, thereby reducing the income of the prostitutes. This draws that the economic benefit to the individual prostitute takes a hit when it is regulated. This can be seen in many cases in which the prostitutes claimed to not want legalisation to their business.

Legal Models of Sex Work

We can categorise legal responses to sex work into four broad categories, namely prohibition, partial decriminalisation, social control legalisation and pro-work legalisation.¹²

The first model, prohibition, criminalises all facets of the sex trade and is the model currently adopted in India. The second model is partial decriminalisation in which although there are serious criminal offences for any person who coerces or forces women into sex work or who trades in under-age sex workers, the sex work industry is otherwise decriminalised. The third model is social control legalisation. In this model, targeted laws and rules actively control the industry through zoning restrictions to keep brothels and sex work out of residential areas and away from schools, places of worship and hospitals, through licensing requirements and public health measures such as mandatory health checks and occasionally identification cards. The final model is pro-work characterised by measures that ensure that sex workers, like workers in other service

industries, receive the full protection of employment law and have access to the protection of the criminal law and other human rights protection. This model typically requires operators of brothels to register the business and provide facilities that meet designated standards, failure of which would be penalised.

Partial Decriminalisation and Pro-Work: A Preferred Approach

A preferred approach to sex work that draws on both feminist positions described previously is that both exploitation and empowerment punctuate sex work marked by a complex interplay of occupational agreements, power relations, coercion, choice and worker experiences. On one hand, sex work leaders have asserted that they are citizens entitled to earn their livelihood who did not want to give up their work but rather to do it with 'dignity and respect'. On the other hand, accounts of the exploitation and victimisation of sex workers are plenty. The most efficient response to the dual reality of exploitation and empowerment is the adoption of the partial decriminalisation and pro-work model. It is the combination of these two models that aligns itself most closely to a human rights approach to regulating sex work and recognising empowerment and granting autonomy.

Replacing the current framework with this model would require the following structural and policy changes:

- The first reform is to decriminalise all aspects of the sex trade relative to adult voluntary sex work. The decriminalisation of soliciting may be agreeable by those who view the sex worker as a 'victim' and may also resonate with those who see sex work as 'immoral'. However, the decriminalisation of those involved in the management and organisation of the sex trade is likely to be opposed by both feminists and conservatives alike. It will be resisted by those who see the sex work industry as a 'social evil'. Nevertheless, such attitudes can be altered by the educational measures which should accompany law reform.
- Integration of sex workers in policymaking by ensuring participation of sex work organisations in drafting/amending laws, policies and programs relevant to them and in its subsequent implementation process.
- Sensitivity to problems faced by sex workers should be made a part of training for police personnel, public prosecutors and the judiciary in partnership with community organisations of sex workers.
- Providing safeguard against arbitrary arrest and detention of sex workers, and investigate harassment, coercion and abuse by law enforcement staff.
- Preserving confidentiality and respect the privacy of sex workers approaching law enforcement and judiciary for redress in cases of sexual assault, exploitation and violence.
- Ensuring enactment of the Supreme Court recommendations to issue identity documents and ration cards to sex workers at the national, state, district and sub-district levels.
- Ensuring the empowerment, active participation and leadership of sex work networks, federations and

collectives in designing policies and procedures for accessing social entitlements.

Though India has had periods of economic growth, modernisation, scientific and technological developments, and macro-level peace initiatives since

independence, its institutional structures have not expansively addressed micro-level development and the concerns of its most disadvantaged segments. Therefore, sex workers remain largely omitted from mainstream society, but there is an urgent need to pay attention to such voices.

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LABOUR LOCKOUT: MAMTA MURTHI



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Dr. Mamta Murthi is an Indian developmental economist and is currently serving as the Vice President for Human Development at the World Bank. A PhD from University of Oxford, she has written extensively on poverty, demography, education and inequality.

The labour laws in the organised sector have led to a lot of organisations hiring either unorganised workers or contract labourers, compromising the benefits of labour welfare. How can the state strike a balance between achieving labour welfare while maintaining employability in the organised labour market?

There is undoubtedly a need for labour protection as people deserve to work in safe working conditions and be treated acceptably. However, there can be situations where the protections are very high. Take, for example, the case of the minimum wage. In situations where minimum wages are too high for the level of productivity in the sector, jobs get pushed into the informal sector. The informal sector is often lacking basic worker protections. So to maintain a balance between the two ends of the spectrum, one must ensure that the minimum wage set is relative to sector productivity. Sometimes minimum wages are set nationally in a large country with many sectors. In this case, formal employment flourishes in those sectors where the productivity is higher than the minimum wage, while in other sectors workers get pushed into the informal sector where the protections are too low. Providing protection to just the formal sector is too limiting, which is why we need a broader scope. What is needed is a larger formal sector with a proper social protection scheme in place and a smaller informal sector where the basic protections are higher. This means starting with basic social protection measures like a non-discriminatory work environment, safe working conditions and then more beyond that. One thing that the pandemic has taught us is the importance of having a social protection system that can provide some sort of basic protection and floor to

the income of people. Having basic protection which is funded through general taxation is a great idea for most countries.

The COVID-19 pandemic has caused a major disruption in the labour market by increasing unemployment and livelihood insecurity. How can livelihood security be extended to the masses in emergencies in developing countries? Do you think India can sustain livelihood insurance?

What the pandemic has underlined is the need for a flexible, general taxation funded income support in times of stress. This can only be done through general taxation as it's very hard to do this via some sort of insurance scheme. Insurance is great when you can pool risks and you have idiosyncratic shocks that are affecting a small part of the population. Everybody's paying into the pool and only some need to draw from it, so you have enough resources to help those in shock. However, when you're experiencing a general shock like the pandemic, you can't expect to bail everybody out. As an example, let's take unemployment insurance, which can be found in many parts of the world. Most of these claims have to be bailed out by general taxation or public money since they can't cope with a general shock. For extreme shocks, the COVID-19 pandemic has shown us the importance of general taxation funded livelihood support schemes. Most countries have adopted some sort of general taxation funded income support for people. How much can be supported is the function of the economic circumstances of a country. But there's no entity other than the government that can tax the public or borrow in a responsible way to support livelihoods.

Finally, there is a need to strengthen general taxation in developing countries. Developing countries might collect somewhere between 10-15 per cent of GDP as tax revenue, personal income tax is typically paid by a very small proportion of the population. Much more could be done to expand that. When you trickle downwards, typically, the state governments need to broaden their tax base as well. Property tax is underdeveloped and can be worked upon as a source of revenue in developing countries.

With more education, women acquire greater skills resulting in higher labour force participation and increased earnings. However, it is known that in India, women's education has a U-shaped relationship with labour force participation. Why do you think this is the situation?

I think in India, you get a u-shaped relationship because people seek jobs that match their qualifications. There aren't enough jobs that women of secondary education can aspire to do. There are jobs for women who have tertiary education and those with primary education. But when you're in the middle range and you only have a high school degree, there aren't enough jobs that you can do. This leads to a cycle of getting married, having children, and trying to be in a job that makes you feel productive while earning a reasonable income. A big challenge is to have an economy that creates jobs for this group of people. This requires a range of interventions, and some of it just has to do with better infrastructure. Some of it has to do with promoting entrepreneurship and self-employment within this group of people and for this, they need access to financial resources. Reforms are also needed in commercial regulations that inhibit people from being self-employed if they don't have a certain set of qualifications. Women tend to go into one type of profession, commonly called the "caring professions" which consist of education and healthcare. When you think about it, there is a lot of scope for female employment in these professions as they represent safe and clean environments that women are typically attracted to and would thrive in. Retail is another big area which women tend to be drawn to and most parents would feel comfortable sending their daughters to jobs in retail. With a little bit of training by the company, women would be more prepared for these jobs. For the most part, addressing this u-shaped relationship is really around job creation for that sector of the population that is not going to get a tertiary degree.

We are observing rapid automation and technological advancement in almost all sectors which have led to a rise in unemployment due to a lack of technological skills in the workforce. Who do you think should take primary responsibility for reskilling the workforce, corporations or the government, and why?

I would say that there is a role for both corporations and the government in reskilling the workforce. For an inclusive society, which we all aspire towards, it is very important that everybody has opportunities. For

this, people need to have a basic understanding of technology; say, for example, they need to know how to use a keyboard, some basic computer skills and Zoom. There is a role for the public sector in financing this because otherwise, you might not have a society in which everybody has this opportunity. If the provision of these basic skills is left to corporations or the market, you will be in a situation where some people will develop these skills and some won't. Beyond the basic skills, people need job-specific skills. When you enter the job market, you might be asked to run a regression to check whether agricultural productivity is related to fertiliser use. In this case, you'd need a general understanding of the economy but, more importantly, you'd need specific skills according to the firm you are working for. And those specific skills, which are very much tied to the job you do and are related to the objective of the firm, should be provided by the employer. If we go a bit deeper, I think that technological change is causing unemployment, but the picture is broader than that. Technology has the ability to both create and destroy jobs. Think of all the back office processing that is now happening in India. Those are after all jobs that are created by technology. And then there are some jobs which won't go away, but just become different because of technology. It's impressive how some hospitals and companies use machines to read X-Rays, MRIs, and other medical information. This, in turn, reveals information that a doctor or health professional can use to perform their job better. So, technology can be job-destroying, job-augmenting and job-creating at the same time. The important thing from a skills standpoint is that everybody needs to have a skill set that allows them to work with technology. At the World Bank, for instance, we provide both financial assistance and technological advice on upgrading curricula in schools so that students are equipped with the kind of skills that they need in today's technology-driven world.

Ten years after the right to education act came into being in 2009, nearly 40 per cent of adolescent girls in the age group of 15-18 years are not attending school while 30 per cent of girls from the poorest families have never set foot in the classroom, according to the report by Right to Education Forum and Centre for Budget Policy Studies. What can be done to improve this situation?

Getting children, especially girls, into school is an enormous challenge and it's a complicated one to address. If it were easy, I think it would have happened sooner. India has one of the highest populations of 'out of school' children, especially girls. And we are not talking about millions, but tens of millions. We are also very concerned about the fact that because of the pandemic, you have school closures, and if you are a young girl in a rural or semi-urban area, you may already have a very tenuous connection to your school. After being at home for weeks or even months, it might be harder for you to go back to your school. So, we need to redouble our efforts and do more, to ensure that the pandemic doesn't have a double whammy on female education. There are three prongs on which things need

to be done to encourage girls to go back to school and stay in school. Firstly, there is the school environment itself. This is something that falls under the Ministry of Education and State Departments. Schools themselves need to be more welcoming and inclusive of girls. This starts with infrastructure. Clean schools with functioning toilets and a safe environment are required. Girls should not be bullied or harassed. Transport to school can often be an issue, especially when you are getting to middle school. Teachers should also be welcoming and inclusive and should be sensitised on the need to retain girls in school. The second dimension of the problem revolves around communities and families. Communities need to realise and recognize the value of educating girls. People often talk about mothers, but fathers are equally important in supporting female education and should be sensitized about the same. Finally, I think the signals that the labour market sends are extremely important. Females are usually not able to take advantage of their education for jobs due to many hurdles. They might be denied, or even harassed. They might be mothers and have to take care of their child because no one else at home might be ready to. All these things have a backward effect and take away the incentive to gain an education. So, there is a need for action on all three fronts, the school environment, working with communities and the labour market. This is not an insurmountable problem, and neighbouring countries like Bangladesh have already seen major success in increased female participation in education. There are a lot of good things happening in India as well, but obviously, more needs to be done in terms of implementation.

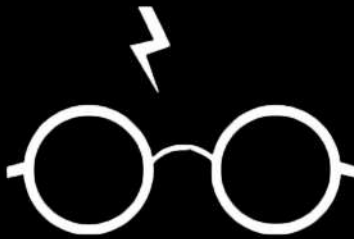
The COVID-19 pandemic has led to a dramatic loss of human life worldwide and presents an unprecedented challenge to public health, underscoring the need for planning to account for increased demand for health amenities and services during crises. What do nations need to work upon to be better prepared for future crises?

Let me tell you about a paradox. Before this pandemic, everyone thought that the richer countries of the world would do a better job in preventing the spread of the disease and protecting their economies. Given the difficulty countries like Italy and the United Kingdom faced last year, the fear was that developing countries would have an even harder time containing the pandemic. One year later, we are a lot wiser. If we look at the death rate on a per capita basis or decline in per capita income, it is much higher in developed countries than in

developing countries. This pandemic has upturned our understanding of what pandemic preparedness means. Preparedness basically relies on the ability to surveil and monitor. You need to know where the disease is emerging and you need to monitor its spread with agility. This requires laboratories, scientific personnel and a system, which allows you to know if a disease is emerging. And this is something in which countries typically underinvest. The second thing is that you need to have means to contain the spread of the pandemic as it emerges, which depends on its characteristics. And this is where all the assumptions that people had, have been upended. Everybody thought that the pandemic would emerge as a common flu. Authorities started urging people to wash hands regularly and ensure the availability of water. People were unprepared for a pandemic that could spread through aerosols and being in close proximity to each other. The solution which was adopted was widespread lockdowns, but that again had negative consequences on education, health and incomes. All of these situations need to be thought through. At the same time, while people were under-prepared for this pandemic, I think that there has been a lot of innovation. For example, The Government of India identified people like the informal sector workers who couldn't go to work because of the pandemic and required monetary assistance. Using technology the Government provided them with cash through electronic or digital payments. Even the treatment of the pandemic has improved if you compare death rates from early on in the pandemic to current levels. Health professionals have gotten better over time in treating people. Going forward, the strengthening of means to surveil and monitor—and for countries to learn from various innovations—is going to be extremely important. Supporting preparedness is integral to the mission of the World Bank Group and we are committed to this agenda. Beyond increased investments across sectors, this will also require partnership. By working together at the global, national, and local level, we can help developing countries build the resistance they need when they face major threats to their people's health.



THE BANDWAGON





EIGHT-BIT HIT

BY AARADHYA DAGA

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In a world of glitz and glamour, technology is redefining who is a celebrity or makes the biggest bucks. Are the keyboard and console mightier than the Showbiz?

Think about the Entertainment Industry for a second – movies, music, television, glitz, glamour – all are more or less synonymous with the industry today. You probably missed out on the part of the entertainment industry that rakes in the most revenue, however – video games. As a matter of fact, the movie and music industries combined struggle to match even half the amount of revenues generated by video games with the global box office and global music records pulling in \$41.7 billion and \$19.1 billion respectively; now contrast that with a \$152.1 billion raked in by video games.¹ To provide even more perspective – unless one is living under a rock, they know about Avengers: Endgame; in the movie’s words, it’s inevitable. Endgame is the second top-grossing movie till date, making \$850 million in the opening weekend, and a cumulative of \$2.798 billion², and this was in 2019. Rockstar Studios’ Grand Theft Auto: V, released back in 2013, made \$1 billion in its first three days, and stands at a cumulative revenue earned of \$6 billion.³ No biz like the Showbiz, they said?

Genesis

At first, there was Pong; the first video game ever created, for the arcade. The industry was promising from the start, providing a good escape from reality for a small price. PacMan made one billion dollars in arcade revenues in a single year⁴, back in the 80s, and from then, the industry took off. Consoles emerged to be an instant hit, with colourful characters and intriguing levels. Although Consoles brought an arcade and more home, they still

were not portable, giving birth to hand-held consoles. This ‘Tech Advancement Race’ kept pushing companies to innovate with newer devices, games and experiences, making it a period of exponential advancements. This subsequently gave rise to the mammoth of Nintendo, which blew the competition out of the water with Nintendo Entertainment System, popularly, NES. Sony and Microsoft weren’t far behind, with the launch of the iconic PlayStation and Xbox following suit. Once people increasingly started owning Personal Computers (PC) gaming caught up, expanding the user base exponentially on account of cheaper games and better graphics. Meanwhile, silently, the first mobile game, Snake, launched on Nokia phones.

The Multiplayer Halo

The launch of Xbox Live was an important landmark in gaming. Developers realised that people liked playing video games with others, but while sitting at home. This launched a new crop of online and multiplayer games, both for PC and Consoles. Multiplayer games are still the most popular genre of video games today, with almost all new releases incorporating an online feature some way or the other. The user base is only increasing given the higher digital penetration. The ease of integration of high-quality experience, in terms of gameplay and multiplayer with the internet, led to the astronomical rise of PC as the preferred platform for Massively Multiplayer Online (MMO) games. This unprecedented rise continued till the dawn of the smartphone era. Companies saw a future in portable gaming, which was still dominated by Nintendo, and started integrating basic games into their phones. The launch of Apple’s

iPhone, however, cemented the future of smartphones as a gaming device, with the availability of the App Store, which laid the foundation for a wide reach of all types of games on portable devices.

Cyberpunk

Today, the video game industry has stayed true to its roots of innovation and tailoring experience. Consoles have redefined gaming with exclusive content to move hardware and a fierce competition between Sony and Microsoft in this regard leaves the consumer better off with quality hardware and software. This rivalry doesn't seem to be stopping anytime soon, with the release of next-gen consoles on part of both the companies – PlayStation 5 and Xbox Scarlett, redefining the traditional console gaming experience. The PC comes in as the blanket alternative for all types of people looking to play games – affordable and a higher technology cap than consoles, birthing the 'PC Master Race'. A highly customisable machine, the personal computer is an increasing favourite among the starters and the veterans. Not only hardware, but the PC, on average, also has a larger library of games available at cheaper costs. It should come as no surprise that 48 per cent of all gaming happens on a PC.⁵ Games are becoming increasingly complex, with the evolution from simple platformers to open-world games, looking to imitate life as closely as possible.

As the industry grows in popularity, the glamour and glitz creep in, with actors, extravagant announcements and releases, conforming more to the status quo, and (slowly) losing its creative and distinctive charm.

It's not good, always, as competition between the big, 'AAA' studios has devolved into a quantity over quality approach. Companies look to milk their cash cow franchises by slapping a new year sticker on the same game and reselling it, making last year's \$60 investment, and progress irrelevant. The games are rushed, and uninspired with a sense of conservative corporation-ism setting in the industry, as compared to the previous sense of innovation and risk-taking that dominated the industry. The community is divided - criticising the studios for annual franchises while the top-grossing games all year continue to be the very same annual franchises. Even games from AAA studios which put out a good game once in a while, face problems with a corporate approach. Case in point: CD Projekt Red (CDPR). Cyberpunk 2077 was the most hyped-up game in years, under development for nine years, with multiple delays and a full \$60 price tag. But when it was finally released, it was full of game-crashing bugs which made it unplayable to the extent that Sony and Microsoft had to take it off their stores and offer refunds – something they've never done before. CDPR lost around 22 per cent in stock price falls, wiping \$1.8

billion off its market cap.⁶

While this was a major one, many studios continue to pass off substandard games as a triple-A quality and face flak, but they get to collect their paycheck at the end of the day, owing to huge sales. The games are all pay-to-win, full of microtransactions that literally make one better at the game, among several other paywalls that exist. The studios seem to focus on making the game look better, forgetting what truly makes a game better – the gameplay. Contrasting games from the current era with some classics would most likely reveal people having more fun with the latter.

All hope doesn't seem lost, as indie games – games developed by small scale studios, sometimes just a few people, are becoming the new norm, slowly but steadily. They recognise the quality gaps that exist and try to fill the void. The community realises that too, and indie games today, if good, command the same amount of respect as a game put out by an established studio.

Portable Rush Saga

With the launch of an in-built app store in devices, mobile gaming took off. So much so that when Angry Birds became the most downloaded mobile game, it spun off as a full-fledged media franchise. There has been no stopping since. Thousands of games flood the app-stores daily, a wider gamut of genres than available anywhere else, all available in one's pocket. It gives access to games to a very large demographic. The only two prerequisites being a smartphone and an internet connection (may or may not be stable, as multiplayer enthusiasts would attest), both quite inexpensive in the day and age. The variety also offers an opportunity to casual gaming by people of all ages, from Boomers to Gen Z, having games from Candy Crush Saga to Pokémon Go. The ease of use makes it a multi-billion-dollar industry, the one segment with the largest contribution to revenue, with opportunities aplenty, in the future, making every big company, including Microsoft, Amazon and Google jostling to get a finger in the pie. Mobile gaming is expected to have a 59 per cent share in the overall video game pie by the end of 2021, having made an estimated \$85 billion in 2020.⁷ Triple-A studios have started porting their iconic franchises like Grand Theft Auto, Call of Duty and FIFA, which were originally Console and PC natives, to mobile phones, showcasing nothing but the fear of missing out on the smartphone boom. It has come far, from an eight-bit pixelated line moving around to eat other pixels on a screen, to high-quality gameplay and diversity.

Twitching A Living

Creating content is one of the simplest things one can get started with today, thanks to all the ease that various platforms provide. The video game industry is not out of this equation either. Video game walkthroughs have existed in text since the 80s, and with the rise in audio-visual media consumption have shifted there. They take the form of 'Let's Plays' and other guides that involve

a person playing the game in an efficient manner so others don't have to spend time looking for where every important aspect of the games lie. Sometimes people who are not able to play a game but would want to know how the game looks and plays like indulge in them too. However, there are various kinds of content that have sprouted ever since YouTube came into picture, and then Twitch took over. People, or, Streamers rather, play games live with audiences who simply watch them play a game. Sometimes because they're really good at it, and sometimes just because they make their streams fun with jokes and messing with the game's mechanics, or sometimes both. There is big money involved through donations and brand endorsements, with popular streamers having a net worth in millions from streaming alone.

Jury Fury

The last place one would expect a video game to end up is in the middle of multi-million-dollar lawsuits, being blamed for violence, explicit content and satanising children, but they seem to be present there as well. Video games have courted a lot of controversy, from Pong to Grand Theft Auto, all the games have found themselves at the behest of various lawsuits. People claim that video games encourage violence and have blamed them for school and mass shootings multiple times, prosecutors claiming that video games inspired the accused to do as they did. DOOM, Mortal Kombat, GTA have all come under the scanner due to these accusations, and although for most parts, the judges held the First Amendment and quashed the case, the violent acts helped reinforce a movement against violent games that continues till date.

A Shot At The Big Leagues

If you ever thought that the skinny kid back at school, who did nothing but play video games wouldn't amount to anything in life, success, health or otherwise, you

were wrong. E-Sports, the athletic equivalent of sports for gamers, is a multi-billion-dollar industry with various organisations vying to get a part of the pie. Professional players get handsome salaries, train with the best equipment and coaches, have dedicated trainers and dieticians, and a huge fan following – nothing short of a celebrity. Players compete in humongous arenas, with millions watching them, competing for prize pools that can reach up to \$40 million for a single tournament.⁸ It means if you were a part of OG's five-man team that won DotA 2's The International in 2019, you, an individual, got to pocket \$3.1 million. Contrast that to Tiger Woods, who made \$2.07 million at the 2019 Masters, and Novak Djokovic who made \$2.9 million winning the Wimbledon Singles. Time to pick up the keyboard and mouse?

Keep Your Friends Close

Just like the end of GTA: Vice City, from which the section derives its name, ended on a high note after ups and downs, the same can be said about the gaming industry. New advancements on the technology front are regular, as state-of-the-art is redefined every other month. Cloud gaming, Augmented Reality, Virtual Reality – all are now applied to games, with better titles just on the horizon. Gaming as a career today is not frowned upon, and takes as much effort, practice and perseverance, as any other career would. While the industry jostles with its new found corporation-ism, a few good old-timers and indie games fill the void of the old-school gaming experience of all meat, no gas. And lastly, it's just fun to kick back and live some hours as another person, virtually; it's a good feeling. All this, for something, most of the people don't take seriously. An ever-increasing number of people taking to games for a myriad of reasons means the industry is here to stay, and stay well. To quote Master Chief's final line of dialogue from Halo: Combat Evolved – "I think we're just getting started."

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THE WRATH OF 'THE MOUSE'

BY HIMANSHU CHHABRA

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Long hailed as the gold standard of the entertainment industry, Disney has an enviable legacy. However, with growing skepticism about its recent practices, Disney's fame is threatened and quality content remains the only way out of this quandary.

The Walt Disney Company is the biggest movie production house in the world. It owns a plethora of creative properties including Star Wars, the Marvel Cinematic Universe, Pixar Studios as well as all the assets of 21st Century Fox, owing to one of the biggest media mergers of all time. Their creative slate is so vast that 21 out of the top 50 highest-grossing films of all time were produced by the studio.¹ All of these properties are precious to fans across the globe who have helped Disney build its massive empire by going to the movies, buying its merchandise and even queuing up at its world-famous theme parks. During the past century, the company has always been at the forefront of revolutions in the media and entertainment industry. From revolutionising animation to taking 'comic-book movies' mainstream, it has played a gargantuan role in dictating pop culture, especially in the United States of America (US), which was the second largest box office market in 2020.² One could argue that such a company would be the biggest supporter of creative professionals in the industry, right?

People often say that the US film industry or Hollywood, as it is famously referred to, is 'addicted to money' and that Disney is no exception.

It would be naive to assume that these multi-billion dollar companies don't have corporate executives at the top making decisions which prioritise pleasing the investors over pleasing the fans.

For them, a 'creative risk' is a 'business risk,' which would mean a lost investment if that risk does not pay off. And lately, because of this mentality, Hollywood executives, especially the ones at Disney, have gotten more and more 'formulaic.'

These days, the focus is to squeeze the maximum possible amount of cash out of already familiar properties and brands rather than coming up with something new. With a strategy like this, every new movie is either a remake, a sequel or a prequel linked to an already successful franchise and this is done at the cost of experimentation and creativity. This trend is only going to strengthen in the near future with the success of films like Aladdin and The Lion King, both of which are beat-by-beat remakes of original classic animated films by Disney, but still grossed \$1 billion³ and \$1.6 billion⁴ respectively at the box office.

At this point, one would be tempted to think that if such movies are so lucrative, it must clearly be a good business decision, and this indicates that people do want to watch 'such' movies. I would like to point out two reasons why this 'money first' approach is extremely harmful for both the creators and the viewers. Movies are a vital form of art. In the span of 2-3 hours, they can invoke emotions within you for characters you have only just encountered, change your perspective towards major issues or things in life and become a binding force for society, helping people progress. But when was the last time we saw a film which made you think and also reached the masses?

Content, these days, is structured to appeal to the

widest possible audience with the aim of filling the maximum number of seats in the theatre and hence generating the maximum amount of revenue for the production house. There is little to no focus on exploring mature themes. Rather, the priority is to get the maximum amount of “shock value” from the audience in order to spread the buzz about the movie. This problem of ‘appealing to the masses’ is also visible in the inclusion of diverse cast members in the movie as a tokenistic measure, where little work is actually put in developing and respecting the characters. This is evident from movies like *Star Wars: The Last Jedi* where the producers lauded themselves for casting an African-American as the lead; the script, however, portrayed him as a dumb side character who is everything but the focus of the story. Ironically, this African-American ‘lead’ was removed from the posters while promoting the film in China fearing that it wouldn’t resonate well with the Chinese audience and in turn impact the popularity and revenue of the film in the country.

Dumbed down summer blockbuster films are not the only problem. To understand the other half of the issue, it’s imperative to understand how the film industry operates. The production houses, as the name indicates, ‘produce’ and ‘market’ the movies, tie-up with theatres all across the country (operated by other companies) and book their screens to project the film they have produced for a fixed number of weeks. Now, big-budget blockbusters would naturally try to block as many screens as possible across the country for long durations of time to ensure that the film reaches the maximum number of people. But this creates a problem since the supply of movie screens is fairly inelastic in the short run. Thus, production houses like Disney usually have complete control over movie screens whenever they release a new film. And when a new ‘blockbuster’ is released every week, there is no space for smaller filmmakers to screen their movies. These ‘smaller’ filmmakers sometimes

even include people like Quentin Tarantino, one of the most successful directors in Hollywood, whose film *The Hateful Eight* was removed by a legacy theatre in Los Angeles because Disney was adamant about booking all the screens of that theatre for *Star Wars: The Force Awakens*.⁵ Disney even threatened the theatre chain, saying it’d remove its film *Star Wars* from all the screens of the chain across the US in case its demand wasn’t accepted. Given that *Star Wars* was the most sought-after movie by the audiences at that time, the theatre chain had to concede. This clearly depicts the sceptre production houses like Disney wield over the entire media industry.

Now, it might seem that ‘The Mouse,’ as the company is famously called after its iconic character ‘Mickey Mouse,’ is on a path to destroy creative filmmaking in the industry. However, there is a silver lining in the form of streaming services, which have turned the traditional business model of the industry upside down. The entire value proposition of such companies, especially players like Netflix, is the volume of content that is available on them. In recent years, these platforms have showcased a lot of content produced by smaller independent filmmakers and artists who might not have been able to navigate through the traditional theatre model. Nowadays, even the viewers are communicating their dissent for such ‘formulaic’ movies in the form of lower-than-expected box-office collections for some films by the studio including *Solo: A Star Wars Story* and *Mary Poppins Returns*, both of which failed to crack even the \$400 million mark.⁶ It remains to be seen what sort of content strategy the company will adopt in the future, but one thing is for sure, it will choose the form of content which makes more money at the box office. So the next time you think of going to the theatre, do ask yourselves: do two hours of mindless explosions really deserve your money and support?

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OVER THE TOP

BY MANYA GUPTA

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Fuelled by the pandemic, the consumption of digital content at the comfort of our homes has risen exponentially. Does this bring down the curtain on conventional cinema?

The selection of the movie, the theatre, the time and getting dressed - all these were a given, irrespective of whom we were going to a movie with - family, friends or just ourselves. Upon arrival, the feeling of excitement on entering the lobby turned to awe when being ushered to the auditorium, with hands struggling to hold popcorn buckets. Once the lights dimmed after we sank into our seats and the screen lit up, magic took over. It was a willful suspension of disbelief, a happy surrender of self to partake in a three-hour journey. Feels nostalgic, doesn't it?

In a year that was dominated by the global pandemic and series of lockdowns, so much changed overnight. From buying groceries to ordering paracetamol, the lockdown forced the entire nation to benefit from digital services. During 2020, the year that was hit by COVID-19, the traditional media and entertainment industry suffered too and one absolute truth that emerged was that the viewing patterns of audiences all over the world were in for a change that year. With cinema halls facing closure owing to lockdown, films could not be physically released in theatres. Even the major production houses, have turned to remote platforms for their new releases, making them the primary source of entertainment. While the big screen is not going away anytime soon, streaming services have come of age and gained popularity, redefining, for good, how we perceive the entertainment industry.

What exactly are these remote platforms, also termed OTT? It stands for Over-The-Top and was initially named

in reference to devices that go 'over' a cable box to give the user access to television content. An OTT platform delivers content via an internet connection rather than through a traditional cable/broadcast provider.

Over the years, the scope of OTT has widened. It is no more just the 'over the cable' setup. It now includes OTT video viewers such as Netflix and Youtube, which provide streaming video content; Connected TV (CTV) and Internet Protocol TV (IPTV) that involves using TV sets connected to the internet through built-in internet connectivity, such as Google Chromecast and Amazon Fire, and Linear OTT video service users such as YouTube TV and PlayStation Vue that requires them to subscribe to a service that delivers live TV channel bundles over the internet for a monthly subscription.

Based on their revenue models, OTT Services can be further classified into three categories: The most common one among the masses is the Advertising-based Video-On-Demand (AVOD) that includes free-to-watch content, which is monetised through video advertising. The paid versions include Subscription-based Video-On-Demand (SVOD) and Transactional-based Video-On-Demand (TVOD), wherein a fixed subscription is to be paid to access video content on a specific platform and certain content through a Pay-Per-View (PPV) purchase model respectively.

As the government implemented the lockdown and COVID-19 regulations, people were forced to stay home for months, coupled with theatres under similar restrictions, most OTT platforms saw an unprecedented rise in subscribers. According to India Brand Equity

Foundation, the volume of paid subscribers to OTT platforms rose by 30 per cent to 29 million from 22.2 million during the period from March to July 2020 alone.

According to a report published by PwC in October 2020, India is currently the world's fastest-growing OTT market, expected to grow at a compounded annual growth rate (CAGR) of 28.6 per cent over the next four years.² This would make India the sixth largest OTT market around the globe by 2024, touching \$2.9 billion in revenues.³

Keeping aside the pandemic response, what could have pushed up the statistics of OTT subscribers, for OTT platforms in India have been increasingly attracting subscribers daily?

According to the trends of the industry, access to better networks, ubiquitous and affordable digital connectivity coupled with increasing penetration in rural areas and the evolution of smartphones are some of the most important reasons. It is no doubt that OTTs have made movie watching convenient, accessible and affordable across a wider segment of users. With just a mobile phone and an internet connection, one can entertain oneself by sitting anywhere in the world.

The past few years have also witnessed the number of OTT platforms multiply, from nine in 2012 to over thirty in 2019.⁴ Apart from the top players in the Indian market - Disney+ Hotstar, Amazon Prime Video and Netflix, the space now enjoys a plethora of local and regional OTT players, such as SonyLIV, Voot, Zee5, ErosNow, ALTBalaji, Hoichoi and Adda Times, leading to a huge spike in traffic.

Further, most industry research and studies on this growing viewership trends, cite convenience and privacy to be the leading causes of this shift in content consumption patterns. Today, when people are juggling multiple responsibilities within 24 hours and struggling to make the most out of their limited time, the 'anywhere, anytime viewing' concept of OTT platforms hit the right chord. Changing consumer lifestyle and access to multiple viewing devices have also come a long way in strengthening the concept of 'anywhere, anytime viewing.' Personalisation of content and recommendation based on watching history is what makes the OTT experience rewarding for the common person.

The other major driver of consumer growth is content. There has been a massive rise in original content being aired on OTT. According to the report, "OTT and the Media & Broadcasting Industry: The Impact & The Way Forward", published by SG Analytics, back in 2018, Netflix and Amazon alone have spent more than 40 per cent of the overall content production budgets of the world.⁵

It is not only the viewers who are benefitted from OTT platforms, but the producers and the entertainment industry as a whole also enjoy a fair share of advantages

by releasing their content online via these platforms. It gives directors, writers and actors an option to invest in new, fresh and engaging stories that entertain, enrich and even empower audiences. Thus, to the viewers, it can and does provide marvellous and unprecedented opportunities to view fresh, exciting and engaging content that is vigorous, vibrant and versatile, without having to wait for a Friday, as is the tradition in Bollywood. For some, the experience of intimate and isolated viewing also helps them to create a very unique bond with the content they explore and discover, giving them the flexibility to pause and savour it at their own pace. Besides offering the usual live entertainment, it is noteworthy that several OTT players have been producing original shows and films, which has managed to capture the attention of many.

OTTs also do not let the producers lose out on their revenues. According to a report by KPMG, "The economics of film production has undergone an overhaul as digital rights have tilted the dynamics of film making in favour of production studios."⁶ In the early years of OTT, digital rights for movies did not generate enough revenue, but over a period, especially with international players such as Amazon Prime and Netflix pumping in huge sums of money to add to their movie libraries, the game changed completely. The surge in original videos-on-demand has led to premium pricing for the production houses. Post the entry of Amazon Prime and Netflix in India, the digital rights are being sold at a premium. However, this was not always the case. Traditionally, these rights were sold to a single channel at combined pricing. Underlining this trend, the 11th edition of KPMG Media & Entertainment report, 'India's Digital Future: Mass of Niches', states that "a key ongoing change in the film industry has been the growing contribution of digital rights, which has grown by 30 per cent in FY19 in line with the previous year."⁷ As the OTT industry experiences a further increase in its customer base and grows in strength and numbers, digital pricing will experience an upswing. Its benefits will be shared by both the production houses and OTT players. Following this, it can be foreseen that the competition for digital rights for both Bollywood and regional films is likely to get more aggressive as OTT players try to outbid each other to acquire movie rights. Recently, Filmfare and a streaming social network even joined forces for the first-ever OTT awards,⁸ which was a landmark event for India's media and entertainment industry, especially the OTT service providers in many ways.

Considering all the facts and available data, it will not be wrong to state that the unprecedented growth and breakthrough of OTT platforms have been undeniably unparalleled. However, this has also caused discomfort among the big players of the film industry regarding the new normalcy. This spike has evoked apprehension among the filmmakers that this may be the death knell for the theatrical experience, as the filmmakers in India have now started opting for an OTT premiere release of their films made initially for cinema halls. This will not only impact the cinemas which are screening Indian

films in India but it will also affect those which depend mainly on Indian films in the traditional overseas market, such as the Middle East, United Kingdom (UK), United States (US) and Canada, and the other non-traditional markets where Indian films have limited exposure.⁹ Additionally, India's 'theatre' industry involves huge investments in infrastructure and also employs around two lakh people.¹⁰

That said, going out of the home to socialise is still ingrained in the social fabric of India and thus, watching movies in theatres will never go out of fashion. Cinema halls have been providing a better, larger and richer user experience to the viewers, and many viewers will still prefer this over the comfort and convenience of watching a movie sitting on their couch. Also, the addictive popcorn and cold drink combos are a cherry on the cake.

The question that arises now is - Is it really a race between OTT and theatres? Should one necessarily dominate and outweigh the other? Both OTT and theatres serve as means of providing entertainment to their viewers, and the production houses will soon realise that OTT is not the adversary, but a dedicated ally. It is not difficult to foresee that both of them would coexist in future owing to their relevance to and exclusivity with a particular format of content. Even though they serve the same type of content, the purpose and consumer

variables are different. The audience will likely visit the theatre to seek an overall movie experience, to spend time with family and friends. Thus, it is this customer experience that will continue to occupy the centre stage of the entertainment industry and not just the movie alone. People might still look for theatre experience for enjoying 3D animations or much-awaited releases but might still prefer OTT platforms over theatres for documentaries, interviews, podcasts, special interest content, history or web series. OTT has impacted ongoing TV viewership rather than the theatrical experience.¹¹ Hence, it would be highly incorrect to exaggerate the impact of OTT platforms and equate its growth to the death of theatres in the country. However, it cannot be denied that the technological revolution will redefine theatre, and only by integrating with new technology can the film industry survive and thrive in the upcoming new normal.

Await more of Lights, Camera, Action! The growth of the OTT platforms and digital services in this virtual era is aglow with both challenges and opportunities. However, the former seems to outweigh the latter in the current times. The success and growth of the OTT services have made it clear that it is an idea, whose time has come, evoking apprehension among the filmmakers that this may be the death knell for the theatrical experience. What it has ostensibly failed to clear is the fact that it is a supplement to the Theatre and not its adversary.

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RESEARCH REVISITED



PANDEMIC AND POLICY: A GENERAL EQUILIBRIUM ANALYSIS

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This research paper explores economic disruptions in the backdrop of the COVID-19 pandemic using Heckscher-Ohlin's model. It investigates the data collected from the World Bank, International Labour Organisation (ILO), Centre for Monitoring Indian Economy (CMIE), Census and various other sources to identify the relation between migration and unemployment across various states of our country. It concludes that the informal sector plays a crucial role in a small developing economy as it can reduce urban unemployment and provides policy recommendations for the same.

Abstract

This paper attempts to analyse the ceteris paribus effects of 'supply chain disruptions', 'strict government regulations' and 'change in saving rate' on urban unemployment, thereby identifying a pattern of labour migration in the unprecedented COVID-19 scenario. In doing this, we use the Heckscher-Ohlin structure in a Harris-Todaro type economy which has three sectors - a manufacturing sector, an agricultural sector and a skilled sector. We extend our representation to the long run by portraying a Solovian economy in which the accumulation of domestic capital stock plays a decisive role as a metre for unemployment and wage disparity. Finally, we conclude that both in the short run as well as long run we see an unambiguous effect on inter-sectoral migration amongst the agricultural and the manufacturing sectors, thus also an unambiguous effect on unemployment which is a counterproductive outcome of the government's policy response.

1. Introduction

Intramural migration is an indispensable and inevitable integrant of the economic and social life of a country. Migrants account for floating and invisible citizens alternating between the origin and the destination areas and remaining on the fringe of the society. In today's world, extensive migration is a usual practice as the global acumen of individuals expands. The manoeuvre has been beneficial to both immigrants' importation

and exportation nations. Internal migration customarily comes about from moving from a rural area in the country to an urbanized area such as the country's capital. These migrants are often wandering in search of a better standard of living or employment opportunities. Empirical analysis reveals that the asymmetrical shift of people from one place to another results in an adverse outcome.

Migration within a nation positively contributes to the destination's overall economy and development. Internal migration mainly occurs due to economic purposes. Numerous individuals from the countryside proceed to their country's cities anticipating to earn more and bring their family up to a soaring standard of living. In large parts of our nation, there has been a humongous reverse migration due to the COVID-19 pandemic. Thousands and thousands of labourers marched back to their villages for the sake of finding some warmth and empathy.

Census 2001 revealed that in India internal migrants account for as large as 309 million which was about 28 per cent of the population. The data published by National Sample Survey Office (NSSO), (2007-08) manifested a rise in internal migrants by 17 million in six years. The benefaction of migrants to the GDP of the Indian economy often goes unnoticed. The estimated data shows that migrants contribute around 10 per cent of the country's GDP where almost 70 per cent of the migrants are women. Census 2011 showed that

the total number of internal migrants is 450 million which is approximately 35 per cent higher than 2001, excluding child labours. West Bengal, Uttar Pradesh and Bihar have the highest number of migrants followed by Punjab, Rajasthan and Madhya Pradesh.

The sharp increase in migration over the years is due to the rapid urbanization of our cities and towns. 93 per cent of India’s total migrants get involved in the informal sector which includes seasonal or periodic migrant labourers in the Green Revolution.

Large scale migration persuaded by greater and greener pastures of economic progressiveness is a folk tale as most of the migration is for subsistence and falls under the citatory of distress migration. Low threshold incomes perpetually force labourers to migrate.

In the general context of the ongoing urbanization and rural industrialisation, exploitation and utilisation of labour take a new conformation that is a combination and an ingenious adaptation of the older forms of control and bondage contextualized to new conditions of capitalism. The foisting of the lockdown as a measure to contain the exponential growth thumped the unskilled and the semi-skilled migrant labourers the most. A rough estimate indicates that around 30 million migrants walked or were stranded in camps on their way back.

The International Labour Organisation (ILO) estimates that around 400 million workers in the informal economy, both unskilled and semi-skilled, will be falling deeper into poverty during this crisis. The procedure for recuperation is going to be long-drawn-out and throbbing for those migrants who would be looking for urban spaces.

2. Statistical Motivation

We investigate the data collected from the World Bank, ILO, Centre for Monitoring Indian Economy (CMIE), Census and various other sources to identify the relation between migration and unemployment across various states of our country. It helps us to establish the background for our research by incorporating the idea of “Migration and Unemployment” in our research paper.

The method involves the representation of the data for migration and unemployment from 14 different states in the form of an X, Y scatter graph.

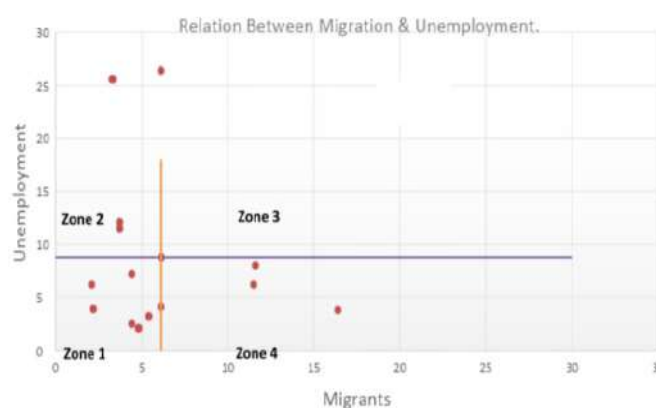
The table below describes the percentage of migration and unemployment for different states of the Indian economy obtained from the CMIE, World Bank data, ILO, Census and few other sources. Using the data in the table we obtain the average rate of migration and unemployment to be 6.12 per cent and 8.77 per cent respectively. The following matrix is intended to show the cross-sectional variation of migration and unemployment for the states listed in Table 3.

States	Total Migrants (per cent)	Unemployment (per cent)
Maharashtra	16.4	3.8
Delhi	11.6	8
West Bengal	11.5	6.2
Uttar Pradesh	6.1	4.1
Haryana	6.1	26.4
Gujarat	5.4	3.2
Madhya Pradesh	4.8	2.1
Karnataka	4.4	2.5
Punjab	4.4	7.2
Rajasthan	3.3	25.6
Jharkhand	3.7	12.1
Bihar	3.7	11.5
Andhra Pradesh	2.2	3.9
Chhattisgarh	2.1	6.2

Source: Centre for Monitoring Indian Economy and Census

In the figure, the percentage share of migrants is measured along the horizontal axis while the unemployment rate is measured along the vertical axis. The solid vertical line originating from the horizontal axis shows the average share of the percentage of unemployment and the solid horizontal line originating from the vertical axis shows the average rate of migration. This average level divides the box into four different zones. The four different zones, Zone 1 to Zone 4 represents the zone with (lower unemployment, lower migration), (higher unemployment, lower migration), (higher unemployment, higher migration) and (lower unemployment, higher migration) respectively. Zone 1 and Zone 3 follows the unemployment hypothesis i.e. unemployment varies positively with Migration while Zone 2 and Zone 4 violates the unemployment hypothesis. From the figure, we observe that most states are concentrated in Zone 1. The concentration of most states in zone 1 clearly validates the unemployment hypothesis for cross-sectional variation among middle and low-income states.

Figure 2: Relationship Between Migration and Unemployment.



Source: Self-computation using data from CMIE, Census and various other sources.

3. Literature Survey

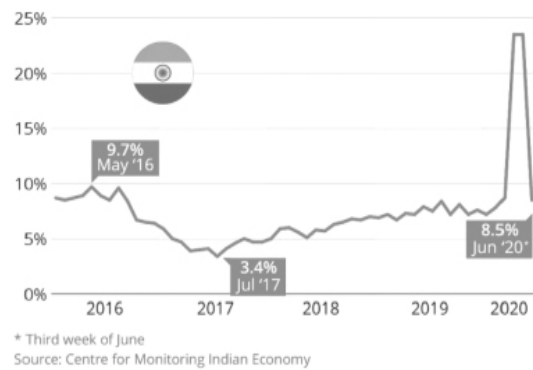
A few theoretical models of rural-urban migration and the informal sector are available in the literature. Harris-Todaro (1970) exhibits rural-urban migration in a dual economy framework. The informal and formal sectors are the subdivisions of the urban sector, where migrants not employed in the formal sector spontaneously get a job in the informal sector. In his model, there subsists open urban unemployment, despite the existence of the informal sector. There are four distinct different income groups within the working class which result in a positive degree of inequality in the dispersal of income of the labourers, which has been firmly discerned by Harris-Todaro (1970). Sen (1974) proposed several politics taking into context the welfare of society. Contemplating the urban sector in small segments and their basic models have been extended in several directions by Stiglitz (1982) and Grinols (1991). Shadow wage rate in the urban formal sector was shown by Stiglitz (1982) whereas Grinols (1991) was engrossed in modelling the General Equilibrium effects of foreign capital inflow in less developed economies.

Datta Chaudhari (1989) and Sarkar and Ghosh (1989) came to a conclusion where the policy which reduces the rate of interest paid by the informal sector also tends to reduce the aggregate output and employment in the industrial sector. Studies shown by Joshi & Joshi (1976) on India have noted that the average informal sector earnings are roughly equal to if not higher than rural earnings. By taking into account the Heckscher-Ohlin framework and considering the manufacturing sector as capital-intensive and the agricultural sector as labour-intensive, we have viewed the manufacturing sector as an import-competing sector and the agricultural sector and skilled sector as export-competing sectors.

We have outlined the effects of government’s regulation, supply chain disruptions and an increase in the precautionary savings on the manufacturing and the agricultural sector. By taking help from Solow (1956) from the technique adapted from Gupta (1993) we have discussed the effects of an increase in saving rate in the long run. We have considered the wage in the agricultural sector as flexible as opposed to the fixed-wage rate in the manufacturing sector. Harris-Todaro framework has been used to explain the migration and the reverse migration between the manufacturing and the agriculture sector. Dasgupta and Rajeev (2020) have made a theoretical analysis of the pandemic in a Keynesian macroeconomic framework in the short run which differs from our paper which reveals the effects of COVID-19 in the informal sector primarily the agricultural sector using a trade-theoretic microeconomic model.

4. Empirical Evidence

Figure 1- shows a steep rise in the average unemployment rate in India during the pre-Covid-19 and COVID-19 crisis. The data provided by CMIE states that unemployment levels have risen to 27 per cent from 9 per cent. It stood at 29.22 per cent in the urban areas, as against 26.69



per cent in the rural areas. However, the average rate of unemployment had fallen when the Government announced the National Rural Employment Guarantee Programme (NREGP) in the rural sector and reverse migration was at peak level.

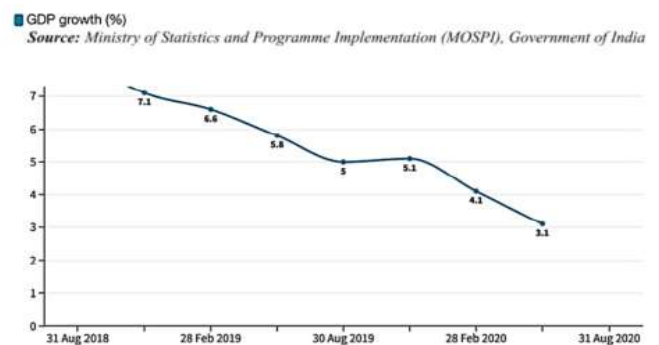


Figure 2- shows the contraction in India’s GDP growth rate as a result of Covid-19 virus. The World Bank reports a 5.2 per cent contraction in global GDP in 2020 and a historic contraction of per capita income. India’s real GDP for the April-June 2021 quarter fell by 23.9 per cent in comparison to the same quarter a year ago.

Table 1: Unemployment rate in India- Rural and Urban

Month	Unemployment Rate (per cent)		
	India	Urban	Rural
Nov 2020	6.54	7.07	6.28
Oct 2020	6.94	7.15	6.92
Sept 2020	6.67	8.45	5.36
Aug 2020	8.38	9.84	7.65
Jul 2020	7.43	9.37	6.63
Jun 2020	10.15	11.65	9.48
May 2020	21.77	23.11	21.13
Apr 2020	23.52	24.07	22.89
Mar 2020	8.77	9.41	8.43
Feb 2020	7.70	8.65	7.34
Jan 2020	7.22	9.70	6.06
Dec 2019	7.00	8.02	6.93

Figure 3: Centre for Monitoring Indian Economy (CMIE, 2020)



Source: Centre for Monitoring Indian Economy (CMIE, 2020)

The table above (Table 1) had been depicted in figure 1 above which shows the line charts of the rate of unemployment from May 2017 to April 2019. Throughout we see an upward trend in the data, with a slight fall in both urban and rural unemployment. Rural unemployment fell from 4 per cent to 3 per cent

(approx.) in July 2017. Urban unemployment fell from 4 per cent to a little over 3 per cent (approx.). We see a notable fall in rural unemployment in May 2018 from 6 per cent in March 2018 to a little over 4 per cent (approx.). We also see a fall in total unemployment in the month of May 2018. There is however a notable rise in urban unemployment between January and February of 2019 and eventually, it falls in April 2019. Another notable fact is that there is a fall in rural unemployment in the months of November, January and March 2019. However, total unemployment rises from close to 6 per cent to close to 8 per cent (approx.).

Table 2: Volume and rate of regional migration in India

States	Total out migrants, (based on place of the last residence, 0-9 years)	Number of out-migrants by major destination states					Number of return migrants Due to COVID 19 and lockdowns	Number of districts for which return migration
		Maharashtra	Delhi	Gujarat	Punjab	Others		
Bihar	31.88	3.27	5.22	2.52	1.78	19.08	23.6	32
UP	50.46	12.11	9.69	5.37	3.02	20.28	17.48	31
Rajasthan	14.1	2.36	0.98	3.30	0.70	6.75	12.09	22
MP	12.19	3.48	0.57	1.50	0.16	6.49	10.72	24
Odisha	6.26	0.71	0.22	1.18	0.06	4.09	2.19	4
Jharkhand	6.92	0.64	0.38	0.38	0.11	5.41	1.1	3

The movement observed in the unemployment rate corresponds to the level of reverse migration among unskilled workers in the economy. Table 2 summarizes the rate and level of reverse migration during the COVID-19 crisis.

Given these empirical facts, two questions that arise are the following. First, what were the channels through which the COVID-19 crisis penetrated the Indian economy and particularly in the labour market? Second, what caused the government policy response to COVID-19 to produce counterproductive outcomes and lead to policy failure? We attempt to provide possible explanations to these questions by building an analytically tractable theoretical model in section 4. Few comparative statics and policy analysis have been carried out in section 5. The basic short-run model is extended to long-run dynamics in section 6. Finally, section 7 concludes the paper.

5. The Model

Given the backdrop, the paper attempts to analyze the effect of COVID-19 on rural-urban migration of unskilled labour, urban unemployment and informalisation of labour in terms of supply chain disruption, investment uncertainty, imposition of government regulation and precautionary savings.

5.1. Assumptions and Description of the Economy

We consider a short-run three-sector, three-factor Harris-Todaro type economy with fixed factor coefficient technology. The stylised economy consists of the following sectors. There is a rural agricultural sector (A) and an urban manufacturing sector (M), both of which use unskilled labour (L) and capital (K) as factors of production. There is a service sector (S), which uses capital (K) and a specific factor – skilled labour (S). The

commodity produced by the agricultural sector is given by X_A , the commodity produced by the manufacturing sector is given by and the commodity produced by the skilled sector is given by X_S . Labour market distortions exist in terms of rigid wage and unskilled labour in the urban manufacturing sector. There is involuntarily urban employment due to the rigid wage rate that leads to Harris-Todaro (1970) type rural-urban migration.

The unionized urban manufacturing wage (\overline{W}_M) is exogenously given and is greater than the flexible rural wage (W_A). This rural-urban wage inequality leads to the migration of unskilled labour from the rural sector to the urban sector. Migration equilibrium is attained when the expected urban wage equals the rural wage. In this migration equilibrium, unemployment continues to persist. Therefore, the Harris Todaro equilibrium is suboptimal.

We assume the rural agricultural sector is relatively labour-intensive as compared to the urban manufacturing sector which is relatively capital intensive. In other words, this means that the capital-labour ratio (K/L) is lower for the commodity produced in the agricultural sector (X_A) than the commodity produced in the manufacturing sector (X_M), that is,

$$\frac{a_{LA}}{a_{KA}} > \frac{a_{LM}}{a_{KM}}$$

where

a_{Li} is the unskilled labour-output in the i -th sector, $i = A, M$

a_{Ki} is the capital-output ratio in the i -th sector, $i = A, M$

There are constant returns to scale in the production of both commodities, which means that the amount of output increases in the same proportion as the increase in the amount of inputs. Perfect competition exists in both commodities and factor markets. There is perfect mobility of capital and unskilled labour within agricultural and manufacturing sectors but skilled labour is specific to the skilled sector.

The total capital endowment is assumed to be the sum of domestic capital denoted by K_D and foreign capital which is fixed and is denoted by \overline{K}_f . Tastes and preferences are the same across the nations. The model assumes there is transportation cost (T) and government regulation (ρ) in the urban manufacturing sector. International trade is always balanced between nations. This is an extension of the Heckscher-Ohlin (H-O) model based on Jones (1965, 1971) framework and Chaudhuri and Mukhopadhyay (2010).

5.2 Equational Structure

$$W_A a_{LA} + r a_{KA} = (\text{Numeraire}) \tag{1}$$

$$\overline{W}_M a_{LM} + r a_{KM} = P_M - T \tag{2}$$

$$W_S a_{SS} + r a_{KS} = P_S \tag{3}$$

$$\overline{W}_M \left(\frac{a_{LM} X_M}{a_{LM} X_M + U} \right) = W_A \tag{4}$$

$$a_{LA}X_A + a_{LM}X_M + U = \bar{L} \quad (5)$$

$$a_{KA}X_A + a_{KM}X_M + a_{KS}X_S = \bar{K} \quad (6)$$

$$a_{SS}X_S = \bar{S} \quad (7)$$

$$(X_A - D_A) + P_S(X_S - D_S) = P_M(D_M - X_M) \\ a_{LM} = a_{LM}(\rho); \quad a'_{LM} < 0 \quad (8)$$

5.3. Working of the Model

We have 7 equations and 7 unknowns – W_A , r , W_s , X_A , X_M , X_S , U

Eq. (8) shows the trade balance condition, that is, the value of exports = value of imports

It determines the National Income Y .

Since W_M is fixed, r^* is obtained from eq. (2)

Putting the value of r^* in eq. (1), we obtain W_A^*

Putting the value of r^* in eq. (3), we obtain W_S^*

From eq. (6), we obtain X_S^*

From eq. (5) and eq. (7), we obtain X_A^* and X_M^* as a function of U

From eq. (4), we obtain U^*

It is a decomposable structure because the factor prices are determined by the commodity prices alone and do not depend on the factor endowments.

6. Comparative statics

In the short run, we obtained the following three propositions:

6.1. Supply-Chain Disruption

An increase in the transportation cost (T) leads to a fall in the rental rate of capital (r) and a subsequent increase in the unskilled rural wage (W_A) and skilled wage (W_S). This causes the rural wage to exceed the expected urban wage resulting in a reverse migration of unskilled labour from the manufacturing sector to the rural sector and ultimately leading to a fall in urban unemployment.

Proposition 1: A Supply-Chain disruption in the manufacturing sector in terms of an increase in the transportation cost (T) leads to reverse migration of unskilled labour from the urban sector to the rural sector which augments informalisation of labour and lowers urban unemployment. Skilled labour gains at a cost to capital owners in terms of factor prices.

6.1. Supply-Chain Disruption

A fall in the total capital endowment (\bar{K}) leads to a fall in the total quantity produced by the manufacturing sector (X_M) and a rise in the total quantity produced by the agricultural sector (X_A) that follows directly from the Rybczynski Theorem. The level of output produced by the service sector (X_S) remains unchanged. Following the fall in X_M , the probability of getting an urban job

decreases. This causes the expected urban wage to fall short of the rural wage resulting in a reverse migration of unskilled labour from the manufacturing sector to the rural sector and ultimately leading to a fall in urban unemployment.

Proposition 2: An investment uncertainty in terms of a fall in the total capital endowment (K) would lead to reverse migration of unskilled labour from the urban sector to the rural sector which augments informalisation of labour and lowers urban unemployment.

6.3. Government Regulation

As the government imposes strict regulations in factories (increase in ρ), it would lead to a fall in the labour-output ratio (a_{LM}) in the manufacturing sector. The capital used also falls causing an increase in the rental rate of capital (r) and a subsequent fall in the skilled (W_S) and unskilled (W_A) wage rates. This causes the expected urban wage to exceed the rural wage resulting in the migration of unskilled labour from the rural sector to the urban sector and ultimately leading to a rise in urban unemployment.

Proposition 3: Government regulation in terms of increase in (ρ) would lead to migration of unskilled labour from the rural sector to the urban sector resulting in a rise in the level of urban unemployment and a fall in the informalisation of labour.

7. An extension: A Dynamic Long Run Equilibrium Model

We develop a dynamic long-run equilibrium model which is an extension of Solow (1956) in Jones type general equilibrium. The model assumes that skilled labour and capital owners save a constant fraction 's' of their income and that capital depreciates at a constant rate 'δ'. In our model, we assume that unemployment continues to persist even in the long run. This is proved in Gupta (1998).

Equation of motion for capital accumulation and its time path:

$$\frac{dK_D(t)}{dt} + (\delta - sr)K_D(t) = sW_S\bar{S} \\ \Rightarrow \frac{dK_D(t)}{dt} + (\delta - sr)K_D(t) = sW_S\bar{S}$$

For Particular Integral,

$$\frac{dK_D(t)}{dt} = 0$$

For Complementary Function,

$$\frac{dK_D(t)}{dt} + (\delta - sr)K_D(t) = 0 \\ \Rightarrow K_D^*(t) = \frac{sW_S\bar{S}}{\delta - sr} \\ K_D(t) = Ae^{bt}$$

Let the trial solution be,

$$\Rightarrow Abe^{bt} + (\delta - sr)Ae^{bt} = 0$$

$$\Rightarrow Ae^{bt}[b + (\delta - sr)] = 0$$

$$\Rightarrow b = -(\delta - sr)$$

For stability of equilibrium,

$$b < 0 \Rightarrow (\delta - sr) > 0$$

$$K_D(t) = \text{P.I.} + \text{C.F.}$$

$$\Rightarrow K_D(t) = \frac{sW_S\bar{S}}{\delta - sr} + Ae^{-(\delta - sr)t}$$

In the long run, $t \rightarrow \infty \Rightarrow K_D(t) = \frac{sW_S\bar{S}}{\delta - sr}$

Equational Structure

$$W_A a_{LA} + r a_{KA} = 1 \text{ (Numeraire)} \quad (1)$$

$$\bar{W}_M a_{LM} + r a_{KM} = P_M - T \quad (2)$$

$$W_S a_{SS} + r a_{KS} = P_S \quad (3)$$

$$\bar{W}_M \left(\frac{a_{LM} X_M}{a_{LM} X_M + U} \right) = W_A \quad (4)$$

$$a_{LA} X_A + a_{LM} X_M + U = \bar{L} \quad (5)$$

$$a_{KA} X_A + a_{KM} X_M + a_{KS} X_S = K_D(s, W_S, r, \bar{S}, \bar{\delta}) + \bar{K}_F \quad (6)$$

$$a_{SS} X_S = \bar{S} \quad (7)$$

$$(X_A - D_A) + P_S(X_S - D_S) = P_M(D_M - X_M) \quad (8)$$

$$a_{LM} = a_{LM}(\rho); a'_{LM} < 0$$

In the long run, we have the following three propositions:

6.1. Supply-Chain Disruption

A rise in transportation costs (ceteris paribus) reduces the net revenue from the manufacturing (capital-intensive) sector. Thus we see a fall in the rate of return (r), hence a rise in agricultural wage and also a rise in the skilled wage.

a) Now, if the rise in skilled wage is dominated by a fall in the rate of return, capital stock (domestic) falls. Hence, we see a contraction of the manufacturing sector and an expansion in the agricultural sector. Thus, the agricultural wage is more than the expected manufacturing wage, thus reverse migration occurs and we see a fall in unemployment.

Proposition 4: Capital decumulation, given that the fall in the rental rate (r) dominates the rise in skilled wage rate (W_S), owing to which the level of unemployment, migration and informalisation of labour in the short run is reinforced in the long run.

b) Now suppose in the previous scenario, if the fall in the rate of return is dominated by the rise in the skilled wage, capital stock (domestic) rises. Hence, the manufacturing sector expands and the agricultural sector contracts. This initiates migration and thus a rise in unemployment.

Proposition 5: Capital accumulation, given that the rise in skilled wage rate (W_S) dominates the fall in the rental rate (r), owing to which the level of unemployment, migration and informalisation of labour remains ambiguous in the long run.

6.2. Government Regulation

A rise in the regulations (ceteris paribus) leads to a fall in the labour per unit of output in the manufacturing sector. Now, we see a fall in skilled wage as well as a rise in agricultural wage but we see a fall in the rate of return.

a) If the rise in the rate of return is dominated by the fall in the skilled wage, we see a fall in the domestic stock of capital. Thus, the manufacturing sector contracts and the agricultural sector expands. This leads to a higher agricultural wage, and thus reverse migration, hence a fall in unemployment.

Proposition 6: Capital decumulation, given that the fall in skilled wage rate (W_S) dominates the rise in the rental rate (r), owing to which the level of unemployment, migration and informalisation of labour in the short run is reinforced in the long run.

b) If the rise in the rate of return dominates a fall in the skilled wage, the domestic capital stock increases. This leads to an expansion in the manufacturing sector and the agricultural sector contracts. This leads to the rise of the fixed, expected manufacturing wage over the flexible agricultural wage. Thus, migration and a rise in unemployment.

Proposition 7: Capital accumulation, given that the rise in the rental rate (r) dominates the fall in skilled wage rate (W_S), owing to which the level of unemployment, migration and informalisation of labour remains ambiguous in the long run.

6.3. Saving Rate

A rise in saving rate, that is, precautionary saving, (ceteris paribus) causes a rise in the domestic capital stock. Hence, an expansion in the manufacturing sector and a contraction in the agricultural sector occurs. And this results in a fixed manufacturing wage, which is higher than the flexible agricultural wage. This leads to migration and a rise in unemployment.

8. Conclusion

We show in our paper that in the short run, an increase

in transportation cost leads to reverse migration from the urban manufacturing sector to the rural agricultural sector, resulting in a fall in unemployment in this stylized, small developing country. An increase in the regulatory measures of the government leads to a fall in the rural wage rate and hence causes migration from the rural to the urban sector. This aggravates the problem of unemployment in the urban manufacturing sector. An investment uncertainty in terms of a fall in total capital endowment in the manufacturing sector leads to contraction of the manufacturing sector, resulting in a reduction of the probability to find a job in the urban sector and a subsequent fall in the expected urban wage. Thus, reverse migration takes place from the urban sector to the rural sector.

However, in the long run, we show that the capital stock is directly proportional with the skilled wage rate, the rate of precautionary savings, and the rental rate of capital and inversely proportional to the depreciation rate of capital. In the long run, an increase in transportation cost or the increase in the regulatory measures of the government, we observe that two situations arise. Firstly, a situation of capital decumulation results in a reverse migration of unskilled labour from the urban sector to the rural sector and a subsequent fall in urban unemployment. Secondly, a situation of capital accumulation results in the migration of labour from the rural sector to the urban sector and the subsequent rise in urban unemployment. Next, we consider an increase in the savings rate (precautionary), which would lead to capital accumulation which in turn encourages rural-urban migration and urban unemployment. In our model, we show that unemployment continues to persist both in the short run as well as in the long run.

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However, in the short run, the informal sector acts as a shock-absorbing sector. The fact that the rural unskilled wage is flexible, it follows that whenever there is reverse migration of unskilled labour from the urban sector to the rural sector, the agricultural (informal) sector readily absorbs this pool of incoming unskilled labour without resulting in any unemployment. This in turn effectively reduces urban unemployment. Thus, the informal sector plays a crucial role in a small developing economy as it can reduce urban unemployment.

9. Policy Recommendations

In the **short run**, because of the reverse migration of the unskilled labour from the urban sector to the rural sector, there is an increased burden on the rural agricultural sector. In order to avoid this, **the government must provide a cash transfer** to the urban workers in addition to the rigid urban manufacturing wage. As a result, the workers will not migrate back to their villages and hence reverse migration will not occur.

The COVID-19 crisis has severely hurt the labour-intensive agricultural sector because of the lockdown and social distancing norms. However, it had no noticeable effect on the skilled sector. So, in order to prevent this, I suggest two measures in the **long run**:

- a) Firstly, **encouraging skill acquisition by the unskilled labour** would enable them to shift from the agricultural sector to the skilled sector.
- b) Secondly, **a structural shift** from the labour-intensive sector dominance to the capital-intensive skilled sector.

Todaro, J. R. (1970). *Migration, Unemployment and Development: A Two-Sector Analysis*. *The American Economic Review*, Vol. 60, No. 1, pp. 126-142.

Mathematical Appendix:

$$W_A a_{LA} + r a_{KA} = 1 \tag{1}$$

$$\bar{W}_M a_{LM} + r a_{KM} = P_M - T \tag{2}$$

$$W_S a_{SS} + r a_{KS} = P_S \tag{3}$$

Eq. (2) can be rewritten as:

$$\bar{W}_M a_{LM} + r a_{KM} + T = P_M \tag{2.1}$$

Taking total differential we get,

$$a_{KM} dr + dT = 0 \tag{Since } d\bar{W}_M = 0 \text{ and } dP_M = 0$$

$$\Rightarrow \frac{a_{KM} r}{P_M} \frac{dr}{r} + \frac{T}{P_M} \frac{dT}{T} = 0$$

$$\Rightarrow \theta_{KM} \hat{r} + \theta_T \hat{T} = 0$$

$$\Rightarrow \hat{r} = \frac{-\theta_T \hat{T}}{\theta_{KM}}$$

Similarly, totally differentiating eq.(1) and eq.(3) we get,

$$\Rightarrow \theta_{LA} \hat{W}_A + \theta_{KA} \hat{r} = 0 \tag{1.1}$$

$$\Rightarrow \theta_{KS} \hat{W}_S + \theta_{KS} \hat{r} = 0 \tag{3.1}$$

Plugging the value of \hat{r} in eq.(1.1) and eq.(3.1) we get,

$$\hat{W}_A = \frac{\theta_{KA} \theta_T \hat{T}}{\theta_{LA} \theta_{KM}} \quad \hat{W}_S = \frac{\theta_{KS} \theta_T \hat{T}}{\theta_{SS} \theta_{KM}} \tag{5}$$

$$a_{LA} X_A + a_{LM} X_M + U = \bar{L} \tag{6}$$

$$a_{SS} X_S = \bar{S} \tag{7}$$

$$a_{KA} X_A + a_{KM} X_M + a_{KS} X_S = \bar{K} \tag{7}$$

Taking total differential of eq.(6) we get,

$$a_{SS} dX_S = 0 \tag{Since } d\bar{S} = 0$$

$$\Rightarrow \lambda_{SS} \hat{X}_S = 0$$

$$\Rightarrow \hat{X}_S = 0$$

$$\Rightarrow \frac{a_{SS} X_S}{\bar{S}} \frac{dX_S}{X_S} = 0$$

$$\Rightarrow \hat{X}_S = 0$$

Similarly totally differentiating eq. (5) and eq. (7) we get,

$$\lambda_{LA} \hat{X}_A + \lambda_{LM} \hat{X}_M = -\lambda_U \hat{U}, \text{ where } \lambda_U = \frac{U}{L} \tag{5.1}$$

$$\lambda_{KA} \hat{X}_A + \lambda_{KM} \hat{X}_M = \hat{K} \tag{7.1}$$

Using Cramer's Rule we get,

$$\hat{X}_A = \frac{-(\lambda_{KM} \lambda_U \hat{U} + \lambda_{LM} \hat{K})}{\Delta}$$

$$\hat{X}_M = \frac{\lambda_{LA} \hat{K} + \lambda_{KA} \lambda_U \hat{U}}{\Delta}$$

Here, $\Delta = \lambda_{LA}\lambda_{KM} - \lambda_{KA}\lambda_{LM} > 0$

$$\frac{a_{LA}}{a_{KA}} > \frac{a_{LM}}{a_{KM}} \Rightarrow \frac{\lambda_{LA}}{\lambda_{KA}} > \frac{\lambda_{LM}}{\lambda_{KM}}$$

By assumption, $\Rightarrow \lambda_{LA}\lambda_{KM} > \lambda_{KA}\lambda_{LM}$

$$\Rightarrow \lambda_{LA}\lambda_{KM} - \lambda_{KA}\lambda_{LM} > 0$$

$$\overline{W}_M \left(\frac{a_{LM}X_M}{a_{LM}X_M + U} \right) = W_A \quad (4)$$

$$\Rightarrow \overline{W}_M a_{LM} X_M = W_A (a_{LM} X_M + U) \quad (4.1)$$

Eq. (4) can be rewritten as

Totally Differentiating Eq. (4) we get,

$$\Rightarrow \overline{W}_M a_{LM} dX_M = W_A (a_{LM} dX_M + dU) + (a_{LM} X_M + U) dW_A$$

$$\Rightarrow (\overline{W}_M - W_A) a_{LM} dX_M - (a_{LM} X_M + U) dW_A = W_A dU$$

$$\Rightarrow (\overline{W}_M - W_A) a_{LM} X_M \hat{X}_M - (a_{LM} X_M + U) W_A \hat{W}_A = W_A U \hat{U}$$

$$\Rightarrow \left(\frac{\overline{W}_M - W_A}{W_A} \right) a_{LM} X_M \hat{X}_M - (a_{LM} X_M + U) \hat{W}_A = U \hat{U}$$

$$\Rightarrow U \hat{X}_M - (a_{LM} X_M + U) \hat{W}_A = U \hat{U}$$

$$\Rightarrow \hat{X}_M - \left(\frac{a_{LM} X_M}{U} + 1 \right) \hat{W}_A = \hat{U}$$



NOVEL APPROACH TO GLOBAL VALUE CHAINS

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In a globalized world of increasing interdependence, Global Value Chains have grown to revamp conventional notions of production and trade. Read on to explore their conceptual and real-world attributes and their relevance.

The notion of global value chains (GVCs), especially since the early 90s, has been characterised as gaining cost-competitiveness in the exports of finished goods, such that intermediate inputs have crossed national borders multiple times. Labour-intensive production activities have been largely offshored to developing countries (with low wage levels), whereas higher value-added activities such as research and designing have been dominated by the developed ones. The insertion of several countries into GVCs started from garments and footwear, which later on spread to office machines, sophisticated machinery, electronics and so on. The earliest theory that captured the rise of GVCs was the *'Flying Geese Theory of Development'*² indicating the growth in Japan's clothing and tools industries. It showed how less-advanced countries may develop in a short span of time by importing labour-intensive production processes from advanced economies. As their production level increases, imports start to fall in relation to a higher rise in exports. The level of sophistication and quality of products also rise gradually. This way, one country leads the process of development, acting as a 'goose' (Japan has been acting as a lead goose since the 1950-60s), and triggers a series of investments and trade in neighbouring, less-developed countries. This process eventually heightens the need for industrialisation in the case of emerging economies, while efforts to de-industrialise persist in the developed North.

'Fragmentation' theory of the 90s further instigated division of the entire production processes into a

number of production blocks and relocation of them to remote places having locational advantages to reduce total production cost as well as service link costs related to transportation, communications among others. However, in the case of just-in-time (JIT), the latter costs are highly sensitive to geographical distances, and this is the reason why industrial agglomerations have spread along with fragmentation³. The 'New Economic Geography' theory conversely suggested that the congestion in agglomeration shifts the fragmented blocks from core to new production sites at the peripheries and this leads to the development of lagged-behind regions⁴. So, the GVC theories in the 1990s and 2000s have mainly stimulated economic growth of the South by following the footsteps of the North.

A key observation made is that, even though trade in finished goods (such as exchange of cloth for wine, as per traditional trade theories of David Ricardo and Heckscher and Ohlin) has been taken over by trade in intermediate inputs or tasks (trade-in task of stitching buttons on shirts) ever since the 70s and after the emergence of China as the major assembly hub, the essence of comparative advantage theory of Ricardo, and its postulation by Paul Samuelson, persisted. That is, fragmentation and industrial agglomerations also occurred as per the capabilities and resource endowments of the countries, viz. less developing countries have been entrusted with tasks of production and assembling, which can support large labour forces and help them rise in GVCs in the areas of their comparative advantages.

The above theories postulated manufacturing of parts

and components in one nation and assembling in another, so that the final exporting country showed higher gross exports and a favourable balance of trade, as reflected in trade statistics, despite lesser value contribution in GVCs. For instance, China only accounted for about 10 per cent of value-added in exports of the Apple iPod⁵. This raised apprehension over the usefulness of trade databases in describing GVCs. So global policymakers shifted to immense usage of domestic as well as international input-output (IO) tables to measure GVCs participation in terms of backward and forward linkages, i.e. direct and indirect imported content of foreign value added (FVA) of exports, and domestic value-added (DVA) that is incorporated in exported items, respectively.

However, in 2020-21, one of the major concerns is the lack of an updated input-output database to understand the changing value chains, during and post-COVID 19. To illustrate, the popular Organisation for Economic Cooperation and Development-World Trade Organisation (OECD-WTO) Trade in Value Added (TiVA)⁶ database provides data on FVA and DVA content in gross exports, but the latest values are available till 2015/2016, depending on the indicator; and even the new database of 2020 which is expected to be released soon will have data up to 2018 only. So, the question arises as to how disruption in supply chains can be explained for the post-trade war of 2018-19 and more importantly, for the exact effect of the pandemic with respect to changes in GVCs backward and forward linkages. Similarly, the United Nations Conference and Trade Development's (UNCTAD) Eora GVC Database is although more updated, still has data on indicators such as DVA for the latest year of 2018. World Input-Output Database (WIOD⁷) has the latest release of 2016 with data up to 2014. Asian Development Bank (ADB), which compiles the Multi-Regional Input-Output Tables (MRIOTs) database (latest update of December 2020), also has data for 2018⁸, which is for selected Asia and Pacific. Inherent deficiencies, therefore, have to be gauged for undertaking authentic value chain analysis for the period 2020-21. One of the root causes is the lack of regularly updating Domestic IO tables, on which international tables depend, viz. the latest table available to India is for 2013-14⁹.

Secondly, as the focus has always been on reducing costs and meeting JIT needs, the question of the vulnerability of value chains remains mostly unanswered. Although the 2009 crisis and declining global trade in 2013-14 induced many economies, even Least Developed Countries, to bring out schemes meant for boosting domestic manufacturing and value chains, such as Make in India 2014 and Atmanirbhar Bharat scheme of 2020, Made in China 2025, Made in America (Buy American), Make in Pakistan, Made in Afghanistan, Made in New Japan and many other - clearly indicating a rise in protectionism trends - but trepidations persisted over the success of trade-led growth and hyper-globalisation due to rising inequities in income distribution.

It was the US-Sino trade war, followed by Covid-19 that actually exposed weaknesses in the existing GVCs

system¹⁰. To explain, many developing countries, even India, to whom labour-intensive activities have been offshored, lack capacity and scale in manufacturing (China has been one of the exceptions), as well as advanced services and R&D, set up to generate more value in GVCs. As North (advanced economies) heavily focused on stages other than production in GVCs, it became quite difficult, when COVID began spreading, to change the structure of production and outsourcing or to re-shore this activity instantly. Major widespread lessons have been learned in the case of GVCs of medical supplies, mainly with respect to the shortage of PPE and face masks - these segments have been considered low-cost and low value-additive to be entrusted to developing countries of Asia, including China and Malaysia; while high medical devices area remained dominated by US¹¹ and other developed economies. Export bans during the lockdown in fact failed to meet immense demands for masks, kits, gloves and so on.

Further, owing to Covid-19, the world is also likely to see a K-shaped recovery rather than a V-shaped one, such that wealthier may become richer and the poor become poorer, thereby raising the inequality levels¹². Developing nations like India can suffer more if the country's government fails to offer industrial subsidies and stimulus packages from time to time, which shall act as necessities during COVID-induced crisis. Advanced countries, in order to overcome the continuous decline in global trade, have been pushing on the agenda of rapid re-globalisation, which may affect the true spirit of multilateralism along with rising inequalities. However, UNCTAD¹³ has been cautioning against complete liberalisation of all the barriers in trade and investment fields as these are much likely to disrupt the rescue process, unless globalization results in the creation of more jobs and higher protection by States. What is more worrisome is the existence of challenges for countries that lack the scale or locational advantages owing to high wage levels and infrastructure costs, as happening in many emerging economies of Asia.

GVCs may also be abridged due to rising trends of reshoring, such as done by US¹⁴ in 2019-20. Many disruptions have been faced due to the closedown of factories during the lockdown. Owing to the suspension of activities in China, Bangladesh experienced the shortage of raw materials for garments production, and then got hit by cancellation of orders by western buyers, such as the EU, the US, followed by job losses; although the Bangladeshi Government did announce stimulus packages since lockdown, viz. a \$500 million bailout package in March 2020.¹⁵ However, electronics GVCs gained due to rising Work-from-Home trends. Importantly, India benefited from its Production Linked Incentives (PLI) in the mobile phones segment to boost production and exports, where approval during October 2020 was accorded to global companies such as Samsung, Rising Star, as well as Wistron, Foxconn Hon Hai and Pegatron (the contract manufacturers of Apple iPhones)¹⁶. Although during COVID, reshoring and relocation have been rising, there cannot be an absolute advantage in all goods, especially medical supplies, and

the principle of comparative advantages must apply.

In addition, trends of offshoring-reshoring are not a new phenomenon, as they have also been explained by the *'Theory of Snakes and Spiders'*¹⁷ which stipulates that there cannot be always offshoring, as this depends on how agglomeration and centrifugal/dispersion forces operate. GVCs take different shapes, and the product can undergo any change between spiders (parts come together for assembling) and snakes (where value-addition is done at every stage). There can be overshooting in case of offshoring, whenever Information and Communication Technology (ICT) advancement rises. This is what has been happening in the last decade, i.e. reshoring has been rising mainly due to the use of Data Transformations (DTs) and Industry 4.0/automation, which was meant initially to capture a niche in the market, but now, to maintain competitiveness post-COVID.

The outlook in GVC theories has accordingly changed from a nexus of trade investment (since the 70s-80s, owing to more use of incoming Foreign Direct Investment especially by East and South-East Asia) to include services in the 90s¹⁸ due to liberalisation in ICT, logistics and so on and Intellectual Property Rights (IPRs) in late 90s and early 2000s to refer to a movement of tacit knowledge and know-how across the borders, which has been treated as the indicator of true gains under GVCs. DTs and Industry 4.0 are now added to the nexus that can garner higher rents along with IP growth but this has grown more exponentially in the North than in the South¹⁹.

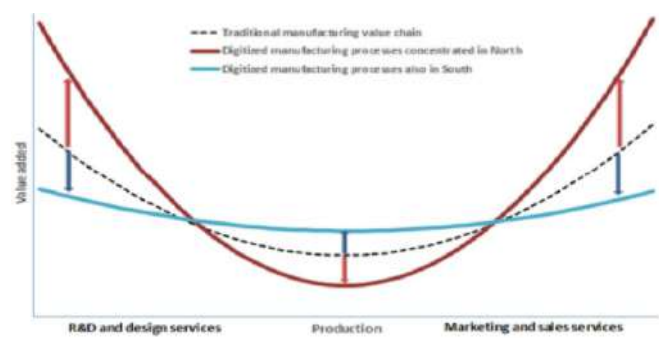
As a result, there may be the development of two different types of chains for both the North and the South. In fact, this holds for Chinese-driven ones and non-Chinese ones in case of growing decoupling plans in China, at least during Covid-19. To elaborate further, GVCs Smiley curve, which was flat in the 70s and became deeper since the 2000s where developing countries struggle at lower ends²⁰, may become more U-shaped²¹ for the North as economies such as the EU have used advanced standards for quality, IP and have robust digital infrastructure to rapidly bring out more innovative products/services by significantly using artificial intelligence (AI), robots, Internet of Things, etc.²². Nevertheless, the problem can be of rising inequalities, as consideration of DTs has induced the use of robots and 3D printing in manufacturing (i.e. smart one), and pre and post-stages are gearing up to gain efficiencies in designing and retailing in a fast manner. This will also make developed economies restore further as the robots can easily replace labour, thereby dropping the need to offshore such activities to the South (see Figure 1). The digital divide is also rising. Despite growing opportunities for developing countries like India to emerge as major players in the digital economy, challenges continually linger due to weak digital spread in terms of knowledge and infrastructure to name a few²³. This is a matter of great worry.

Amidst all this, what persists is the need for an 'upgrade

in GVCs' even during the pandemic, where firms move from the improvement in production processes (Original Equipment Manufacturing) to production of more sophisticated items (or upgrade of existing ones – similar to Original Design Manufacture). Once brands are built, the upgrading moves from functional (start of designing along with assembling or production), to entirely new chains (from phones to TVs or making of parts of phones instead of just importing them)²⁴.

Especially for an emerging set of countries, it becomes essential to first engage in assembling activities of intermediate inputs offered by key advanced players (viz. China adopted the same procedure since the 90s, which made it a global assembly hub, and recently India's growth in smartphones is due to rising role as an assembler, so on). However, using the case of developed countries, the new framework for possible Upgrading in GVCs²⁵ has been postulated based on the spread of digitisation, where both manufacturing firms (mostly to be in emerging economies) and lead firms (advanced countries' babies) will work in simultaneity and gain the benefits of upgrading, but the gap between them in terms of value creation may not be reduced (Figure 2), as venturing to new chains may happen more in case of lead firms. The applicability of this GVC theory for developing countries has to be evaluated in the light of pandemic.

Figure 1: DT based new Smiley Curves of GVCs



Source: Mayer (2018)

Figure 2: Theoretical Framework of DT-driven upgrading in GVCs



Source: Szalavetz (2019)

The theoretical framework now required would be to strengthen and consolidate and build resilient regional value chains (RVCs), with extensive use of e-commerce, DTs and automation such as AI to overcome the risks posed by the pandemic and related shocks that may occur in future. Region-wise models/framework are

yet to be built - for which updated input-output tables at least for a region are a must. Also, automation may not occur globally for entire GVCs, viz. in South Asia's garments industry, this would mean huge spending by the government on infrastructure and manpower to adapt to Industry 4.0, where even a basic digital economy is lacking (whereas, the same process can be more feasible in Europe). The revival of flying-geese theorem and fragmentation, based on comparative advantages, may hold the key to the growth of such RVCs.

Secondly, reshoring may not be very feasible in the long run especially in high demand segments of electronics and garments, as this would, in turn, require proper placement of restrictions on trade and investments, use of subsidies, and that too the WTO-complaint one. It is mentioned that, "As re-shored companies become less competitive, there is further risk of a second wave of protectionism, triggering retaliation across countries and further income and welfare loss."²⁶ That is, prolonged reshoring may not bring resilience in supply

chains, which is the core solution of this crisis situation to deal with geopolitical challenges. Greater product diversification and trade openness may be required, despite the continuation of protectionism²⁷.

The debate between connecting globally or moving inwards to strengthen the local economy seems never-ending, as offshoring may not come to halt to a large extent. Countries that have relied on the use of imported inputs have suffered during the pandemic, as compared to India and China that use more local inputs. However, this negates the usefulness of production networks. In fact, information-sharing and investments undertaken for DTs may prove to be crucial now. Caution must still be undertaken while analyzing trade statistics to identify potential supply chains (at least for a region). A proper mix of reshoring and off-shoring has to be brainstormed using region-wise or country-wise data relating to both the trends – a compilation of such databases must be a priority so as to formulate new GVCs/RVCs theories during and post-COVID.

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MANAGING THE UNAVOIDABLE

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In a world full of contingencies, it is imperative for people to manage risks that cannot be eliminated by taking any prior action. What are the ways for ensuring protection against such risks for developing countries?

No matter how much countries try to reduce people's exposure to natural hazards or to make their assets more resistant to hazards such as earthquakes and floods, natural risk cannot be reduced to zero. Disasters will continue to inflict damage, and so it is critical to supplement actions on exposure and vulnerability with improvements in the ability of people to cope with the shocks that cannot be avoided despite efforts to reduce exposure or vulnerability.

People use financial instruments, notably their savings, to smooth consumption and limit the effects of income shocks on their wellbeing and future prospects. However, most households – and almost all poor households – have no or little savings in financial form. And poor people often lack access to formal financial instruments, because of the cost of bank accounts, the long-distance and time involved in accessing a financial agent, or the lack of documentation and mistrust in banks. This lack of tools for smooth consumption during income shocks magnifies the impact of disasters on well-being, as tragically illustrated by the current COVID-19 crisis: losing their source of income means many households in the world have just enough savings to maintain consumption for a few weeks.

Lack of access to finance is also a significant obstacle to recovery and reconstruction – for households, firms, and the public sector – thus slowing down the return to normalcy. As described in Hallegatte and Vogt-Schilb (2019), the length of the reconstruction phase has a direct influence on total consumption losses: the longer it takes to rebuild, the larger are the total consumption

and well-being losses.

Better access to post-disaster finance would therefore accelerate reconstruction and reduce well-being losses. How does one achieve this then? It requires a holistic and flexible risk management strategy with a range of policy instruments appropriate for different disasters and affected populations (figure 1). This chapter assesses some of these options to make households more resilient and therefore better able to absorb asset losses without suffering a large loss in well-being. It reveals that interventions that are usually implemented to promote poverty reduction and development, such as financial inclusion and social protection, are also very efficient at building resilience. However, the resilience gains could be enhanced if natural risks are taken into account in the design of these development policies – for example, by making social protection adaptive and responsive to natural disasters. The availability and efficiency of these many instruments and tools to manage damages from natural disasters is an essential factor in the assessment of the “socio-economic resilience” of countries (Hallegatte et al. 2017) and even provinces or regions (e.g., Walsh and Hallegatte 2020).

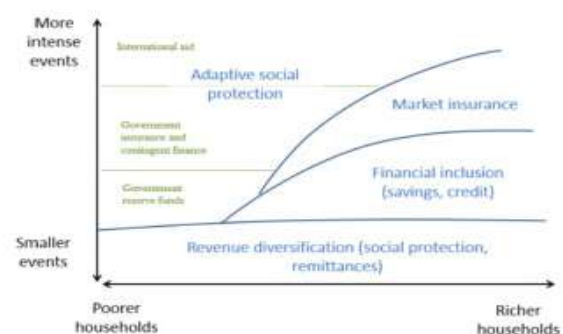


Figure 1: Poorer and richer households have different needs and can be supported with different instruments
Risk finance strategy for households and governments

Source: Hallegatte et al. 2016.

Note: In blue, instrument targeting households; in green, instruments for governments or local authorities.

Insurance can play a key role

In the developed world, and increasingly in developing countries, the private sector has demonstrated its effectiveness as a mechanism for the financial protection of individuals, businesses, and government assets. The private sector can contribute to the disaster risk financing and insurance agenda in four different ways: (1) providing risk capital; (2) providing technical expertise; (3) driving innovation through competition and a push to access new markets/market segments; and (4) participating in public-private partnerships in insurance programs – for example, in the delivery of payouts to beneficiaries as well as in the education of consumers.

The value of access to risk capital was demonstrated after the 2010 earthquake in Chile, where an estimated 95 per cent of the \$8 billion in insured losses was passed out of the domestic market and onto international reinsurers, protecting domestic carriers. A study of the Christchurch earthquake in New Zealand in 2011 shows that insurance helps firms bounce back, and even rebound, after a shock (Poontirakul et al. 2016). However, insurance is very expensive, and insurance markets are complex, making it challenging to provide the appropriate insurance products, especially for poor households or small firms in developing countries.

Domestic insurance markets have also proven to be an effective channel for developing the resilience of disaster-exposed households and businesses. The Turkish Catastrophe Insurance Pool (TCIP) and the Mongolian Livestock Insurance Pool are good examples of public-private partnerships. In both of these cases, the domestic insurance market provides the mechanism through which governments are able to reach households and businesses with insurance products to realize their policy goals of expanding the financial resilience of the population against disasters. Both partnerships have substantially increased insurance penetration at the local level.

Developing insurance markets is, however, challenging, particularly in low-income environments. Where insurance is not compulsory, the pick-up rates remain low. Even in the United States and Italy, high-income countries in which insurance against floods or earthquakes is subsidised, less than 30 per cent of homeowners are covered (Insurance Bureau of Canada 2015). And a successful scheme such as the Mongolian Livestock Insurance Pool, which covers more than 10,000 herders and was initiated in 2005, still has a relatively low pick-up rate (less than 15 per cent of the herders in the covered areas). There are many reasons why pick-

up rates are so low, including affordability issues and behavioural biases (Kunreuther, Pauly, and McMorro 2013). In developing countries, affordability issues, magnified by large transaction costs, are particularly problematic, but weak institutions and lack of trust also play a key role. And insurance requires the availability of robust data so the insurer can assess risks ex-ante—something that is often lacking in developing countries (Rogers and Tsirkunov 2013).

Index-based insurance refers to products in which insurance payments are not based on observed losses, but on a physical variable. For example, a farmer will receive a predefined insurance payment if rainfall falls below a minimum threshold over a one-month period. These products are simpler, have lower transaction costs and create no moral hazard, making them attractive in developing countries. Despite its advantages, the pick-up of index-based insurance is low. One problem is the basis risk or the difference between the actual losses and the payouts (Mobarak and Rosenzweig 2013). Another is that index insurance typically covers only one type of risk, whereas producers may be exposed to many (such as a price risk or supply chain risk). Other reasons include a general distrust in the insurance policy, limited financial literacy, and insufficient understanding of the product. Overall, the evidence suggests that the pick-up of index-based insurance requires large subsidies and, as with indemnity insurance, subsidies can make the schemes unsustainable (Brown, Zelenska, and Mobarak 2013).

Disaster risk insurance is not the only type of insurance that can boost resilience; another type critical to managing natural risks is health insurance. Indeed, natural disasters cause injuries and disabilities, and health shocks tend to push households into poverty, particularly where people have to borrow, often at high-interest rates, to access care. The World Health Organization (WHO) estimates that about 100 million people fall into poverty each year just to pay for health care. A big problem is that financial risk protection varies widely, with people in low-income countries having to bear very high and variable shares of out-of-pocket health expenditures.

Adaptive and scalable social protection acts as insurance for the poor

According to a growing body of evidence, social insurance and social safety nets can very efficiently support poor people affected by disasters or environmental and economic shocks. Porter and White (2016) measured the impact of drought on the consumption of farmers in rural Ethiopia in 2005 and 2011 and found the visible effects of a change in a drought metric. A 10 per cent loss in crops from a drought led to a two per cent reduction in consumption, but people covered by the Productive Safety Net Programme (PSNP) – an innovative adaptive safety net program – reduced their consumption by only 1.5 per cent, suggesting that a quarter of the impact is avoided on average by the adaptive safety net.

Although designing effective social protection can be a challenge, recent experience from social protection systems globally offers encouraging and valuable lessons. It suggests that countries at all income levels can set up systems that increase resilience to natural hazards. But to do so, they have to ensure that the systems are rapidly scalable in case of crisis and feature targeting mechanisms flexible enough to adjust quickly to new situations. Three key approaches stand out: (1) increasing the amount transferred by an existing program to its beneficiaries or relaxing rules and conditionality so that the transfers increase; (2) extending the coverage of an existing program to include new beneficiaries; and (3) introducing extraordinary payments or creating an entirely new program (Bastagli 2014). These options are described in more detail in chapter 5 of *Shock Waves* using case studies on Ethiopia, the Philippines, and Pakistan (Hallegatte et al. 2016).

To extend support to new beneficiaries – whether through an existing or a new program – a country must be able to identify them rapidly. A challenge is to strike a balance between providing rapid support when needed and targeting precisely those in most need. Case studies suggest that the cost of drought to households can increase from \$0 to about \$50 per household if support is delayed by four months and to about \$1,300 if support is delayed by six to nine months (Clarke and Hill 2013). This rapid increase is due to the irreversible impacts of drought on children and distress sales of assets (especially livestock). An important lesson from past disasters is that timeliness is critical, and it is preferable to tolerate targeting errors than delaying support by months to collect precise data.

Just how costly is adaptive social protection? Certainly, the cost of providing coverage to vulnerable people affected by natural hazards changes from year to year. A recent study found that in the Horn of Africa and Sahel regions – assuming that vulnerable people can be protected against the worst effects of drought with an annual social protection package of \$300 per capita (the typical size of such support systems in the region) – one per cent of the region's GDP would be sufficient to cover this population, although more is needed in some countries. In fact, the total cost of providing this protection to disaster victims in Africa during the period 2010–13 was lower than what was spent on humanitarian relief measures (del Ninno, Coll-Black, and Fallavier 2016).

These transfers are a good economic choice, even with targeting errors. A global analysis finds that the benefit-cost ratio is higher than 1.3 in all countries, and its average value across countries is 2.2 (weighting countries by their population). In many countries, the ratio exceeds 3 or 4. No trend with income is obvious (post-disaster support makes sense in poor and rich countries), but countries with the highest benefit-cost ratios have an income per capita of less than \$25,000 a year (in purchasing parity power-adjusted US dollars).

Governments also need financial protection

Households and firms are not the only ones in need of financing after a disaster. Governments and local authorities often struggle to finance reconstruction. Budget contingencies usually represent about 2–5 per cent of government expenditures (such as in Vietnam, Indonesia, and Colombia), and such contingencies must contend with all shocks, not just natural hazards. Many governments, especially small states such as small islands, cannot afford sufficient reserves to respond to major events.

Fortunately, various instruments have been developed and implemented to cover these liabilities created by natural hazards and other environmental risks (Mahul and Ghesquiere 2010). The optimal choice of instruments is country-specific and depends not only on costs but also on the many other co-benefits these instruments can provide in terms of timeliness and transparency, as well as facilitation of post-disaster planning.

Reserve funds: In the Philippines, the National Disaster Risk Reduction and Management Fund finances a range of disaster-related expenditures, but it is not able to disburse rapidly in response to a crisis. For that reason, the government created the Quick Response Fund, which focuses on emergency response. In Mexico, FONDEN was created as a budgetary tool to rapidly allocate federal funds for the rehabilitation of public infrastructure affected by disasters. However, reserve funds have limited capacities and cannot be designed to cope with the rarer and more extreme events.

Insurance and catastrophe bonds: The contingency fund FONDEN in Mexico leverages private sector financing as part of a strategy that combines risk retention and risk transfers. In 2006 FONDEN issued a \$160 million catastrophe bond to transfer Mexico's earthquake risk to the international capital markets – the first parametric catastrophe bond issued by a national government. Even though they are costly, these financial schemes are able to disburse funds rapidly – indeed, more rapidly than would be possible with public budgets. And by predefining payout rules for allocating post-disaster support, formal insurance and financial products can reduce political economy biases (Clarke and Dercon, 2016).

Regional risk-sharing facilities: The Caribbean Catastrophic Risk Insurance Facility (CCRIF) currently pools disaster risk across 16 countries. It was the world's first regional catastrophe insurance facility, using parametric insurance to provide participating governments with quick, short-term liquidity for financing responses and early recovery from major earthquakes or hurricanes.

Contingent credit: In 2007, the World Bank introduced Catastrophe Deferred Drawdown Options (Cat-DDOs), a new financing instrument that allows countries eligible to borrow from the International Bank for Reconstruction and Development (IBRD) to access budget support in the immediate aftermath of a disaster. A contingency loan can be rapidly disbursed if a state of emergency is

declared, and thus it can help governments finance the upscaling of social protection. Cat-DDOs have proven to be an effective instrument for implementing disaster risk management strategies and supporting post-disaster responses, including during the current COVID-19 crisis.

International aid: When a country exceeds its capacity to cope with a disaster, international aid and humanitarian emergency measures can be critical. Foreign aid includes essential in-kind support (including emergency equipment such as water treatment stations, reconstruction material, equipment and machinery, and relief goods such as food, blankets, and clothes), as well as financial aid for social protection and reconstruction costs.

A portfolio approach for developing countries

This review points to the complementarity between the development of market insurance for the middle class and adaptive social protection that targets poor people. Market insurance is difficult to provide to poor people because of its transaction costs, institutional

and legal requirements, and affordability issues. But even if it covers only the nonpoor, market insurance can generate large resilience gains. And it reduces the financial pressure on the government, with fewer needs to support the middle class after a disaster. Adaptive social protection cannot easily protect the non-poor because of the limits in available resources and more pressing priorities. But it can be very efficient in helping poor people cope with and recover from disasters. A way forward is therefore to combine the two measures: (1) develop market insurance to protect the middle class and ensure that governments can use their resources to help the poor after disasters, and (2) create adaptive social protection systems to protect the poor, who cannot access or afford market insurance. And because social protection tends to transfer losses to the governments, which need to also take care of reconstructing infrastructure and public building, they also need to plan for disasters, by including disaster liabilities into their budgets and contingent liabilities and creating comprehensive risk financing strategies able to deal with possible shocks, big and small.

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THE SCIENCE BEHIND ECONOMICS: POLITICS, PEOPLE AND POLITICAL IDEOLOGY

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This research paper sheds light on the ways in which polity informs and is, in turn, informed by economics by exploring the nuances and the origin of this bilateral relationship. It undertakes a cohesive analysis of the existing literature, with a special focus on the work done by Keynes and Friedman. To demonstrate the interplay of political and economic influences in shaping the world as we see it is, it explores in depth the particulars of Reaganomics and Thatcherism. It concludes by proposing a rethinking of the political climate as an economic indicator and raises some questions and puts forth some solutions in this regard.

Abstract

Why is it that the constant debate between Keynesianism and Monetarism continues to centre economic discussions despite its broad irrelevance? Does economics decide the fate of the economy and its people or is it the other way round? Does economic thought rely simply on the polity or is there a deeper connection? The fact that the answer to these questions is so intuitive and yet these questions are barely asked is one of the reasons as to why a greater understanding of political systems and thought, especially among those in power, is important.

This paper aims to derive an understanding of how political systems define and further economic thought despite the independence of its inception. It also aims to establish the link between populism and economics as well as the economics of and by the people.

Introduction

It is commonly understood that economics is a science that studies and develops various indicators affecting the economy. Politics, on the other hand, is the practice associated with the governance of people and of controlling a polity via the exercise of power. However, it is important to understand that for the development of any science, political funding and ideological inclination is extremely important. Economics, in particular, is a science that cannot exist independent of political

affiliations. The realities of status quo, direction of political thought and ideological inclinations of advanced nations lead to the development of economics. The vacuum created around economic hypothesis is misleading and alienates the influence of dominant narratives surrounding its establishment.

The neoclassical framework of economics was developed around the time when monetarism largely appealed to those in power. The establishment of the 'Long Run Equilibrium'¹ and the 'Theory of Rational Expectations'² was the result of a paradigm shift in political thought towards the omnipotence of markets and the need to progressively reduce the role of governments in economic structures. Mrs Thatcher and Mr Ronald Reagan were champions of supply side economics³ and hence, the end of the 20th century saw a rising affiliation towards this field of economics; a trend that continues to this date. President Richard Nixon publicly adopted the policies of Keynesianism, an act which got a push politically post the Second World War. The ideological obsession with liberalization and its pressing need was created by institutions like the World Bank and the International Monetary Fund, which are largely financed by the developed nations of the world.

This paper largely develops on how the influence of political thought has historically led to the growth of economic theories and how narratives occupying political spaces end up conquering a majority of economic experiments. The falsification of regulation

and glorification of free markets has largely been the result of political desire rather than of uncontrolled economic theorization. However, it is also important to understand that economics, due to its nature of being a social science, can never thrive outside of political affiliations. The nature of economics is such that it is closely bound to the realities of the world. Although this makes it susceptible to power struggles, it also makes it an indicator of future expectations, by closely studying political tendencies.

Literature Review

Political Economy

'Political Economy belongs to no nation; it is of no country: it is the science of the rules for the production, the accumulation, the distribution and the consumption of wealth. It will assert itself whether you wish it or not. It is founded on the attributes of the human mind and no power can change it.'

The relation between politics and economics is neither an unknown idea nor is it minutely understood. Historically, from Wealth of Nations (1776) by Adam Smith to John Stuart Mill's Principles of Political Economy (1848), economics, as we now know it, was in fact referred to as the "Political Economy."

The relation between politics and economics is highlighted by Adam Smith's Wealth of Nations (1776) in which he elaborates on markets as a decentralized "well-governed" system, which went on to become the foundation of (political) economic theory. Thomas Malthus' Principles of Political Economy (1820) talks about the Ricardian rent theory⁴, political aristocrats and effective demand. In Das Capital (1867), Karl Marx extensively talks about the political economy of capitalism and the exploitation of labor by the ruling class, powerful elites, and so on. All these texts largely refer to economics and prevailing economic structures as closely related to the polity and not politics and subsequently derive adequate conclusions (independent of the influence of those at power).

Economics and Political Ideology

Political economy is different from the core of this paper since this paper strives to derive a relationship not just between politics and economics but also between specific political ideologies that lead to the inception and propagation of the field of economics. Both the structure of a polity and the inherent biases existing in the minds of those in power frame how economics forms and moulds itself.

"The Relation between Economics and Politics" by Arthur t. Hardley (The Yale Law Journal, Jan. 1899, Vol 8, Pg 194-206) extensively talks about the disadvantages of dissociating economics from politics. Economics, as a "science," is often built around incomprehensive assumptions and unreal models while politics, as an "art," is often dissociated from this science. It talks

about how economics, as a discipline, grew from being a science of money making to the art of studying the growth of political economy. However, till date, this science is actively dissociated from the art of politics, even though they're deeply entangled with each other. The problem that arises from this dissociation is that science, being considered fundamentally neutral, is alienated from any kind of ideological influence. Thus, the problem of economics becomes the supposed neutrality and organic growth of it, however, there continues to be strained political influences.

In *Russia's Transition to Capitalism: The Rise of a World Power?* (2009) by David Lane, a comparison is drawn between Mikhail Sergeyevich Gorbachev's⁵ intention for the Union of Soviet Socialist Republics (USSR) and Boris Yeltsin's⁶ ideology for the nation. We see that political ideologies have a huge bearing on the kind of economics that a nation follows. Yeltsin's objective was to ensure that Russia is incorporated in the advanced capitalist nations of the world while Gorbakhev wanted to 'rejoin its European home.' It is thus an example of how entire economic systems are influenced by the kind of political backing that encompasses nations.

Reaganomics and Thatcherism: Understanding the influence of Ronald Reagan and Margaret Thatcher on Supply Side Economics

Ronald Wilson Reagan was the 40th US president, serving from 20 January 1981 to 20 January 1989. His first job after being sworn in was to deal with the worst recession since the Great Depression. His era was an important turning point in economics because for the first time, the Phillips' Curve⁷ was completely struck down due to stagflation: a combination of a double digit contraction in the economy and a double digit inflation. What's important however, is to analyze the response to such a situation and thus, the simultaneous evolution of a school of economics, namely supply side economics. It's important to note that Reagan, primarily a champion of supply side economics, promised the "Reagan Revolution" focused on reducing government expenditure, taxes and in general, the role of the Government in regulation. His philosophy was, *"Government is not the solution to our problem. Government is the problem."*

Margaret Hilda Thatcher, on the other hand, was a British stateswoman who served as the Prime Minister of the United Kingdom from 1979 to 1990. Thatcher also entered office at a time when high inflation and an oncoming recession were looming over Great Britain. Thatcher, like Reagan, tried to shift the centre of the political spectrum towards the right. With a series of pro-business and anti interventional measures, Thatcher represented and accordingly led the revolution of monetarist economics⁸ in Great Britain.

Discovery of Stagflation

Milton Friedman, the flag bearer of monetarism and neoliberalism,⁹ along with Edmund Phelps, had already

mastered the cause of stagflation, long before Ronald Reagan and Margaret Thatcher came to power. In the late 1960s, Friedman argued that once people adjusted to high inflation rates, unemployment would start rising again. Thus, the inverse relationship between unemployment and inflation was struck down and stagflation was introduced. The stagflation of the 1970s further strengthened the Friedman-Phelps view.

Therefore, does the initial claim that politics has a bearing on economics still hold true? Did the leaders get elected because they supported an already established economic theory? Or did their role further the understanding and implication of these theories? And if so, is economics really driven by ideology?

The case study of Reaganomics and Thatcherism is important because it answers the primary question addressed in this paper: what leads to the establishment of theories in economics and how is it that the contrasting schools of thought end up gaining prominence?

The answer to it and all other questions asked above is simple: although economics has the capability to grow independently, it cannot be separated from ideology. And this very inception of ideology is the core establishment between politics and economics. It is important to note that although both have a huge bearing on each other, the effectiveness of economics can only be established when applied politically. This distinction is what makes economics more dependent on political ideology. The growth of economics is also dependent on the same, which shall be explored shortly.

There was sustained resistance to the policies of Thatcher and Reagan and great skepticism and doubt. The reasons for it were that many thought that a tight monetary policy along with a rise in interest rates would not only stagnate the economy but also reduce bank loans to industry, increase unemployment and lead to a severe recession. Many economists believed that the theoretical appeal of monetarism would fail to prove itself useful in the practical world. Instead of analyzing the result, it is important to understand that we would have never known how relevant monetarism is, had it not been implemented by these leaders. Similarly, we will also never know the impact of any other school of economics to deal with the situation, simply through the theoretical application of one. As constantly mentioned in this paper, the aim isn't to analyze the effectiveness of said policies, but to study the influence of political thought in the field of economics. The hypothesis might seem very intuitive; however, its study is important to understand the evolution of different fields of economics. Popular thought relies on economics as a science and simultaneous evolution of different perspectives under it; however, most forget that for the growth of any school of economics, backing political

thought becomes the bedrock.

John Maynard Keynes and Milton Friedman

An easy misunderstanding that this paper invites is that economic thought is shaped by political ideology. To get rid of this confusion, a case study of two of the most famous and contrasting economists is done below

In *The General Theory*, Keynes wrote (1936, p. 257): *"the Classical Theory has been accustomed to rest the supposedly self-adjusting character of the economic system on an assumed fluidity of money wages; and when there is a rigidity, to lay on this rigidity the blame of maladjustment... My difference from this theory is primarily a difference of analysis."*

The Keynesian school of economics developed at the time of the Second World War when the world knew classical economics¹⁰ as the only formal economic theorization. The influence of classical economics was so rampant that Keynes' findings wreaked havoc and were immediately adopted post war to be known as the savior of macroeconomics.

Milton Friedman, on the other hand, had argued in the late 1960s that the Phillips Curve was based on faulty assumptions and that stagflation was a real possibility. The rise in world oil prices in 1970 proved him right and thus began the era of monetarism. Thus, both Keynes and Friedman produced their most famous works at a point in time wherein their theorisations had not yet been popularised.

Does economics influence political thought or is it the other way round?

An obvious question that comes to mind by logical extension of the observations above is: if economic thought is so free of the rampant ideology, is it not that economics influences political thought? The answer to it is yes and no. While economics does influence politics, it is political thought that ensures that economics delivers its promised impact.

It is not the case that the application of Keynesianism or monetarism was a necessity inflicted upon a particular polity. Rather, it was the political ideology that ultimately led to its inclusion. Economic thought can grow independent of ongoing political inclination, however, its legitimacy and relevance is ensured only via those implementing them. Thus, coming to the question: does political ideology influence economic thought? The answer is no. As seen explicitly in the cases stated above and many others as well, economic thought can grow independent of policy measures; however, the popularity and growth of any particular school of thought is dependent on the rampant ideology. Had Keynesianism not been imposed, massive public funding and research into its core tenets and applicability would not have been undertaken. Had the supply side of economics not been championed by Ronald Reagan and Margaret Thatcher, the current wave of neoliberalism

would probably have significantly less political followers worldwide.

Economics: Of the people or by the people?

Given below is the data collected during the polls of the United States (US) elections held in 2020. Largely, we see a prioritization of economics in the voting pattern of different agents. It is however, also important to note that unlike other years, 2020 offered a unique challenge to the economy with the onset of the pandemic. However, in 2012 US elections, 32 per cent of Americans said that the economy was the most important political problem (Source; American National Election Studies). In 2008 US elections (during the Financial Crisis), 42 per cent of

Americans believed that economics was the most important aspect of a candidate’s campaign and voted accordingly (Source; American National Election Studies)

Wealthier voters tend to prioritize the economy

Percentage of voters who said the economy was the most important problem facing the country

HOUSEHOLD INCOME	2008	2012	2016
\$100,000+	51.1%	37.4%	13.4%
\$50,000 to \$99,999	47.0	35.9	11.3
Less than \$50k	35.9	27.7	9.7

SOURCE: AMERICAN NATIONAL ELECTION STUDIES

More educated voters say the economy is the top problem

Percentage of voters who said the economy was the most important problem facing the country

LEVEL OF EDUCATION	2008	2012	2016
At least a bachelor’s degree	47.3%	37.2%	12.5%
Some college or an associate’s degree	44.0	31.3	11.7
High school graduate or less	36.6	28.0	9.1

SOURCE: AMERICAN NATIONAL ELECTION STUDIES

More white and Hispanic voters worry about the economy

Percentage of voters who said the economy was the most important problem facing the country

RACE	2008	2012	2016
White	44.1%	32.3%	11.5%
Hispanic	43.1	37.6	12.3
Black	31.9	24.2	6.4

SOURCE: AMERICAN NATIONAL ELECTION STUDIES

We thus notice a sharp correlation and an understandable causation between the election of a candidate and their underlying economic campaign. Economic considerations form a large part of the objective of a vote and this leads us to the next question: is economics a science of the people or do people determine its inception? The answer to this can be derived by drawing a logical link of the conclusions derived in the paper. Although, economic thought is not influenced by political ideology, its propagation is dependent on

politics. Since political ideology is largely propagated by those in power, elections are an important determining factor of not only the candidate but also the broader economic inclination defined under the campaign.

From the above discussion, we can derive a very interesting result: popular demand for economics defines its growth. Since economic priorities of selected candidates play a huge role in determining their election and political ideology plays an important role in the growth of economics, we can thus come to the conclusion that it is via popular thought that economics sustains and multiplies itself. Had the economic policies of Ronald Reagan not appealed to the American public, we would not have the growth of modern supply side economics as we see it today. Thus, economics not only studies human behavior but also grows in proportion to it.

Conclusions

Recent history has shown an increasing concern for economics as a major factor determining political decisions as a result of increased economic turbulence. Major financial and economic crises have led to a transition of economics and politics. It would however, be unfair to exonerate the role of inadequate economic ideas to adapt to shifting political and economic requirements. It would also be unfair to credit growth of economic apparatus to merely political ideology, keeping in mind dynamic and complex realities of the world and the ever adapting capitalism. However, everything else considered, it is still possible to credit political thinking to a majority of economic development which as substantiated adequately in this paper

The current economic science is characterised as analytical, mathematical, logical and reductive. It is immune to value judgements based on changing political landscapes and thus, hidden from efficient criticism. The lack of understanding of complex economic problems and inability to comprehend them tends to discredit subjective and context based (especially political) criticism of economic decisions.

The way forward requires deeper analysis and rethinking of political climates as not only world building but also as economic indicators. Reduction of economics to merely the scientific has to be done away with and dynamic environments need to be taken into consideration while crediting or discrediting economic frameworks. New tools of thinking and reformation of existing ones are required to carefully re-examine past and current complexities in political atmospheres. Economics, thus, needs to become not only of the people and by the

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- [1] The idea that in the long run, economic variables will come back to normalcy. For example, unemployment in the long run is equal to its natural rate
- [2] This means that people have rational expectations about economic variables. The implication is that people make intelligent use of available information in forecasting variables that affect their economic decisions.
- [3] This is an economic theory that postulates tax cuts for the wealthy resulting in increased savings and investment capacity for them that trickle down to the overall economy.
- [4] Ricardo finds rent as, “Rent is that portion of the produce of the earth which is paid to the landlord for the use of original and indestructible power of the soil.”
- [5] He was the general secretary of the Communist Party of the Soviet Union (1985–91) and president of the Soviet Union (1990–91).
- [6] He was a Russian and former Soviet politician who served as the first President of Russia from 1991 to 1999.
- [7] The Phillips curve is an economic concept developed by A. W. Phillips stating that inflation and unemployment have a stable and inverse relationship.
- [8] Monetarism is a macroeconomic theory, which states that governments can foster economic stability by targeting the growth rate of money supply. Essentially, it is a set of views based on the belief that the total amount of money in an economy is the primary determinant of economic growth.
- [9] Neoliberalism is contemporarily used to refer to market-oriented reform policies such as “eliminating price controls, deregulating capital markets, lowering trade barriers” and reducing, especially through privatization and austerity, state influence in the economy.
- [10] Classical economics or classical political economy is a school of thought in economics that flourished, primarily in Britain, in the late 18th and early-to-mid 19th century. It is a theory of market economies as largely self-regulating systems, governed by natural laws of production and exchange

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E-COMMERCE SEARCH COSTS: A QUANTITATIVE & BEHAVIOURAL ANALYSIS

BY AMOGH SANGEWAR*, GARVIT GOSWAMI*, ISHIKA DAGA, YASH VARDHAN SARAF,
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The following research paper sheds light on the search costs associated with the E-Commerce Industry through the lens of perceived time and mental effort. The survey conducted to assess the population's opinions on the same acts as a testament to the ambiguity and subjectivity of the factors mentioned. Thus, the scope of an increased search cost due to the above two factors has been explored, a deviation from the general assumption regarding the E-Commerce industry.

Abstract

This paper seeks to analyse the impact of e-commerce on consumer's search cost. Initially, we provide an overview of the existing literature on search cost and define search cost in order to undertake further analysis. Using an in-depth analysis of the existing research, we discuss consumer search strategy in a directed search model and also analyse certain aspects of consumer behaviour on online platforms. Further, we analyse the impact of the variables affecting search cost, namely time, mental effort and physical effort, and discuss their overall impact. We have tried to explore the time and mental efforts that consumers spend on e-commerce websites. For this, we have undertaken an online survey, in which we identified certain factors to assess the perceptions of people regarding the above-mentioned variables.

Keywords: E-commerce, Search Cost, Optimal Strategy, Perceptions.

1. Introduction and Literature

E-commerce, given its powerful initiation as the changing force of business, has seen significant research and literature is widely available on the same. Given its specific nature, search cost is fairly well-researched but far from saturation. Specific quantifications of search cost are inherently difficult and are thus rarely carried out. In the intersection, while there is literature pertaining to specific elements such as the impact of

product reviews on search costs, research about the overall impact of e-commerce on search costs is quite limited. This paper aims at filling this gap.

There are different dependent and independent factors which influence search costs. Distinct studies have catered to the research of non-identical factors and hence, their results differ too. Dinerstein et al. (2018) illustrated how search friction gets reduced by the platform design and navigation tools, even though there is a high volume of products and sellers in the online market. Jolivet and Turon (2014) analysed how consumer search and purchase decisions vary with respect to advertisements and that consumers have to incur search costs to scrutinize all adverts' prices. Bakos (2001) demonstrated how consumer search costs can differentiate digital markets from conventional markets. Wu, Ray, et al. (2004) constituted that a decrease in search cost can both adversely and favourably impact social welfare. Amblee et al. (2017) examined how online customer and editorial reviews influence search costs and consumer confidence. Thus, there is indispensable work on consumer search costs with different bases of study.

Mazon and Pereira (2001) developed a model where e-commerce reduces consumer search costs. Harrington, Jr. (2001) developed an innovative model to separately influence search costs for price and product information in case of electronic goods. Brown and Goolsbee (2000) conveyed that by engaging customers in low-cost price comparisons online, search costs can be considerably

reduced with the help of the internet. Seiler (2011) proposed a structural model and explained the vital role played by search costs in influencing consumer behaviour and also showed how promotion for a given product increases the consumers' incentives to search.

In this paper, we try to factor in multiple elements and thereby evaluate the net effect of e-commerce on search costs. We first seek to define search cost and then analyse all the variables of the search cost function. Even within the e-commerce sector, there are various factors which affect time. We first describe the optimal search strategy in case of directed search and analyse consumer behaviour in that case. Then, we establish the definition of search cost and evaluate it. To evaluate the time and mental effort that consumers spend on e-commerce websites, we have undertaken a survey to know people's perception. We go on to explore findings from this survey and try to analyse the impact of these variables on search cost.

2. Definition of Search Cost

Search costs, concerning the current framework, represent the time, mental effort, physical effort and the associated monetary costs of searching and accessing markets to find an ideal product. They greatly influence the purchase and sale decisions of market entities. Search costs are of immense importance to sellers since they greatly determine the volume of orders they receive and hence, innovations and novel work methods are being continuously conceived to reduce search costs for customers as much as possible. Decreased search costs greatly enhance transactional efficiencies, making all stakeholders better-off. However, the diverse range of factors that influence search costs makes it extremely difficult to measure search costs. When we look into search costs associated with the e-commerce sector, what immediately comes to mind is that e-commerce has made it easier for buyers to access a wide variety of products and ultimately finalise their purchases.

Electronic marketplaces providing price information are believed to reduce the incremental cost of obtaining information about additional sellers and may also reduce the ability of sellers to obscure their quoted prices (e.g. by including or excluding transportation costs, incentives, special promotions, financing costs, etc.)

While purchasing some product, a buyer usually determines a maximum price threshold and keeps searching until he finally finds a satisfactory product within his predefined price range. Customers with access to electronic marketplaces become more demanding and are willing to make fewer compromises concerning their ideal product (Y. Bakos, 2001). This desire to get the ideal product may make a person go through a lot more options before finalising a product. An important point to note here is that, even though a consumer might spend more time looking for a product on online platforms, he is, in most cases, also able to get a better product than what he would have bought from

a physical retail shop. The consumer will continue to look for a better alternative of a product as long as the perceived benefit is greater than the time and effort put in for searching for a product. In other words, a rational consumer will continue to search for a better product or service until the marginal cost of searching exceeds the expected marginal benefit.

3. Consumers' Optimal Search Strategy

The model described here is largely based on Jolivet and Turon (2014).

Let $j \geq 1$ be the number of listings for a certain product currently visible on the platform. Each listing $j \in \{1, \dots, n\}$ consists of price p_j and a vector of characteristics x_j . The vector ' x ' is a vector of characteristics, say, sellers' reputation, sellers' status and so on. Here, we assume that out of all listings, one is always bought; the consumers scroll through the options available on an e-commerce platform with the end objective of purchasing some product and not just for information. Further, as elaborated in the seminal paper, the aim here is to analyse consumer behaviour and not the market in general. We also retain the "sequential" character of search, which says that the consumer decides to draw adverts one after the other.

Further, let us assume a parametric vector ' l ', that describes preferences for a certain characteristic set ' x '. Therefore, a simple utility function for a heterogeneous product represented by (p, x) , is as follows,

$$U(p, x, l) = lx - p$$

Let us assume that drawing listings incur a search cost of $s \geq 0$, which is constant across all draws.

Now, let "reservation utility (r)" be defined as the least amount of utility that can make a consumer indifferent between sampling and stopping. Let reservation utility be determined by the price (p), search cost (s) and parametric vector of preference (l).

The optimal sequential search and purchase strategy is as follows (Weitzman, 1979):

A consumer with personal characteristics (s, l) and beliefs about the given product should compute reservation utilities of n listings presented to him and sort them in decreasing order of r_j . He should then start by drawing listings with highest r_j and proceed as:

- Let \bar{u} either be the highest utility offered by listings sampled so far or the value of the outside option if no listing has yet been sampled.
- If \bar{u} is strictly lower than the highest r among listings not yet sampled so far, then sample another listing (one with highest r among listings not sampled)
- If \bar{u} is larger than the highest r among listings not yet sampled, then stop sampling and purchase the least listing drawn so far (one that offers utility \bar{u}).

Mathematically,

$$\bar{u} = \max_{j \in S \cup \{0\}} u_j(p, x, I)$$

where u_0 is the utility before beginning to search.

Let S be the set of sampled listings while S' be the set of non-sampled listings.

Therefore,

$$S \cup S' = \{1, \dots, n\} \text{ and } S \cap S' = \emptyset$$

1. So if $\bar{u} < \max_{j \in S} r_j$, then *sample*
2. If $\bar{u} \geq \max_{j \in S'} r_j$, then *stop*

$$j \in S'$$

In case of ties, the following way be followed

1. If several listings have the same reservation utility r_i , consumers sample in random order (here, $i \in \{1, \dots, n\}$).
2. If several listings are drawn offering the same maximum level of utility, the consumer chooses randomly.
3. When indifferent between sampling and stopping i.e. $\bar{u} = \max_{j \in S} r_j$, then consumer stops.

$$j \in S'$$

The following case provides an interesting outcome:

$$u_i \geq \max_{j \in S} u_j \text{ \& } u_i < r_{j \in S'}$$

Therefore,

$$\max_{j \in S} u_j \leq u_i < r_{j \in S'}$$

Now if,

$$\max_{j \in S'} u_j < u_i$$

Then,

$$\max_{j \in S} u_j, \max_{j \in S'} u_j \leq u_i$$

So

$$\max_{j \in \{1, \dots, n\}} u_j \leq u_i < r_{j \in S'}$$

In this case, the consumer will search for other adverts and eventually go back to i .

4. Search Cost on the Internet - A Theoretical Approach

It is largely believed that with the advent of e-commerce, the search cost of consumers has declined. Various factors like online advertisements, online ratings and reviews, product recommendations (eg. Amazon's Choice), easier access to product information, exclusive online special offers etc. are believed to be largely responsible for reduced search costs. Sellers' search costs are also believed to have been reduced with the advent of e-commerce since it offers sellers new ways of reaching customers through targeted advertisements and personalised marketing. However, the current study is restricted to analysing consumers' search costs and the impact of e-commerce on it.

E-commerce allows consumers to draw comparisons

for various sellers in a limited time frame, thereby allowing consumers to make informed and more efficient decisions. This may further lead to increased price competition amongst sellers. However, this price competition can be avoided through product differentiation. This availability of varied products across an e-commerce platform, therefore, leads to reduced monopoly power of a particular seller and enhances market efficiency, since instead of competing through price, sellers can now focus on product development, thereby benefiting the consumers. Easy accessibility to information further leads to customisation through a superior user interface. Customer profile and data on past purchases can be used to provide customers with better and personalised services (Y. Bakos, 2001).

As per our definition above, search cost is a function of time, mental effort and physical effort (here, we assume that the associated monetary costs of finding and accessing the offline market are subsumed under physical effort). Hence, $S = S(T, E_m, E_p)$, where T is time, E_m is mental effort and E_p is physical effort. In all cases, time, mental effort and physical effort are positively related to search cost, that is, an increase in any one of them leads to an increase in the search costs, keeping the other two constant.

Let us compare online and offline platforms on the basis of each of these three factors. As discussed earlier, e-commerce platforms provide information about different products on a single window. Thus, with very less time, we can compare various products on the basis of price as well as other attributes. Additionally, factors like advertisements, product reviews and ratings, and special offers etc. make our choices easier. But as will be discussed below, there exists a common perception that the availability of a large variety of products and easy access to their information might lead to an increase in time taken by buyers to finalise a product, due to greater confusion among buyers arising from an increase in the number of options available. Let us take an example: person X decides to buy a product from the offline market while person Y decides to buy a product online. (It is assumed online and offline market are exclusive of each other from consumers' point of view, that is, a consumer can't access both offline and online markets for the same purchase decision) X, being physically limited to sample only a certain number of sellers before purchasing a product, is prompted to purchase a product without sampling all the sellers. Now, consider Y. He is able to sample a higher number of sellers, since he has easy access to them through an online platform. Yet, it is possible that Y, due to easier access to a greater number of sellers and not being physically bound, as in the case of X, samples quite a large number of sellers. This might further delay the decision of Y, since he has to choose among a large number of sellers.

Although this is just a case, a large number of consumers perceive their time to have increased with the advent of e-commerce. It is possible that these consumers may not factor in the time required to access the market and might have considered only the in-market time.

But since the latter can't be ruled out, the impact of e-commerce on time remains largely ambiguous.

Moving to another factor - the mental effort (E_m); the advent of e-commerce has allowed the consumers to access information about different products quite easily, as compared to the offline platforms. This has further helped them in drawing easy comparisons between the products. But a larger variety of products might increase the mental effort required due to an increased need for comparison. Further, the existence of online advertisements might cause greater confusion. Striving to provide better products in order to increase their customer base, sellers try to portray their products better than the others through advertisements and other media. This competition further leads to the betterment in the attributes of their products. The 'choosing between the best' causes greater mental effort. Thus, here again, due to both increase and decrease in mental efforts in specific cases, it becomes largely difficult to conclude whether the aggregate mental efforts have increased or decreased. Thus, there exists ambiguity in the impact on mental effort as well.

Finally, consider physical efforts (E_p). This factor can be said to have reduced since the advent of e-commerce. Accessing the offline market and physically viewing, comparing and purchasing products surely takes much more physical effort than just searching and purchasing a product online. Hence, the physical effort required to purchase a product online is almost negligible; clearly lower than that in the offline market. Hence, we can conclude that E_p has surely reduced since the introduction of e-commerce.

Thus, aggregating T , E_m and E_p we conclude that the impact of e-commerce on time and mental effort is ambiguous, while that on physical effort is negative (reduction in physical effort). Therefore, the impact on search cost remains theoretically ambiguous. If the aggregated impact on time and mental effort turns out to be positive, then the magnitude of reduction in physical effort determines whether the search cost has reduced or not. But if the aggregated impact on time and mental effort turns out to be negative, then the search cost has surely declined. As will be shown in the section on the survey about perceptions of people regarding time and effort, changes due to the advent of e-commerce, this ambiguity can also be reflected in the perceptions of people.

Since physical effort has declined due to the advent of e-commerce, our further analysis resorts to investigating mental effort and time. Mental effort mostly encompasses beliefs and perceptions that consumers withhold. Consumers' beliefs regarding a particular product have an impact on their decision and thus, their search cost. These beliefs vary from person to person and are ambiguous, as stated earlier. A consumer might have a certain preference for a brand and may go for it without sampling/comparing it with other products. This brand loyalty is mostly present in high-priced goods. The loss resulting from a fraudulent

deal in case of luxury goods far exceeds the loss that consumers could incur from the purchase of low-priced goods, most consumers would tend to resort to brands that have a good name in the market. Thus, brand images might as well reduce the mental effort of consumers. However, while the above theory applies to most of the consumers, it cannot be generalised. Myriad other personal factors or external efforts by new brands on e-commerce platforms might help persuade consumers into purchasing even the highly-priced, luxury items from them with the help of special offers and advertisements. Thus, there is no certainty about the same. Some risk-averse people might as well buy products only from trusted brands (low mental effort and time) while on the other hand, risk-seeking people might buy products from newer brands and may compare it with other products (high mental effort and time).

5. People's Perception Regarding Time and Mental Effort

While theories provide particular results based on certain assumptions regarding the behaviour of the people, it is also necessary to verify what people perceive the outcomes to be. We can't deny the fact that people might perceive entirely different outcomes than those suggested in theories. In the current case, we have undertaken a survey in order to assess people's perceptions about the impact that the advent of e-commerce has on time and mental effort.

We have previously established that physical effort has surely reduced on the internet, in comparison to the offline markets. We have also established that the aggregated impact on time and mental effort is ambiguous. But as we will discuss later, the perceptions of people may be different from these outcomes. Since ambiguity lies in the variables - time and mental effort, we consider people's perceptions only in these aspects.

In a survey (conducted online), we have tried to analyse the impact of e-commerce on time as well as mental effort and the direction of perceptions in comparison to the established ambiguity. We had identified 6 factors affecting search cost within the e-commerce sector namely advertisements, customer ratings and reviews, availability of a large number of product options, easier access to product information, exclusive online special offers and product recommendations, all of which impact the time and mental effort of consumers. Based on these six factors, we have assessed whether people believe that their time and mental effort requirements have gone down due to each of these factors taken independently, or instead, have increased.

5.1 Identification of Factors affecting Time and Mental Effort

Various factors impact time on e-commerce platforms. While it may not be clear as to whether they may increase or reduce search costs in e-commerce, the factors identified and discussed below surely have some magnitude of impact. Also, the factors identified below

may not be an exhaustive list of such factors.

5.1.1 Advertisements

The idea that advertisements have a substantial influence on consumer psychology and can influence shopping decisions is well-documented, established by various studies, and has significant literature to itself. Especially with the advent of e-commerce, advertisements have assumed a larger role for businesses, since brick-and-mortar based avenues of promoting sales are no longer relevant to this new digital world. With regards to the impact of advertisements on the time of consumers, there are multiple theoretical understandings of the same. One view on advertisements would be that they help the buyer by providing easier access to information about a product, subsequently reducing the time which would have been incurred in looking for new and diverse products for a particular need. According to this point of view, advertisements act as a mechanism to reduce the time taken to finalize a sample. Another view on advertisements would be that they incite and motivate a person to increase the scope of their research about a product they want to purchase. Advertisements may act as a medium to introduce new products to buyers, which would lead to a higher degree of time to be put in by the buyer in comparing and finding the best option out of the available products. In this case, it increases time.

Several personal factors also have a bearing on this answer. For instance, a person with an inherent distrust of advertisements might be motivated to spend more time verifying the authenticity and details of a product, simply because they saw an advertisement for it. Also, in the day and age of big data, frameworks cannot operate assuming advertisements to be random or generic. For accuracy, the nature of advertisements has to be expanded to those that are highly targeted, with advertisers using algorithmic analysis to predict who has a need or interest in the product. Given that the theoretical framework is insufficient to generate a clear picture of the impact on search costs, the impact on the welfare of the consumer is also ambiguous. This is also difficult to generalise, given priorities vary widely. Someone may value a more efficient searching process while someone may disregard that to focus on accuracy in terms of optimal product selection.

5.1.2 Customer Ratings & Reviews

All product reviews can be divided into two categories: Product Reviews and Editorial Reviews. The reason we have taken this as a factor in our study of the time variable is that it has the potential to take both a positive or a negative value pertaining to the time variable. The most common perception is that a greater amount of consumer reviews helps in making the purchase decision of the buyer faster by reducing the need to check all the details about the product in order to ensure its suitability for the intended use. Consumer reviews help the buyer make a decision after hearing from someone in a similar position as the buyer and

an expert review offer an unbiased opinion about the product. However, it is possible that the presence of multiple and conflicting customer/expert reviews might result in an increase in time. A person who has not yet decided will be heavily swayed in different directions due to the conflicting reviews and may end up putting in greater effort to make a decision. Similarly, a large number of reviews, even if not conflicting, can increase the time by inducing the customer to surf through all of them in order to check every possible detail about the product.

5.1.3 Product Options

E-commerce has completely changed the way in which we shop. Earlier, we were bound by certain restrictions which limited the variety of options and choices available to a consumer. Searching and comparing options physically was indeed very cumbersome and in many cases, people started looking for the product they liked best at a store, rather than the product that they were initially looking for. In other words, they were willing to compromise on the quality of the product in order to save time.

Now, naturally, the advent of e-commerce changed the way in which we shop. Shoppers are able to buy products simply by scrolling through the list of products available. The number of options available to them are surreal. Whenever you open an e-commerce site, you are flooded with options to choose from. Not only that, you also have a vast variety of e-commerce websites available to you. Now, since most people in the earlier setting used to visit only a few stores before making a buying decision just to save time, one would logically deduce that they start spending less time searching while also getting more options to choose from through the online medium. Though, in some instances, there is also a possibility of increased search costs through the online mode. This is where human psychology comes into play. Within the comforts of their homes, people tend to look for the best products that they can get. Even when they find a product that they like, there is a tendency that they dig deeper to find an even better product. Same is the case with the pricing aspect. Even if people find the ideal product for them, they might want to look for a similar product at a cheaper price. The flexibility that the online mode allows has a lot to do with the possibility of increased search costs. People can look for products at any time and at any place allowing customers a great degree of flexibility and thereby, the chances of higher search costs increase.

Ideally speaking, the myriad options that e-commerce provides to the prospective customers looking for a particular product along with adequate information to compare the relative prices quoted by various brands selling that product, might induce a rational consumer to spend more time scrolling through the web, in order to secure themselves the best deal.

5.1.4 Easier Access to Product Information

Sitting at the comfort of home, consumers are able to compare their product with other substitutes in the market. Product information is one of the fundamentals of purchase and thus, it has been featured as one of the factors. Its availability without a salesman indicates the probability of increased time since people now take more time to assess the utilities they are to gain from the product. However, there also exists a possibility of the consumer taking less time in the sense that now they have easier access to information.

5.1.5 Exclusive Online Special Offers

Special deals and promotions are an efficient way of attracting new customers as well as ensuring the retention of the existing customers for an online retailer. Such exclusive offers are also often used by online retailers to induce customers into buying more than they would have usually bought in the absence of such deals. These exclusive offers take the shape of membership discounts, loyalty discounts, promotional discounts, seasonal discounts, volume discounts and buy-one-get-one-free and similar deals. As consumers may become more conscious about their expenses due to offers, an exclusive discount or offer can often be their primary criterion for choosing e-commerce over brick-and-mortar shops. Excluding the convenience of products being delivered at home (in cases where physical visits to a store are a cause of inconvenience), the customers usually face a trade-off between sacrificing their shopping experiences as well as the extra waiting time to receive their products and the exclusive discounts and lucrative deals that an e-commerce aggregator offers them. Such promotion-based marketing often helps online retailers attract and retain customers.

5.1.6 Product Recommendations

Product recommendations are a part of an e-commerce personalization strategy in which the consumer is displayed various alternative or supplementary products along with the product which he/she is currently viewing. There are usually two kinds of product recommendations. The first category is that of substitute products in which the customer is offered alternatives to the product he is viewing. In the second category, the customer is offered products that enhance the utility.

The motive behind such recommendations is to directly reduce search costs by making available goods for viewing to the customer without taking the effort of searching for them explicitly. Yet, the consumers may perceive this as a confusing feature since coming across additional and related products while viewing a particular product adds to their time and effort. Thus, this factor surely impacts search cost on the internet, however whether the impact is positive or negative, it is difficult to determine.

5.2 Methodology of the Survey

To analyse the impact of e-commerce on time and mental efforts, we have taken into consideration 6

factors as described above. The study is based on the result of primary data which was collected through an online survey. The survey contained six questions each of which meant to analyse the impact of each variable that was considered by us in our study. Each factor was to be evaluated by the respondents on the basis of perceived impact on time and mental effort, on a 5-point scale starting from 'strongly increase' and ending with 'strongly decrease'. We have assigned numeric values to them, where 'strongly increase' is assigned +2 and 'strongly decrease' is assigned -2. After that, we have taken up an average rating for each factor which we have used to determine the necessary perceptions, as will be discussed below. These average ratings are derived by dividing the total ratings by the number of respondents i.e. by 205. This would tell us about the magnitude of impact each of the factors has on time and mental effort.

5.3 Findings¹

Following are the factor-wise average ratings of time and mental effort perceived by people as well as the average rating for the overall perception

Table-1: Average Ratings of Factors

Factors	Strongly Increase	Increase	No Change	Decrease	Strongly Decrease	Total Rating	Average Rating
Advertisement	48	73	0	-41	-34	46	0.224390243
Customer Ratings	90	67	0	-42	-30	85	0.414634146
Larger Variety of Product Options	126	80	0	-25	-26	155	0.764705882
Easier Access to Product Information	120	57	0	-43	-40	94	0.458536585
Exclusive Online Special Offers	124	58	0	-37	-34	111	0.541463415
Product Recommendations	68	50	0	-39	-26	53	0.258536585

Table-2: Average Rating of the Overall Response²

Overall	Strongly Increase	Increase	No Change	Decrease	Strongly Decrease	Total Rating	Average Rating
Ratings	24	95	0	-63	-44	12	0.058536585

As can be observed in the tables above, all the factors show positive average values, which means that, on an average, people feel that there is an increase in the time and mental effort due to each factor. The highest impact is of 'large variety of product options', which means that most of the consumers get overwhelmed due to the presence of a large variety of products. Whereas, 'advertisements' seem to have the least impact on the perception of increased time and mental effort on e-commerce. Advertisements reduce the time and mental effort spent on searching for a considerable number of consumers. The magnitude of each factor is self-explanatory from the table. Each individual mean rating lies between 0 to 1, which shows that on an average, people perceive their time and mental effort to have increased (due to the factors identified above), yet they feel that such an increase is very low.

If we look at the data of responses on the overall impact of e-commerce, we observe that the result is severely

diversified. This is also evident from the table where the average rating of the 'overall' impact is coming out to be just about 0.05. Around 46 per cent of people believe that their time has increased, however the percentage for 'strongly increasing' stands only at around 5 per cent. Another 43 per cent of people believe that their time has decreased or strongly decreased, thus explaining the reason for a low mean rating. This makes our hypothesis of mental efforts and time being an ambiguous variable true, it is something that will differ with every individual and will depend upon a number of parameters, including individuals' own perceptions about mental effort and time, trade-off between better quality product and more time spent, etc.. Thus, the overall impact of search cost is also ambiguous.

6. Conclusion

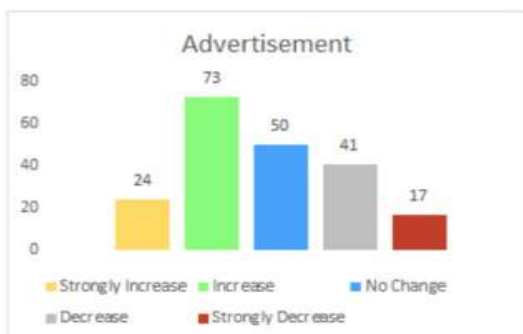
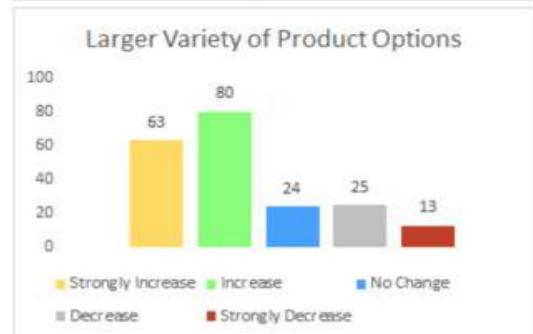
From the above discussion, it is clear that the consumers' physical effort has decreased, and it is the magnitude, direction of time and mental effort on which the search cost depends. The consumer will go on to sample products until the cost of additional searching is equal to the expected marginal benefit. This additional searching depends upon various factors, as stated above.

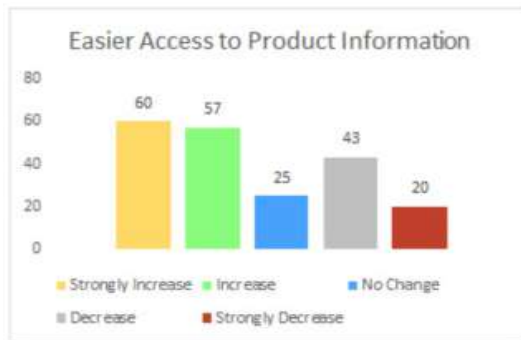
This highlights an important question - if people feel that e-commerce increases the time and mental effort,

Appendix

The following are the responses to the survey:

why do they still use it? Even though e-commerce platforms may result in an increase in time and mental effort while looking for a product, they have surely reduced the physical effort in comparison to the offline markets. Hence, there is a possibility that one variable may push down the entire cost significantly. Consumer expectation is growing at the same pace at which e-commerce is growing. This rising demand for better service has driven more analysis on the part of sellers who now provide incentives to customers according to their individual preference. Thus, the distinct benefits available to the customers ultimately may reduce the net effect of negative utility arising out of increased search cost due to time and mental effort. Also, it is quite possible that people fail to consider the travel time and other associated costs. Thus, it is a possibility that e-commerce is reducing the search cost, but as time, mental effort and physical effort are not quantifiable, the overall impact cannot be assessed with surety in our analysis. Although various studies have concluded that search cost has reduced due to the advent of e-commerce, in the above analysis, the scope of an increased search cost due to the same has also been explored, thereby opening grounds for reforming conclusions in this regard.





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[1] See Appendix for factor-wise and overall responses.

[2] "Overall" here means the perceptions of people about their overall time and mental effort on e-commerce, and not the average of the other factors recognised. In order to evaluate overall impact, we asked a separate question about the overall perceptions of the people.

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SRÉS

SHRI RAM ECONOMICS
SUMMIT 2021



SHRI RAM ECONOMICS SUMMIT '21

Organised from 10 to 12 April 2021, the ninth edition of Shri Ram Economics Summit, Asia's largest undergraduate economics summit, witnessed more than 10,000 registrations. With unparalleled speaker line-ups, comprehensive workshops and invigorating competitions in store, SRES 2021 attracted various members of academic and garnered interest from 80+ institutions, including IITs, IIMs, DU and Xavier's among others. SRES 2021 was sponsored by GuruQ and Spectrum and covered by India Today, Bloomberg Quint and The Statesman.

Mr. Rakesh Jhunjhunwala

Over the course of an hour, India's most renowned investor, popularly known as the 'Big Bull,' took the audience through his journey of investing and becoming a business magnate. Mr. Jhunjhunwala gave exciting anecdotes and examples from his own life to highlight the simple, but often overlooked keys to success. Providing the audience with a fresh perspective of the financial markets, he capped off his speech by saying, "your patience will be tested but your conviction will be rewarded."

Ms. Anshula Kant

Ms. Anshula Kant, the first woman Managing Director and CFO of the World Bank, graced SRES 2021 with her presence. She provided the audience with insights into the challenges facing the world, ranging from inequity in resource allocation and poverty to climate change. Ms. Kant also described the measures that the World Bank is taking to help countries navigate the coronavirus pandemic and emphasised on the need for global partnership and solidarity in these difficult times.

Dr. Ajay Kumar

Dr. Ajay Kumar, the Defense Secretary of India, provided several insights into the privatisation of defence equipment and the consequent impact it would have on the country. He also highlighted the pace of technological advancements and the significance technology holds in national security. Stressing on the need to become 'atmanirbhar' in defence manufacturing, he emphasised that their aim is to boost defence production, develop new technology and give significant roles to private players in the defence sector.

Mr. Punit Renjen

Mr. Punit Renjen, the Global CEO of Deloitte, provided insightful lessons on negotiating difficult situations in the corporate world, highlighting the importance of being creative, positive and strong-headed. From his origins in Rohtak to being a visionary leader of Industry 4.0, he talked about the importance of being hardworking, driven and persistent in life. Overall, he captivated the audience with his never-say-die attitude and astounding resilience. Given his command and expertise in areas pertaining to automation and data exchange in manufacturing technologies, his optimism about the future of the same was revealing.



Dr. Shekhar Shah and Prof. Harsh V Pant

In an enlightening panel discussion, the Director-General of the National Council for Applied Economic Research (NCAER), Dr. Shekhar Shah and the Director of Studies and Head of the Strategic Studies Programme at the Observer Research Foundation, Prof. Pant explored the implications of the budget 2021. They reviewed India's international policies and pointed out ways of leveraging strengths and mitigating weaknesses.

Mr. Dinesh Khara

Currently serving as the Chairman of the State Bank of India, he has over 36 years of experience in the banking sector. At the Summit, Mr. Khara spoke at length about the innovations in the Fintech industry and pointed out the threats and opportunities associated with the same.

Mr. Satyendar Jain

Renowned for having revolutionized primary healthcare access through Mohalla clinics, Mr. Satyendar Jain, Minister for Health and Home, Government of Delhi, took the audience through his journey of embarking India on the road to Universal Health Care. He also shed light on making healthcare accessible to the poor. It is his genius that the visit to a doctor is no longer a days-long mission for the poor. Attaching special importance to healthcare under the broader theme of governance, Mr. Jain also reflected on the importance of the Mohalla scheme and how it is a harbinger of change in the Indian Healthcare landscape.

Mr. Hardeep Singh Puri

The Minister of Civil Aviation under the Government of India engaged in a conversation about the future of India's economy. Delving deeper into the government's handling of the pandemic, Mr. Puri spoke about how state emphasis must gradually shift from lives to livelihoods since the latter feeds majorly into the former. He also highlighted the need for innovation and greater privatisation moving forward. Overall, he captivated the audience by his vision of the Indian Aviation and Commerce industry, as well as India in 2030.

Mr. Abidali Neemuchwala

The former Managing Director and CEO of Wipro, Mr. Abidali Neemuchwala walked the audience through the basics of venture capital and emphasised that "Venture Capitalists must bridge the gap between startups and access to opportunities through mentorship."

Mr. Ajay Maken and Mr. Anil Sardana

In this riveting panel discussion, Mr Ajay Maken, the General Secretary of All India Congress Committee and Mr. Anil Sardana, MD-CEO of Adani Transmission Ltd discussed at length the need for reforms in the power sector. Mr. Maken also addressed the story of Delhi's power sector privatisation and its dramatic impact.





Mr. Ravish Kumar and Mr. Akash Banerjee

In this scintillating panel discussion with Mr. Ravish Kumar, Senior Executive Editor, NDTV India and Mr. Akash Banerjee, Host of The Deshbhakt, delegates asked various questions, delving deep into the intricacies of Indian politics and media. After touching upon the pandemic and the state of the freedom of speech in India, the panel concluded on a positive note by highlighting the need for youth activism and encouraged all delegates to be inquisitive about the happenings in the country and voice their opinions wherever needed.

Workshops:

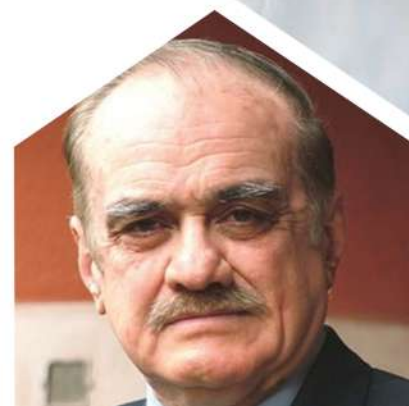
In collaboration with the leading think tanks of the country, SRES 2021 allows the delegates to engage, discuss and delve deeper into the most critical issues of the world today.

Council on Energy, Environment and Water (CEEW): Energy Transition and Investment Trends in Emerging Economies

In this enriching session, Mr. Arjun Dutt, Senior Analyst at CEEW Centre for Energy Finance, shared his insights on the role of decarbonisation of the power sector as well as of investment in renewable energy in combating climate change. He looked into the contribution of sustainable investments in ensuring India's development, comparing India's energy trends with those of other countries and shed light on the aspects where the Indian policy-making is lacking. He concluded by highlighting the scope of renewable energy in India and his vision for future.

Vivekananda International Foundation: India's Security Environment, Internal and External Policies

In this enlightening workshop by Dr. Arvind Gupta, Director of Vivekananda International Foundation and Lt. Gen. Ravi Sawhney, Distinguished Fellow of Vivekananda International Foundation, the discussion centred around India's security environment and its internal and external policies towards the same.



DISCOURSE

AN ARCHIVE OF IDEAS



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WRITER, HISTORIAN &
DISTINGUISHED PROFESSOR



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HEALTHCARE
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**THE NEW FUTURE OF
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**IS THE FOURTH PILLAR
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with Mr. Karan Thapar
'THE DEVIL'S ADVOCATE'



**IMPORTANCE OF
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**A DISCUSSION ON THE
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**CAN DATA HELP CHANGE
THE COURSE OF THE
PANDEMIC?**
with Dr. Shamika Ravi
SENIOR FELLOW,
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PETROLEUM AND NATURAL GAS





DATALAB



HEALTHCARE INFRASTRUCTURE INDEX

Introduction

This data report aims to develop a state-wise health infrastructure index for India over a period of 9 years, from 2011 to 2019. On the basis of the available data taken from various issues of the National Health Profile, eighteen indicators of health infrastructure have been considered. Ranks are assigned to various states for its health infrastructure as per their index values, for all nine years.

This report aims to find the availability of basic healthcare facilities in various states while keeping the performance of other states in perspective. This would help in identification of the states that are performing better than the national average and vice versa. Once identified, the reasons for their not up-to-the-mark statistical performance are pinned down to some particularly poor performing indicators and steps can be taken to improve the status quo.

Methodology

For the purpose of this study, 18 variables necessary for an efficient healthcare system were identified. The chosen variables include the built environment and supporting elements: equipment, access, systems and processes, initiatives and staff, as defined by the NCBI. The variables do not take into account indicators that measure well-being of the individuals in the state, but rather represent the inherent capacity of the state with regard to facilities and resources to provide health care services.

To ensure that, a scientific and a step by step approach has been used to assign weights to various indicators. This scientific approach is known as Principal Component Analysis/ Factor Analysis methodology.

To ensure that the selected data set had enough sampling adequacy and relation, KMO and Barlett's Test was performed. Once the data adequacy was established through the KMO and Barlett's Test, eigenvalues were calculated for all the 18 components or health indicators and weights were assigned to each indicator.

Findings

Through the study, it is found that each of the health indicators in the country has been on an increasing trajectory. Each state has become better off in 2019, with the index value rising by at least 33.26 per cent from their values in 2011. However, a disparity between the conditions in each state was observed.

We aspire that this report shall be a guide for future research across a range of ideas relevant to the domain.



COMPREHENSIVE DEVELOPMENT INDEX

The objective of this publication is to create a global ranking system that is inclusive of all aspects of human well-being in the 21st century. While previously studied human development indices have only measured basic necessities like mean years of schooling, life expectancy at birth and GNI per capita, this study acknowledges that human life is more holistic than that and thus existing rankings are not representative of the real picture across countries. Issues such as access to the internet, unemployment rates and gender inequality are crucial determinants of man's well-being in our society today.

Using intensive analysis and scientific methodology, a new system for ranking countries was created and compared with existing rankings.



PROJECT JAANKARI

An initiative by college students to propel knowledge-sharing and enable primary research in relatively neglected sectors. Project Jaankari is The Economics Society's flagship intervention in primary data and research. The project involves the collection of on-ground data, which is analysed using relevant tools.

This analysis, in turn, is used to come up with policy suggestions to improve the working of the system.

Through both primary and secondary data collection, this year, we intended to understand the performance of DTC buses in Delhi, the backbone of Delhi's public transport system. As part of the project, 322 people had been surveyed - 302 commuters/non-commuters and 20 drivers, to understand both sides of the story. The data so collected was used to assess the impact the DTC network created and the efficiency with which it operated and the conclusions so derived were, in turn, used to give relevant suggestions, which shall be submitted to the Government of Delhi.



RESEARCH AND POLICY PUBLICATIONS



Research Report: The Future of Sustainable Energy in India: Benefits, Challenges and the Way Ahead

The report gauges the need to shift towards sustainable energy and studies the challenges encountered during such a change. A detailed study of national and international frameworks and policies has been undertaken. The status quo and the future prospects have been extensively discussed in the report and policy suggestions have also been put forth.



Research Report: Repugnant Transactions and Black Markets-Societal, Legal and Economic Perspective

This research report seeks to provide a comprehensive study of repugnant transactions and black markets by analysing various social, economic, moral and legal concerns associated with such transactions. The study has been supplemented with case studies of contemporary relevance, including kidney exchange and illegal cross-border trade.



Research Report: An Inquiry into the India-China Industrial Differentiation

This research project has been undertaken to analogously examine the historical trends of the manufacturing sector in India and China and to expound the causes behind the manufacturing differential in both countries. It aims to provide a narrative way of analysis for simplicity and hence differs from conventional research literature already available in this domain.



Policy Report: Social Norms and Public Policy

In this policy brief, we try to identify social norms and analyse their impact on government policies. For convenience, the brief is divided into four sections: Education, Agriculture, Healthcare, Women Welfare. Under each of these sections, we explore social norms that are rendering policy responses ineffective. We also suggest modifications to existing policies as well as some new policy interventions that might solve problems by taking cognisance of the existing social norms.



Policy Brief: Beedi Industry in India

This policy brief seeks to comprehensively analyse the beedi industry in India, primarily on the basis of four parameters: economic, social, political/legal and historical. The report details the costs and benefits associated with the beedi industry and concludes with policy suggestions for the sector as a whole.

**BUDGET
2020-21**



Policy Brief: Budget 2021-22 Analysis

This policy brief aims to analyse the budget 2021-22 by comprehensively looking at sector-specific proposals in the budget and undertaking a cost-benefit analysis of the same. Sectors like healthcare, education, power and energy, finance, infrastructure, agriculture and so on will chiefly be analysed by charting an overview, analysing proposals versus expectations, and drawing conclusions.



Policy Recommendations

When the government or a think tank releases a notice calling for views, comments, suggestions or recommendations on their policies, The Economics Society actively participates in the same. Throughout the course of this year, we've perused several policies, taken them up section-wise and analysed every clause to arrive at detailed and practical solutions. Some of the key policies and bills we took up this year as follows:

- 01 Cigarettes and Other Tobacco Products Amendment Bill, 2020:** Suggestions with respect to sections covering provision of smoking in public places, trade of cigars, penalty system, provisions for minors.
- 02 The Electricity (Amendment) Act 2020:** Comments provided on cross-border trade, tariffs and subsidies, renewable energy to increase market efficiency and improve regulation.
- 03 Amendments to the Apprentices Act, 1961:** The suggestions centred around rigourising the application and evaluation of apprentices while making the process more inclusive, monitoring the TPAs and empowering them and so on.
- 04 India's Arctic Policy:** The comments urged the policymakers to clearly define the international environmental regulations, detail an action plan and introduce an incentive scheme by charting out proposed methodologies.

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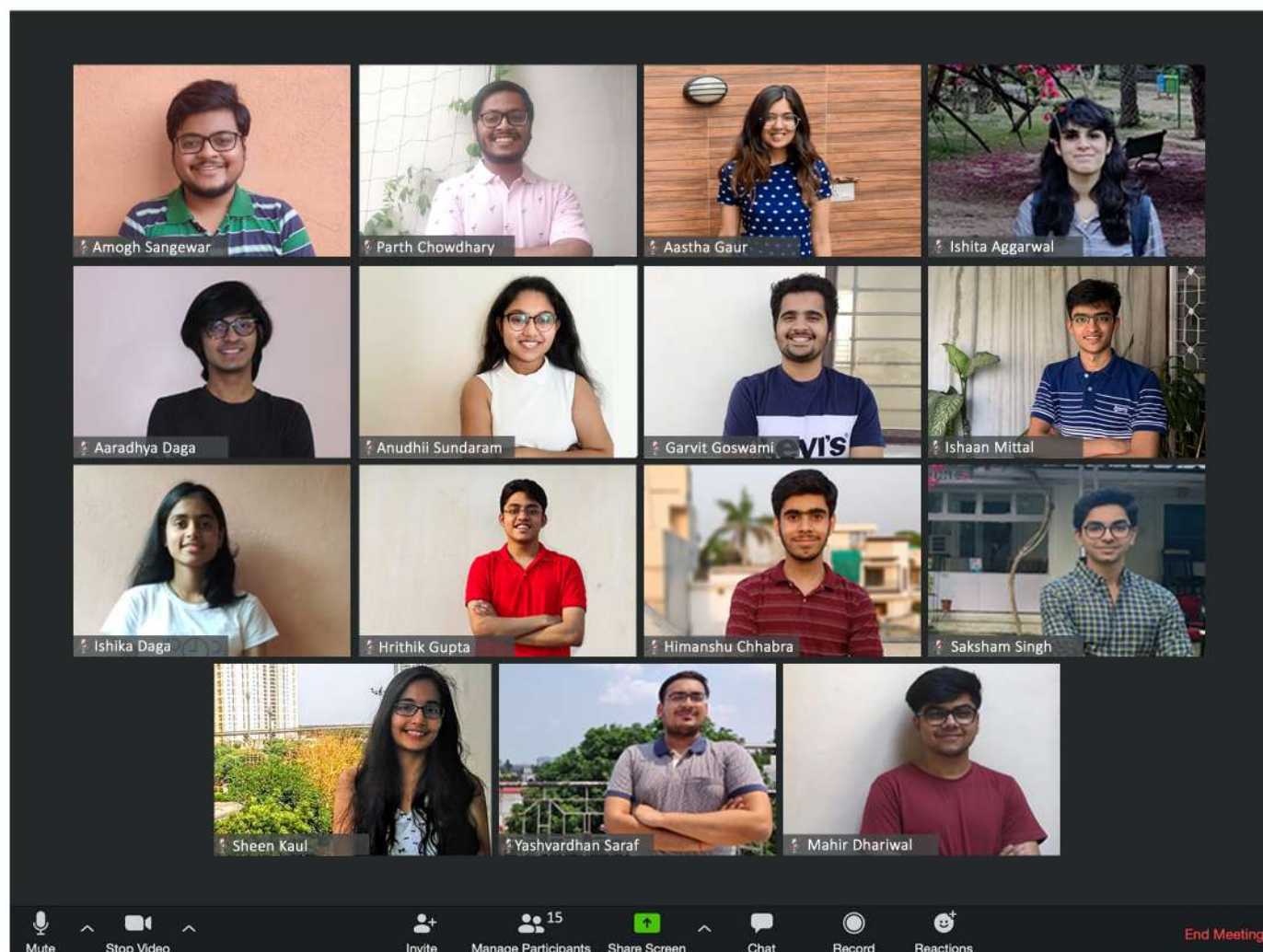


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Finance Coordinators	Hrithik Gupta Sheen Kaul

THE ECONOMICS SOCIETY

2020-21



AASTHA JHA



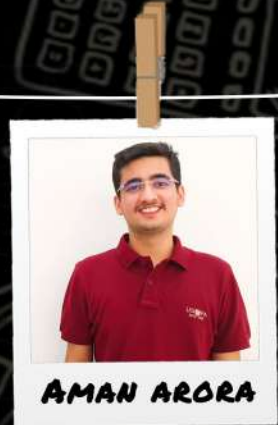
ABHEYA ARORA



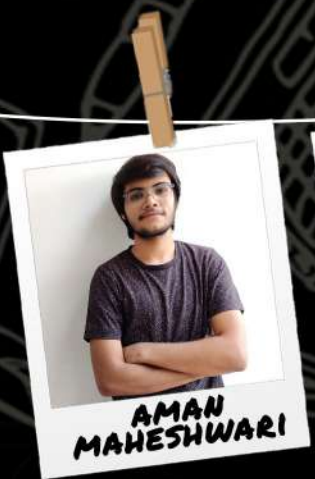
**ABHIRAM
LOKANATHAN**



**AISHWARYA
CHADHA**



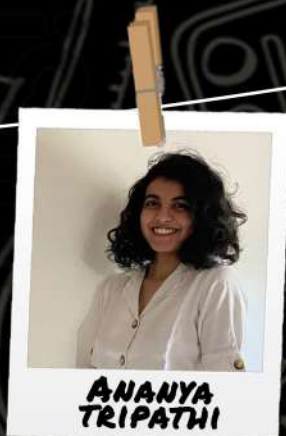
AMAN ARORA



**AMAN
MAHESHWARI**



**ANANYA
DHANUKA**



**ANANYA
TRIPATHI**



ANJALI JAIN



ANURAG GARG



**AVANTIKA
BAHADUR**



AVI MEENA



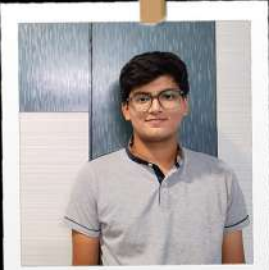
CHIRAG BANKA



DHRUV LOWE



**HARDIK
KAPOOR**



HARDIK VAKIL



JANHVI MALIK



KANISHQ CHHABRA



KESHAV TODI



KHUSHI KAPOOR



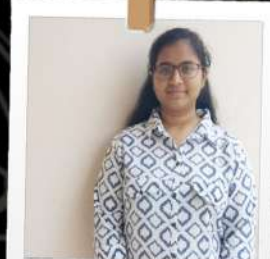
KOUSHIKI AICH



KRISH AGRAWAL



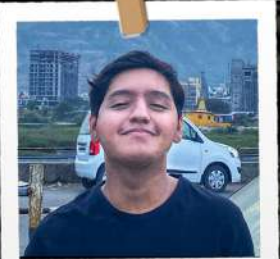
MAITHILI SHARMA



MANYA GUPTA



MANYA KUMAR



MEHUL JOSHI



NEEVATI FITKARIWALA



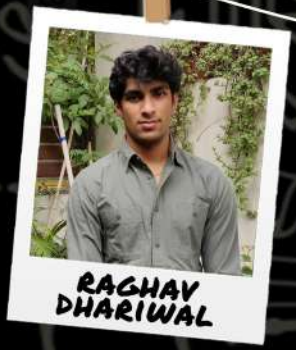
NEHAL KAUL



NEHARIKA MISHRA



NIKUNJ KHETAN



**RAGHAV
DHARIWAL**



RAISA AZAD



**RAKSHITA
JANJIRE**



RAYA DHAWAN



RYAN BARUA



**SANSKRITI
SUNDERUM**



SHIKSHA MODY



SRISHTI JAIN



**SURABHI
AGARWAL**



**SWAPNIL
SAGAR**



**TUSHAR
MANDHANA**



**VANSHIKA
MALPANI**



YASHVI MITTAL



**AROOSH
SINGH**



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