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**Jindal School of Government
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JINDAL JOURNAL OF PUBLIC POLICY

AUGUST 2021

VOLUME 5

ISSUE II

EDITORS' FOREWORD

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Assistance Partnerships
Jyotsna Bapat

Health Impacts of Climate Change in
the Pacific Region
Saber Salem & Armin Rosencranz

Pandemic Pedagogies and Policies in
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Editors' Foreword

Dear Readers,

We would like to convey our deepest condolences to all those who have lost someone in the family or among close relatives and friends owing to COVID. Many of us also lost near and dear ones because they could not reach health institutions when care was needed for other reasons. Our condolences to those families too.

The reality of this pandemic is that it is rare to find a person who has not lost someone they know during this time. The official records suggest that 1 out of every 2500 adults has died in the country. If we go by the experience around us, the magnitude of casualty may be many times higher than the official numbers. Print and electronic media brought out investigative stories to point out gross under-reporting of deaths. Several eminent researchers used innovative methods to provide alternative estimates of COVID mortality in India, while the state continued to deny and dismiss those studies. Measuring deaths and cases accurately therefore, is crucial to design and implement appropriate policies.

The fault lines of India's public policy were exposed more rapidly during the last year and half than they would have been under more normal circumstances. While the people of India faced the worst health and humanitarian crisis and continue to do so, the state leaders responded with little empathy and sensibility, remained busy in propaganda, and displayed a complete lack of foresight. The images of thousands of bodies floating in the river Ganges portrayed systematic denial by the state, denial of quality treatment, and denial of basic dignity in death. It reminded us of the horrors of the influenza pandemic of 1918, during the colonial rule, where more than a million died, and similar scenes of dead bodies left floating in rivers were witnessed. It is extremely saddening to realize that after almost seventy-four years of Independence, the plight of millions of poor Indians has hardly changed!

The current volume brings out some key issues related to the COVID-19 pandemic and the disruptions brought about in various dimensions of the lives of the people by the subsequent lockdowns. Given that the world economy has been hit severely with rising unemployment, hunger and poverty, there were popular expectations that the world would begin to strongly move away from the neo-liberal dogma and focus on welfare. In contrast, neoliberalism seems to have established an unparalleled hegemony over economic thinking. Income and wealth inequalities have increased globally, with extreme levels of wealth concentration taking place with unprecedented velocity. Apurva K.H. and Achala S. Yaresemehave, in their paper, attempt to measure income inequality using Social Accounting

Matrix (SAM) for the state of Karnataka for the year 2013-14. The SAM captures both the structures of production and distribution. The results of the multiplier show that the social sectors of education and health exhibit the highest potential in income creation with direct intervention, thus implying better income distribution in the economy. This piece is of considerable significance for a country which has the dubious distinction of having the lowest public spending on health.

Jyotsna Bapat's invited piece on India's Official Development Assistance Partnerships (ODA) highlights the disruptions that the pandemic has brought about regarding the future of ODA projects. She aptly suggests that adapting ODA to the Indian reality would mean multilaterally investing in mid-sized projects in friendly developing countries. Strategically, these developing countries could be selected around the Indo-Pacific region and within Asia. Pragmatically, it could be beneficial if these projects were formulated in the context of the new geopolitical and economic realities, including post-COVID economic recovery, climate change, renewable energy, disaster resilient infrastructure connectivity and even the blue economy.

While the world is looking for recovery and reconstruction, the imminent danger of ignoring climate issues for the sake of aggressive economic expansion is looming large. It seems the little gains achieved from the prolonged negotiations of decades to build a sustainable economic order are being squandered away. As a consequence, aggressive destruction of climate could be severe and multidimensional, among other things, affecting human health. Saber Salem and Armin Rosencranz trace the various disruptions of physical, biological, and ecological systems induced by climate change which are likely to intensify existing health threats and lead to an emergence of new health threats. The best solution and way forward, according to the authors, is to convince national legislatures to translate international agreements into domestic laws so that businesses, multinational corporations and governments can be held accountable for their actions. Currently, there is no such legal framework to discourage these entities from increasing their fossil fuel generation and further damaging the environment.

COVID-19 induced lockdowns have prompted further deterioration in the lives of women over the world. Umika Chanana's paper on domestic violence seeks to critically analyse the plethora of challenges faced by women during the pandemic that emanate intense consequences on the health and wellbeing of both women and children in families. Legal measures have fallen short of preventing violence and attaining gender equality thus far. The paper tries to identify the risks and consequences of the crisis faced by women and children as they are caught up in the epicentre of the pandemic, and it evaluates the government policies dealing with the covert crisis.

Jhalak Agarwal, in her paper on unsafe abortions, discusses the plight of unsafe abortion services in India, shedding light on the regenerative health issues that are preventable but have been dismissed and neglected by emotional debates and discussions. Socio-economic vulnerability, early pregnancy, and insufficient and inadequate access to healthcare services put many women at the risk of unsafe abortions. Jhalak's paper draws evidence from various sources to present the author's perspectives on how improper access to safe abortion care acts a major barrier.

The pandemic has also brought about transformations in the way knowledge and skills are imparted. School education has been affected significantly. The digital divide has accentuated rich-poor, public-private and rural-urban inequalities more than ever. In this context programmes like Saksham Haryana, which are intended to improve learning outcomes in government primary schools, bear special significance. Arushi Sharan and co-authors attempt to shed some light on the implementation of the Saksham Haryana programme by evaluating the role of individual implementers at every level of the programme. The paper tries to identify the nodal points in the implementation of the program and offers suggestions for improvements. This study has potential lessons for public programs in general and school education in particular.

Face-to-face classes have given way to virtual meetings and learning not only in formal schools but also in the training of various art forms. Mridula Anand's piece brings out the divide that emerged in the field of classical arts between those who embraced technology and those who could not. She deals with a multitude of new and interesting learnings and practises that have made inroads into performance arts and also highlights the significance of these in a post-COVID regime. This article focuses on the ways in which the discussed technological leaps will distinctly change the way classical Indian dance teachers operate and teach, and suggests policy changes.

We are glad to inform you that we are able to bring out the journal within the regular interval for the third time consecutively in these trying times of the pandemic. This would not have been possible without numerous contributions of our colleagues. We are particularly indebted to Vivekanand Jha for almost single-handedly managing all the correspondence with the authors, reviewers, editors and helping us in all possible ways. Special thanks are due to our esteemed colleagues, Milindo Chakrabarti, Bhuvanewari Raman, Kaveri Ishwar Haritas, Geeta Sinha, Avanindra Nath Thakur, Dhritiman Gupta, Gargi Bharadwaj, Shivangi Chandel, Vidya Subramanian and Divya Chaudhary for taking the time and patiently reviewing submissions and resubmissions. Active involvement, mentorship and encouragement from our Dean R. Sudarshan helped us at crucial junctures. Shweta Venkatesh took the pains to read all the pieces, made language and grammatical changes and also provided critical suggestions

related to the content with impeccable efficiency. Our heartfelt thanks to Shweta for being patient with us and responding to our repeated requests with grace. Mani Mala, Manager & Academic Co-ordinator of the Jindal School of Government and Public Policy, was forthcoming with support whenever we were in need. Manoj Kumar's prompt support in designing the issue and Naveen Kumar and Durgesh Nath Tiwari's support in uploading the content on the website came at a key stages. We deeply appreciate their efforts.

We hope to come back with our next issue soon and provide young and experienced voices a common platform for a healthy discourse on public policy. Please help us reach out to wider academic circles and improve our content through your comments and suggestions.

Enjoy reading and stay safe!

Thanks and warm regards

Manini Ojha and Indranil
Co-editors, Jindal Journal of Public Policy

INDIA'S FUTURE DEVELOPMENT ASSISTANCE PARTNERSHIPS

Jyotsna R Bapat¹

Abstract

The COVID-19 pandemic has resulted in the stalling of many projects undertaken in the connectivity and power sector both nationally and internationally as well as in many sectors in which India had initiated investments in partnership with multiple friendly nations. As a middle-income economy and an emerging market, India invests in Official Development Assistance (ODA), partnering with other developing or middle-income countries. Learning from the strategies of the Group of 7 (G7), a democratic group of the most financially and industrially advanced countries and adapting their policies to the Indian reality would be one option for India to shape its future ODA investments. Adapting ODA to the Indian reality would mean multilaterally investing in mid-sized projects in friendly developing countries. Strategically, these developing countries would be selected around the Indo-Pacific region and within Asia. Pragmatically, it would be beneficial if these project priorities were formulated in the context of new geopolitical and economic realities, including post-Covid economic recovery, climate change, renewable energy, disaster resilient infrastructure connectivity and even the blue economy. India has reiterated its strong commitment to a rules-based multilateral order for ensuring international peace, stability, and prosperity. India would thus be in a position to invest in the sectors of sustainable environmental development, climate, energy, infrastructure connectivity, and fintech. Given India's human resource capabilities and the size of its partnership funding, the country can effectively invest in mid-sized projects in these sectors. A review of the existing policies, projects underway, and achievements thus far in the aforementioned sectors as well as further requirements, is essential before India undertakes any further ODA investments.

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INTRODUCTION

More than 40 countries have committed to providing India with the medical resources and pharmaceutical products that the country urgently needs to battle the sudden surge of COVID-19 cases, ongoing since the start of the second phase around 4th April 2021. ‘They have come forward on their own. We have assisted and we are getting assistance, it shows an interdependent world’ said the foreign Secretary, Ministry of External Affairs (MEA), India². In 2015-2016, there was a shift that happened when India refused bilateral financial aid from most of the Group of Seven (G7) countries. Soon after in 2017, the government declared that India had been a net donor to the ODA. The Indian Government’s budget for the year 2019-2020 had allocated 1.32 billion USD (INR 8415 crore) to India’s foreign aid programme which was 0.3% of the overall budget. However, there is no fixed budget that is approved by the parliament as part of the Development Partnership Fund (DPF) routed through the MEA in India.

India is not alone in this foreign aid or Official Development Assistance (ODA). In this recent decade from 2010-2020, 19 countries, mostly middle-income countries with emerging economies, have reported investment with other countries through the development assistance initiative. This is a new trend among middle income countries to be involved in South-South dialogue and to be broadly categorised into three: providers of South-South Cooperation members, Arab donors, and Emerging EU donors (within the EU, some donors are newly formed countries, and some are old EU countries reviving development initiatives). Together, their contribution is estimated to be 9-10% of ODA³.

DEVELOPMENT PARTNERSHIP ADMINISTRATION (DPA)

Within a few years of its independence, India had been participating in bilateral development assistance particularly by providing grants to its immediate neighbours in South Asia. Indian grants have funded transport infrastructure like roads and railways, dams for power and agriculture, and trade and investment. However, funding of multilateral development projects is relatively new. In the year 2019-20, India allocated foreign aid through an administrative set up known as the Development Partnership Administration (DPA) within the Ministry of Foreign Affairs (MEA). The MEA sought to learn from the experiences of various other prominent models such as those of USAID and DFID. Learning from prominent bilateral donors, DPA was created as an integral part of the MEA. Like them, it does not formulate any development assistance policies, but deals with their coordination and implementation. India’s development assistance takes one of three forms: grant assistance, lines of credit, and capacity building. These Development Partnership Funds (DPFs) are closely linked

to India's foreign policy and strategic interests in commerce and economy, energy security, food security, and search for natural resources and defence interests⁴. Not being an independent agency, the DPA has no officially established 'vision, mission or procedures' or annual budgets. What has evolved is funding that is dependent on the geopolitical and security interests of the time. Currently, the outputs and outcomes of DAF are not transparently published in the public domain.

MODEL FOR DEVELOPMENT ASSISTANCE PARTNERSHIP

The Indian model of development partnership is comprehensive and involves multiple instruments including grant-in-aid, line of credit, and capacity building through technical assistance. Depending on the priorities of partner countries, India's development cooperation ranges from commerce to culture, energy to engineering, health to housing, fintech to infrastructure, sports to science, disaster relief and humanitarian assistance to restoration and preservation of cultural and heritage assets⁵. India's approach to development partnership is evolving. A largely human-centric approach marked by respect, diversity, care for the future, and sustainable development, its fundamental principle is cooperation, respecting development partners, and being guided by their development priorities. India's development cooperation does not come with any conditions, as stated by the Hon'ble Prime Minister of India Narendra Modi in his address at the Parliament of Uganda in July 2018. "Our development partnership will be guided by your priorities. It will be on terms that will be comfortable for you, that will liberate your potential and not constrain your future... We will build as much local capacity and create as many local opportunities as possible," said the prime minister⁶.

Though there is no separate organisational set up for the DPA, it has laid down a process for handling multiple instruments for fund allocations, including grant-in-aid, line of credit and capacity building and technical assistance. Existing ranks within the MEA are assigned to carry out these processes.

NEW DIMENSION TO DPA

On 12 December 2015, after the UN Framework Convention on Climate Change, a legally binding international treaty on climate change known as the Paris Agreement was adopted by 196 Parties at COP 21 in Paris and entered into force on 4 November 2016. The goal of this treaty is to limit global warming to well below 2 degrees Celsius, preferably to 1.5 degrees Celsius, compared to pre-industrial levels⁷. In response, the MEA India through the DPA, has added one more vertical to its agenda for development projects. This is in addition to the horizontal agenda

of environmentally sustainable development as per the UN Sustainable Development Goals accepted by India. The horizontal dimension refers to the measures taken for social and environmental impact mitigation and adaptation for all development aid funded infrastructure projects for their entire lifecycle⁸. The vertical dimension deals with sustainable environmental development in connectivity, climate change, green and renewable energy, and fintech sectors. This vertical dimension in the DPA is the focus of this paper.

G7 STRATEGIES FOR AID AND INVESTMENT

The MEA had sought to learn from the experiences of various other prominent models for ODA⁹ to create the DPA as an integral part of itself. In 2012, the DPA was formed. It was decided that the best way to learn how to proceed further was to look at the global experience of the G7 countries who have similar initiatives, and to study their present and ongoing strategies in developing countries, with a special focus on India's experience with them.

G7 is an intergovernmental organization that was constituted in 1975 and it is made up of democracies that are the world's financially largest developed economies. The G7 ODA strategies, especially as used with regards to funding projects in India thus far, are like each other and these countries do not take any development aid from other countries. In 2011, China had stopped bilateral aid. In 2017, India declared that it would not accept bilateral foreign development aid from any country.

Until 2016, all the G7 countries except Italy had their ODA¹⁰ funded bilateral projects in India. They provided bilateral grants termed as 'Soft-loans' and technical assistance to various infrastructure and social development projects in different regions of India including cities and rural areas. Bilateral loans, also called concessional loans, are loans given by sovereign states. They consist of 25% of the grant element to donor countries¹¹.

As of today, only Japan provides ODA to India. The total amount provided by Japan is approximately 203 billion JPY or 240 billion INR (1.48 JPY=1 INR) in 2019-2020. India has been the largest recipient of the Japanese ODA Loan for several years now since 2010. The cumulative amount of Japanese ODA Loan to India amounts to approximately 3,600 billion JPY. As per the RBI press release in September 2020, the overall external debt from all sources at the end of June 2020 is placed at 554.5 billion USD¹². As the annual long-term debt for 2019-2020 is 449.5 billion USD, 105 billion USD was settled in 2019-2020. Of the 449.5 billion USD,

India's bilateral debt is placed at 27.5 billion USD, while multilateral debt is placed at 64.8 billion USD. Together, these form 20.5% of annual loans, with bilateral debts forming only 6.11% of the debts that India owes to the world, including part capital and part interest.

Table 1: External Debt - Outstanding and Variation 2020

(USD billion)							
Component	Outstanding as at end of			Absolute variation		Percentage variation	
	June 2019 PR	March 2020 PR	June 2020 P	Jun-20 over Jun-19	Jun-20 over Mar-20	Jun-20 over Jun-19	Jun-20 over Mar-20
1	2	3	4	5	6	7	8
1. Multilateral	59.0	60.0	64.8	5.8	4.8	9.8	8.0
2. Bilateral	26.5	27.2	27.5	0.9			

(PR -Partially revised, P -provisional)

More recently, all independent bilateral aid agencies have merged their ODA and commercial loan funding agencies under one ministry, except the USA. The strategies they now employ can serve as a guide for the DPA's investment strategies for its future projects. There was a structural transformation that happened over the last few years in the ODA agencies that were providing aid to developing countries. Table 2 indicates the transformation, whereby the ODA agencies merged with the parent ministry, namely the Foreign Affairs, Investment and Trade Ministry that oversees these aspects in the G7 countries. Except for Japan, which continues to have ODA with India, the other countries involved have ceased their ODA. Japan has an ODA through the Japan Bank for International Cooperation (JBIC) in FY 2018-19, which was at 522.405 billion JPY in two major mega projects in connectivity, hitherto the highest ODA. Japan's bilateral trade with India, for FY 2019-20 (April – December) was 11.87 billion USD¹⁵ in 2019-2020.

Table 2: Transition in ODA agencies to Developing Countries*

Country	Old name	New name	Status	Current Focus in India
Canada	CIDA	GAC	Merged	Gender equity
France	FDA	FDA	Merged	Multimodal transport and water Infrastructure
Germany	GTZ	GIZ	Merged	Science and technology
Italy	IADC	IADC	Merged	Trade and investment
Japan	JAICA	JBIC	Merged	Transport and water Infrastructure
UK	DFID	FCDO	Merged	Fintech
USA	USAID	USAID	Separate	Disaster proofing urban Infrastructure

*(Data is compiled using ODA country wise websites and newspaper articles)

The strategy of all the G7 countries is to accept the ODA related policy, follow the rules laid by the host government, and also to work around these rules in subtle ways when necessary. The fact remains that ODA are ‘loans’ that are to be returned to the bilateral donor country eventually, albeit long term low interest loans. These are relatively safe investments for the donor country as there is a sovereign guarantee against the loans given by the bilateral donor. However, they are a liability for the host country. Thus, while the interest may be low, the risk is minimal to the donor as the host takes on the burden of returning the loan.

Outstanding ‘concessional debt’ or development aid loans by bilateral and even multilateral aid agencies to India remained by and large range-bound for many years. The concessional debt marginally rose by 1.6 per cent to 48.2 billion USD as at the end of March 2020. As a share in the total debt, it declined significantly from around 20 per cent at the end of March 2008 to around 9 per cent at the end of March 2020¹⁴. Principal repayments constitute the bulk of sovereign external debt servicing. While the absolute amount of principal repayments rose over the years, the share of principal payments in the total sovereign external debt service payments declined post 2015-16. This can be mainly attributed to the 2017 ‘no bilateral aid’ policy. In 2017, General V. K. Singh, the then Minister of State for External Affairs, made it known publicly that India had been a net donor in 2015-16 by donating 7,719.65 crore INR (1.1 billion USD) as aid and had received only 2,144.77 crore INR (300 million USD) from foreign countries and global banks for that same year¹⁵. Singh indicated that India could donate much more than it was receiving in concessional debts. The reduction in concessional debt over time could be substantially attributed to the cessation

of ODA from bilateral donors. Thus, when these loans were stopped, the impact on sovereign finances was a positive one. Interestingly, the G7 countries now have a substantial FDI in India (Table 3), which is a higher risk investment to India and G7 than a sovereign loan with a concessional finance would have been. The following table indicates the FDI. They are in the forms of pension funds, insurance funds etc. which can be moved in and out of India relatively easily. This is a risk that India is willing to take.

Table 3: FDI by G7 countries in 2020

Country Name	USD in Billion
Canada	32.60
France	6.59
Germany	11.90
Italy	-
Japan	32.06
UK	28.32
USA	45.9
Total FDI in India 2020	157.43

*(Data compiled from Country-wise details about past trade and aid which is available on MEA website eg.https://mea.gov.in/Portal/ForeignRelation/India-Japan_Bilateral_Brief_feb_2020.pdf for details on Japan-India details, and so on.

As a result of India's ceasing to accept bilateral aid from the G7 countries, two new triangular relations have developed with each of the G7 countries. The first of these relations involves a donor country, an industry headquartered and located in India, and a chamber of industry located in the donor country but favouring the said Indian industry. The second triangular relation involves a donor country, international NGOs located in the donor country linked with a national level NGO located in India. This industry funding is supported by FDI with Technical Assistance. While the development aid provided by these countries is given directly to multiple Indian NGOs, the funds given are modest. Both the private industry funding and the development aid funds are used for projects in the new vertical sectors. Data indicated that the triangular economic relations have brought more foreign industry and FDI into the country after the sovereign concessional and bilateral loans were stopped by India. G7 countries offer loans to government agencies, Indian private banks and Indian private industries or set up their own industries in India with their investment funds along with technical assistance and training and guidance.

WHAT CAN INDIA DO?

As seen from the aforementioned cases, India possesses the technical skills, capacity for competence, and even the ability to provide rolling stocks and equipment needed for projects. This bodes well for the future investment of DPFs in other countries for Indian DPA projects through MEA. The sectors in which DPFs can be invested are climate change, energy, connectivity, sustainable development, and fintech — namely the new verticals. Projects too, would be in sectors such as new and renewable energy, disaster risk proofing infrastructure, and fintech in the financial and service sector. Despite these positive conclusions, India lacks the large funds that are required for mega projects that G7 countries, or even China, possess and can invest easily. However, the gap between the mega projects that a developing country desires and the projects that a developing country can afford to undertake within its budget can potentially be filled with medium sized projects. This is a point of entry for India.

As per its foreign policy, India's primary focus is on its neighbour countries, i.e. Asia and the Indian Ocean rim countries. Any project selection will always have to take into account other strategic calculations besides the economic ones, namely those of energy security, defence, geopolitical security and environmental security. South-South Cooperation has created the opportunity to invest in countries that qualify these criteria. This is a new area in which India is taking a leadership role to create funds, such as the India-UN fund for South-South cooperation, which was created for disaster risk proofing infrastructure in urban areas and to which USAID expressed a willingness to contribute. Thus, the DPA MEA appears to be on a developmentally-sound track.

IMPROVING DEVELOPMENT ASSISTANCE PARTNERSHIP

A mature view would acknowledge both failures and successes, the job done and remaining to be done. India, while being a middle-income country and an emerging market, has retained third world developing country characteristics in both its bilateralism and in its multilaterally funded Development Partnership Projects. The same systems that allow for the DPA projects to not succeed, also have the capacity to respond to crises and to operate effectively on a mission mode or through Special Purpose Vehicles (SPV). To quote an example, the same DPA has shown grit and persistence in pushing for the India-Myanmar-Thailand (IMT) trilateral highway that will provide connectivity from Thailand to India, across Myanmar, thus linking the three countries effectively. When Myanmar backed out of its commitment to the four-lane Mandalay (Myanmar) to Moreh (India) connection, India stepped in to continue

the project. Through the DPA, it mobilised funding through Exim Bank and hired private contractors through a global tendering process to plan, initiate, and construct a road connectivity project¹⁶. Thus, India has the capability to operate in mission mode and respond to crises effectively. Institutional and industrial capabilities when they function in mission mode, however, renders the “Normal” a snafu¹⁷. There is no accountability for finishing a project on time and within budget. The IMT project from Moreh to Mandalay was not carried out within the timeline and therefore extending the budget is an inevitable consequence. However, the current unstable geopolitical situation renders its future uncertain.

A feature of the ‘third world /developing country’ is lack of accountability¹⁸. There is no fear of action being taken against those responsible for the failure. There is no incentive to keep to the established timeline of the project or to complete the project within the allotted budget. It is only when raising international funds and when the international markets demand rigorous economic, financial, and environmental viability standards and reports do Indian funding agencies perform their duties rigorously. This rigorous accounting and the presence of systemic checks in projects is a resounding feature of all the projects carried out by the G7 countries, both within India and outside India. These systemic checks and processes of accountability are still missing in the Indian projects undertaken abroad. In India, projects favoured by the Prime Minister obtain special sanctions, a feature that is characteristic of a developing country.¹⁹ Future challenges are going to be projects that are in new vertical sectors with no set rules or laws to guide them apart from ‘best practices’. They are likely to have uncertain outcomes, with low probability and high risk of success. Therefore, accountability and transparency in the processes followed become all the more crucial for the MEA projects that India funds bilaterally and multilaterally in its neighbour countries in the future

HEALTH IMPACTS OF CLIMATE CHANGE IN THE PACIFIC REGION

Saber Salem¹

Armin Rosencranz²

Abstract

Climate change will impact human health in numerous ways. Scientists predict that existing health threats will intensify and new health threats will emerge, affecting everyone in one way or the other. Public health will be impacted by disruptions of physical, biological, and ecological systems. The resultant health effects will be respiratory and cardiovascular disease, deaths related to extreme weather events such as destructive tropical cyclones, water-borne diseases, food insecurity and threats to mental health. Climatic conditions will further ease the way for diseases transmitted through insects and other species. Transmission seasons of vector-borne diseases such as malaria, which is transmitted through the Anopheles mosquitoes and kills almost half a million people every year, will be lengthened. Climate change resulting in temperature rise will increase exposure to dengue because the Aedes mosquito vector of dengue thrives in hotter and wetter climate conditions. All nations will be affected by climate change in the years to come, but the Pacific island nations will bear the brunt of severe climate conditions and dangers to their health more than others. People in these small island states will be particularly vulnerable and experience premature deaths and injuries year-in-and-year-out. Their children in particular will be exposed to the resulting health risks, not to mention that the elderly and people with co-morbidity conditions will be equally endangered.

The best solution and way forward is to convince national legislatures to translate international agreements into domestic laws so that businesses, multinational corporations and governments can be held accountable for their actions. Currently, there is no such legal framework to discourage these entities from increasing their fossil fuel generation and further damaging the environment.

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INTRODUCTION

Climate change clearly poses serious threats to human health and international development³. Over the past 50 years, the global climate has changed markedly due to anthropogenic greenhouse gases released into the lower atmosphere⁴. Scientists predict that environmental hazards will continue to affect human health and damage the planet in the absence of effective global governance.

Recent studies have found that rising temperatures will cause devastation in poorer, hotter countries and kill more people if planet-heating emissions are not reduced. It is predicted that climate change-related deaths will increase by 73 deaths per 100,000 people globally by the end of this century. Environmental fatalities will soon match the current death toll from infectious diseases such as tuberculosis, HIV/AIDS, malaria, dengue and yellow fever⁵.

If the global CO₂ emission is not curbed, environmental fatalities and displacement will continue to rise and perhaps surpass fatalities caused by other man-made disasters⁶. The ensuing civil conflict over shrinking resources such as water, food and land will certainly overwhelm governments and create a massive transnational security challenge⁷. Overcrowding of small islands could lead to the spread of communicable diseases and possibly a global pandemic⁸.

Over the years there has been a steady increase in global CO₂ emissions. This increase is predicted to continue over the next 100 years, precipitating natural disasters. Also, the global temperature will rise between 1.8 to 4°C and the ocean level will rise between 0.18 to 1 meter by mid next century⁹. This suggests that there will be more prolonged droughts causing famine and malnutrition, fatalities related to weather events, heat waves causing

³ Lachlan McIver et al., 'Health Impacts of Climate Change in Pacific Island Countries: A Regional Assessment of Vulnerabilities and Adaptation Priorities' *Environmental Health Perspectives*, Vol. 124, no. 11 (2016), pp. 1707—1714.

⁴ Izuoma Egeruoh-Adindu, 'Climate Change effects and international displacement in Nigeria: Legal and institutional challenges', *Journal on Environmental Law, Policy and Development*, Vol. 7 (2020), pp. 8-38.

⁵ Oliver Milman, *Rising temperatures will cause more deaths than all infectious diseases – study*, 2020 <<https://www.theguardian.com/us-news/2020/aug/04/rising-global-temperatures-death-toll-infectious-diseases-study>> [accessed 19 December 2020].

⁶ *Id.*

⁷ Egeruoh-Adindu, *Supra* note 2.

⁸ Uji, *Supra* note 11.

⁹ Howard Frumkin et al., 'Climate Change: The Public Health Response', *American Journal of Public Health*, Vol. 98, no. 3 (2008), pp.435-442.

hypothermia, the growth of infectious diseases, and water and food contamination.¹⁰

The frequency of prolonged droughts will increasingly affect vulnerable countries across the globe. It will disastrously affect the agriculture sector, which will then precipitate mass displacement and hunger as well as fatalities related to malnutrition. The small Pacific Island nations are some of the most vulnerable countries in the world that have fallen victim to the severe impacts of climate change.

This is due in large part to geographic, demographic and socioeconomic factors, such as low elevation and few natural resources¹¹. Sea level rise will put many Pacific Island nations on the verge of sinking, thereby producing a large body of environmental refugees¹².

HEALTH IMPLICATIONS

Climate change and severe weather events will damage the socio-environmental determinants of health such as clean air, safe drinking water, food security and habitat. Scientists predict that severe weather events will cause additional deaths of around 250,000 people between 2030 and 2050 owing to malnutrition, malaria, diarrhoea and heat strokes. It will also displace millions of people¹³.

The health implications of climate change will be respiratory and cardiovascular disease, injuries and deaths caused by natural disasters, changes in geographical distribution of food, water-borne diseases and mental health¹⁴. Environmental disasters affect all populations, particularly the elderly, children, pregnant women and displaced people. The socio-economic effects of climate change on the Pacific health sector will be far beyond the financial means of the island nations.¹⁵

¹⁰ *Id.*

¹¹World Health Organization, *Human health and climate change in Pacific island countries*, 2015<https://apps.who.int/iris/bitstream/handle/10665/208253/9789290617303_eng.pdf?sequence=1&isAllowed=y> [accessed 10 December 2020].

¹²Saber Salem, Armin Rosencranz, 'Climate Refugees in the Pacific', *Environmental Law Reporter*, Vol. 50, no.7 (2020), pp. 10540-10545.

¹³National Health Portal, *Health and Climate Change*, 2020<https://www.nhp.gov.in/health-and-climate-change_pg> [accessed 20 December 2020].

¹⁴Centre for Disease Control and Prevention, *Climate Effects on Health*, 2020<<https://www.cdc.gov/climateandhealth/effects/default.htm>> [accessed 20 December 2020].

¹⁵ Chanel and Doherty, *Supra* note 10.

Scientists believe that the global climate is changing at a much faster pace than was predicted¹⁶. This potentially catastrophic risk to human health and wellbeing could reverse global health gains of the past decades as the number of diseases and deaths start to surge. Thus, climate change is a global phenomenon, which requires collective global action and cooperation.

Further, the health implications of climate change vary from place to place. Pacific Island developing countries all enjoy the same geographical topology and are affected by similar natural disasters. The most common climate-induced diseases that will cause more deaths in the Pacific region are:

- a. Heat-aggravated illnesses: As global temperatures continue to rise, days will become excessively hot, which then leads to heat strokes, cardiovascular and kidney problems¹⁷. Soaring heat will cause many deaths and particularly affect the elderly, children and people with chronic medical conditions. Heat also causes various skin diseases.

The agriculture sector will also receive its fair share of harm from soaring heat where tropical fruit trees start drying up due to lack of water. This means there are fewer local fruits and vegetables available. This is likely to push up the price of these items, making them less affordable to the general population. A side effect is the growing dependency on imported and processed food, which has its own health implications.

- b. Vector-borne diseases: As the world is continuously warming up and cold seasons become temperate, disease-carrying mosquitoes will thrive, resulting in dengue fever, Zika, chikungunya and malaria. According to Fiji's Ministry of Health, dengue, a viral disease transmitted by the *Aedes* mosquito, is endemic in Fiji as elsewhere in the Pacific¹⁸. It affects people of all age groups, especially the elderly and children. Mortality rates increase when medical assistance is not delivered quickly.

Zika, another deadly disease caused by the *Aedes* mosquito, is transmissible from person-to-person. Infected travellers from affected countries take it to the non-infected ones. There has also been a large

¹⁶Carol Death, *Governing Sustainable Development: Partnerships, Protests and Power at the World Summits* (Oxford: Routledge, 2010).

¹⁷Samantha Harrington, *How climate change threatens public health*, 2019 <<https://yaleclimateconnections.org/2019/08/how-climate-change-threatens-public-health/>> [accessed 22 December 2020].

¹⁸Ministry of Health and Medical Services, *Rapid Public Health Risk Assessment Tropical Cyclone Winston Republic of Fiji*, 2016 <http://www.health.gov.fj/wp-content/uploads/2016/03/20160315-Rapid-Health-Risk-Assessment-TC-Winston-Mar2016-for-editing_14-March-2016_final-2.pdf> [accessed 22 December 2020].

outbreak of chikungunya in many Pacific Island countries. This vector disease is transmitted from person-to-person. Children and the elderly are the most-affected groups.¹⁹

- c. Water-borne diseases: Climate change and severe weather events increase the risk of water-borne diseases. When tropical cyclones make landfall and cause flash flooding, they contaminate sources of drinking water by washing human and animal faeces in it. The health impacts of it include gastrointestinal illnesses such as diarrhoea, skin diseases, cholera, and liver and kidney damage²⁰.
- d. Mental Health: Climate change and extreme weather events impair mental health when people's properties get damaged or they lose their loved ones. Death and destruction brought about by climatic disasters scar the affected people mentally and emotionally. It affects people of all age groups, but particularly the poor, daily wage workers and farmers.

Additionally, increase in temperature causes heat stress, which makes working conditions unbearable and increase the risk of cardiovascular, respiratory and renal diseases²¹. Each of these health problems increase stress amongst affected people and negatively impact their mental health. So far, there is no direct correlation between mental health and climate change. However, mental illness is caused by the death and destruction that climatic disasters leave behind²².

- e. Food Security and Malnutrition: Climatologists warn that climate change will expose people to food insecurity not only in the Pacific region but also globally²³. Irregular patterns of rainfall, destructive deluges, prolonged droughts and warming of seawater inevitably reduce agricultural and fishery outputs.

Reduction in agricultural outputs induces chronic hunger and malnutrition. According to the WHO, by 2030, climate change will

¹⁹*Id.*

²⁰United States Environment Protection Agency, *Climate Impacts on Human Health*, 2017<<https://19january2017snapshot.epa.gov/climate-impacts/climate-impacts-human-health.html#ref5>>[accessed 22 December 2020].

²¹World Health Organization, *Global climate change and health: an old story writ large* WHO, 2003<<https://www.who.int/globalchange/summary/en/>>[accessed 23 December 2020].

²²United Nations Framework Convention on Climate Change, *Climate Change Impacts Human Health*, 2017 <<HTTPS://UNFCCC.INT/NEWS/CLIMATE-CHANGE-IMPACTS-HUMAN-HEALTH>>[accessed 23 December 2020].

²³WHO, *Supra* note 24.

account for up to 4.7 million cases of malnutrition, or ‘about 10% of the global total’²⁴. It is estimated that marine resources such as fish stock will see a reduction of 40%, which could threaten the food security and livelihoods of the Pacific Islanders. Climate change could also affect up to 2.6 billion people around the world who, like Pacific Islanders, get their protein from seafood²⁵.

Further, climate change and extreme weather patterns are expected to negatively affect crop yields as floods, droughts and storms damage agricultural crops. Also, warm temperatures will make it difficult for some crops to grow. Pest infestations will increase, which, like natural disasters, severely damage crops. An increase in CO₂ levels reduces the nutritional value of wheat and rice²⁶.

Climate change also causes mass displacement due to persistent sea level rise, landslides, tidal inundation of coastal communities, and loss of croplands and drinking water. There are predictions that the Pacific region will run out of drinking water well before running out of land²⁷. Rising global temperatures will increase poverty, social deprivation and civil conflict²⁸. Population displacement caused by natural disasters will result in overcrowding of small islands. This will increase the risk of transmission of communicable diseases such as respiratory infections, hepatitis A, meningococcal disease and typhoid²⁹.

Acute respiratory infection, measles, diphtheria and pertussis are transmitted from person-to-person through respiratory droplets during coughing and sneezing³⁰. The risks are further increased when evacuation centres in particular are overcrowded and not ventilated adequately. The transmission of meningitis infections and water-related and vector-borne diseases also increase in crowded shelters.

THE WAY FORWARD

Responding to the impacts of the forthcoming climatic shift is a priority for the health sector. Climate change will result in an increase in the

²⁴WHO, Climate change and human health in Asia and the Pacific: From evidence to action, 2008 <http://www.searo.who.int/LinkFiles/Publications_and_Documents_Booklet.pdf> [accessed 23 December 2020].

²⁵*Ibid.*

²⁶Centre for Disease Control and Prevention, *Supra* note 17.

²⁷Salem and Rosencranz, *Supra* note 6.

²⁸Kudrat-E-Khuda, ‘Interrelationship between Environment and Human Rights’, *Journal on Environmental Law, Policy and Development*, Vol. 7 (2020), pp. 39-68.

²⁹Ministry of Health and Medical Services, *Supra* note 21.

³⁰*Id.*

intensity and frequency of extreme weather events such as cyclones, sea level rise, droughts and sea acidification. These impacts will strongly affect the Pacific region³¹. More than other factors, it is the geographic location of these sea-locked island nations in the middle of the vast Pacific Ocean that makes them especially vulnerable to climate change.

The health implications of climate change are more noticeable in the blue Pacific region than in any other regions of the world³². Every year climate change and severe weather events cause extensive damage and destruction to these under-developed island nations. The recent Tropical Cyclone Yasa ripped through Fiji, a small island nation in the South Pacific, causing an estimated damage of hundreds of millions of dollars and many human fatalities³³. Pacific Island countries are subject to unique factors which hinder their socio-economic growth and make them perpetually aid-dependent.

The low-lying nature of these island nations makes them excessively vulnerable to climate change and severe weather events. These island nations are threatened by rising sea levels, destructive tropical cyclones, tidal inundation, sea flooding and sea acidification. Countries such as Kiribati, the Marshall Islands, Tokelau and Tuvalu are barely 4 meters above sea level³⁴. The 10 million people in the Pacific live along the coastline, which suggests that the region will produce a large body of climate refugees. This social phenomenon itself will produce health issues including stress and mental health.

Moreover, climate change and shifting weather patterns are transboundary in character. Therefore, international cooperation and collective action are needed to prevent further environmental degradation. Scientists warn that if global temperature rises beyond 2°C, parts of the earth will become intolerable. Recent studies suggest that even if the global temperature remains at 2°C, there will be a 95% loss of the Great Barrier Reef³⁵, 53%

³¹Georgina Morrow and Kathryn Bowen, 'Accounting for health in climate change policies: a case study of Fiji', *Journal of Global Health Action*, Vol. 7, no. 1 (2014).

³²*Id.*

³³Sheldon Chanell and Ben Doherty, *Cyclone Yasa: two die in Fiji as storm lays waste second-largest island*, 2020 <<https://www.theguardian.com/world/2020/dec/18/cyclone-yasa-two-die-in-fiji-as-storm-hits-second-largest-island>> [accessed 20 December 2020].

³⁴Kazuyuki Uji, *The health impacts of climate change in Asia-Pacific*, 2008 <<https://www.who.int/publications/i/item/the-health-impacts-of-climate-change-in-asia-pacific>> [accessed 21 December 2020].

³⁵^eThe Great Barrier Reef is a site of remarkable variety and beauty on the northeast coast of Australia. It contains the world's largest collection of coral reefs, with 400 types of coral, 1500 species of fish and 4000 types of mollusc. It also holds great scientific interests as the habitat of species such as the dugong (sea cow) and the large green turtle, which are threatened with extinction³⁵. UNESCO, *Great Barrier Reef*, 2019 <<https://whc.unesco.org/en/list/154/>> [accessed 20 December 2020].

transformation of tundra ecosystems, rapid sea level rise and displacement of millions of people from the coastal areas³⁶.

According to the Intergovernmental Panel on Climate Change (IPCC), climate change is a 'crisis of governance, not a crisis of the environment or a failure of the market'³⁷. Many environmental challenges are transnational in character, thus requiring international cooperation and collective action. The current system of nation states tends to encourage competition rather than cooperation.

Diplomatic efforts from the Pacific leaders to encourage a reduction of global carbon emission are failing due to lack of consensus. Tony de Brum, Minister of Foreign Affairs of Marshall Islands, asserted that 'there has been a failure of traditional diplomacy at the UN... we need a new brand of diplomacy... one voice diplomacy'³⁸.

Thus, it is important that world leaders unite and curb climate change before environmental catastrophes become unmanageable. They must consider health a central dimension of climate change and act accordingly. The time for goal setting has passed. It is time to translate words into actions by translating international agreements into domestic laws.

For the past three decades, there have been bilateral and multilateral talks, agreements and gatherings around the world aimed at finding a sustainable solution to environmental problems. Nonetheless, given that international law and agreements are not enforceable at the domestic level, most governments have been slow in implementing those international agreements in their respective countries. Thus, there are growing concerns particularly from the Pacific Island nations that global commitments under these 'global accords are not ambitious or urgent enough'³⁹.

Some governments have acted as free riders by disregarding climate change and continuing with their coal-burning practices. Australia, China and India each burn coal to produce at least 80% of their energy. In the U.S. the Bush Administration opted out of the Kyoto Protocol of 1997: it set no standards

³⁶Evans, *Supra* note 3.

³⁷Quoted in J.P. Evans, *Environmental Governance*, (Oxford: Routledge, 2012), p. 2.

³⁸George Carter, *Establishing a Pacific Voice in the Climate Change Negotiations*, in *The New Pacific Diplomacy* (Greg Fry & Sandra Tarte eds., Australian National Univ. Press 2015).

³⁹Lindsay Maizland, 'Global Climate Agreements: Successes and Failures', 2021 <<https://www.cfr.org/backgrounder/paris-global-climate-change-agreements>> [accessed 20 June 2021].

for major emitters of greenhouse gases, i.e., China and India, while creating mandates for the U.S. that could have harsh economic effects⁴⁰.

In the U.S., the Trump Administration rejected the Paris Agreement of 2015 which encourages the member nations to reduce global temperature to below 2°C, preferably to 1.5°C, compared to pre-industrial levels⁴¹. Despite the fact that it was ratified by 196 Parties at COP 21 in Paris and entered into force in November 2016, the Trump Administration was the first government to withdraw from it⁴². However, President Joe Biden reinstated the United States to the Paris Agreement soon after being sworn in to office and signed a series of executive orders aimed at tackling climate change⁴³.

In the absence of a global coordinating body, the global environment has become an object of global governance without an accompanying regulatory or legal framework. The best solution to address environmental problems is for international agreements to be transposed into national laws.

The rational response to climate change and global warming is that developed nations must make some sacrifices regarding their standard of living and help poorer nations to adopt cleaner technologies and avoid emitting massive pollutants. Unfortunately, most actors prefer their own short-term interests, which leads to further environmental deterioration.

Multilateral organisations such as the UN and the European Union must take the lead to discourage free riding and set boundaries for free riders. Environmental issues do not respect national borders. Carbon emissions are correlated with national economic output. Most developing countries will need to increase their economic activities to address their high level of poverty and underdevelopment.

Climate change has conjured up an environment of mistrust, fear and danger. The global environment is suffering because of the absence of a global power to influence state behaviour. This has led to the ‘prisoner’s

⁴⁰David E. Sanger, *Bush Will Continue to Oppose Kyoto Pact on Global Warming*, 2001<<https://www.nytimes.com/2001/06/12/world/bush-will-continue-to-oppose-kyoto-pact-on-global-warming.html>>[accessed 25 December 2020].

⁴¹United Nations Climate Change, *The Paris Agreement*, 2020<<https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement>>[accessed 24 December 2020].

⁴²**Matt McGrath**, *Climate change: US formally withdraws from Paris agreement*, 2020<<https://www.bbc.com/news/science-environment-54797743>>[accessed 24 December 2020].

⁴³Oliver Milman, ‘Biden returns US to Paris climate accord hours after becoming president’, 2021<<https://www.theguardian.com/environment/2021/jan/20/paris-climate-accord-joe-biden-returns-us>>[accessed 20 June 2021].

dilemma⁴⁴ situation where countries continue with their greenhouse gas emissions and pollute the atmosphere because they are not sure that others would stop if they do. Therefore, it is about time that the international community creates an environment of trust because collective actions need trust and frameworks that create certainty for the actors involved.

Developed countries fear that they will lose their comfortable lifestyles if they make too many concessions to protect the environment. Developing and least developed countries, on the other hand, see it as a danger to deprive human beings of necessities in the name of saving the planet. It is due in large part to these unwarranted fears and mistrusts that governments have not taken bold steps to reduce pollution.

The United States can create this environment of trust. All eyes are now on the Biden Administration to lead the way and create a global coalition to address environmental problems. The environmental catastrophes that we are facing today can be seen as a 'tragedy of the commons'. Common fish stocks in the ocean have been over-exploited by fishing companies, trees have been logged for timber, mining and creating space for more polluting commercial activities. The atmosphere has been used by individuals, commercial companies and nations as a commons in which to dump polluting gases.

International talks must lead quickly to international actions. International agreements must become incorporated into domestic law to make them implementable and to hold polluters accountable. Without the formation of such a legal framework, environmental challenges will become increasingly severe.

According to the International Energy Agency, coal is responsible for 30% of all energy-related carbon dioxide emissions. In 2018, it accounted for 14.66 billion tonnes of carbon emissions. It is predicted to drop slightly to 14.34 billion in 2030 and 13.89 billion in 2040. However, the sustainable development path 'calls for coal's carbon emissions to plunge to 8.28 billion tonnes by 2030 and 3.4 billion by 2040'⁴⁵.

⁴⁴The prisoner's dilemma involves two (or more) prisoners, who may opt to remain silent or collaborate with their captors to obtain a more lenient punishment. But each prisoner knows that if they remain silent and their accomplice talks then they will receive a very heavy punishment... As a result, both prisoners talk and both receive moderately heavy punishments, the very worst outcome in terms of the amount of punishment suffered overall." Evans, *Supra* note 3.

⁴⁵Clyde Russell, *China, India are both the problem and solution for coal, climate change*, 2019 <<https://www.reuters.com/article/column-russell-coal-ia/column-china-india-are-both-the-problem-and-solution-for-coal-climate-change-russell-idUSL4N27U10R?rpc=401&>> [accessed 28 December 2020].

The U.S. is responsible for 11.1% and EU for 5.2% of coal consumption. Interestingly, coal burning is declining in these two regions owing to cheap natural gas in the U.S. and the ‘penetration of renewables’ in Europe. However, there will be a surge in China’s coal use from 2.83 billion tonnes to 2.84 billion in 2030 and 2.87 billion by 2040. The sustainable development path framework, according to the careful research of Clyde Russell, dictates that it must drop to 2.07 billion by 2030 and 1.15 billion by 2040⁴⁶.

With that in mind, the future of coal is in the hands of China and India, which currently account for 60.2% of the global electricity that is generated by coal. India’s demand was 586 million tonnes of coal equivalent in 2018. This could rise to 938 million by 2030 and 1.16 billion by 2040. It has to drop to 546 million to meet the sustainable development scenario⁴⁷.

Since governments are not bound by any domestic laws to reduce their coal use and accompanying greenhouse gas emissions, the outlook for a significant reduction in carbon dioxide is bleak. Therefore, environmental protection must become entrenched in civil laws in order that governments can be held accountable.

CONCLUSION

Climate change has undeniably become an existential threat to coastal communities. Many island nations, particularly in the Pacific region, have already started sinking. The ten million Pacific islanders who will be dislodged from their homes will have no place to take shelter. Compounded with this disaster are the health risks associated with climate change. These displaced peoples will be exposed to various types of diseases, malnutrition and premature deaths. Extreme weather events have already taken a heavy toll on their subsistence agriculture and other sources of food. This reduced availability of nutritional sustenance and clean drinking water poses a major health danger.

Destructive natural disasters have increased markedly, claiming many human lives and severely damaging properties. Each of these natural disasters introduces new diseases and pushes available resources to the limit. Climate change is an existential threat to sea-locked island nations. We are indeed in a climate emergency, which requires immediate action from all nations. Every nation is obligated to fulfil its moral and legal obligations towards the environment and rescue its endangered people.

⁴⁶*Id.*

⁴⁷*Id.*

The global environment is deteriorating because of ever-increasing human activities. This deterioration is compounded by the absence of a global authority and of domestic legal frameworks to discourage free riding, encourage cooperation and prevent further environmental damage. Governments in the global North and global South are pursuing their short-term economic gains with complete disregard to environmental consequences.

The best solution and way forward is to convince national legislatures to translate international agreements into domestic laws so that businesses, multinational corporations and governments can be held accountable for their actions. Currently, there is no such legal framework to discourage these entities from increasing their fossil fuel generation and further damaging the environment.

There have been many international talks and agreements aimed at addressing the current environmental challenges. However, many governments either disregarded them or walked out of them. The Bush and Trump Administrations withdrawing from the Kyoto Protocol and the Paris Agreement respectively are prime examples. As one of the major global carbon emitters, it was not expected of the US to behave irresponsibly towards a major global challenge, which threatens the very existence of current and future generations.

This was a justifying ground for countries such as China, India and the rest of the world to continue with their business-as-usual trajectory. Today however, with the coming of the Biden Administration, all global hopes are in the hands of the United States to behave as a responsible global power and spearhead the fight against climate change.

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PANDEMIC PEDAGOGIES AND POLICIES IN CLASSICAL ARTS

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Abstract

Dancers commit hours and substantial costs towards practice with the hope of extracting large returns through performing and teaching their art. However, the pandemic was a game changer in terms of learning and training, forcing face-to-face classes to move online with virtual meetings providing the virtual learning. During these demanding times, a clear divide between those who were able embrace technology and those who could not emerged. Further, technological tools such as artificial intelligence and machine learning have silently and systematically worked on automating parts of classical dance which were hitherto unimagined. Some interesting questions arise due to these which become relevant especially post the pandemic. How do we see the in-person learning experience undergoing a change in the future? What is the new role of technology in teaching arts? How is the pedagogy going to change in terms of interaction, the virtual, and the exploratory? This could have far-reaching effects geographically as well as on the need for a human teacher. This article deals with a multitude of new and interesting learnings and practices that have made inroads into performance arts and also highlights the significance of these in a post-COVID regime. This article focuses on ways in which the technological leaps made will distinctly change the way classical Indian dance teachers operate and teach and concludes by suggesting a few policy changes.

INTRODUCTION

As a student who learnt classical dance in a very systematic, structured yet unquestioning mode, my teaching career has witnessed all the struggles a teacher would experience first-hand. My commentary is thus informed by personal experience of the travails of student management to real estate to balancing research and practice. Arts occupations tend to have low barriers to entry given that one can, in effect, call themselves an artist. Subsequent success or failure does not depend on professional qualification or degrees

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(Madden, 2011). Rather, it is measured by talent or by the quality of art works. This is in direct contrast to other professions which have a prerequisite of formal degrees or documentations. It is to be noted that these professions also boast of higher pay.

With a continuous need for teachers to train students in their pursuit of arts, the field of training and performing classical arts had reached unprecedented levels in the last few years by surviving the onslaught of interest in alternative art forms, relatively unchanged pedagogy, and cultural shifts. The spread of teachers teaching dance outside India indicated a sustained, if not growing, interest in the arts that were long suspected to be a dying form. This gave great impetus to spreading cultures and to increasing engagement and outreach by utilising any adaptations required to stay relevant. As more and more students preferred locally-available teachers, the need for a trainer living within proximity to their home locations saw a spurt. Coupled with culture tourism, the local art and culture scene drew a steady stream of enthusiastic visitors to learn from teachers (Richards, 2018). However, learning the dance form from local teachers often involved a few known teachers who either performed regularly or had advertised for classes, which meant that a wider pool of often struggling teachers was not tapped into.

The pandemic was a systemic shock to the dance ecosystem given the gradual reduction in audience and the severe unemployment of art workers. Lockdown meant teachers could not travel and teach and that they could not congregate in any one closed location. Dancing with masks on was impractical while social distancing was a challenge in large classes or small spaces. Of course, the ancillary fields such as make-up artists, singers, orchestra, lighting, and videography managers were equally affected by the sudden disruption in their economic sustainability, further making the ecosystem fragile. These economic setbacks coupled with an alarming rise in of dancers affected by COVID-19 (around hundreds with a few deaths as well), magnified its devastating footprint. A wide range of occupational challenges already existed and the chasm had only been deepened due to the pandemic. For instance, the working paper for the International Labour Organization which discusses the occupational characteristics of cultural workers and their relationships and income, mentions the variable length of contracts and commissions and hence income, seasonal employment and odd hours of work as the many challenges faced by artists more so due to the pandemic (Liemt, 2014).

The detrimental outcomes among professional artists due to the lockdowns have been recorded with a large majority of artists citing less

time to perform, teach and directing art works as the top three effects of the lockdown and its associated restrictions. Against this backdrop, the lockdown had multiple implications for those working in the performing arts, not to mention the social impact on professionals who were unable to meet and co-create their work in person.

While these were avenues to explore, most dancers were left to fend for themselves, hoping for better times. Existing policy support to the arts is by a handful of organizations loosely structured under the umbrella of the Ministry of Culture. While scholarships and housing are offered, there are many dance teachers who are under the radar as far as state-led support is concerned. The Centre for Cultural Resources and Training (CCRT) offers scholarships and has empanelled artists as well as training programs. However, the need for reaching out to a wider range of artists in emergency situations is not factored into the schema of the organization.

REAL ESTATE

Most dance classes happen in studios that are rented or in individual homes. For teachers, this involves a delicate balance between cost of rental versus the demand for classes in that geographical area. Real estate has always been a critical indicator for parents to consider the dance class. Proximity and ease of transport are important factors that determine how the demand and supply balance. With multiple teachers in each area offering dance classes within a stone's throw of each other, the presence of a space adequate for dance classes does hold the parent's attention. Unfortunately, rental spaces are not free. The typical demand curve, if extrapolated for dance as well, would show the quantity of art demanded at each price level and would per usual slope downwards. Renting larger spaces would need to be offset either by quantity of students or pricing per class. Income uncertainty and a gap between bid and ask are real challenges dance teachers face with few people willing to enrol in dance classes at higher prices and more people willing to enrol at lower prices. Moreover, spatial constraints hinder both the choreographic thought process and the use of space in movement. The lockdowns necessitated closures of many studios, galleries and schools which were the main venues for dance classes. While a few dancers managed to utilise parks and other open spaces, the need to travel distances as well as other logistical issues pose a barrier for many to adapt to different environs to showcase art. Yet only a few reports show the implication of mega-events such as pandemics on real estate, particularly in the context of the arts (OECD, 2020). While singers have the flexibility to practise and teach from their homes in a relatively undisturbed manner, dancers have keenly felt the lack of open spaces due to the lockdowns. The pandemic has affected dance education globally,

especially for learning skills that require human interaction, common space and consistent supervised practice to achieve competency (Yang, 2021).

TECHNOLOGICAL CONSTRAINTS OR SOLUTIONS?

Most teachers embraced technology which provided them a tool to teach online. With the pandemic forcing families to stay indoors, platforms designed for professional meetings and information exchange have become a part of mainstream art training. Various applications such as Skype and Zoom have now become standard tools for dance teachers. Given that instructions can be synchronous as well as asynchronous, dance teachers provide a combination of both forms to maximize benefit from their classes (Simamora, 2020)

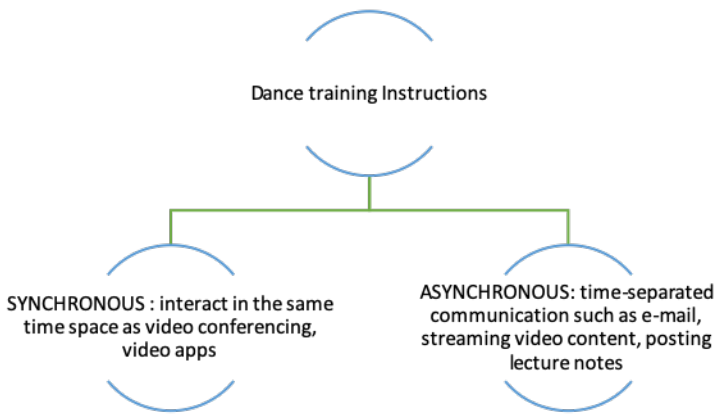


Figure 1. Training Instructions

With the advent of social media platforms such as Youtube and Instagram providing an instantaneous audience, artists, especially Bharatanatyam dancers, saw an opportunity to present their work to a global, and not just national, audience. There no longer is the unspoken but understood pre-requisite of a certain number of years of training to ascend the stage or present a work. A good camera, lighting and music is all that is required, and a dancer is born. This spurt of showcasing talent had another effect — the sudden availability of a multitude of teachers to teach this artform. With easy visibility and affordable marketing, dancers hitherto unknown could avail new opportunities for training students. Often reproached for lack of transparency, opportunities, and fair platforms, classical dances have taken a turnaround and offered social media as an instrument to level the playing field. However, the cacophony of multiple online events has resulted in a digital fatigue and the quality of promised performances has not lived up to its mark. Critiques of the lack of any semblance of

accepted standards of dance as well as the empowerment to criticise without constructive inputs have further driven wedges rather than bridge gaps. As with any occupation, cliques existed offline, and now they exist digitally. Refreshing change had already begun to take form in terms of pedagogy, new thought, and learning beyond the dance classes. Social media has only made these self-reflective voices louder and more accessible from any locality. Learning the historical, social and political milieu in which dance was taught and was propagated are actively addressed in multiple dance forums and teachings. In my course at the Indian Institute of Technology, Hyderabad, I encourage students to not only understand the context specific environment of traditional dancers but also explore how new age technologies like artificial intelligence are impacting the arts as we know it. This course deliberates on the new emerging aesthetics that technology brings to dance. It also explores rethinking the meaning of a choreographer if a machine can choreograph classical Indian dance units through machine learning and iterative processes. In cataloguing choreographic processes, students talk through copyright and intellectual property rights in the digital age as well.

The silver lining has been the reach of local performances to a global audience and the curation of unique concepts that have a wider assemblage due to the comfort of both location and time.

HOW CAN DANCERS KEEP UP WITH TECHNOLOGY AND CREATE AN INTERACTIVE ONLINE PRESENCE TO STAY RELEVANT?

There are many challenges to teaching dance-based classes in the midst of this new normal. Most dancers have limited financial and technical capabilities to utilise different platforms in reaching an audience. A possible solution would be for state and central dance agencies to earmark funds for training low-income dancers and to provide computers in case of need. The Union Ministry of Culture released Rs 5,462 lakhs to the Zonal Cultural Centers (ZCCs) in September 2020. Organizations like the Association of Bharatanatyam Artists of India (ABHAI) collected funds from members both through donations as well as through ticketed workshops and managed to reach out to many deserving artists in need². Nupura Dance School, Bengaluru hosted an online program where donors could donate to any one of the listed charities that supported artists. Rangamandira Trust collected funds for many local artisans who still practise and perform both folk and classical arts in remote rural areas. The Whatsapp group, 'Musicians

²<https://www.aninews.in/news/national/general-news/rs-5462-lakhs-released-under-central-schemes-to-help-artists-during-covid-19-culture-ministry20200915084440/>

for Musicians' created by Indrajit Basu and supported by West Bengal-based artistes put together a fund for artistes in need. The 'Unite for India Dance Marathon' by Kalasagara, United Kingdom was another effort to bring together artists to perform for a societal cause. While these are artist-led societal causes, a nation-wide program can tap into philanthropist contributions and expand the reach of support.

EDUCATIONAL PLATFORMISATION

Cultural tourism is one of the innovative and context specific modes to draw a global audience to visit and appreciate a nation's culture as well as to immerse themselves in it. These served as infrastructural substrates for art immersion for the tourists. The rich cultural milieu of each state drew their audience, albeit in a haphazard and chaotic manner. Localized dance and music festivals timed to attract and retain the maximum tourist attention provided not only a platform for the artists to perform but also connect with possible students for long term interactions as well. The keen interest of the tourists to learn about the art form they choose and the tapping of knowledge of artists creates a sustainable framework and a demonstration of cultural matrices. However, the spread of the coronavirus was exponential throughout the world and extensive containment measures were taken. With lockdowns came a fundamental shift as footfalls receded and empty spaces reflected artist struggles. Complete closure of borders and no-fly policies have led to large scale financial problems for organisers and artists and have placed a strain on the stakeholders of the community. In the absence of a physical co-presence, participants often struggle to evaluate and appreciate artworks let alone learn new artforms (Buchholz, 2020). Many private dance schools and organizations were much quicker to rise to the occasion than established national cultural institutions in helping organize online workshops, performances, and talks by renowned and experienced gurus of classical dance and music. In fact, a unique initiative by RMT Samskruti, a privately run organization, was the 'Limited Spaces Limitless Hope series' where dancers showcased their talent in performing in the limited spaces at their disposal along with a short message from people of different spheres highlighting how art was important to them. This series was curated to spotlight the space constraints that dancers face during lockdowns.

WHAT ROLE CAN THE PANDEMIC PLAY IN INFORMING DANCE CULTURES?

Art and Culture agencies facilitated online series of lectures and demonstrations which elucidated various art forms and their cultural cores

that can be accessed by the young as well as the old, although sporadically and individually. With technology constantly upgrading and re-inventing itself, performers of art require upskilling and re-learning new tools that would aid them to widening their horizons. To a certain extent, art organizations, society-led initiatives and artist-curated series bridge this gap in technological know-how. Towards this, artists-led organizations like the RMT Samskruti curated and presented their Annual Festival online which paid young artists to perform. ABHAI organized the first ever Online Festival of Natyam with a sponsorship from Sangam Festival, Princeton, New Jersey to pay dancers to perform under the 'Artists for artists welfare fund'. State-led organizations were slow in creating the platforms for the artists. Sangeet NatakAcademi and SPIC MACAY organized a few concerts with member or senior artists although young fledgling artists were left without much help. Kalakshetra screened their old in-house productions and held their annual festival online during the lockdowns. The Indian Council for Cultural Relations (ICCR) had few and sporadic online engagements which were mainly driven by local artists.

One of the biggest demographics visibly missing in art conversations are the senior citizens, a major reason being lack of digital knowledge. Rare instances such as the 'Samvadanam' podcasts document and record podcasts with a wide range of artists for posterity. In one such podcast, Smt. Hema Rajagopalan, a dancer who moved to the United States, mentioned how senior experienced dancers could be invited to give talks on specific topics or stylistic nuances that would be lost forever if undocumented. It is crucial to consider access and connects with the broader citizenship, facilitated by specific programs by the governments for providing a peek into India's rich cultural heritage. Inclusion of artists whose ages do not permit active performance or teaching can be encouraged to share their in-depth knowledge and years of experience on a digital platform exclusively tailored to educate people about the arts. An unprecedented benefit would be the preservation and recording of art history for future generations. Digital connectivity curated by the artists will ensure agency over what they provide and hence maintain a high level of quality and accurate content.

SPACES THAT DANCE

National cultural festivals and government-curated national festivals augmented with privately-run festivals provided plenty of opportunities for dancers to showcase their talents. Year-long festivals and dance programs ensured a hectic schedule of performances and plenty of possibilities for young as well as experienced dancers who have now had to contend with the pandemic's swift and savage closure of spaces. With overnight cancellations of concerts and festivals in India and overseas;

weeks stretched into months of awaiting normalcy. A lack of clarity on when the days of live performances will resume left artists depressed and anxious as to their futures. Further, most festivals are held in often large historical and remote locations of cultural and historic importance. With closures resulting in heritage sites being inaccessible, many dance platforms were closed with no clear indication of when they would resume. Ancillary travel, tourist, lighting and videography streams were also affected and saw revenues dwindling.

WHAT ELEMENTS OF VIRTUAL AND AUGMENTED REALITY CAN HELP FESTIVALS OF THE FUTURE?

The pandemic served as a wake-up call for many organisers who were either unprepared or underprepared for digital services. Given the current wake of immobility due to an unforeseen cause, it would help to create a structure and put guidelines in place as an anticipatory solution to future challenges. Virtual streaming of events would enable artists the world over to participate and not require a physical presence. It will also encourage newer artists to perform and ensure the infusion of new talent instead of the same roster year after year. Digital platforms also enable unique ideas to be explored and performed which might not be possible in a physical space. Virtually-held events or virtual streaming of events from these heritage sites and creating festivals at smaller heritage sites will not only drive interest towards lesser-known sites that require the attention of authorities but also promote local festivals under the aegis of state governments that can help boost local economic activity. This further helps decentralize the system through multiple platforms instead of funnelling it through one. This inadvertently aids in upkeep and better infrastructure development around these sites.

Beyond these simple local-centric strategies, a range of coalitions and networks between various cultural entities, both private and public, can further promote online performances not only as a short-term response to the pandemic but as a long-term plan of action as well. Through collaborations, policy-influencing organizations can enable private platforms providers to extend their reach into previously unattainable territories and spaces.

The Ministry of Culture has signed multiple wide-ranging MOUs with universities and organizations to promote art and culture in different localities. However, inviting young artists to bring new ideas and experienced artists to provide a historic perspective can enliven local traditions for posterity. Information-rich documentaries with local artists can preserve thoughts and ideas that should become syllabi for art students. The knowledge of what we had is the way we understand what we have lost.

Another anticipatory solution to future mobility challenges could be in the form of courses informed by better faculty and aided by technology that should be made available to a global audience. This will further aid in increasing methodological research into various facets of Indian culture and pedagogy.

DISCUSSION

The pandemic has changed the way artists appreciate and practice art due to a very different year than expected. A year busy with programs, performances and teaching began well enough with distant rumblings of a possible fast-spreading virus and quickly culminated into a great challenge for artists. As the potential for disease transmission was high as also the associated costs of contracting the disease, dancers had little choice but to accept the lack of a steady stream of performance opportunities and in some cases, the possibility of earning through these. Prevention, while being the biggest regimen followed, has stretched the very limits of resilience of an already fragile art ecosystem by systematically eliminating collaborations and creative spaces. The ever-enterprising artists and art organisers recouped and acknowledged the new normal. With multiple independent online platforms taking the lead in ensuring that the show goes on, returning to classes and continuing learning online have been more feasible. The move to online platforms has encouraged younger and older dancers to showcase their talents and expertise in ways never before. Undoubtedly, this has proved to be a way to sustain the livelihoods of a few in the arts field but has failed many more.

Collaborative efforts and public partnerships can reinforce, develop, and grow sustainable art practices keeping the artists as the focus of the initiative. This requires active, evidence-based policy changes backed by an empathetic desire to preserve the health of art forms and their practitioners. Needless to say, this in turn impacts the health of the society as well. Further, the expansion and embedding of digital technologies in art pedagogies globally need not be unique to the pandemic and can be more acutely and accurately leveraged for long-term education. A supportive and well-equipped ecosystem would be critical for the adoption of and adaptation to newer demands and newer environs. This global pivot to digitally mediated, remote, and distance art education is by no means a hasty band-aid but an opportunity for critical reflection and policy cognition.

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MEASUREMENT OF INEQUALITY THROUGH SOCIAL ACCOUNTING MATRIX FRAMEWORK: CONSTRUCTION AND ESTIMATION OF MULTIPLIER AT SUB-NATIONAL LEVEL FOR KARNATAKA¹

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Abstract

Historical evidence shows that demand-constrained growth has devastating consequences, especially if the growth is capital-intensive and productivity-led with no increase in real wages. Income deflation due to rising inequality has negative multiplier effects. In the Indian context, it can be noted that the shift in the policy regime to a market-oriented structure has resulted in unequal income distribution effects, consequently having implications on demand. The hitherto emphasis on higher growth, which has failed to trickle down, has affected poverty and inequality by depressing demand. The literature in this context has focussed on measuring inequality through the Gini index and the Lorenz curve, but with the motivation to capture interdependence in a circular flow of economy, we have used the Social Accounting Matrix (SAM) to measure inequality using the lens of the multiplier for the state of Karnataka for the year 2013-14 as SAM captures both production structure and distribution. The results of the multiplier showed that the social sectors of education and health exhibit the highest potential in income creation with direct intervention, thus implying better income distribution in the economy.

¹ The authors would like to thank Dr.Jyotsna Jha, Director (Centre for Budget & Policy Studies, Bengaluru) for research idea and resources. The paper is based on a larger research, carried out by the Centre for Budget and Policy Studies, Bangalore (www.cbps.in) with the funding support from the Department of Finance, Government of Karnataka (GoK). The authors acknowledge the role of a number of officials across different Government Departments of the GoK, especially that of Mr.Narasimha Phani of the Department of Economics and Statistics, for his valuable inputs and suggestions. Both the authors have contributed equally to this paper.

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INTRODUCTION

The gap between the rich and poor has widened since the Reagan-Thatcher administration and has become a heated debate post the Global Financial Crisis in 2008 with income and wealth being largely concentrated in few hands. The same is observed among emerging economies with market forces, government policies and non-governmental organisations shaping and driving the forces that widen inequality (Gallegati, M, et.al , 2016). The global income inequality trends show an increase in the Gini coefficients from 38.6 to 41.8 between 1990 and 2014 (Basu, S. R. (2017)) with similar trends observed for India with an increase in the Gini coefficient from 32.6 to 35.7 between 1985 and 2011, thereby placing India alongside one of the most unequal countries in the world (Himanshu, H. (2019)). To an extent, this trend can be an implication of the change in policy regime in the Indian context. The policy regime in post-colonial India has undergone tremendous structural transformation from being a Nehruvian statist mechanism until the 1970s to a pro-big business order from the early 1980s before settling into a market-oriented reign in the current neoliberal world (Chandrasekhar, C. P. (2012), Kohli (2006a, 2006b), Basole, A. (2015), Rodrik et.al (2004) Tendulkar, L. S. (2012)). The post-independence development experience saw a policy regime driven by an interventionist state, a high-handed public sector, import substitution, control of foreign capital, and investment in huge infrastructure to the gradual liberalisation policies adopted in the early 1980s to increase productivity and induce private investment via gradual delicensing before finally accepting structural adjustment reforms and macro-stabilisation policies as enunciated by the IMF and the World Bank in the 1990s. The underlying political economy saw a shift in focus from redistributive justice to faster growth. This structural transformation in the policy regime has manifested itself in various ways in the areas of poverty and inequality with a concurrent shift in the focus of growth policy. The objective of growth policies has moved from being capital goods intensive as detailed in the first three five-year plans to poverty as the focus-theme of the fifth five-year plan ('GaribiHatao' meaning 'Remove poverty' being the famous slogan) followed by inclusive growth driving the agenda in the 11th and 12th five-year plans. Subsequently, in the neoliberal era, the emphasis of the growth policy as elaborated in the Economic Survey, is to make India a five- trillion dollar economy by 2024. However, the consequence of this has been increasing and widening inequality due to the persistent emphasis on production with no emphasis on its distributive aspect. Concerns of efficiency have taken over the policy regime as compared to questions of equity.

India's growth trajectory has shown a continuous emphasis on poverty alleviation as part of its policy agenda with inequality (income inequality) being less-focussed upon and side-lined. The yardstick to measure poverty and to determine the poverty line, despite it being very narrowly defined, is based on consumption levels of certain non-durable goods like sugar, salt, spices, cereals, vegetables, milk, pulses, edible oils, vegetables, fresh fruits, non-vegetarian items, dry fruits, other food, and durable goods like fuel, clothing, footwear, education, medical (non-institutional and institutional), personal and toilet goods, entertainment, other goods and other services that assure an acceptable living standard which in turn ensures economic participation of the citizens in the economy. The headcount ratio figures, defined as the proportion of the population with expenditure or income below a threshold level, have seen accelerated decline in poverty rates from 45.5% in 1993-94 to 29.9% in 2009-10 based on the Tendulkar line estimates (Panagariya, A., & Mukim, M. (2014)). As per this standard, growth has been able to shift millions of poor out of poverty. Further, data published by the UN Development Programme and Oxford Poverty and Human Development Initiative (OPHI) in July 2020 which focused on the changes in poverty rates, noted that India has recorded the largest reduction in poverty on the multidimensional poverty index between 2005-06 and 2015-16 by bringing 273 million Indians out of poverty⁴. Having said that, change in absolute poverty and deprivation can be fully determined by change in income levels and the distribution of incomes. Increasing growth has reduced poverty but has not translated into better income and wealth distribution, especially after the adoption of LPG reforms, where high economic growth has simultaneously augmented inequality. Reduction in poverty through increasing economic growth without a concomitant reduction in inequality results in unproductive disparities that further hinder economic growth (Weisskopf, T. E. (2011)). India, a nation deeply fractured by social inequalities, has seen increasing economic inequality from 0.32 in 1993-94 to 0.38 in 2011-12 in urban areas and from 0.26 to 0.29 in rural areas for the same time period as seen through a rise in the Gini Coefficients estimates using the National Sample Survey (NSS) on consumption expenditure (Himanshu 2015). Further, the wealth disparity (asset inequality) estimates measured using All India Debt and Investment Survey shows that the top 10% of individuals possess over half of the total wealth while the bottom 10% possess merely 0.4% of the total wealth between 1991 and 2002 (Jayadev, A., et. al (2007)).

⁴<https://timesofindia.indiatimes.com/india/at-273-million-people-india-records-largest-reduction-in-number-of-people-living-in-poverty-un/articleshow/77013816.cms>

An Oxfam article titled, 'India: extreme inequality in numbers', notes that 'the top 10% of the Indian population holds 77% of the total national wealth, 73% of the wealth generated in 2017 went to the richest 1%, while 67 million Indians who comprise the poorest half of the population saw only a 1% increase in their wealth'. These devastating numbers reflect widening gaps within the population⁵. However, this is justified using the popular Kuznets' framework by certain policy makers and academicians, which hypothesises that nations experience a rise in income inequality as they grow and subsequently, when the growth reaches an optimum level, income inequality tends to decline following an inverted 'U' curve. However, the empirical evidence shows that the increasing inequality experienced by developed countries post 1970s and the equalising tendency of growth experienced by developing countries in the early phases goes against the Kuznets' hypothesis. Further, it was shown that the capitalist process of accumulation always witnessed rising inequality throughout the 19th and 20th centuries, interrupted only by exogenous shocks of the Great Depression and the World Wars (Vakulabharanam, V. (2015)). In the Indian context, the growth regime manifested through the mechanism of trickle-down process has proved to be a failure given the 'jobless growth' regime that the Indian economy has experienced post 1990s. As per the NSS, employment growth was around 2% per annum between 1999-2000 and 2004-05; during its high growth phase of 2004-05 and 2009-10, employment saw a decline in its growth to around 0.7% per annum and further to 0.4% between 2009-10 and 2011-12 after which it saw an absolute decline in employment during the periods of 2013-14 and 2015-16 (Abraham, V. (2017)). The current growth regime has further deepened the crisis on the employment front with negative employment growth making it a job-loss growth regime (Kannan, K. P., & Raveendran, G. (2009), Mehrotra, S., et.al (2012) & K P Kannan & G Raveendran, (2019)). Increasing technological change, pursuit of higher education, and aspirations of economic and social mobility have reduced the labour absorption capacity of agriculture and manufacturing sectors, which are employment intensive sectors, thus discouraging many workers from entering the labour force (Kannan, K. P., & Raveendran, G. (2009), (Mehrotra, S., et.al (2014), Santosh, M., & Sharmistha, S. (2017). Roy, S. (2016) Naidu, S. C. (2016)). In addition, the proposition of 'sound finance' as put forth by the fiscal consolidation regime has imposed a limit on spending capacity with autonomous expenditure having no role to play (Patnaik, P. (2006). Chakraborty, P. (2010). Isaac, T. T., & Ramakumar, R. (2006)).

Given this context at a national level with rapid growth, increasing joblessness, and rising income inequality, it becomes imperative to

⁵<https://www.oxfam.org/en/india-extreme-inequality-numbers>

understand this phenomena at the sub-aggregate level (in this case, the state of Karnataka) due to the presence of complexities at the state level, be it the historical context, economic size, production structure or any other factors. Regional disparity or inter-regional inequality has increased resulting in increased divergence across states and affecting income distribution (Nagaraj, R. (2000)). Through this paper, we intend to understand inequality through the lens of multiplier using a static Social Accounting Matrix⁶ (SAM) that we constructed for the state of Karnataka⁷ for the year 2013-14⁸. Before exploring and analysing the same, we have detailed in brief the popular methods used by researchers and policy makers to understand the issue of inequality.

Economic inequality has been measured using different methods, one of the most popular tools being the Gini coefficient. The Gini index measures the distribution of resources in a population, and how equitable the distribution is (Farris, F.A, 2011), based on a parameter of choice, be it consumption or wealth representing the economic divide in the population under study. In the context of the Indian economy where the data on income and wealth is not captured by our statistical system, the robustness of consumption expenditure surveys conducted by the NSSO to capture the same as its proxy is reinstated (Sen P, 2020). Studies using consumer expenditure data have shown that the Gini coefficient has largely indicated a pattern of widening inequality in the pre- and post-reforms periods across different fractile groups indicating higher consumption by urban people (Sarkar & Mehta (2010)), with 'socialist policies' of the pre-reform period actually ensuring better income redistribution among the rich and poor classes (Pal, P., & Ghosh, J.,2007). Although the Gini coefficient helps measure the inequality to some extent, it is less sensitive to inequality at the tail end of income distribution.

The other popular method used to understand economic inequality is the Lorenz curve which is a common graphical method used to represent the degree of income inequality in a country. It plots the cumulative share of

⁶Static Social Accounting Matrix is built with certain underlying assumptions; Static SAM has fixed coefficients (no substitution possibilities), presence of excess capacity (demand deficiency), and Static SAM is built for a single year and the multiplier estimates gives initial impact of the shock alone.

⁷ Karnataka was chosen because alongside the study being funded by Department of Finance, Govt. of Karnataka, the sole intention was to understand the Karnataka's growth process, given the intensity of growth being driven by service sector for considerable time period, through the lens of multiplier.

⁸ The time period 2013-14 is chosen because of the methods/techniques we chose to estimate the multiplier i.e., Input-Output Transactions Table and Social Accounting Matrix and in the process of constructing the same for the state of Karnataka, we had to rely on National IOTT which was last constructed for the year 2013-14 for Gross Value of Output Estimates by NCAER (Singh, K., and Saluja, M. R. (2018)).

Measurement of inequality through social accounting matrix framework: construction and 39 income earned by the poorest (x%) of the population for all possible values of x. The further away the Lorenz curve is from the equality line of 45-degree, the more unequal the income distribution is. However, if the Lorenz curves cross, it cannot provide a conclusive ranking between distributions (Trapeznikova, I. (2019)). Now we turn to SAM, a robust method employed to capture the distributive effects efficiently and which deepens the understanding of inequality, as analysed through the Gini Coefficient or Lorenz Curve.

With increasing unequal income distribution, methodologies like SAM assist in capturing the workings of an entire economic system to analyse the issues of poverty and inequality using the lens of multiplier. SAM is a matrix representation of national income accounts that highlights the interlinkages and the circular flow of payments and receipts among the different components of the system. The schematic structure of SAM has five major accounts, namely, production represented by the Input-Output Table; factors being labour and capital; institutions being private corporate sector, public corporations; Households and Government; Indirect Tax account, Capital Account and Rest of the World (ROW). SAM captures the induced effect of an exogenous change in demand on the production structure and income that operate through household incomes and final demand (Figure 1).

Figure 1 Schematic Structure of Social Accounting Matrix (SAM)

	Product on Account	Factors of Production	Households	Private Corporate Sector	Public Sector Corporations	Government	Net Indirect Taxes	Capital Account	ROW	Total Output
Production Account	Input Output Table		Household Consumption			Government Consumption (GFCE)		Gross fixed Capital Formation	Exports	Aggregate Demand
Factors of Production	Value Added								Net Factor Income	Factor Income
Households		Endowment of Households				Government Transfer, Interest on Debt			Net Current Transfers	Total household income
Private Corporate Sector		Operating Profits				Interest on Debt				Income of Private Corporation
Public Sector Corporations		Operating Surplus								Income of Public Sector Corporations
Government		Income from Entrepreneurship	Income tax from households	Corporate Taxes			Total Indirect Taxes		Net Capital Transfer	Total Government Earnings
Net Indirect Taxes	Taxes on Intermediate Goods		Taxes on purchases by Households			Taxes on purchases by Government		Taxes on Investment Goods	Taxes on Exports	Total Indirect Taxes
Capital Account		Depreciation	Household Savings	Corporate Savings	Public Sector Savings	Government Savings			Foreign Savings	Gross Savings of the Economy
ROW	Imports									Foreign Exchange Payments
Total Output	Aggregate Supply	Total factor endowment	Total use of household income	Private corporate income	Income of Public Sector Corporations	Aggregate Government Expenditure	Total Indirect Taxes	Aggregate Investment	Foreign Exchange Receipts	

Source: Pradhan B.K et al (2006)

SAM was built for the UK for the first time by Richard Stone as early as the 1960s and thereafter it was used as a planning technique by developing countries to understand the multiplier effect of an initial increase in final demand and income distribution effects thereof. The presence of dual economic structures in postcolonial countries reiterated the importance of SAM as a comprehensive tool to understand both production structure and distribution. In the Indian context, constructing SAM at the national level is not a frequent exercise undertaken by the official statistical system. Researchers have constructed SAM for India to analyse specific sectoral issues (Ojha, V et al, 2009; Pradhan, et al, 2014) and also the importance of the household sector on output and employment (Sinha, A et al, 2000). Some researchers also conducted a sub-aggregate level analysis where they analysed the fiscal policy choices made by the states out of fiscal transfers given to them (Ganesh-Kumar and Panda, 2014). Some others have built a SAM for India where regions were classified into poor, middle income, rich and special category states to understand the distribution effects (Pradhan, B. K, et al, 2006). A recent attempt was made to construct SAM for Andhra Pradesh for the year 2007 largely using India's coefficients (Saluja, M. R.2014). Considering the gap in this research front, we have built SAM for Karnataka using diverse sources available at the state and national levels such as National Account Statistics, NSS Consumer Expenditure Surveys, Accounts of Public Hospitals and Public Universities for Karnataka to ensure accuracy and to arrive at the varied multiplier effects.

Using the lens of multiplier, we propose that multiplier (specifically income multiplier) depends on income distribution. Stated differently, if there is an increase in demand, production or supply is accordingly stimulated. Therefore, inequality matters for multiplier as it affects the marginal propensity to consume and the GDP.

ANALYSIS

Using multiple and diverse sources (refer to Appendix A1), we have constructed SAM for Karnataka for the year 2013-14. Each component of the matrix was estimated using sources available at national, state and local government levels to ensure accuracy. A brief note on the same is given in Appendix A2.1, A2.2, A2.3. However, the construction of SAM at a disaggregated level has its own challenges and limitations; a note on the same is added in the Appendix A3. Further, the validation of the data sources is unviable at the sub-national or state level for the same reasons as explained in Appendix A3. The construction of the SAM matrix for Karnataka was further used to derive the technical coefficient matrix and estimate multiplier values using the Leontief Inverse method. Analysis of the varied multipliers derived from the SAM construction gives us a clear picture of economic inequality in the state.

Consumption Expenditure: Due to the lack of data on income figures at both the national and state levels, consumption expenditure is used as a proxy in this case to analyse questions of poverty and inequality. Using NSS, which classifies households into ten occupational categories, it is observed from the estimates that the share of consumption expenditure of the urban regular wage earners and of the salaried sections is the highest (25%). This is followed by the self-employed in urban areas (20%) and the self-employed in agriculture households in rural areas (20%), with the least share being that of the casual labourers, reflecting their low-income levels (Table 1). These unequal consumption shares across occupational households also imply unequal income distribution.

Table 1: Share of Consumption Expenditure across Occupational Households

Occupational Group	Share of Consumption Expenditure
Self-Employed in Agriculture	20%
Self-Employed in Non-Agriculture	7%
Rural Regular wage / Salary Earning	5%
Casual Labour in Agriculture	10%
Casual Labour in Non-Agriculture	4%
Rural – Others	1%
Urban Self-Employed	20%
Urban Regular Wage / Salary Earning	25%
Casual Labour – Urban	4%
Urban – Others	4%
Total	100%

Source: Authors calculations using NSS Consumption Expenditure 68th Round Data for Karnataka

OUTPUT MULTIPLIER FOR SAM AND IOTT

Income distribution is an important determinant of activity levels, aggregate demand and employment in the economy. The relationship between economic inequality and multiplier is negative, implying that greater inequality has depressive effects on GDP with an unequal distribution of resources raising demand deficiency due to marginal propensities to consume negatively correlated with income levels (Rognlie, M., & Auclert, A. (2019) and Gallegati, M. et.al., (2016)). SAM as a planning technique is an extension of IOTT which captures not just the production structure but also the effects of an injection on both production and distribution. In this regard, a comparison of SAM and IOTT output multiplier reveals the extent to which an injection in a sector affects supply side linkages due to its effect on households and households' incomes.

Multiplier estimates were obtained by deriving the Leontief Inverse Matrix after the IOTT and SAM construction for the state of Karnataka. A comparison of output multiplier (column sum of the matrix) of both SAM and IOTT that captures the backward linkages and supply side effects reflects some interesting patterns. IOTT, as it represents production structure, shows that output multiplier effects are larger in sectors like electricity, manufacturing, construction and mining while these are lower for social sectors (1.59 for education and 1.73 for health). On the other hand, the SAM output multiplier effects show that along with manufacturing, construction and electricity, education also has one of the highest output multiplier effects. The health sector also shows better supply side effects with the value of 5.43. It is important to recognise that social sectors also have better supply and backward linkages when the income distribution structure is considered alongside them. This proves the potential of social sectors in income creation and reduction of inequality through demand creation (Table 2).

Table 2: Output Multipliers for SAM and IOTT

Sectors	Output Multiplier SAM	Output Multiplier IOTT
Crops	4.95	1.34
Livestock	4.93	1.70
Forestry & Logging	4.33	1.29
Fisheries	4.50	1.36
Mining & Quarrying	0.45	2.14
Manufacturing	6.73	2.88
Electricity, Gas & Water Supply	6.06	3.05
Construction	6.10	2.72
Trade & Repair Services	4.33	1.80
Hotels & Restaurants	4.75	2.01
Railways	5.38	1.92
Road Transport	5.33	2.43
Water Transport	-0.42	2.67
Air Transport	37.44	3.36
Services incidental to Transport	22.24	2.10
Storage	4.76	2.08
Communication	5.26	2.20
Financial Services	4.01	1.34

Real Estate & Professional Services	4.35	1.67
Public Administration	5.76	1.61
Education and Research	6.31	1.59
Medical and Health	5.43	1.73
Other remaining services	7.43	2.20

Source: Authors' calculations

INCOME MULTIPLIER

The income multiplier values reflected in SAM show the indirect linkage that the sectors have with household income distribution. It primarily captures the extent of the benefits enjoyed by households due to the growth in certain sectors. These estimates are obtained by calculating the Leontief Inverse matrix through the summation of columns with the households forming the rows of the matrix and the sectors forming the columns. The comparison across our sectors shows that the highest income multipliers have been reported from education, public administration, other remaining services, health, and agriculture, implying that households have higher-than-average propensities to spend on these sectors. This means that the influence of these sectors on the incomes of the factors of production is greater than other sectors, and an increase in the demand for goods from these sectors influences household income in a bigger way as compared to, say, the manufacturing sector. SAM provides us with a comprehensive income multiplier and these allow us to examine the effects of exogenous injections on the distribution of income across households (Table 3). These estimates reiterate the importance of certain kinds of public spending that ought to reduce inequalities as they reduce out-of-pocket expenditures.

Table 3: Income Multipliers

Sector	HH Income Multiplier
Crops	1.64
Livestock	1.48
Forestry & Logging	1.42
Fisheries	1.44
Mining & Quarrying	-0.17
Manufacturing	1.52
Electricity, Gas & Water Supply	1.31
Construction	1.49
Trade & Repair Services	1.12
Hotels & Restaurants	1.25

Railways	1.58
Road Transport	1.26
Water Transport	-0.39
Air Transport	9.67
Services incidental to Transport	6.92
Storage	1.22
Communication	1.36
Financial Services	1.23
Real Estate & Professional Services	1.20
Public Administration	1.88
Education and Research	2.14
Medical and Health	1.70
Other remaining services	2.12

Source: Authors' calculations

HOUSEHOLD INCOME MULTIPLIER ACROSS HOUSEHOLDS

Household Income Multiplier shows the impact of the growth process on different types of households. The estimates are obtained from the Leontief Inverse Matrix through summation across sectors for each household type. The household income multipliers among households turned out to be the highest for the regular salaried urban households followed by self-employed households in both rural and urban areas with the lowest multiplier value being for casual income households. This implies that growth effects are not reaching these households and therefore they require special government intervention as market forces are unable to trickle down to these groups in a positive manner (Table 4).

Table 4: Income Multipliers by Household Groups

HH Categories	HH Income Multiplier
RH1	9.07
RH2	2.29
RH3	1.94
RH4	3.19
RH5	1.21
RH6	0.11
UH1	9.92
UH2	14.15
UH3	1.4
UH4	1.09

Source: Authors' calculations

COMPARISON BETWEEN SAM AND IOTT MULTIPLIERS

Estimating output and forward multipliers should be normalised as it helps identify the key sectors with varied potential for the economy. The normalisation was done by taking the value of the sector's own multiplier value divided by the sum of multipliers for all the sectors, and then normalised by 23, which was the number of sectors under our purview. Further, a comparison of normalised forward and backward multiplier helped us arrive at the key sectors and their potentials in income creation. There are four categories of these sectors, and their 'key-ness' can be classified as follows:

Category 1: Sectors that have high forward and backward linkage effects influence both the sectors from which they receive as well as take input. The sectors where both effects are high are called the key sectors or locomotive sectors.

Category 2: Sectors that have high backward but low forward linkage effects are the sectors effective in the evaluation of the natural resources of the country.

Category 3: Sectors that have high forward but low backward linkage effects are the sectors producing intermediate goods and they increase the production of sectors demanding these goods.

Category 4: Sectors that have low backward and forward linkage effects do not influence the other sectors directly, but help in increasing the country's income by creating added value

Table 5: Key sector identification based on multiplier values

Sector	Type 1 Output Multiplier	Type 2 Multiplier	Forward Multiplier	Income Multiplier	SAM Multipliers	Key Sector identification
Crops	1.4	5.2	1.2	1.10	2.99	Forward
Livestock	1.9	6.2	0.6	1.20	2.06	Income Creation
Forestry & Logging	1.3	5.7	0.5	1.14	1.78	Income Creation
Fishing	1.4	5.4	0.5	1.19	2.18	Income Creation
Mining & Quarrying	2.2	4.9	1.7	1.27	1.85	Key
Manufacturing	2.9	6.3	6.0	0.73	2.04	Key
Electricity, Gas & Water Supply	3.1	6.3	1.0	0.76	1.98	Key
Construction	2.8	6.9	2.0	0.98	2.75	Key
Trade & Repair Services	3.9	8.6	0.8	2.79	2.16	Backward
Hotels & Restaurants	2.1	5.1	0.5	1.11	1.90	Income Creation
Railways	1.9	6.6	0.5	1.25	2.31	Income Creation

Road Transport	2.5	5.4	0.7	1.09	2.53	Backward
Water Transport	2.7	5.6	0.5	0.99	1.00	Backward
Air Transport	3.5	8.2	0.5	0.44	4.36	Backward
Services incidental to Transport	2.1	5.1	0.5	0.92	4.49	Income Creation
Storage	2.1	4.9	0.6	1.02	3.80	Income Creation
Communication	2.3	5.5	0.5	0.94	3.97	Backward
Financial Services	1.4	3.7	1.2	1.02	0.47	Forward
Real Estate & Professional Services	1.7	4.2	1.4	1.22	6.21	Forward
Public Administration	1.7	7.8	0.5	1.24	5.74	Income Creation
Education and research	1.6	8.2	0.5	1.23	5.51	Income Creation
Medical and health	1.8	7.3	0.5	1.17	5.28	Income Creation
Other remaining services	2.2	6.5	0.5	1.19	4.54	Backward

Source: Authors' calculations

These normalised multipliers⁹ give us interesting results. The type 1 multiplier values which emphasise backward linkages reflect the significance of manufacturing, electricity, construction and trade, and repair services while the values of income multiplier and SAM multipliers reveal very different patterns. The income multiplier, which is obtained by multiplying the output multiplier with the ratio of value added to the output, tells us the extent of factor incomes created through value addition after accounting for the intermediate use of inputs. These values tell us that trade and repair services, public administration, education, real estate, health and primary sectors create higher factor incomes. SAM multiplier values, which reflect the interaction between the production and distribution processes, are the highest for real estate and professional services, public administration, education, and health (Table 5).

The values of all kinds of multipliers estimated seem to show that social sector expenditure is indeed an investment to be undertaken not only for its impact on human well-being and productivity in the long run but also for the high potential it has for income creation in the short run. State-driven social sector expenditure would enhance consumption due to extra income left in the hands of the people and subsequently result in larger multiplier, thus reducing income inequality. In the context of Karnataka, when more than 80 percent of the households hold Below Poverty Line cards, their

⁹Rasmussen index procedure was followed to identify the key sectors. If both normal output (NOM) and normalised forward multiplier (NFM) are greater than one, then it is considered to be a key sector; if $NOM < 1$, $NFM > 1$, then forward, if $NOM > 1$, $NFM < 1$ then Backward and if both NOM and NFM are < 1 , then it means they help in income creation.

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propensity to consume is higher. Social sectors are given emphasis here for the potential income creation and subsequently the reduction of income as it affects distribution of income directly through demand linkages more than other sectors which possess larger supply side effects.

CONCLUSION

Quantitative techniques and methodologies applied for economic analysis should be able to reflect the interactions among agents and institutions in the economy. The SAM serves as an important tool in evaluating development policies as it is a comprehensive tool and can be extended to study socio-economic objectives. In a federal structure like ours, states play a key role in development planning and implementation. In this context, the austerity measures undertaken by governments across the world post the recession are revisited due to increasing inequality. This aspect of income redistribution has attracted the attention of scholars and policy makers due to this negative relationship between inequality and growth. Though growth has reduced poverty, rising levels of inequality affects poor sections disproportionately. For instance, Karnataka has one of the highest Gini Coefficient values based on consumption parameters (between 1973-74 and 2004-05, the Gini coefficient which was 0.28 in rural areas and 0.29 in urban areas, decreased to 0.23 in rural areas and increased to 0.36 in urban areas for the year 2004-05) showing increasing consumption inequality in the urban areas of the state (Nayak, et.al 2010). Therefore, a broad based growth approach is necessary to ensure per capita income growth for all sections of the society. In this paper, through the lens of multiplier by constructing SAM at regional level, our analysis shows that direct spending by the government, especially on social sectors, has better income distribution effects. This helps reduce the magnitude of inequality and increase growth through linkages (interdependence) as shown by SAM multipliers. Direct intervention for social protection through investment in health and education can increase levels of disposable income and subsequently stimulate demand and supply linkages.

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APPENDICES

APPENDIX 1 (A1):

DATA SOURCES USED FOR IOTT AND SAM

<p style="text-align: center;">State Level Databases</p> <ul style="list-style-type: none"> • State Domestic Product Report (GoK) • Annual Reports (Corporations) • Directorate of Economics & Statistics • RMSA, SSA, Commissionerate of Public Instruction, Directorate of Medical Education, Department of Universities (Higher Education) • Annual Reports of PSUs procured through RTI • Karnataka State Budget 2015 (Administrative Departments & DCU's), Local Budgets (Consolidated accounts of SAAD), BBMP, MGNREGA • Economic-Cum-Purpose Classification 2011-12 to 2018-19, GoK • Karnataka's Economic Survey 2015-16 • Overview of Budget, Financial Statement, 2015 	<p style="text-align: center;">Sample Surveys</p> <ul style="list-style-type: none"> • Annual Survey of Industries (Manufacturing NPS-MS & NPCS) • NSS 68th Round on Household Consumption of Various Goods and Services in India: July 2011 – June 2012 • NSS 67th Round held between July 2010 – June 2011 on Economic Characteristics of Unincorporated Non-Agricultural Enterprises • NSS 70th Round Data on All India Debt and Investment Survey January - December 2013
<p style="text-align: center;">National Level Databases</p> <ul style="list-style-type: none"> • India I-O Table 2013-14 (Saluja & Singh 2018, NCAER) • National Account Statistics – 2015 • Central Board of Direct Taxes • Reserve Bank of India Publications 	<p style="text-align: center;">Private Sources</p> <ul style="list-style-type: none"> • Karnataka Value Added Tax-Ready Reckoner 2016-17 CMIE Prowess • India Human Development Survey 2011-12

**APPENDIX 2 (A2):
ESTIMATION PROCEDURE OF SAM
COMPONENTSAPPENDICES**

APPENDIX A2.1: ESTIMATION PROCEDURE OF IIUSE MATRIX

Intermediate Consumption Matrix	Sources Used	Estimation Procedure
16 Sectors	CMIE, Annual Reports (Corporations), Annual Survey of Industries (Manufacturing NPC-MS & NPC), Directorate of Economics & Statistics (Crops)	Expenditure (payments) statement, Fixed Assets Schedule, was used to derive the Input Structure. Every expense was categorised into the 23 sectors as per the origin sector. For Education, to distribute the expenditure across levels of education, we used the Budget Outlay for these levels. For Health, to capture the presence of both private and public sector, we used the expenditure shares as per National Health Accounts Estimates, 2013-14.
Education	RMSA, SSA ² , Commissionerate of Public Instruction, Directorate of Medical Education, Department of Universities (Higher Education), Annual Reports (RTI), (Mangalore & Bangalore University)	
Health	RTI (Jayadeva, Victoria, NIMHANS, Kidwai) & CMIE ³	
5 Sectors	Remaining we have assumed the India's coefficients (Public Administration, Other remaining services, Fishing, Livestock, Water Transport)	Saluja & Singh 2018, NCAER.
GVA	State Domestic Product Report, DES, GoK4 2016-17	Taken as is.

GVO	<p>State Domestic Product Report, DES, GoK 2016-17</p> <p>Annual Survey of Industries 2013-14</p> <p>Saluja& Singh 2018, NCAER.</p>	<p>For Agriculture & Allied Activities as reported in SDP Report, ASI for Manufacturing, for the remaining sectors, we have used NCAER (NAS)⁵</p>
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¹NPC-MS: National Product Classification for Manufacturing Sector 2015; NPCS: National Product Classification-Services

²RMSA: Rashtriya Madhyamik Shiksha Abhiyan; SSA: Sarva Shiksha Abhiyan

³CMIE Prowess: Centre for Monitoring Indian Economy

⁴DES-GoK: Department of Economics & Statistics, Govt. of Karnataka

⁵NCAER: National Council of Applied Economics Research; NAS: National Accounts Statistics

APPENDIX A2.2:**ESTIMATION PROCEDURE OF FINAL DEMAND MATRIX**

Final Demand Components⁶	Sources Used	Estimation procedure
PFCE	NSS ⁷ 68th Round on Household Consumption of Various Goods and Services in India: July 2011 – June 2012 SUT 2013-14 CSO	Aggregate PFCE for each sector: SUT 2013-14 CSO. Ratios of KA PFCE / India PFCE: NSS
GFCF & GFCE	NSS 67 th Round held between July 2010 – June 2011 on Economic Characteristics of Unincorporated Non-Agricultural Enterprises, Karnataka State Budget 2015 (Administrative Departments & DCU's ⁸), Local Budgets (Consolidated accounts of SAAD ⁹), BBMP ¹⁰ , MGNREGA, PSU's Annual Reports, Public Universities & Hospitals, ECP, NSS 70th Round Data on All India Debt and Investment Survey January - December 2013, CMIE	Each item in the Expenditure Statements from these sources were classified into consumption/capital expenditure. Estimated GFCF for Agriculture, Livestock & Public Administration: AIDIS, extrapolation as per Narayana et.al 2010, Corporations, Autonomous Bodies State's GFCF: Capital Formation/Income (CMIE) *GVO KA for all sectors except 5 sectors (used NAS coefficients)
Exports	Karnataka's Economic Survey 2015-16	Reported as is (37% of GVA)

⁶PFCE: Private Final Consumption Expenditure; GFCE: Govt. Final Consumption Expenditure; GFCF: Gross Fixed Capital Formation; X: Exports; M: Imports

⁷NSS: National Sample Survey Office

⁸DCU's: Directorate of Commercial Undertakings

⁹SAAD: State Annual Audited Accounts, Govt. of Karnataka

¹⁰BBMP: Bruhat Bengaluru MahanagaraPalike

Imports	Residual Method	Residual Method
Indirect Taxes	Karnataka Value Added Tax-Ready Reckoner 2016-17, Overview of Budget, Financial Statement, 2015	For each of the 448 items (NSS), tax rates were checked and applied at HH Level from KA VAT Reckoner. Some assumptions were made at this level for certain types of HH and for certain goods (UH2) Formula for computation of taxes Consumption Expenditure Value / (1+Tax Rate) = Value of item before tax Total Taxes Paid = Consumption Expenditure Value - Value of item before tax
Subsidies	SDP, ECP ¹¹ , Budget Statement	Reported as is.

¹¹SDP: State Domestic Product Report; ECP: Economic-Cum-Purpose Classification Report

APPENDIX A2.3:**DISAGGREGATE COMPONENTS OF SAM**

Other SAM Components	Sources Used	Estimation procedure
GVA ¹² Division (Wage and Non-Wage Income)	CCS ¹³ KA (Agriculture & Allied Activities (13 major)), ASI (Manufacturing), Education & Health (GFCF & GFCE Ratio KA), NAS for other sectors (India coefficients)	Input Structure was examined to classify the Wage and Non-Wage Income.
Total Income HH Corporate Sector PSU Govt	IHDS ¹⁴ NAS, CMIE Direct Method Aggregation of respective row (taxes paid)	HH: C/Y from IHDS and applied the same on NSS Consumption Expenditure to get HH Income. Private Corporate Sector: CMIE Sample was extrapolated using NAS GVA
Households PFCE (RH1 to UH4)	NSS 2011-12	NSS estimates for each HH groups was obtained for the State
Endowment of HH (Labour and Capital), Govt. Transfers	IHDS	Using Income and Social Capital Questionnaire, we examined each item of the expenses to classify into Labor, Capital, Transfer incomes.

¹² GVA: Gross Value Added¹³ CCS: Cost of Cultivation Survey¹⁴ IHDS: India Human Development Survey

Income Tax on Households, Corporate Taxes	CBDT, IHDS	Total Direct Tax for KA (CBDT), Proportion between Corporate and Income Tax: CBDT ¹⁵ for Aggregate Corporate and Income Tax by HH. (HH proportions using IHDS Consumption/Income - Assumed that Income and Income Tax payments are proportional.
Savings (All Institutions)	Residual	HH & Private Corporate Sector, Govt Savings, Foreign Savings: Residual (Income – Expenditure); Public Sector Savings = Public Income;
Operating profits	CMIE, NAS	Proportion estimated through CMIE for KA is applied on India's Profits from NAS.
Income from Entrepreneurship & Depreciation	ECP 2011-12 to 2018-19, SDP Report GoK.	Reported as is.
Interest on Debt	Interest Payments to Private Corporate Sector- Residual	
Imports, NFIA ¹⁶ , Net Current & Capital Transfer	RBI for NFIA, Capital transfers & Current Transfers	Imports: Residual; NFIA, Capital & Current Transfers: RBI Globalizing People: India's Inward Remittances (KA Share 15%)

¹⁵ CBDT: Central Board for Direct Taxes

¹⁶ NFIA: Net Factor Income from Abroad

CORONA VIRUS AND DOMESTIC VIOLENCE: THE ENTRENCHED PATRIARCHY FABRICATING A SHADOW PANDEMIC?

Umika Chanana¹

Abstract

Domestic violence is a transnational issue moving beyond the distinctions of caste, class, culture, and race. A culture of silence prevails amongst women in India. Amidst the Covid-19 crisis, the movement of people has been largely restricted within the four walls of the household which has prompted further deterioration of their condition in the continuously changing world order. This paper seeks to critically analyse the plethora of challenges faced by women during the pandemic that spawns a sense of fear and helplessness that results in intense consequences regarding the health and wellbeing of both women and children in the family. The legal measures have fallen short of preventing violence and attaining gender equality. The paper analyses the policies and strategies of different sectors within India by examining multiple layers of disruptions in the lives of women. The research paper tries to identify the risks and consequences of the crisis faced by women and children as they are caught up in the epicentre of the pandemic, and it evaluates the government policies in dealing with the covert crisis. It highlights the strategic dilemma that warrants the recalibration of policy, it is imperative to assess the policy implications of the “shadow pandemic” that encircles the lives of women. Domestic Violence may not affect us directly but it has indirect implications on everyone’s mind.

BACKGROUND/CONTEXT

Domestic Violence is evident in most societies in the world. It is interlinked with the concept of superiority, power and is an event or a series of events in which an individual in a relationship misuses power to establish control, instil fear, and demand obedience from another. Such violence has no limits and can be practiced in diverse patterns of physical assault, financial abuse, psychological invasion, or sexual assault.

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The World Health Organization report titled, 'WHO multi-country study on women's health and domestic violence against women' (2005) indicates that the proportion of women who have faced physical or sexual assault or both by an intimate partner ranges from 15% to 71% globally². Similarly, the National Family Health Survey III carried out in 2005-06 covered 29 states, and the analysis propounded that a considerable proportion of married women have experienced some form of physical or sexual abuse by their husbands at some point in their lives. It highlighted that approximately 37.2%³ of women encounter violence after marriage in India. This raises a concern that half of the human population feels a certain sense of insecurity in their own homes which should rather function as the safest destination for their inhabitants.

The aforementioned statistics indicate the figures in pre-Covid-19 times in conjunction with the transforming world order. However, the rapid spread of the coronavirus through human contact has caused havoc in the world. To circumvent the transmission, countries have responded by imposing lockdowns but the prevailing system has highlighted the unequal power play that has threatened the existence of women by unmasking the gendered inequalities across the globe. It is notoriously well-known that whether they are natural calamities such as earthquakes, hurricanes, or pandemics like the coronavirus, the disruption caused to the lives and livelihoods of people provides a collective stimulus to increasing incidences of domestic violence against women.

In light of recent events, WHO in its report, 'COVID-19 and violence against women – what the health sector/system can do' (April 2020) pronounced that the likelihood of the occurrence of intimate partner violence is expected to increase as social distancing has caused people to stay at home for longer durations, which in turn fuels the need of men to exert power in the powerless situation that they are stuck in. The National Commission of Women, the governmental body that receives complaints across India, highlighted that the complaints have doubled from the first week of (March 2, 2020) to the final week (March 23, 2020-April 1, 2020)⁴, especially after the nation-wide lockdown, has been promulgated. Similarly, the Council of Europe has expressed concerns over the health and well-being of women and children regarding an increase in the number of cases of violence at home⁵.

² WHO multi-country study on women's health and domestic violence against women (2005)

³ National Family Health Survey III Report,(2005-2006) VOL-I

⁴ Jagriti Chandra, *Rise in domestic violence, policy apathy*, The Hindu, April 02, 2020 <https://www.thehindu.com/news/national/covid-19-lockdown-spike-in-domestic-violence-says-ncw/article31238659.ece>

⁵ Council of Europe, *Women's rights and COVID-19 pandemic* <https://www.coe.int/en/web/gender-equality/women-s-rights-and-covid-19>

Within India, the states that have seen an enormous rise in the cases of domestic violence being reported are Uttar Pradesh, Bihar, Punjab, and Haryana⁶. It is crucial to note that not all cases are reported especially during the time of a pandemic where there is evident distortion in the structural functioning of the institutions. Confined within the four walls of the household, it is primarily women who are victimized and isolated with partners who exhibit abusive conduct and disrupt domestic peace and safety.

The lockdown furnishes an opportunity to the abuser to operationalize 'intimate turmoil' of the minds and bodies of the women in their households by controlling their mobility.

Rekha Sharma⁷ (Chairperson of National Commission for Women) discerned that the National Commission for women had received a total of 3027 complaints (April and May, 2020) of which 47.2% are the complaints related to domestic violence⁸. She further reiterates that during the quarantine, the lack of clarity with regard to the future along with the absence of social security has resulted in post-traumatic stress. Return migration has also heightened the risk of violence. This stems from the existing unequal power dynamics that leaves women workers in distress and escalates to domestic violence. The power dynamics resulting in domestic violence are widely linked with all sectors across all classes in both the rural and urban regions of India. Domestic violence tarnishes the capability and productivity of an individual while simultaneously inhibiting their physical and mental well-being.

The pandemic has altered the communication link with the government authorities. Thereby, several initiatives that have been launched such as tele-counselling facilities have registered that in the absence of a national policy to deal with critical instances of domestic violence, women's rights organizations, and other non-governmental organizations have gained centre stage⁹.

⁶ Sucharita Maji, Saurabh Bansod, Tushar Singh, *Domestic Violence during COVID-19 pandemic: The case of Indian women*, Journal of Community and Applied Psychology, <https://doi.org/10.1002/casp.2501>

⁷ Chairperson of National Commission for Women

⁸ Ambika Pandit (June 7,2020) *Lockdown saw significant rise in domestic violence complaints to NCW*, The Times of India. <https://timesofindia.indiatimes.com/india/lockdown-saw-significant-rise-in-domestic-violence-complaints-to-ncw/articleshow/76240502.cms>

⁹ R. Sen (June, 2020). *Stay Home, Stay Safe: Interrogating violence in the domestic sphere*, Economic and Political Weekly, Vol. 55, Issue No. 25.

STAY HOME, STAY SAFE: THE PERSISTING IRONY

Family and households are considered to be the safest places especially during a pandemic. However, the sword of patriarchy leaves women helpless and scared, and domestic violence causes physical, emotional, psychological, as well as sexual attacks on their attempts to lead a safe and dignified life.

The current circumstances of increasing cases of domestic violence are not just the result of the frustration of physical containment in homes but are also the result of the circumstances of an economic slowdown that has led to the closing of businesses and increasing unemployment that threatens their survival. The victims have their self-esteem affected and further, domestic violence crushes their confidence through taunts, verbal abuse, and exposition to constant beating. This serves as a predicament as they are finding it challenging to deal with violence on the inside and the virus outside.

“Unemployment and poverty are common features among the gangs who rape. In this environment, and within a patriarchal structure, violence is one of the few things that can command respect. As young men become increasingly unable to participate in the India shining fairytale, they reassert their identities, and power, in a savage and cruel act” (Desai, 2014)¹⁰. He further notes that men who are unemployed, uneducated, marginalized may be more prone to violence against girls and women. While the crises affect both men and women economically, the plight of women due to domestic violence is severely hampered during the episodes of unemployment. The dual burden of violence and economic crisis has widened the gap between the genders and has impeded the efforts made to achieve gender parity.

Most women are employed part-time and work in broadening the care economy as they take care of the basic needs of children and the elderly in the family. This type of assigned work is unpaid, undervalued, and unorganized which aggravates the pre-existing gender norms. Unpredictable times call for unpredictable measures that might correspond to women taking heavy interest loans, multiple jobs or even risky jobs to fill the financial gap. Pregnant women who face domestic violence may consequently face maternal mortality, morbidity, and depression. The lack of public transport services for these women to visit their antenatal homes and for consecutive post-partum visits has only exacerbated their vulnerability.

Patricia Uberoi (1993) argued that the culture of silence prevails due to the idea of honour associated with the patriarchal mindset. The socio-cultural

¹⁰ Desai is a renowned sociologist who has written extensively on rape

pattern has created an aversion to subordinate the family and its innate relationships to judicial scrutiny. The family is idolized as a way of life and focussed identity. Its inviolability is reaffirmed by the society and is linked with the concept of “*izzat*” (honour), propriety, and respect. Thus, the available data is not comprehensive and inclusive of all the cases of violence within the home. The resulting impunity is a major cause of aggravating oppression leading to losing individuality and a sense of ownership of one’s own body, mind, and soul¹¹.

Saravanan (2000), affirmed that family is the predominant site where the violence of various forms occur leading to suicide, torture, and homicide. International Labour Organization statistics highlight that women spend more hours in household work as compared to men which quoted that on average time spend is 312 minutes per day in urban areas and 291 minutes in rural areas by women compared to men who spend 29 and 32 minutes respectively. Covid-19 has led to a two-fold increase in the work of women as all members of the family are at home and women suffer violence if they fail to complete the household chores. Men often expect women to serve them domestically, sexually, and monetarily. Therefore, the confinement demonstrates the mind-set and when men feel powerless in one domain they seek to establish more power over the other without any discomfort to themselves and a complete disregard of the other gender who not only takes care of them but the entire family¹².

Antonio Guterres, UN Chief (2020), stated that “*peace is not just the absence of war*”¹³ in the context of women facing domestic violence. This is indicative of the fact that the places where women should feel the safest i.e. their own homes, are the ones where they face an extreme form of violence. Women in this pandemic are afraid of being confined in the same place as their abuser and even when they manage to leave, the world outside looks upon them with suspicion. For instance, there was a case in Bengaluru where a woman after suffering domestic abuse approached various government organizations and NGOs however, the apprehension that she might be contagious resulted in having no place for her to stay until quite recently when the situation changed¹⁴. In such circumstances, it becomes

¹¹Patricia Uberoi (1993), *Family, Kinship and Marriage in India*, Oxford University Press.

¹²Sheela. Saravanan 2000. *Violence against Women in India: A Literature Review*, Mumbai: Institute of Social Studies Trust. March.

¹³ *UN chief calls for domestic violence ‘ceasefire’ amid horrifying global surge*, (April 6, 2020) UN News Global perspectives Human stories

¹⁴ A. Krishnakumar, & S. Verma, (2021). *Understanding Domestic Violence in India During COVID-19: a Routine Activity Approach*. Asian journal of criminology, 1–17. Advance online publication. <https://doi.org/10.1007/s11417-020-09340-1>

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challenging to escape as there are limited means to share information with trustworthy people and authorities.

The NFHS III illustrated that only one in four women sought help whereas two out of three never disclosed that they were the victims of violence. Hence, most women prefer not to report such heinous crimes to the authorities and they are improbable to do so now when the conventional platforms for help are inaccessible.

Rukmini Sen (2020) in her article titled, 'Stay Home, Stay Safe: Interrogating violence in the domestic sphere' marks that the pandemic has shifted gears for the victims of domestic violence. There have been minimal or no discussions on the impact of the lockdown affecting everyday lives of the women. Research from the previous years ascertain that the home is not identified as a safe place for the women suffering violence within the private sphere¹⁵.

Ellina Samantroy and Kingshuk Sarkar (2020) in their article titled, 'Violence in times of COVID-19 Lack of Legal Protection for workers in the informal economy' argue that the women employed in the informal sector are not protected under the umbrella of labour legislations. Additionally, the pandemic has magnified such issues by metamorphosing the pre-existing inequalities and culminating in increased instances of violence against women. Furthermore, the authors pointed out that in maximum number of households the domestic help, self-employed workers, and casual workers were abjured of their monthly wages. This deprivation further intensified already precarious situation, leading to the workers living in constant fear, anxiety and despair in poor living conditions. The agonized lives of women are surrounded by the loss of livelihood leading to starvation with the responsibility of augmented domestic work in the household where the income is squandered by men¹⁶.

Shelby Bourgault, Amber Peterman and Megan O'Donnell (2021) in their paper, 'Violence against women and children during COVID-19' have studied and analysed one hundred papers in their research and have highlighted that there have been traces of escalated forms of violence due to degraded economic opportunities, unwanted migration, loss of livelihood, food insecurity and spousal substance abuse¹⁷. Additionally, a research study

¹⁵ R. Sen, (June, 2020). *Stay Home, Stay Safe: Interrogating violence in the domestic sphere*, Economic and Political Weekly, Vol. 55, Issue No. 25.

¹⁶ E. Samantroy, & K. Sarkar, (2020) *Violence in times of COVID-19 lack of legal protection for women informal workers*, Economic and Political Weekly, ISSN (Online) 2349-8846.

¹⁷ S. Bourgault, A. Peterman, and M O'Donnell, (2021). *Violence against women and children during COVID-19*, Centre for global development, <https://www.jstor.org/stable/resrep30898>

from Bolivia (2021) noted that the youth empowerment program curtailed distinct type of violence experienced by adolescent girls¹⁸.

Paattojoshi (2020), reveal that there has been a severe increase in spousal violence in forms of verbal, sexual, physical and emotional violence that has been substantiated with the help of survey data and self-report trends.

THE HEALTH PREDICAMENT ENCIRCLING THE VICIOUS CYCLE OF VIOLENCE

Domestic Violence has been recognized as a public health emergency where it consequentially differs in type and its brunt on women as stated by Ahmed-Ghosh (2004)¹⁹. Johnson and Johnson (2001) argued that such violence impedes the mental and physical development and well-being of women violating their basic human rights²⁰.

The distress faced in homes has a cascading effect on children by resulting in depression, anxiety, stress difficulties comprehending what is being taught in schools, colleges and reduce the focus on their work. At the same time for women, it can lead to trauma, injuries, mental and reproductive health problems including HIV, AIDS, and unplanned pregnancies. Covid-19 exposure to domestic violence will further aggravate these complications. Sometimes, children are used as tools to inflict more damage to women.

Ellina Samantroy and Kingshuk Sarkar (2020) delineates that in certain cases the living conditions of the abused women makes them vulnerable to diseases as they stay with extended families in small places. In such areas it becomes difficult to maintain the provisions for COVID-19. The living conditions are also highly unhygienic rendering it impossible to maintain safety precautions pertaining to COVID-19²¹.

Gupta and Dalvie (2020) wrote, with the increased incidences of domestic violence discrete efforts are being made to route and address the cause via women rights organizations, state police, other treasured civil society organizations. The pandemic has impacted women working in varied dimensions for instance, women living with disability, or those suffering from life threatening

¹⁸ Gulesci,Selim; Beccar,Manuela Puente; Ubfal,Diego Javier.2021.*Can Youth Empowerment Programs Reduce Violence against Girls during the COVID-19 Pandemic ?* (Policy Research working paper;no. WPS 9547;COVID-19 (Coronavirus) Washington, D.C. : World Bank Group.

¹⁹ Ahmed-Ghosh H. *Chattels of Society: Domestic Violence in India*. Violence Against Women. 2004;10(1):94-118. doi:[10.1177/1077801203256019](https://doi.org/10.1177/1077801203256019)

²⁰ P.S. Johnson & J.A. Johnson (2001).*The oppression of women in India*. Violence against women, 7, 1051–1068.

²¹ E. Samantroy, & K. Sarkar, (2020) *Violence in times of COVID-19 lack of legal protection for women informal workers*, Economic and Political Weekly, ISSN (Online) 2349-8846.

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During the lockdown, apart from the group of women facing domestic violence, and possibly within this group as well, there resides the sex workers in Mumbai, Kolkata, and Madhya Pradesh who have secured no economic or health support from the government during pandemic. Moreover, the sex-workers living in un-homely conditions within brothels encounter obstacles in their livelihoods to cater to the basic needs of their families including food and buying basic medicines. The violence that these women mask does not come under the purview of Domestic Violence Act²³.

Consequentially, fewer women have access to counselling. This inadvertently affects pregnant women as they majorly suffer from hormone-induced depression, postpartum depression as well as post-menstrual depression.

THE LEGAL CONUNDRUM AND THE GOVERNMENT'S RESPONSE TOWARDS THE LOOMING CRISIS

The Protection of Women from Domestic Violence Act, 2005 fails to address this concern during a pandemic. The Act has a detailed definition of what constitutes Domestic violence but is not inclusive of verbal, emotional, sexual, and economic violence due to social dictate of the society that we constitute²⁴.

Shivakumar, 2020 affirms that women in India lack basic knowledge of their constitutional and legal rights. Lack of awareness is a major issue that prevents them from having a safe and dignified life. This has resulted in a further assumption of patriarchal claim over women. During the pandemic, lack of awareness of the helpline number can lead to severe health hazards that the government might not be able to untangle even when in the post-Covid world order²⁵.

²² Dr Manisha Gupte and Dr Suchitra Dalvie, (April 6, 2020). *The gendered impact of COVID-19 in India*, The Week.

²³ R. Sen, (June, 2020). *Stay Home, Stay Safe: Interrogating violence in the domestic sphere*, Economic and Political Weekly, Vol. 55, Issue No. 25.

²⁴ The Protection of Domestic Violence Act, 2005 (September 13, 2005)

²⁵ R. Sen, (June, 2020). *Stay Home, Stay Safe: Interrogating violence in the domestic sphere*, Economic and Political Weekly, Vol. 55, Issue No. 25.

Non-Governmental Organizations have taken several steps to address the ‘*shadow pandemic*’²⁶ by effectively carrying out initiatives like Red-Dot initiative where the indication of a red bindi on women’s foreheads indicates that the women are expressing their distress symbolically if not verbally. When the dot is shown to neighbours and shopkeepers it serves as a distress call to the helpline number reaching for their safety. In Spain, the Institute of Equity has initiated a campaign named *Mascarilla-19 (Mask-19)*, in which women manage to go pharmaceutical stores and request for the Mask-19, which implies that the woman has faced domestic violence and is in dire need of protection. The head of the store makes a note of the name, address, and phone number and alerts the police or the staff workers. The women wait at their homes until help arrives to address their concerns. This is an innovative solution to the existing and inflamed problem of domestic violence²⁷.

To efficiently address the concern, it is crucial for law enforcement agencies to understand the gravity of the situation and believe women. The long term scourge of domestic violence is destructive and needs to be addressed immediately. It is pertinent that all sectors collaborate to eradicate the social evil and eliminate gender inequality in the long run also ensure equal participation of women in decision-making and the developmental process²⁸.

Reaching women in distress is crucial to prevent further violence from occurring and resulting in perilous situations. Policies that provide women with economic and social support are a must in order that they never rely on the abuser for their survival. This can be accomplished by providing safe places for them to stay by converting empty hotels into temporary shelters especially in urban areas. Whereas in rural areas ASHAs, who are the frontline health workers, must be the first point of contact for abused women, along with panchayats and self-help groups coordinating their efforts to provide safety and security to women in distress. These measures can serve women in villages better.

WAY FORWARD

It has been clear that the impact of Covid-19 is not just related to health and economy but has widespread socio-cultural dimensions. It is essential to take into account the holistic picture and leave no stone unturned to

²⁶ *The shadow pandemic: Violence against women during COVID-19*, UN Women

²⁷ Joanne Oakley (April 8, 2020), *Gender violence initiative ‘Mascarilla 19’ helps three women across Andulcia since launch* <https://www.theolivepress.es/spain-news/2020/04/08/gender-violence-initiative-mascarilla-19-helps-three-women-across-andulcia-since-launch/>

²⁸ *The shadow pandemic: Violence against women during COVID-19*, UN Women

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protect the dignity and wellbeing of all, including women who, often with no fault of their own, are the worst sufferers during catastrophes, calamities, and pandemics.

INTERNATIONAL MEASURES TO ADDRESS DOMESTIC VIOLENCE:

According to available data released by the United Nations Economic and Social Affairs (2015) in a majority of countries, less than 40% of the women who experience violence seek help of any sort. Furthermore, the women who did seek help preferred to reach out to close friends and family rather than formal institutions and mechanisms. Out of them, merely less than 10% sought help by appealing to the police²⁹.

Even though laws exist against both violence and harassment, there is an acute dearth of actual measures implementing these laws. According to data published by the World Bank Group (2018) at least 144 countries have passed laws against domestic violence and 154 have laws against sexual harassment. However, this does not mean, in any way, that countries are always compliant with international standards and recommendations or that they effectively implement them³⁰.

In recent years, with regard to the availability of data on violence against women, the progress has been significant. According to the Sustainable Development Goals' Global Database, comparable national prevalence data on Intimate Partner Violence, for the period 2005-2017, are available for 106 countries which shows great advancement in monitoring and evaluation³¹.

Moreover, we can safely highlight how lack of alcohol, fear of unemployment, and inability to fulfil the basic needs of the family are no reasons to practice domestic violence. It is the persistence of patriarchy not only in the minds of men but also women who often ignore the enduring pain and fail to report it to the authorities. A behavioural and structural change is required for the betterment of women's health and well-being. Legal and administrative measures alone may fail as a change in the mind sets of people is what is needed to help embrace woman empowerment.

²⁹ United Nations Economic and Social Affairs (2015). [The World's Women 2015, Trends and Statistics](#), p. 159.

³⁰ World Bank Group (2018). [Women, Business and the Law 2018](#), database.

³¹ [Inter-Agency and Expert Group on SDG Indicators](#) (March, 2017). [SDGs Global Database, Department of Economic and Social Affairs, United Nations](#)

CONCLUSION

The paper looked at the lethal combination of the COVID-19 induced lockdown and domestic violence. It has been mentioned by various scholars in their arguments that the pandemic has led to a surge in the number of cases of domestic violence in the community. If we do not pay heed to the early warning signs and treat this issue as a top priority, victims and survivors would be unable to get essential services and it would delay access to justice and healthcare. Therefore, though non-governmental organizations are playing a crucial role in addressing the pleas of abused women, the government must holistically incorporate measures within the national policy to meet the needs of the victims of domestic abuse. Thus, it is imperative to follow the age-old rule of *leaving no one behind* in order to make sure that domestic violence cases do not remain invisible during this pandemic.

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UNSAFE ABORTION IN INDIA: ACCESS, SERVICES, AND POLICY

Jhalak Aggarwal¹

Abstract

13 women die due to unsafe abortions in India every day. Almost 6.4 million abortions occur in India annually, making it a leading cause of maternal mortality². This paper discusses the plight of unsafe abortion services in India, shedding light on the regenerative health issues that are preventable but have been dismissed and neglected by emotional debates and discussions. Socio-economic vulnerability, early pregnancy, and insufficient and inadequate access to healthcare services put many women at the risk of unsafe abortions. The paper draws evidence from various sources to present the author's perspectives on how improper access to safe abortion care acts a major barrier. Studies shows that more than 80 percent of Indian women are not aware of the fact that abortion is legal in India, contributing to women looking for termination via unsafe and perilous practices. Thus, the cost in terms of women's health and lives centres around the need to pursue attempts and efforts to make information on safe abortion practices available and accessible to women in India.

INTRODUCTION

Unsafe abortions are one of the leading contributors to the high maternal mortality rate in India, much of which is avoidable. It contributes to 8 percent of maternal deaths in India, becoming the third leading cause of all such deaths in India³. The WHO defines unsafe abortions as “*the termination of an unintended pregnancy either by persons lacking the necessary skills or in an environment lacking the minimum medical standards or both*”⁴. It is strongly linked with other complications for the child-bearer such as trauma, haemorrhage

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² Snigdha, Aarzo. (2018). “13 Women Die in India Every Day Due to Unsafe Abortions - India News.” *India Today*, India Today.

³ Snigdha, Aarzo. (2018). “13 Women Die in India Every Day Due to Unsafe Abortions - India News.” *India Today*, India Today.

⁴ UNDP/UNFPA/WHO/World Bank Special Programme of Research, Development and Research Training in Human Reproduction (HRP). (2012). “*Unsafe abortion: global and regional estimates of the incidence of unsafe abortion and associated mortality in 2008*”. WHO.

and is a major cause of maternal deaths⁵. In spite of being legalised via the Medical Termination of Pregnancy Act in the 1970s, India was home to approximately 15.6 million unsafe abortions in 2015. According to WHO, every eight minutes a woman dies due to complications arising from unsafe abortions in developing countries, making it a leading cause of maternal mortality.⁶ According to the research by Adler et al in 2012, there are multiple interrelated factors relevant to under the practice of abortion in India⁷ such as

- Women's educational status and labour force participation
- Social class and economic conditions
- Preference for male child

However, the objectives of this paper are: to analyse the socio-economic factors associated with unsafe abortion, to dissect the global discourse on abortion, and lastly, to examine the policies for abortion in India.

SOCIO-ECONOMIC FACTORS ASSOCIATED WITH ABORTIONS IN INDIA

India is a land with massive social baggage and societal demons such as poverty and illiteracy. About 70% of the population of India inhabit rural areas where safe abortion procedures are not readily accessible.⁸ Women men living in such environments have greater chances of unsafe abortions as compared with women living in urban dwellings. Further, inequalities in access to information, opportunities, and decision-making also affect an individual's well-being. Health is considered a special good directly related to a person's well-being, enabling the individual to act as an agent. In the discussion of abortion practices, various factors such as socio-economic aspects, attitudes, and stigma towards young and unmarried women play a crucial role in contributing towards increased unsafe abortion practices.

Socio-economic Factors

The health outcomes are affected not only by biological factors but also by socio-economic factors and people's positions in social hierarchies. Growing evidence suggests that through appropriate intervention for the social determinants of health, health outcomes can be improved. In addition to this, the implications of abortion are different for unmarried

⁵ Khan KS, Wojdyla D, Say L, et al. Who analysis of causes of maternal death: a systematic review. *The Lancet* 2006;367:1066–74.

⁶ Haddad, Lisa. Nour, Nawal. (2009). "Unsafe Abortion: Unnecessay Maternal Mortality". PubMed.

⁷ Adler AJ, Filippi V, Thomas SL, et al. (2012). "Quantifying the global burden of morbidity due to unsafe abortion: magnitude in hospital-based studies and methodological issues". *International Journal of Gynecology& Obstetrics*.

⁸ (2019). *Two-Thirds of Abortions Unsafe in over Half of Indian States Studied*. Nuffield Department of Population Health.

girls as opposed to married women due to their different social contexts. Abortions in unmarried women are considered to be a social stigma thus creating obstacles in safe abortions and defeating the purpose i.e. the health of the woman undergoing abortion. In the rural areas despite there being access to a medical centre, unmarried girls are taken to far-off places for the procedure for the sake of preserving her future by keeping the family image intact. In addition to this, providers sometimes refuse to perform the procedure on young women or ask them to bring their parents to the health centre, thus forcing them to resort to unsafe abortions. While the law demands the consent of only the woman if she is above 18 years, various providers nonetheless ask for consent from the spouse or from the woman's relatives. Furthermore, women who are poor, young, uneducated, and/or unmarried delay their abortions due to lack of information on different aspects such as understanding the signs of pregnancy, accessing the location of the required services, and lack of awareness of the legality of choosing the service. Although women from all socio-economic backgrounds access abortion services, there is an explicit class divide in the places in which women obtain the service. We see that private medical facilities are expensive and financially out of reach of most women. Women who access safe facilities are generally from a financially sound background who can afford to pay the various costs associated with the procedure such as the transportation cost, doctor's fees, and other miscellaneous expenses, something which is unlikely for a woman from a weak economic standing. This poverty-trap also makes the option of legal abortion unavailable to women from economically and socially weaker groups, thus forcing them to access services from unskilled and uninformed providers.

Stigma

The stigma against premarital sex, the fear of disclosure, shame and silence for women, and/or myths about abortions are causes of unsafe abortions⁹. Various social, cultural, political, and economic factors influence and contribute to this stigma. Our society perceives abortion not through the lens of health and decision-making, but through norms and morals. Women who undergo an abortion are looked down upon. Power also plays a critical role where power over women by societal pressures influences her independent decisions regarding the abortion. This shows domination and social control over the woman, which devalues her and her ability to act as an individual.

⁹ Cárdenas, R., Labandera, A., Baum, S.E. *et al.* (2018). "It's something that marks you": Abortion stigma after decriminalization in Uruguay. *Reprod Health*.

TABLE 1. SOCIAL DETERMINANTS OF HEALTH INEQUITIES IN ABORTION CARE

Family and Peer Influences	Community Context	Availability of Relevant Services	Cultural and Social Values
<ul style="list-style-type: none"> - Power and decision-making - Income - Marital relationship - Access to resources - Support network - Age - Number of children 	<ul style="list-style-type: none"> - Place of residence i.e. rural or urban - Social position - Awareness - Distance to the facility - Social capital - Laws and rights 	<ul style="list-style-type: none"> - Fees and related costs - Staff skills and competency - Acceptance by the community 	<ul style="list-style-type: none"> - Women's status - Gender norms - Social cohesion - Image and respect in the society - Health beliefs - Religious factors

Source: Solar O, Irwin A. (2010). “*A conceptual framework for action on the social determinants of health*”. Social Determinants of Health Discussion Paper 2 (Policy and Practice).

Family and Peer Influences: There is a link between the health outcomes and the individual attributes of pregnant women where the family members influence the choice of pregnant women. Women have little to no power and decision-making abilities regarding their own fertility and health care solutions and options. Relationships with partners, access to resources, income of the family, and age affect women's health and the decisions they make.

Community Context: Individual women and their families reside in communities, which differ in important social ways. For instance; the place of residence is a crucial factor where urban households use maternal health services and facilities more than rural households due to better physical accessibility and awareness of laws and rights. In addition to the woes of the urban-rural divide, service providers also sometimes discriminate against the marginalized communities due to their low social positions. Communities with high levels of social capital are more likely to challenge this as material and psychosocial resources are shared by members who work together to address their problems collectively.

Availability of relevant services: The availability of requisite services plays a key role in defining maternal health outcomes. Services are inaccessible sometimes due to physical, financial, or social barriers. Further, the quality of health personnel and services are also of significance. The technical quality of health outcomes depends on appropriate staffing equipment, and on the correct use of clinical protocols.

Cultural and Social Norms: A woman's status, health beliefs and religious norms influence her decisions regarding pregnancy and delivery care. The gender dynamics that play out in households where men or elderly family members have more power result in the norm that women should accept their choices.

ACCESS: A MAJOR BARRIER TO SAFE ABORTION

Access can be defined as “*the ability of patients to use the services they want to use and are recommended to use by experts*”¹⁰. Given the lack of skilled and accessible professionals, millions of women in India risk injury and death by choosing unsafe abortions. This limited access to services has become a major cause of increasing maternal mortality in India, contributing to almost 8 per cent of all maternal deaths from unsafe abortions. Women in the backward and rural regions are largely affected as they have limited access to medically-safe abortions. The access to safe abortion practices is hindered by:

Availability: The availability of appropriate healthcare services at the right place and at the right time to meet the needs of pregnant women is extremely important. But we see that physical access is a major contributor to increasing unsafe abortions. For example, a study revealed that in order to reach an abortion provider in Madhya Pradesh, a woman has to travel an average distance of 20km (Hussain et. al., 2018). Furthermore, only a few primary health-care facilities in rural area offer abortion care services. (Iyengar, 2016). The primary health-care centres are usually the first point of contact for underprivileged women and such a low number highlights the problem of availability for safe abortion practices.

Affordability: Financial hindrance acts a significant barrier of access for women seeking safe abortions. The disparity between the number of individuals using the services and their ability to pay is marked. The informal fees charged by public providers and the high prices in private setting exploits women's vulnerability and poor knowledge of law, irrespective

¹⁰ Wright J., Williams R., Wilkinson J.R. (1998). *Health needs assessment: Development and importance of health needs assessment*. Br. Med. J.

of their class and ability to pay. This is especially prevalent when the pregnancy is unwanted and socially unacceptable. In addition, the state unfortunately is not the leading abortion service provider. Abortion care services are mainly concentrated in the private sector, leading to higher out-of-pocket expenses. The cost of abortion also varies depending on various factors such as the stage of pregnancy the women is in when she seeks an abortion, her marital status, whether it is a sex-selective abortion, and whether the provider is registered.

Acceptability: Many times, neither the law nor the policy create barriers to access but instead, it is the providers themselves who do so. There is sometimes a clear misfit between provider and patient attitudes towards each other as well as their expectations of each other. Although the law does not mandate the consent of the spouse or of the third-party for an abortion except in case of a person under the age of full legal responsibility, such consent is insisted on by abortion providers. The reason for this is the need to protect themselves from social and legal issues resulting from complications or even death as a result of the abortion; this is a position brought about by the low social status of women and their dependency on their husbands.

State	No. of MTPs (1993-1994)	No. of Facilities	State Population (1996)	MTP: Facility ratio	MTP: Population ratio	1000 Population Facility ratio
Andhra Pradesh	13179	373	7,21,55,000	37	0.19	1,93,445
Assam	21372	100	2,47,26,000	214	0.86	2,47,260
Bihar	11060	209	9,30,05,000	53	0.12	4,45,000
Gujarat	10263	700	4,55,48,000	15	0.23	65,069
Haryana	22438	228	1,85,53,000	98	1.21	81,373
Karnataka	9077	471	4,93,44,000	19	0.18	1,04,764
Kerala	34433	559	3,09,65,000	62	1.11	55,394
Madhya Pradesh	33086	295	7,41,85,000	112	0.45	2,51,475
Maharashtra	97079	1775	8,65,87,000	55	1.12	48,781
Orissa	19510	169	3,44,40,000	115	0.57	2,03,787
Punjab	19436	242	2,23,67,000	80	0.87	92,426
Rajasthan	29023	316	4,97,24,000	92	0.58	1,57,354
Tamil Nadu	42364	623	5,94,52,000	68	0.71	95,429
Uttar Pradesh	12103	425	15,66,92,000	29	0.08	3,68,687
West Bengal	64273	452	7,46,01,000	142	0.86	1,65,047
India	609915	9271	93,42,18,000	63	0.65	1,00,768

Johnson, Heidi. (2002), *“Abortion Practice in India: A review of Literature”*. Centre for Enquiry into Health and Allied Themes.

In Table 2 above, we can see that according to population per MTP facility ratio, Bihar has only one centre for 445,000 people. The MTP facilities

are more prevalent in states such as Uttar Pradesh, Madhya Pradesh, and Orissa, but still serve an average of 200,000 people. The lowest number of centres is present in the six states with the highest number of abortions. This clearly suggests that the current number of facilities insufficient and inadequate to meet the population demands and needs. Efforts to rectify these inadequacies must be made since the current efforts have just touched the surface and failed to bring down the number of unsafe abortions.

Case Study 1: This is the story of a woman from Assam who was a victim of an unsafe abortion practice. In early 2016, she became pregnant for the fourth time. When she realised this, she kept it a secret from her family because raising three children had already taken a toll on her physically, emotionally, and financially. She decided to terminate the pregnancy but since abortions were considered a taboo, she decided to do it secretly. She approached a private clinic in Guwahati where the process was carried out by an untrained practitioner. She noted that after her abortion, the secretion was not cleaned properly. After a month, she felt pain in her abdomen which increased with every passing day. Her brother took her to the district hospital where she was diagnosed with uterine cancer. The doctors suspected that since her abortion was not completed fully, the remains of the dead foetus inside the woman made her vulnerable to the disease.¹¹

GLOBAL PERSPECTIVE ON UNSAFE ABORTIONS

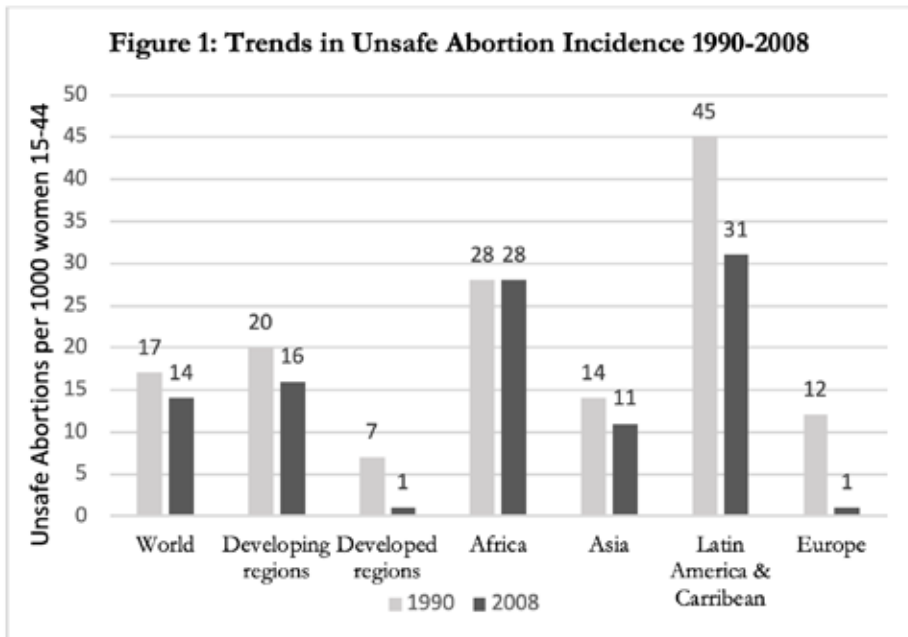
The world has made impressive progress on the main causes of maternal mortality – severe bleeding, infection, blood pressure, and obstructed labour. However, unsafe abortion – the only almost completely preventable cause – has been paid less attention to in this quest. The rate of unsafe abortion is still at least one in 12 maternal deaths globally¹². If we look at abortions across the globe, 60 countries have laws prescribing the gestational limits¹³. However, laws in 23 countries including Canada, Germany, Denmark, and Vietnam are extremely liberal allowing abortion on the request of the woman at any time during the pregnancy both for foetus abnormalities and social reasons.

¹¹ (2018)“Why Is Unsafe Abortion Still A Reality For Millions Of Women In India?”. Feminism India.

¹² Murshid, Munzur; Haque, Mainul. (2019). “*Unsafe Abortion: A Forgotten Emergency: Women’s health*”. Médecins Sans Frontières (MSF) International.

¹³ Manning, Vinoj. (2020). “*Discourse: Returning Women Their Body.*” Deccan Chronicle.

During the 1994 International Conference on Population and Development (ICPD), access to safe abortions was observed as critical for public health. Trends suggest that abortion law reforms in developing countries have reduced abortion-related deaths and risks¹⁴. For instance, in Nepal, abortion-related risks, complications, and deaths as a proportion of maternal illnesses decreased by 48 percent. Similarly, in Ethiopia, abortion related complications decreased by 70 percent. However, if we compare the results with India, only 40 percent of abortions are considered safe, even though abortion has been broadly legal for over 40 years.



Source: UNDP/UNFPA/WHO/World Bank Special Programme of Research, (HRP). (2012). “*Unsafe Abortion Incidence and Mortality - Global and Regional Levels in 2008 and Trends*”. WHO.

In Figure 1 above, we can see the trend in the number of unsafe abortions incidences from the years 1990-2008. The graph also suggests that the rise in the total number of unsafe abortions is largely attributed to the increasing population size of women of reproductive age between 15-44 years. Further, the unsafe abortion rate has decreased in all major regions of the world since 1990 but exhibits only a minor decrease in Africa. In the regions of Latin America and the Caribbean, the rate has decreased by almost one third from the base level. The incidence rate in Asia also

¹⁴ Barot, Sneha. (2018). “*The Roadmap to Safe Abortion Worldwide: Lessons from new global trends on incidence, legality, and safety*”. Guttmacher Institute.

decreased by 17 per cent from 14 in 1990 to 11 in 2008. Lastly, we can say that since unsafe abortions are negligible in the sub-region of Eastern Asia i.e. Vietnam, China, and Singapore, the rate is relatively low in Asia as compared to other regions¹⁵.

Going ahead, various international agreements recognise, support, and reinforce safe and legal abortion as a woman's right, anchored in the rights to life, liberty, equality, non-discrimination, and more. In *K.L v Peru*, the UN Human Rights Committee acknowledged and admitted that the government's inability to ensure legal abortion services for a 17-year old girl carrying an anencephalic foetus violated her rights to privacy and freedom¹⁶. In addition to this, the ICPD links government responsibilities under international deals and pacts to their commitments to promote safe abortions and prevent unsafe ones. Numerous national and international laws, policies, and legislations recognise the right to abortion. To illustrate this, Colombia's Constitutional Court in 2006 found that "*women's sexual and reproductive rights have finally been recognized as human rights, and have become part of constitutional rights, which are the fundamental basis of all democratic states*"¹⁷. Though India was amongst the first to pass a liberal law for abortion, the time has come to revise the law and bring it in tandem with international standards, conventions, and guidelines.

ABORTIONS IN INDIA: LAW AND POLICY

India was one of the earliest countries to pass the Medical Termination of Pregnancy Act (MTP Act), 1971 which governs and regulates abortion services to save women's lives, safeguard their physical and mental health, and protect their socio-economic rights. It allows termination of pregnancy up to twenty weeks for situations when continuation is a risk to health or the pregnancy is a result of rape, incest, or the failure of a contraceptive method. Yet around 56 percent of abortions in India are performed illegally (Guttmacher Study 2017). While the changing debate on rights has emphasised abortion services as a woman's right to decide and exercise power over her body, the MTP Act still predominantly focuses on married women's maternal mortality problems. Despite this liberal law, non-availability of trained professionals and detailed documentation, information asymmetry about the legality of abortions, and social constraints contribute to abortion-related deaths. Based on this paper, the author's proposed recommendations for the MTP Act are as follows:

¹⁵ UNDP/UNFPA/WHO/World Bank Special Programme of Research, Development and Research Training in Human Reproduction (HRP). (2012). "*Unsafe Abortion Incidence and Mortality - Global and Regional Levels in 2008 and Trends*". WHO.

¹⁶ (2014) "*A Global View of Abortion Rights*". Centre for Reproductive Rights.

¹⁷ (2016). "*10 Years of Legal Abortion in Colombia?*". Centre for Reproductive Rights.

- Increasing the provider base to AYUSH providers, nurses, and ANMs
- Increase gestation limit from twenty to twenty-four weeks for vulnerable categories.
- No upper gestation limit for cases with foetal abnormalities

Furthermore, the abortion law in India authorizes the state governments to manage and control the abortion services. The states have accepted the law, but they differ greatly in interpretation and implementation. Many states have added protocols and created more entry barriers, administrative delays, and irrelevant controls to ensure safety and prevent unsafe abortions. For instance, Haryana and Delhi require the architectural plan of the service centres and details of car parking provisions as mandatory requirements to be submitted for being registered. Similarly, Maharashtra needs a blood bank to be present within 5km of the facility, a requirement which is completely unnecessary¹⁸. As Hirve (2004) concludes, these regulations highlight that the state focus is to have control rather than facilitate abortion care.

Furthermore, the POCSO Act 2012 mandates the revelation of all the abortion cases for girls under the age of 18 years. In many cases, to protect identities or to safeguard either the boy or the girl, the girl's family members themselves are not inclined to report the case, which is a mandatory step to avail abortion services. The problem of breaking the system or seeker's will creates a constant conflict for service providers, making them liable for offence. These provisions often increase the provider's vulnerability and force women, particularly minors i.e. below the age of 18 years, to avail services under unregistered unsafe practitioners.

An amendment in the act was made in 2002, now commonly known as the Medical Termination of Pregnancy Amendment Act. It recognised a safe place for abortion that is "*a hospital run or maintained by the government, or any place approved by the Government or District Level Committee constituted by that Government with the Chief Medical Officer or District Health Officer*"(MTP Act Amendment, 2002).

In addition to this, it stated that for a pregnancy less than twelve weeks old, the opinion of single doctor alone suffices; if the pregnancy is between twelve and twenty weeks, the opinion of two doctors is necessary; and in other urgent medical situations, the opinion of a single registered medical practitioner will be sufficient. However, no changes were made to increase the acceptable gestation period during which an abortion can

18 Siddhivinayak S Hirve. (2004). "*Abortion Law, Policy and Services in India: A Critical Review*", Reproductive Health Matters.

be undergone. So the question still remains: what about rape survivors or vulnerable women? What about women with complications and risks in the upper limit of the defined gestation period?

India's abortion policy and regulations are progressive, but better access to safe abortions is hindered by unnecessary societal and misguided practices. It is time that the MTP is reworked for better implementation and increased access for women by allowing second trimester abortions, empowering decision-making, and addressing the gaps in the current law which prevents women from taking decisions for themselves and their bodies. There should be priority actions and investments to address the social determinants that compel women to seek out unsafe abortions. The policy action on social determinants of health inequities for unsafe abortions can be reduced by targeting programmes for the disadvantaged and underprivileged population, abolishing gaps in the health outcomes for the haves and have-nots, and addressing the social health gradients.

Case Study 2: In March 2017, the Supreme Court rejected a plea made by a 37-year old woman from Maharashtra to terminate her 26-week-old foetus on the grounds that the child suffered from Down's Syndrome. The Supreme Court denied the petition since it was not a life-threatening disease and there was no risk to the woman's health. She challenged the validity of the law saying that it does not allow a woman to exert her right. However, the law permits termination in extreme cases if continuation of the pregnancy is likely to cause grave injury to the woman's health and/or increases or induces the risk of abnormalities in the child, but in this case, the panel of doctors held that the baby had chances of survival and there was no physical risk to the mother. Hence, her plea was rejected.¹⁹

CONCLUSION

This review exhibits that morbidity and mortality from unsafe abortions remain a serious issue for Indian women. Abortion care is neglected, as is much of India's health care. The combination of poor quality of care and a poor work ethos with ineffective laws has resulted in the unregulated growth of exploitative and unsafe abortion services. To bring down the mortality rate due to unsafe abortions, it is imperative that access is made available. Based on the study, here are a few recommendations:

¹⁹ Sinha, Bhadri. (2017). "SC denies permission to abort 26-week-old foetus suffering from Down's Syndrome". Hindustan Times.

Strengthen access to safe abortion services: It is important to execute training and service delivery guidelines. The providers must be trained, with appropriate medicines and equipment at all levels of facilities.

Better knowledge of the MTP Act: In many parts of India, the providers insist that the consent of a family member is necessary for abortions. However, Section 4 of the MTP Act clearly states that while consent is a prerequisite, adult women of sound mind do not require consent from anyone to terminate the pregnancy under the existing MTP Act. Only minors and mentally ill women require the consent of their guardians. Sometimes due to the asymmetry of information, women undergo unsafe abortion practices. Thus, measures should be taken to improve the awareness levels of women to ensure that it is known that only their consent is required to carry out the MTP procedure if they are above 18 and mentally sound.

Increase the number of service providers: In India, the abortion law of 'physician only' is followed. However, the number of doctors could easily be increased by amending the law such that it authorises medical practitioners with a bachelor's degree and relevant experience to provide abortion care.

Increase the upper limit for abortion: In cases where serious foetal abnormalities are diagnosed, the MTP Act must be modified to allow for later abortions i.e. after 20 weeks of pregnancy.

Improve and simplify access to abortion care: According to the law, women are required to seek the medical opinion of one doctor for the first-trimester abortion and two doctors post this. Though expert opinion is important, the MTP Act can be simplified to reduce the requirement to the provider's opinion, thus increasing women's access.

Many women groups strongly advocate for and support limiting regulations of pregnancy outcomes and enabling women to make decisions regarding their pregnancies as they are the owners of their bodies. The decision about the number of children and when to have children is personal and hence, should be in the hands of the child-bearer. Based on the analysis, it is also important to target programme implementation and intervention at the community levels to narrow the rural-urban divide. In India, the social factors around abortion overpower the law and become major decision-making factors contributing to the decision of choosing unsafe abortion procedures. Thus, the need of the hour is to address the social determinants of health, and to improve women's access to safe abortion services, particularly in disadvantaged and rural areas.

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SAKSHAM HARYANA: THE ROLE OF POLICY IMPLEMENTERS

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Abstract

Policy studies are vital for generating a meaningful and robust public discourse that can inform both the government and the citizenry at large. In the context of India, there is ample academic literature on the assessment of governmental policies and programmes, as well as on the bureaucracy and its functioning. However, when it comes to understanding the functioning of administrative structures in the implementation process, there is a dearth of sufficient literature. Therefore, this study attempts to shed some light on the same through a case study on the implementation of the Saksham Haryana programme of the Government of Haryana across the three districts of Hisar, Mahendragarh and Faridabad. This study researches the implementation process by evaluating the role of individual implementers at every level of the programme. This allows for the clear identification of the nodal points in implementation, as well as the dynamics involved among the various implementers. Based on these findings, this study offers suggestions for an improved implementation of the programme.

INTRODUCTION

The education policy landscape in India has elevated its focus from mere access and equity, to inclusivity, quality and accountability (National Education Policy, 2020), in line with Sustainable Development Goal (SDG) 4, that was adopted by India as a part of the 2030 Agenda for Sustainable Development. So far, there have been three major landmarks in the Indian education policy landscape, from the National Policy on Education (NPE) 1968, to NPE 1986, to NPE 2020. The first NPE in 1968 focused on “radical restructuring” and “compulsory education” for all children up till age 14,

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as had been stipulated by the Directive Principles in the Constitution of India.⁵ The second NPE sought to improve the state of primary education in the country by emphasizing a “child-centered approach” and launching “Operation Blackboard” to improve infrastructure⁶. Now, the third National Policy on Education (2020) intends to incorporate a multidisciplinary and flexible curriculum and enhance competency-based learning that can foster creativity and critical thinking in children⁷. It is important to note that while competency-based education may have entered the NPE mandate only as recently as 2020, it has been a part of the education policy objectives in Haryana since 2014.

Competency-based learning is an approach to education that focuses not on rote learning but on the student’s demonstrable ability to apply knowledge and learning. It includes experiential, discussion-based, and analysis-based learning which are essential to honing skills such as critical thinking, problem-solving, adaptability and good communication. The need to adopt this approach in Haryana arose through the lack of quality education and skilling that was revealed through the Annual Status of Education Report (ASER) published by the organisation Pratham⁸. As per ASER 2012, less than 30% students enrolled in Grade 5 could do simple two-digit addition and subtraction, and only around 60% of students enrolled could read a Grade 2 text. In 2014, only 24% of the students in Grade 3 could do at least subtraction, and 30.8% of students in Grade 5 could do division⁹. ASER revealed that these figures were much lower than the similarly situated private schools of rural Haryana. This brought to light the urgent need to bridge the gap in learning outcomes of the government schools in the state. To this effect, the state government launched the Quality Improvement Programme (QIP) in 2014, which aimed at improving the quality of school education in 3,222 government primary schools. In line with this, a Learning Enhancement Programme (LEP) was also initiated from 2015 across these schools, which involved remedial teaching that could help the students

⁵ Ministry of Human Resource Development, Government of India. (1968). *National Policy on Education, 1968*, pp 38-39. https://www.education.gov.in/sites/upload_files/mhrd/files/document-reports/NPE-1968.pdf

⁶ Ministry of Human Resource Development, Government of India. (1986). *National Policy on Education, 1986 (Programme of Action, 1992)*, pp 15, 21. https://www.education.gov.in/sites/upload_files/mhrd/files/upload_document/npe.pdf

⁷ Ministry of Human Resource Development, Government of India. (2020). *National Policy on Education, 2020*. https://www.education.gov.in/sites/upload_files/mhrd/files/NEP_Final_English_0.pdf

⁸ Pratham is a non-governmental organisation that works across India towards improving the quality of education for children through scalable and low-cost interventions. ASER is an autonomous unit within the Pratham network for surveys, evaluation and research.

⁹ For more information: <http://img.asercentre.org/docs/Publications/ASER%20Reports/ASER%202014/ASER%20state%20pages%20Eng/haryana.pdf>

‘catch-up’ to the required levels of grade-level competencies (GLCs). A student would be deemed to be grade-level competent, if they knew all the competencies or skills defined for that particular grade. For example, a grade 7 student is deemed to be GLC if they can demonstrate that they have learned the knowledge and skills that they are expected to learn in the grade that they are studying (such as rudimentary algebra).

By 2017, a more comprehensive competency-based education programme was instituted in the state by way of Saksham Haryana. This programme constitutes an interesting case for studying the administration of education, as it was initially implemented across multiple parallel bodies and continues to be so, namely: State Council of Education Research and Training (SCERT), the state education department (Directorates of Elementary and Secondary Education), and *Sarva Shiksha Abhiyaan* (SSA).

Thus, this study adopts a ‘process view’ to study its implementation, wherein implementation is understood to occur through a process of constant interaction and negotiation among the individual implementers. Following this, the study focuses on issues of coordination and on the administrative roadblocks faced by implementers, particularly the mid-level ones, as they are the bridge between the state-level policymakers and ground level workers. In order to do this, this study makes use of primary data collected through in-depth interviews conducted with the Nodal Officer of Saksham Haryana, as well as teachers, district officials and DIET Principals in the districts of Hisar, Mahendragarh, and Faridabad in the state. By making implementers as its analytical focus, this research is able to identify the implementation challenges and gaps that exist at each level. Based on such findings, this paper presents a discussion on the process of implementation of Saksham Haryana, and offers suggestions for the overall improved execution of the programme.

It is hoped that this case study will help in understanding the implementation bottlenecks involved in streamlining a competency-based education framework. As the bureaucratic structures of the education departments in other states are similar to that of Haryana, with SSA and DIET bodies also in operation across states and districts in the country, the architecture of public education administration has commonalities across states. To that extent, some of the findings and recommendations presented in this study may be relevant for other states as well, for either existing competency-based education programmes, or for future ones.

This paper begins by undertaking a review of the relevant literature on policy implementation. It is followed by an explanation of the structure of

implementation of the Saksham Haryana programme. The next sections present the research methodology adopted, the findings from the study as well as a discussion on the same. This paper concludes by highlighting critical areas of improvement and offering suggestions for the same.

REVIEW OF LITERATURE

The conventional body of literature on policy implementation has developed through the work of several generations of implementation analysts. The classical view in policy studies did not distinguish between implementation and policy-making — implementation was understood to be a natural corollary of the mere declaration of the policy (Natesan and Marathe, 2015). However, the first generation of implementation analysts problematised this view; with Pressman and Widavsky (1973) bringing to the light the idea that successful implementation requires certain optimal enabling conditions which are distinct from the creation and declaration of the policy itself. For them, these conditions that were required to effectively put a policy into practice, were commanding control and authoritative action from the top. Thus, the first generation of implementation scholars were referred to as ‘top-down’ theorists. However, this top-down position did not account for the fact that implementation involves multiple actors working across several levels of administration — implementation is not the sole function of the leadership. The second generation of scholars took a ‘bottom-up’ view, highlighting the role that ground-level implementers such as teachers, doctors and police officials play. Weatherly and Lipsky (1977) referred to these implementers as “street-level bureaucrats.” They argued that policy implementation involves consensus-building and negotiation among local actors (Yadav, 2010). This second model too, received criticism for placing all the emphasis on the ground-level actors, and discrediting the roles and positions of other implementers working in the various echelons of administration.

Thus, the third generation of analysts sought to synthesise (Najam, 1995) the work of the previous two generations. These scholars argued that rather than being merely an outcome, implementation is a process that involves people working across multiple levels of governance. Each implementer has their own unique interests and roles because of their respective positioning in the process, and implementation occurs through a process of constant interaction amongst these actors involving negotiation and bargaining (Natesan and Marathe, 2015). In the context of policy implementation in India, the process’ view of policy implementation is reflected in the work of Natesan and Marathe (2017) and Caroline Dyer (1999). Natesan and Marathe (2017) study the implementation of the Mahatma Gandhi National Rural Employment Guarantee Act (MNREGA) in the state of

Tamil Nadu. They find that the implementers' own attitudes and workloads affect implementation. Their study also highlights that there is a difference in incentives for the actors implementing the policy on the ground from the top-level policy makers, and that a gap between these two leads to a dilution of the policy vision and objective, as well as its reduction to mere targets. They also find that accountability and power devolution are key factors to ensure successful policy implementation.

Similarly, Dyer (1999) studies the implementation of Operation Blackboard under the 1986 NEP in Gujarat and Delhi. She uses a 'backward mapping' approach to understand every level of implementation from the ground-up. She finds that the policy design itself had gaps, as it had not been made keeping in mind the realities of implementation at the grassroots level, i.e., the existing state of schools, the requirements and interests of teachers.

The inadequate implementation of policies on the ground-level has also been echoed by other scholars studying educational administration in India. In his work, R.S. Tyagi (2014) analyses the trends of localisation and decentralisation of administration in the education sector in response to the forces of globalisation. He comments that "development of competent management capacity and sound delivery system" (Tyagi, 2014, p. 778) continue to be critical challenges plaguing the administration of education in India. Further, he says that there is a lack of coordination among the different sectors and parallel bodies (created through the implementation of SSA) working in education.

In their review of the research conducted in developing countries pertaining to the provision of education programmes and policies, and how they affect the quality and quantity of education that children receive, Glewwe and Kremer (2006) conclude that "education systems in developing countries are weak" (p. 949). They highlight that budget distortions in education finance, inadequate or absent structure of incentives for teachers, and poorly-designed curricula are key factors that contribute to the systemic shortcomings present. Kiran Bhatta (2016) also cites institutional constraints and roadblocks as key factors that are contributing to the 'crisis' in education in India today, namely, the gaps in learning competencies among school students in India. She stresses on capacity and institution building through sustained efforts, in order to successfully navigate and adapt to challenges that exist and that may emerge in the dynamic field of education governance. In doing so, Bhatta (2016) underscores the idea that implementation is a multi-stage, iterative process.

Drawing from this literature then, this paper presents a case study of the implementation process through Saksham Haryana in the context of

education. As it is a massive programme that involves not only the employees of the education department across the state, district and ground levels, but also functionaries of SCERT and SSA, the synthesiser model of policy implementation is most suited for the purposes of this study. The next section details the design of this programme, as well as its implementation architecture.

STRUCTURE OF SAKSHAM HARYANA AND THE EDUCATION DEPARTMENT

Saksham Haryana was launched in June 2017 as an initiative by the Chief Minister's Office (CMO) in Haryana to improve the learning outcomes of government primary and middle school students in the state by using systemic interventions to make them grade-level competent. The scope, scale, implementation mechanism, review and monitoring mechanisms of this programme have been designed by a team of professional consultants housed in the Saksham Haryana Cell (SHC). The important components of this programme are:

Learning Enhancement Program (LEP)

In government schools in Haryana, the majority of the students would move to higher grades without achieving the 'learning level outcomes' of the previous one, especially after the 'no-fail' policy instituted up till class 8¹⁰. This widened the gap between the actual learning levels of students and what they were being taught in classrooms, therefore rendering the usual classroom teaching ineffective. Thus, it became necessary to provide students with the requisite support to bridge this learning gap by gaining mastery over the required competencies. LEP is a remedial teaching programme to this effect, wherein the first hour of teaching in schools is reserved for activity-based teaching that helps improve students' learning levels. This teaching is sensitive and responsive to the students' existing learning levels (L0, L1 and L2, with L2 being completely grade-level competent.) This recognition and categorisation of students as per their existing competencies by teachers helps in providing the right kind of remedial teaching. It is noteworthy that remedial teaching has shown to positively impact the learning levels of children. In their impact evaluation of a remedial teaching programme called 'Balsakhi' among primary school students, Banerjee et. al. (2007) report that the programme yielded positive outcomes, with children reporting higher test scores, and large gains in language and math competencies particularly by students falling at the bottom of the test-score distributions.

¹⁰ For more information: <https://indianexpress.com/article/explained/simply-put-the-no-fail-policy-may-have-failed-what-now/>

Review and Monitoring:

The objective of this intervention is to examine the accountability levels of all stakeholders within the education system (teachers, state, block, and district officials). This is done through regular reviews by the Deputy Commissioners (DCs) and Sub-Divisional Magistrates (SDMs) in each district with all the relevant stakeholders. At the sub-district level, *Mentors* i.e., Assistant Block Resource Coordinators (ABRCs)/Block Resource Persons (BRPs) and *Monitors* i.e., district education officials such as the District Education Officers (DEOs) and Block Education Officers (BEOs), conduct regular school visits to provide requisite pedagogical assistance to teachers and to ensure the quality of classroom teaching respectively.

Student Performance Dashboard:

A student performance dashboard allows collection, digitization, and analysis of student assessments. The data on this dashboard is uploaded by school teachers and shows a picture of the performance of every student's assessment. This data is visible to all stakeholders and helps build transparency and public accountability. It also promotes data-backed decision making in DC/SDM reviews, early identification of loopholes and measurement of the impact of interventions in real-time. Teachers can also use this documentation of the performance of their students to offer personalised support.

Third-party assessment (Ghoshna exams)

An essential component of the Saksham Haryana programme is the measurement of the impact that the interventions have on the learning levels of students. To this end, regular third-party assessments¹¹ are conducted through the Saksham Ghoshna exams which began in 2017 itself when the state set the aim to become 'Saksham' by 2019, i.e., achieve grade level competencies (GLCs) for 80% of students in the state. The unit chosen for this assessment is a block. For a block to be 'Saksham', more than 80% of its students need to be grade level competent; for a district to become 'Saksham', all its blocks need to become 'Saksham'. For Haryana to become 'Saksham', all its districts would need to become 'Saksham.'

Education Department

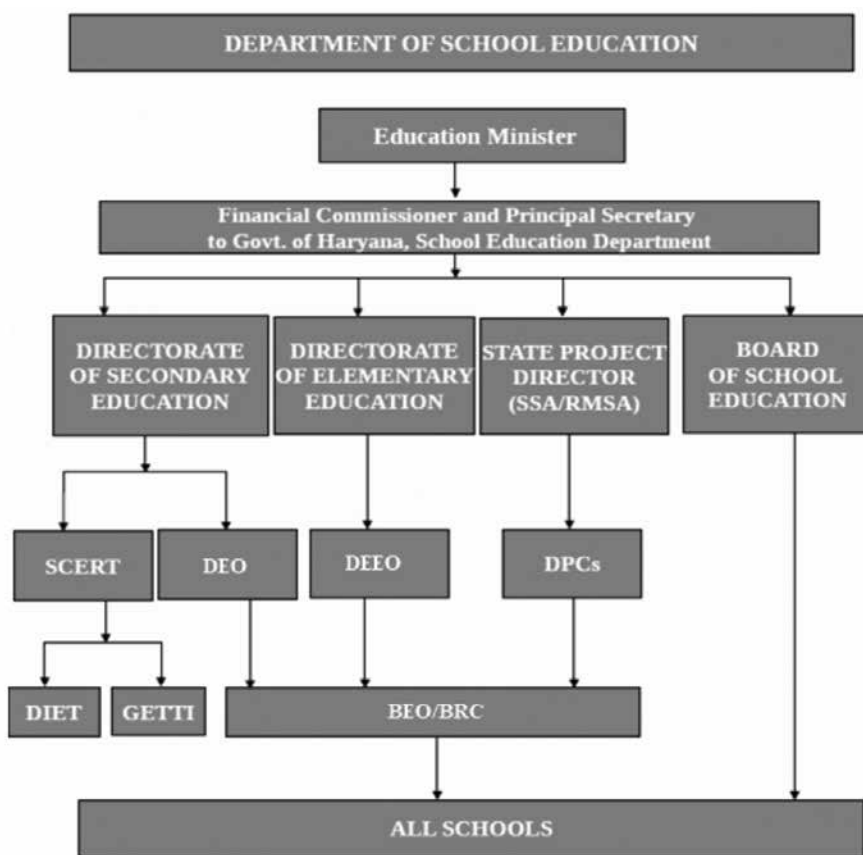
Education administration at the state-level is complex, with schools reporting to different parallel bodies (See Figure 1). At the state level, the education

¹¹ The third-party assessments for the first 9 *Ghoshna* rounds since 2017 were conducted by the educational testing agency Gray Matters India. The 10th round was conducted by Educational Initiatives. To know more about the testing agencies, please see: (i) <https://www.graymatters.in/> (ii) <https://www.ci-india.com/>

department is headed by the Principal Secretary, School Education, who also heads three wings — Department of Elementary Education, Department of Secondary Education and Samagra Shiksha Abhiyan (SSA). Each of these wings is further headed by a director.

At the district level, the department is further divided into three wings headed by a District Education Officer (DEO), a District Elementary Education Officer (DEEO) and a District Programme Coordinator (DPC). Similarly, at the block level, Block Education Officers (BEO) oversee the functioning of schools and other allied activities.

Figure 1: The structure of education administration in the state



Source: Compiled by the authors

State Council of Educational Research and Training (SCERT) is an autonomous body of the government concerned with the academic aspects of school education including the formulation of curriculum, preparation of textbooks and teachers’ handbooks, and teacher training. District Institutes

for Education and Training (DIET) are district-level educational institutes which have been established in each district by the Government of India. They help in coordinating and implementing the state government's policies at the district level. For instance, DIET trains the Assistant Block Resource Coordinators (ABRCs) and Block Resource Persons (BRPs) who conduct school visits and provide pedagogical support to teachers.

Block Resource Centres (BRCs) and Cluster Resource Centres (CRCs) have also been established in each education block under SSA to conduct in-service teacher training and to provide constant academic support to teachers and schools. BRCs and CRCs also help in community mobilisation activities at block and cluster levels respectively.

METHODS

For the purposes of this research, qualitative interviews were conducted from March 2020 to June 2020 with a range of stakeholders involved in education administration across the districts of Faridabad, Hisar and Mahendragarh. The interview participants spanned the three levels of the implementation of Saksham Haryana: state, district, and school-level. These three districts were chosen because of their differing contexts in terms of the size of education administration. Hisar is a very large district with nine education blocks¹². Mahendragarh is a mid-sized district and has eight education blocks while Faridabad is the smallest district with only two education blocks.

A purposive, non-probability sampling method was used to identify the stakeholders. As a result, the participants interviewed included the District Elementary Education Officer (DEEO), the DIET principal, the District Project Coordinator (DPC) from *Sarva Shiksha Abhiyaan* (SSA) and a Junior Basic Training (JBT) or Trained Graduate Teacher (TGT) in each district. At the state level, the Nodal Officer of Saksham Haryana was interviewed. A total of thirteen interviews were conducted this way. The stakeholders were chosen in this manner to understand the implementation process from top to bottom, with an emphasis on mid-level implementers, as they are the crucial connecting link in the entire structure of implementation. The interviews were conducted with prior approval from the Institutional Review Board (IRB), Ashoka University (see Appendix I), and only after obtaining prior written consent from the participants. The interviews were based on a semi-structured schedule, with a mix of closed and open-ended

¹²An educational block is simply division of a district into different blocks depending on ease of administration, geographical access and average number of schools/clusters falling in that particular area.

questions. They were conducted via telephone or in-person. The responses were transcribed, translated and then categorised for analysis.

Limitations and challenges of the study

Three of the authors of this paper were working as Chief Minister's Good Governance Associates (CMGGAs) during the data collection process of the paper. Their association with the Chief Minister's Office may have possibly affected interview responses. It is possible that the perceived authority of the CMGGAs may have caused participants to exaggerate or curtail their responses in some instances.

This issue is not too dissimilar to the ones that usually accompany the data collected through interviews and/or surveys, as there is no way to always ensure an honest response from the participants, and this was anticipated at the beginning of the study. As Eisenhardt and Graebner (2007) have opined "The challenge of interview data is best mitigated by data collection approaches that limit bias" (p. 28). In a similar vein, to mitigate bias, stakeholders from across the implementation hierarchy were chosen in order to obtain diversified responses. Secondly, rapport-building was done with the stakeholders prior to conducting the interviews to build some level of trust between the respondents and the interviewers and to counteract any perceived authority of CMGGAs in order to facilitate a transparent exchange. Thirdly, a list of backup stakeholders/alternatives was maintained and utilised, in instances where the respondent appeared visibly uncomfortable speaking to CMGGAs.

To further ensure the integrity of this study, the recommendations that have been made in the subsequent sections of this paper have all been drawn from findings that were observed and iterated across the various levels of stakeholders, and across districts that have been studied, rather than from any single source.

FINDINGS

Stakeholders across the three levels of implementation (state, district and school-level) highlighted how Saksham Haryana has helped in improving the learning outcomes of the students. Teachers in Faridabad and Hisar, the DEEO Hisar, and DIET Principal Hisar said that the targeted, task-based approach of Saksham has helped in achieving better outcomes. This was summed up by the Project Director, who, while sharing the history and development of the programme, stated that "Saksham Haryana has helped in bringing the much-needed shift from syllabus-oriented to competency-oriented teaching-learning process."

All the three teachers emphasised that the categorisation of students according to their existing competencies has not only helped in effective remedial teaching under LEP, but has also enabled individual attention to be given to the students for the first time. Students are now observed in detail. The teacher in Hisar said that where LEP has been a priority, 50% of the students have been able to do well in class. The teacher in Faridabad added that another reason for improved performance is the increased accountability of teachers, especially through mentoring in monitoring. However, all the three teachers said that academic work needs to be prioritised over administrative work for teachers so that they have more teaching time. This view was echoed by district officials — specifically the DEEO Hisar, the DPC Hisar and DIET Mahendragarh. District officials also mentioned that a lot of their time is spent in doing tasks unrelated to education administration. In particular, the DPC in Faridabad and DEEO Mahendragarh said that there are too many court cases that take away time from their main responsibilities. They suggested that a legal counsellor should be appointed in the districts to mitigate this issue.

DEEOs across the three districts said that power should be decentralised to district authorities to transfer teachers wherein teacher rationalisation has happened improperly so as to reduce teacher vacancies in schools. This would help in better implementing the programme across every school in the district.

With respect to effective coordination, communication and alignment among the implementers, the responses across the districts were varied. In Mahendragarh, the DPC mentioned that strong interpersonal relationships have helped in effective coordination between the three bodies in the district, while the DIET Principal mentioned that there was effective coordination among different officials, which has been obtained through timely discussions and the use of WhatsApp groups.

In Faridabad, the response was mixed. While the DIET Principal said that there was mutual support and coordination among the implementing bodies due to motivation from district administration and awareness amongst teachers, the DPC stated that there was an absence of support from the district administration.

In Hisar, the DIET Principal clearly flagged an absence of coordination among education department officials, and an absence of support from them, particularly for new initiatives that the DIET may wish to undertake. Not only district officials, but also the faculty of DIET and teachers in schools were mentioned as sometimes being unable to work together which

hindered the effective implementation of the programme. The teacher in Hisar mentioned that there were gaps in top-down communication. They often do not get timely information about various activities or decisions of the education department at the state regarding the programme, such as the Saksham *ghoshna* exam dates.

DISCUSSION

It is difficult to ascertain a very conclusive inference from the primary findings regarding the size of the district education administration and the implementation of Saksham Haryana. Only in Hisar (the largest district in this study in terms of the size and number of blocks) did the DIET Principal flag issues of coordination, and challenges in working with the other stakeholders in the implementation of the programme. The teacher interviewed in Hisar also highlighted lapses and gaps in top-down communication, while the teachers from the other two districts did not. Thus, it appears that with a larger area to administer, the district administration faces greater difficulties in implementation. However, this paper cannot comment on any inherent causal relationship between the two.

With respect to the stakeholders, respondents working at different levels highlighted different aspects, issues and concerns with respect to the implementation:

Teachers are the foot-soldiers with respect to the implementation of Saksham Haryana, and therefore their perspectives were largely concerned with the classroom-level implementation of the programme. They highlighted how teaching time gets reduced due to excessive administrative work and involvement in other untimely programmes, and how the support and involvement of district officials motivates them to perform better. They also unanimously opined that the programme has brought rigour to school education and is a desirable intervention. District-level officials shared a larger managerial perspective on the implementation of Saksham Haryana. As these officials are directly responsible for the effective functioning of schools and administration of teachers in the district, their perception of the implementation of the programme was concerned with its functioning in the entire district and how the administrative processes could be made smoother. The state-level stakeholders shared the larger history and vision of the programme, keeping in mind the broader state of affairs across the entire state. Their perspective focuses more on the working of the state education department.

These varying perspectives have been defined by the respective positioning and interests of the participants in the implementation of the Saksham Haryana programme, thus affirming the 'process' view of implementation. The interviewees at the three levels have shed light on the different elements

of policy implementation underscoring the position that ultimately, it is a complex process comprised of individuals performing their own roles and interacting with each other at every stage to bargain, coordinate, and even collaborate, through the course of executing the programme. Thus, understanding the perspective of each stakeholder has provided a holistic picture of the manner of functioning of the policy and where intervention may be necessary. Going forward with this understanding and the findings from the data, the next section presents the scope for improvement of the implementation of Saksham Haryana and suggestions for the same.

CRITICAL AREAS OF IMPROVEMENT AND WAY FORWARD

Provisioning of specialised IT staff:

District officials such as the DEEO Faridabad highlighted the lack of adequate staff in offices. IT staff is required, along with staff in rural areas to ensure the smooth implementation of this programme. This is a major hindrance that leads to ineffective implementation of tech-based initiatives. At times, teachers are roped in to support in technical work, which decreases their classroom time.

Streamlining Human Resources (HR) Processes

The education department, the biggest department in the Government of Haryana¹³, is overburdened with a myriad of complex Human Resources (HR) problems (allowances, leaves, transfers, RTIs, court cases etc.). These HR processes need to be streamlined for the effective implementation of the Saksham Haryana, particularly at the district level as that indeed is the crucial unit of implementation for this programme. Streamlining of HR processes which concern these pivotal district-level implementers will also lead to a greater availability of time for them to look into the educational aspects of the programme, rather than be occupied solely with administrative/HR matters of the department's employees.

Better team-building practices to boost coordination:

Overall, the stakeholders said that Saksham Haryana had created a positive impact on teachers, but that there was scope for improvement in teamwork at the district-level. In Faridabad, the DPC said that there was weak leadership in the district with an absence of support from the district administration; DC/SDM reviews happen without proper or full participation. The interviews also revealed that difficulties in coordination were found in Hisar i.e., the district with the greatest number of educational blocks for the purposes of this study. Thus, it perhaps follows that as the size of the education

¹³ The Haryana government employed 1,15,195 people in the education department of the state as on 31.03.2016 — the largest department in the state in terms of the number of people it employs. For more information: http://esaharyana.gov.in/Portals/0/2016_1.pdf

administration apparatus expands, greater efforts need to be taken to put in place strategies that boost effective communication and coordination. One way to overcome this hurdle is to organise annual/bi-annual activities across the various bodies/departments involved in the district education administration to foster familiarity and improve coordination.

Simplification of competency framework and better mapping with LEP:

The interviews with teachers also highlighted that a high number of competencies have been listed for one grade, such that it confuses both teachers and students. Therefore, the list of competencies per grade needs to be streamlined. Sometimes coursework, Saksham, and LEP become three different things for both teachers and students to handle. This also leads to a system, wherein teachers and students are constantly engaged in examinations, whether for Saksham or as part of their regular coursework. This reduces the actual time available for classroom teaching and learning, and teachers feel overburdened. Therefore, Saksham Haryana needs to be better integrated with the existing curriculum and academic year. This could be reworked through a possible merger between the traditional SAT examination and Saksham examinations. Another way could be to comprehensively develop and pre-fix an academic calendar, wherein the dates for the exams would be differentiated and earmarked such that they are not simultaneously held.

Reduction of non-education related tasks

Nearly all the stakeholders interviewed at the district and ground-level consistently highlighted their involvement in non-educational activities such as Road Safety Meetings and Poshan Abhiyan. This involvement in every other activity organised by other departments present in the district leaves the district-level officials with little or no time to be field-functionaries and effective monitors of the programme. With respect to an initiative called Paudhagiri, wherein the state government distributes saplings to school students to create environmental consciousness and provide holistic education, the teachers interviewed mentioned that their involvement primarily becomes about administrative aspects such as geotagging each plant, bringing saplings from nurseries, and keeping a record of each of them, rather than providing guidance and assistance to the students. This takes away from their valuable teaching time. Thus, there is a need to rethink the involvement of these functionaries in non-educational tasks, and come up with better planning, resource management, and other alternatives. A greater investment in the capacity of the system in terms of personnel may perhaps assist in the same.

Robust checks and measures to be introduced to identify unfair means:

Some teachers reported that the positive pressure to have good performance in the Saksham Ghoshna exams, led to the adoption of unfair means or

misrepresentation of data in some instances such that the results may not always be reflective of the real picture. To counter this, stringent processes can be instituted to monitor the collection and reporting of data on the student performance dashboard.

Scalable Practices:

The stakeholders interviewed highlighted some administrative practices that have been efficacious in achieving the objectives of Saksham Haryana. These include the regular reviews conducted by DCs and SDMs at the district level, the use of WhatsApp groups among teachers and education officials to ensure quick and effective coordination, and the regular school-visits conducted by mentors (ABRCs and BRPs), who in turn are actively trained by DIET functionaries. These practices can be encouraged and strengthened in order to enable their wider adoption.

CONCLUSION

This paper presents the findings of a study that was conducted in the districts of Hisar, Mahendragarh, and Faridabad in Haryana to research the implementation of the Saksham Haryana programme, with its analytical focus on the policy implementers across the various levels of administration.

The primary findings of the research suggest that there is a positive sentiment in implementers across the board with respect to the Saksham Haryana programme, as it is perceived to be an improvement that has brought about positive changes in the educational environment of government schools. This improvement in learning-level outcomes is perhaps echoed in the near-continuous improvement in the external third-party assessments that the state has seen in the Saksham Ghoshna examinations (See Table 1).

Table 1: Saksham Ghoshna Rounds Results

Round	Month	No. of blocks assessed	No. of saksham blocks
1	Dec 2017	9	2
2	Feb 2018	13	1
3	May 2018	15	4
4	Aug 2018	23	11
5	Sep 2018	30	3
6	Nov 2018	25	5
7	Feb 2019	93	68
8	May 2019	25	13
	Total	119	107

Source: Samagra Governance

However, the paper reports some shortcomings in the existing model as well and offers suggestions for improvement. As McLaughlin (1987) has argued, successful implementation requires a balance of support and pressure, such that local capacities can be strengthened. Similarly, for the Saksham model to truly and effectively come together, a number of administrative factors need to be worked upon.

As the district is the nodal unit of implementation for this programme, it is important to streamline the HR processes concerning the state education department employees working at that level. Further, it is important for mid-level managers, who are the connecting bridges between the state-level policy makers and ground-level implementers, to actively take on the role of motivating the implementers on the frontline (i.e., teachers, ABRCs, BRPs), and to ensure that there are no lapses and gaps in communication. It is also necessary to reduce non-education related tasks for teachers and district officials, and strengthen the measures taken to avoid oversight and increase accountability.

The successful implementation of any policy or programme, such that it meets the desired objectives that it was designed for, requires the concerted efforts of individuals working at multiple levels to ensure proper communication, coordination and resource-sharing. The positioning and perspectives of implementers at each level are therefore vital in understanding how the implementation is occurring in practice. It allows for the possibility of not only identifying any missing crucial links or glitches, but also of viewing the system of implementation as a larger, composite whole. This paper provides a thorough and comprehensive understanding of the implementation of the Saksham Haryana programme based on this approach. While it forms only one component of understanding the scope and process of instituting a competency-based education system in government schools in India, it can surely serve as a point of initiation for the same.

ACKNOWLEDGEMENTS

We would like to thank Dr. Rakesh Gupta for his initiative, motivation and direction, along with Dr. Priyamvada Trivedi and Itika Gupta for their inputs and guidance. We would also like to thank the reviewer for their comments.

DECLARATION OF CONFLICTING INTERESTS

The authors declare no potential conflicts of interest with respect to the research, authorship and/or publication of this paper.

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