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Interrogating POCSO Judgments

Regressive interpretation of the POCSO Act cannot be seen as an isolated problem of the law as any challenge to the structural biases of law demands an engagement with feminist struggle for legal justice. page 10

Plantation Workers' Welfare

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Panchayat Politics in West Bengal

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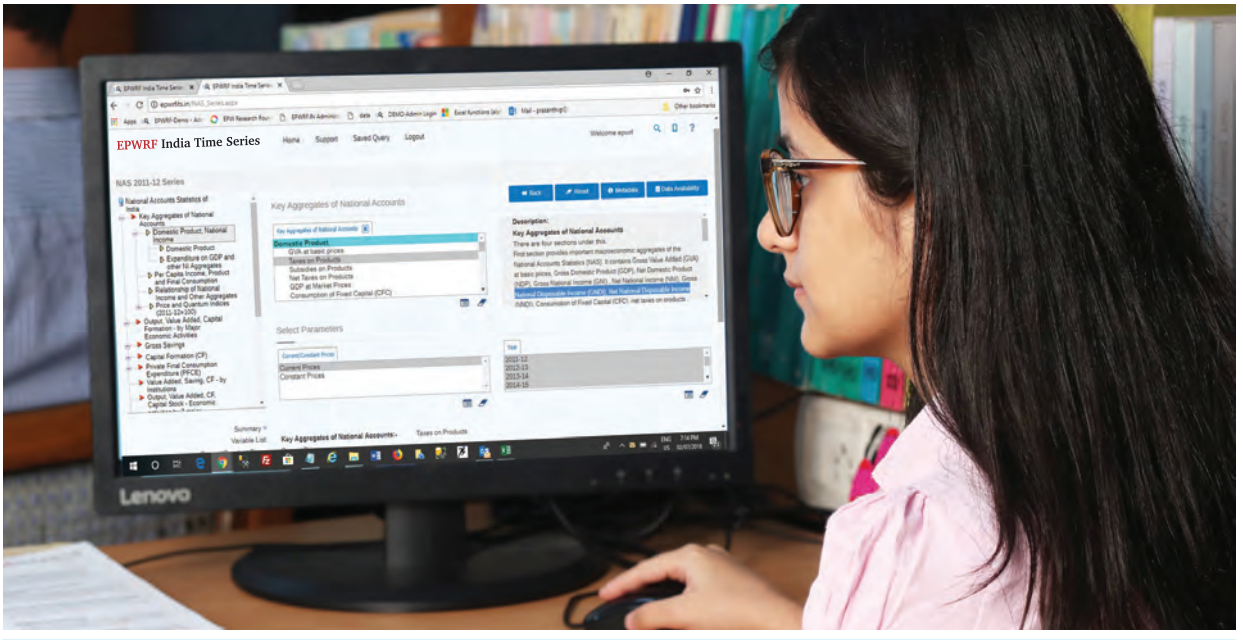

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A Feminist Interrogation of the POCSO Judgments and Criminal Law in India

10 This article argues that the recent Protection of Children from Sexual Offences Act judgments cannot be studied in isolation from the larger paradigm of feminist critique of law and engagement with law in India. — ***Atreyee Sengupta***

Nine Years of Turmoil in Taxation

13 In 2012, the finance ministry of the Government of India amended the Income Tax Act to tax capital gains from indirect corporate transactions. Despite the altered legal position that this law will apply prospectively instead of retrospectively, the woes of the ministry are not over. — ***K L Datta***

Using Public Procurement Strategically

16 The article examines policy decisions and practices in public procurement in India during the pandemic, and finds that bureaucracy could not use it strategically. Some lessons from China's procurement designs are also offered. — ***Yugank Goyal***

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20 Welfare provisions for plantation workers in the Occupational Safety, Health and Working Conditions Code, 2020 are subject to how respective state governments frame rules and can have wide variations too. There is a need to recognise the use of technology in ensuring better occupational safety. — ***Kingshuk Sarkar, Vinit Ghosh***

District-level Estimates of Unemployment Rates in Odisha

23 This article describes the possibilities of using an alternative method, such as small area estimation, for generating district-level unemployment estimates with higher precision combining the Periodic Labour Force Survey 2018–19 data and the auxiliary variables from other secondary data sources. — ***Khan M F, Hukum Chandra, B N Mohanty & Sridhar Sahoo***

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33 The article maps and analyses the impact of the first wave of the COVID-19 pandemic and the subsequent lockdown in Maharashtra based on the three dimensions of human development—health and nutrition, education, and livelihood. — ***Chandrika Singh, Shoumeli Das, Anuradha Nair***

Drivers of Foodgrain Productivity in Uttar Pradesh

40 The study uses district-wise panel data for the period between 2000–01 and 2016–17 and thereby assesses trends and acceleration or deceleration of growth in area, production and productivity of foodgrains in Uttar Pradesh. — ***Priyanka Singh, Mini Goyal & Bishwa Bhaskar Choudhary***

Elected Representatives and Local Bureaucracy Interface in West Bengal

46 Based on the long-term ethnographic research in four districts during a political transition in West Bengal and analysing narratives of disagreements between elected representatives and local bureaucrats in their gram panchayats, it is argued that the interface between the elected members and the bureaucracy is dialectical and is influenced by external as well as local contexts. — ***Suman Nath, Bhaskar Chakrabarti***

Why Human Development Should Precede Economic Growth in the States

54 The paper presents a conceptual model of the relationship between human development and growth and between them and poverty. It then empirically tests the model. — ***Santosh Mehrotra, Jajati Keshari Parida***

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62 A response to an earlier article which claims that there has been a significant increase in the utilisation of public healthcare facilities by the poor and a reduction in out-of-pocket expenses in healthcare, along with cautioning on methodological issues and the possible errors of interpretation in the earlier article. — ***T R Dilip, Narayanan Devadasan & Sunil Nandraj***

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Reforming Olympic Games

In the middle of all the recent celebrations, some attention is also deserved by those voices that have been opposing Olympic Games at most of the venues in the past. Such voices of protest and opposition were very much there in Tokyo and, what is more, they were already there in the context of the 1924 Olympics in Paris and even the 1928 Olympics in Los Angeles.

Leaving aside the COVID-19-specific issues at this time, if we look at most other issues of these protests, we find that they are generally concerned with the high expenses, diversion of resources from more urgent needs, the long-term futility of investing in excessive sports stadia and facilities, and, above all, the displacement of homeless people and poorer communities caused due to the sudden need for many new constructions and facilities. Some displacement of the society's weaker sections, which is visible, is, of course, opposed, but in addition, it has been argued that many places, which in the future could have been potentially used for housing the poor and the homeless, are used up in constructions that may not have any high-priority, long-term utility.

We in India are all too familiar with the displacement of a number of people who were pushed to the outskirts of the cities in very unsatisfactory conditions, as well as the emergence of serious livelihood problems for them, at the time when the Asian Games or the Commonwealth Games were organised.

As far as possible, efforts should be made to avoid such problems from reoccurring. As the cost and security concerns related to this massive sports' extravaganza go on escalating, there is a clear possibility that in the future, venues will be restricted only to some of the richest countries. This trend is already visible.

To avoid such problems, an important reform is already overdue. There is a clear need to spread this once-in-four-years event across 20 to 30 countries or so, thereby representing all continents. While one country can be the lead venue, its responsibilities for organising various sports can be shared by about 25 other countries across the world. This way, it can become much more of an all-world event. It can be spread over the greater part of the year, depending upon the convenience and the appropriate season of the various host countries. Hence, sports enthusiasts will have much to look forward to all year round, instead of having most of the sports concentrated in just about two to three weeks when they cannot really enjoy all the sports fully.

Yet another advantage of such an arrangement will be that it will become rather possible to include some hitherto neglected games that are popular. At the same time, some of the existing problems can also be resolved too.

Bharat Dogra
NEW DELHI

Fixing MSPs of Wheat and Paddy

Paddy–wheat, as part of the kharif and rabi crop rotation stormed into the crop pattern of northern India, typically in Punjab and Haryana, with the onset of the green revolution in the late 1960s. Notwithstanding the all-out efforts of the governments to curtail its further expansion in order to minimise

water use, load on electric power, air pollution caused by burning paddy straw, etc, the area under paddy crop cultivation went on increasing and has come to occupy about three-fourths of the total cultivated area of Punjab. Farmers are constrained that under the existing circumstances, alternative crop enterprises do not stand a chance of economic return and higher stability in yield and price as compared to paddy.

To fix the minimum support price (MSP) of a crop, various criteria are considered, such as ruling price (projecting the past trend in price), parity price (keeping crop price index at par with non-farm price index and input price index), and net international price (after accounting for tariff and non-tariff barriers). Yet, the most relevant criterion is the cost of cultivation of the crops for which every year, a broad-based exercise is carried out at the national level with a huge cost of data generation. A look at the cost structure of paddy and wheat cultivation in Punjab indicates that about one-third of the operational cost gets incurred on human labour. In light of COVID-19-induced lockdowns and the back-migration of labourers from Bihar and Uttar Pradesh, the current year's crops are facing labour shortage, and thus, the magnification of the wage bill is certain. The load of some input subsidies—particularly on electricity, water, and other environmental costs borne by respective states—also does not get reflected in the MSP. The buffer stocks, global versus domestic prices and political scenario are the likely reasons for overruling the cost-based market structure.

Against the expectation, with the coming of the World Trade Organization, foodgrain prices have not shown a rapid upward trend. Therefore, one important factor for dragging feet from MSP by the government could be low international prices, particularly in the case of wheat. The global price of wheat was reported as 17% lower than its MSP in the second quarter of 2019. But, we should never forget the fact that the purchase from domestic producers has more positive implications than buying from international markets in terms of flow of money, employment and investment avenues, and possible risks and uncertainties. Moreover, paddy price in the international market has been ruling even higher than the MSP and thus we are export-competitive.

No doubt, agriculture is a state subject, but the involvement of the central government in the arena became essential to facilitate the interstate movement of foodgrains. It procures from surplus states at MSPs and distributes in deficit states at subsidised rates. In the process, maintaining of buffer stocks through scientific storage is of paramount importance. To minimise the storage losses, there is investment by the public and private sectors. Against a norm of buffer stocks of rice and wheat put at 41 million tonnes, there is a comfortable situation with 70 to 80 million tonnes (June–September) available in the country that is also responsible for the overhauling of the market structure.

The existing regulated markets came up through a long journey of farm market reforms, which need further refinements. For instance, the foograin surplus potential states have been increasing *mandi* taxes and this appears to be an irritating factor for the central government. Presently, Punjab is charging as much as 16% *ad valorem* mandi taxes, including 2.5% as commission of *arhatia*. If so, it should be a matter between the state and the central government, and farmers are not responsible for it. So, the overall dismantling of the system can be damaging.

The MSP for paddy and wheat was frozen from 2000–01 to 2005–06 under the pretext of huge buffer stocks with the country and low international prices. As observed, hiking of MSPs a year before the parliamentary elections has been a vote-catching tool. In view of the 15th parliamentary elections in 2009, the MSPs of paddy and wheat for 2006–08 saw a record increase. Then the increase slowed down till 2011. Similarly, a typical hike in MSP was recorded in wheat in 2011–12 and in paddy in 2012–13 due to the forthcoming elections in 2014. Again, before the parliamentary elections due in 2019, price upsurge for both crops was conspicuously noticed. Conversely, the first few years of every new government have been witnessing a reverse picture with minimum increase in 2010–11, 2014–15, and recently in 2019–21. A comfortable majority of the ruling political party is an added factor to revamp the built-up market structure. Logically, an increase in the input index should not be lost sight of. Even recently, it has been increasing by an average of 5% with an unfavourable index of terms of trade for agriculture (down to 97.01% in 2017–18).

It is worth mentioning here that recently, there was an unsuccessful experience of contract farming by the Punjab government through which some multinational corporations were roped in to assure market procurement of basmati rice, vegetables and some other crops with the purpose to diversify agriculture. It was an illogical one-side contract wherein the state government and the farmers were the net losers. We must also not ignore the fact that the rice–wheat system together has yielded approximately 9.5 tonnes per hectare in Punjab, which is favourably comparable with any of the best in the world. Moreover, this high-potential belt with 1.5% geographical area of the country is contributing to 12% of foodgrains of the nation as well as providing a significant share to the national kitty (around 25% rice and 36% wheat). This belt needs to be sustained as the food security belt of the nation by addressing the environmental and the above-mentioned problems through alternative possible means.

Joginder Singh
LUDHIANA

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Government Policies Drive Farmers to Penury

Ironically, agricultural households now earn "more" income from wages than from crop farming.

The report of the 77th round of the National Sample Survey on agricultural and rural households once again reiterates the growing immiseration of the farmers. The fragmented landholdings and slow growth of income from crop and animal farming have forced an increasing number of agricultural households to take up wage labour to sustain livelihoods. Moreover, the efforts to raise their income from non-farm activities have also not been very successful.

The report indicates that between 2012–13 and 2018–19, the number of agricultural households increased marginally from 90 million to 93 million. However, the declining viability of farming has reduced the share of agricultural households in total rural households from 58% to 54% during the period. Moreover, continued fragmentation has increased the share of small landholdings, of less than 1 hectare, from 67.1% in 2012–13 to 70.4% in 2018–19. In contrast, the share of large landowning households, with above 10 hectares, remained stable at 0.4% during the period.

The average monthly net income of agricultural households was a bare ₹8,337 in 2018–19. But what is striking is that wages now account for almost half the monthly income of agricultural households. This is a major shift as wage income has now overtaken the income from crop production, which was always the primary income source of agricultural households. Stagnant productivity and low product prices have now shrunk the share of income from crop production to just about a third of the total income. Unfortunately, income from animal farming and non-farm business has failed to compensate for the shrinking share of income from crop cultivation.

Another striking trend is the increase in land leasing. The share of land leased in for agricultural operations has doubled from 6.5% to 13% between 2002–03 and 2018–19. Households with small landholdings are leasing out their lands to the larger ones. Another important aspect is that the share of income from non-farm business has declined marginally in recent years for agricultural households as a whole. However, households with minimal land continue to get around a tenth of their income from non-farm businesses.

The other disquieting trend was the increase in debt burden. Though the share of indebted agricultural households marginally declined from 51.9% in 2012–13 to 50.2% in 2018–19, the average size of the household debt increased by more than half to ₹74,121, between 2012–13 and 2018–19. However, most of the increase in the debt burden was on account of the larger loans taken by the larger landowners. In fact, while the average debt size of agricultural household with more than 10 hectares went up by more than one and a half times to ₹7.9 lakh, the average debt of households with the least landholdings declined to ₹26,883. The numbers also show that the proportion of small landholding households securing loans has declined. Thus, while credit availability to large landowners continues to steadily increase, credit flows to smaller landowners are clearly shrinking.

In such a constraining context, wages have become the main source of income of agricultural households. This is especially so since wages account for between 56% and 70% of income of households with less than 1 hectare of land. Since these households account for two-thirds of the agricultural households, the vast majority of the farmers are now primarily dependent on the sale of labour for their sustenance. However, in households with larger landholdings, crop production remains the major income source. Interestingly, though income from animal farming was less than that from non-farm business, for agricultural households as a whole, it has now emerged as an important source of income for agricultural households with small landholdings.

A positive development was that the share of institutional credit to agricultural households as a whole has increased significantly to close to two-thirds of the total credit in 2018–19. However, the gains were highly skewed. While the share of institutional credit in outstanding loans of the households with large holding has gone up to as much as 80%, its share in the credit flows to the smallest landowners was only 28%. The constraints to the flow of total credit and institutional credit to small farmers are a major handicap that needs to be corrected.

A major achievement is that a large part of the credit was productively used. Almost a third of the credit went for revenue or recurring expenditure for farming operations. Then a little more than a quarter of the loans availed was used for capital investments on construction and equipment. Around a fifth of the loans taken were used for meeting housing and consumption needs. A small part of the credit was used for other purposes such as marriages, ceremonies, education, and medical spending, with each category accounting for a 5% share.

Overall, the survey highlights the dire plight of the farmers. The declining share of income from crop and animal farming and the growing dependence of wage income indicate that the viability of farming has been seriously eroded by low productivity and product prices. The worst-hit small landowners are now forced to lease out their land. A major setback has been the

limited success of efforts to boost animal farming and non-farm business despite the sustained initiatives to diversify earning avenues of farmers. To make matters worse, credit flows to small landowners have declined. And institutional investors continue to discriminate against them. The government must now set aside the rhetoric of doubling farmer incomes and focus on efforts to increase agriculture productivity and product prices and improve the viability of farming.

Engineering Flexibility without Accountability

Changing chief ministers reflects a deep damage to substantive accountability in a democracy.

Parliamentary democracies operate through principles of accountability, as well as allowing for flexibility—to expand or enhance the demands of the democratic will. The head of a government, chosen by the members of the legislature, falls within the category of *primus inter pares*—the first among equals. They assume the confidence of the legislators (elected by the voters), and in fulfilling this, they stand to add substance to the institution and to the overall operation of parliamentary democracy. It has been argued that the burden of democratisation, seen through the functioning of this post/institution, is incumbent on assuring stability as a means of performing the democratic will, while also ensuring a certain flexibility to remove or replace at times ministerial members using considered judgment that such members are cause for people's dissatisfaction. Against this background, examining the quintessential "kissa kursi ka" in Indian politics in many cases dilutes this principle of democratisation or accountability and seems to rely more on capitalising on flexibility to meet specific demands, sometimes very narrowly constructed. The recent case of changing chief ministers of state governments can be a defensible practice given the framework of Indian electoral democracy and, hence, in principle, difficult to condemn. However, the way these changes unfold, points at several glaring constraints as well as barriers to any notion of substantive democracy.

Recently, Gujarat's new chief minister took the oath of office, replacing the incumbent who had led the Bharatiya Janata Party (BJP) to a victory in the last assembly elections in 2017. The sudden replacement, however, caused all sorts of speculation at the causes for this change. In fact, the whole council of ministers were replaced en masse. The thrust in the sudden change appears to be non-performance, with the exacerbated rural distress and poor management of the COVID-19 pandemic. The exact outcome of this change will reveal itself, but there is no doubt that Gujarat's politics appears to be in a flux and hence this is to be "managed." In this process of managing, we get some indication of how the institution of the chief minister, cabinet, and the political party is placed within the constellation of electoral democracy.

The high command culture, a remnant of the days of the old Congress establishment (still alive, it would appear to some), seems to have taken strong roots in the current ruling dispensation. In the last six months, the BJP-ruled states have seen four chief ministers resigning. Reports indicate that the source of these changes appear to be rooted in the corridors of power in Delhi. This culture of replacing non-performing or "ill-fitting" leaders begs the question: What is the ground for performance, and what constitutes a "good fit"? The parameters for these seem to have no consistency. For example, if the response to rural distress and the COVID-19 pandemic are seen as standards, then there are definitely more contenders for change among the BJP-ruled states. If the criterion for "fit" are rooted in the electoral arithmetic, then it is undoubtedly a reassertion of a whispered reality that, beyond the electoral booth, all exercises in arithmetic and political calculations require a reduction of social identity and marginality into a game of instrumental accommodation. In this specific case, the post-1990s era has seen Gujarat settle on a broadly upper-caste and Patel-dominated formula of control, with other communities being accommodated as a part of an arithmetic of social engineering. The vintage of marginalised community-led alliances, which had some traction in the 1980s, seem to have dissolved with a strong polarisation that has seen one community being branded the outsider. Social marginalisation seems to be superficially dealt with in this arithmetic. And, this sudden change seems to be located there.

The last assembly elections were not as smooth as predicted, with the ruling party's count dropping to double digits. Rural distress and unemployment are the immediate concerns. This move would seem to accommodate this distress and return to a more stable political calculus with the Patels at the forefront. Whether this could garner a buy-in from the rural segments of the community is to be seen, considering the momentum of the Patidar movement.

Then there is the problem of performance. Several reports have continued to point at how the choice of governance has been centralised and the source of decision-making remains outside the state, which is a grave matter especially with the COVID-19 pandemic. The substantive functioning of a government in power is diluted by bureaucratic management. In a crisis, not in the least a pandemic, this is bound to make things worse. Yet, this control is rooted in a continuity, possibly to secure a stability of capitalist penetration, enacted through the "Gujarat Model," which seems to put forth a skewed, urbanised developmentalism at odds with the widespread social and economic distress.

Finally, the absence of a strong opposition means that the criterion for performance seems to be conveniently hijacked by the party in power. The good, bad, and the ugly are narrativised through decisions from the top. And, yet these decisions do indicate some anxiety. There is a cloud of uncertainty on how different state elections will respond to what has been a year of gloom in more ways than one. The devastation of life and livelihood with the pandemic has exacerbated an already diminishing condition of the poor and marginalised in Gujarat, and a remedy is sought in managing affairs and image control. This reflects a deep crisis of democracy across the board.

Politics of Reconciling Misfortune

The outcry from the highest caste, socially at the top of the caste hierarchy, alleges that it has fallen into misfortune on account of inattention and aggressive infliction of a sense of insecurity perceived under the ruling dispensation in Uttar Pradesh (UP). This outcry, which has gathered importance particularly in the context of the 2022 assembly elections in the state, has prompted almost all the major parties to approach and direct attention to this particular caste with a promise to address this outcry. Hence, the suggestion is that such parties be voted to power for the redressal of such outcry. However, what is more interesting is that, of all the parties, it is the party of the "Bahujan" which is at the forefront promising the aggrieved caste that it will compensate them for their misfortune with better prospects when in power, and in lieu the caste in question must vote for this party. The Bahujan response to the ideas of misfortune raises more questions than offering solutions.

In the politics of reshuffling the focus on this state of misfortune, a party that otherwise claims to represent the marginalised section of society seems to be quite vocal in its rhetoric regarding the removal of the state of misfortune should such party be voted into power by those who—albeit on top of the social hierarchy—are the victims of misfortune.

There could be some merit in the perception that misfortune has befallen the "Pandit" from the state. The outcry may suggest that their voting for the party that now is in power has turned out to be a misfortune as they do not have any control on the judgment that they had made in 2017.

The party of the Bahujan is supposed to clarify to the Dalits from the state, who are their basic social constituency, that such perception of misfortune, though real, is transitional in nature and hence is different from the misfortune of Dalits. It is transitional in nature, in the sense that it can be removed depending on the capture of political power by a political party, which includes the party of the Bahujan.

Dalit misfortune, in contrast, is almost permanent and structural and, hence, perennial. That is to say their social misfortune is the result of their birth in a particular caste on which they have no control, albeit their reduction to social degradation is the result of the ideology of "caste of mind" that designates some as inferior or superior by birth. If the transitional nature makes the "Pandit" less fortunate only temporarily, depending on the change in the ruling dispensation, then in what sense is their misfortune equal to the perpetual misfortune shared by the Dalits across time and space? Are we not cognitively too generous to reconcile two different states of misfortune operating at different levels?

A party claiming to represent the emancipatory project of annihilation of caste should prompt all those "caste-minded" members to say that it was not in their hands to be born in a particular caste, which generated overall social misfortune. But, it is in our hands to walk out from this caste framework, which would also mean walking out together with the affected caste. A party representing the social margin is expected to instantiate a critical consciousness among the people that the politics of serving the corporate interests is likely to push all the castes into a state of misfortune. Such parties are expected to communicate to the people that it is not in the interest of an egalitarian society to become either the source of creating misfortune for others such as Dalits, minorities, women, and Adivasis, or to support a politics that intends to create misfortune for the sake of protecting corporate interests.

Although it is too early to predict how the consolidation of electoral political consciousness against the corporate interests will unfold, but there are boldly vocal and not subtle reactions that question the connection between political and corporate power as a source of producing collective misfortune. The most vocal critique of this connection is emerging from the Dalits of UP. This would mean that an instrumentally convenient effort seeking reconciliation of asymmetrical misfortune between the "Pandit" and Dalits is likely to face a tough challenge from all those who locate the roots of misfortune in the link between political and corporate power. Those who are subjected to structures that generate the social misfortune are also sensitive to the need for change in political alternatives that would bring them all new prospects in life. The critical and reflective are seldom reconciled with instrumental politics.

Gopalpur

FROM 50 YEARS AGO

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Khrushchev: Sauce and Sausage

"If lack of intelligence is shown on the part of leaders of such states as the USA and the Soviet Union, then it would not only be a calamity for the people of our countries, but for the people of the whole world. A great deal depends on the mutual understanding between our two states." We have seen so much of the Soviet-American detente that the quotation would appear to be really from a bygone age. Yet it is well to remember that it was barely a decade ago that Khrushchev said this to visiting American journalists. Khrushchev's major contribution was the Soviet-American detente and it is a measure of his achievement that it still is the mainstay of the international system.

In spite of the rather modest funeral that the ebullient Russian has been given, his successors cannot deny that they have benefited from the new trend that Khrushchev introduced in Soviet foreign policy. What was this new trend? Its standard description is the policy of peaceful co-existence. However, this may not be an accurate description, as Stalin himself had introduced the element of peaceful co-existence in Soviet foreign policy. In his last work, "The Economic Problems of Socialism in the USSR", Stalin conceived of contradictions and conflicts within the capitalist bloc which would lead to the worldwide triumph of communism.

A Feminist Interrogation of the POCSO Judgments and Criminal Law in India

ATREYEE SENGUPTA

The recent Protection of Children from Sexual Offences Act judgments of the Bombay High Court have led to a gamut of criticisms from lawyers and activists alike. In light of this situation, this article argues that this judgment cannot be studied in isolation from the larger paradigm of feminist critique of law and engagement with law in India. By the virtue of contextualising the POCSO judgments in this manner, this article aims to propel contemporary feminist politics towards a more rigorous project of engendering criminal law in India.

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Recently, there has been a lot of uproar in a case[1] involving the sexual assault of a minor, where the trial court under the Prevention of Children from Sexual Offences Act, 2012 (also known as the POCSO Act) and the Indian Penal Code (IPC) convicted the perpetrator. When the perpetrator appealed to the high court, the Bombay High Court ruled that the act did not amount to sexual harassment because it did not involve "skin-to-skin" contact with the victim, even if the perpetrator had intentions of engaging in sexual assault. The perpetrator was convicted under Section 354 of the IPC for outraging a woman's modesty (Deshpande 2021). The sentence of imprisonment for the latter is generally one year, whereas the sentence under the POCSO is three to five years.

In a similar argument, in another case involving the sexual assault of a minor, the Nagpur bench of the Bombay High Court refused to consider an assault of sexual intent against a minor without physical contact as amounting to sexual assault under POCSO Act (*Wire Staff* 2021). These two judgments among many others set dangerous precedents for cases dealing with offences under the POCSO Act. In both these cases, the trial courts had convicted the perpetrator under POCSO but the high court refused to accept it as a case of sexual assault under the POCSO Act. There are several questions about the criminal justice system that arise from this precedent. The POCSO was enacted in 2012 to make the criminal law procedures more sensitive in dealing with sexual assault against minor children, both male and female. It also aimed at making the criminal procedures more sensitised to prevent the repetition of the trauma that children go through in such cases. When such literal, closed and narrow interpretation of the POCSO Act takes place, this entire idea of making the criminal law and procedures amicable to minors is defeated.

How Is Physical Contact Defined?

In the Satish Ragade case, Justice Pushpa Ganediwala referred to the definition of sexual assault under Section 7 of the POCSO Act. This states that,

> Whoever, with sexual intent touches the vagina, penis, anus or breast of the child or makes the child touch the vagina, penis, anus or breast of such person or any other person, or does any other act with sexual intent which involves physical contact without penetration is said to commit sexual assault.

This section defines what is considered under non-penetrative "sexual assault" within the act. The significant detail to notice in the section is the reference to "physical contact" that was invoked by Justice Ganediwala in the judgment. One can raise the question as to how can one define "physical contact." There is ample scope to express doubts on whether the definition of "physical contact" that Ganediwala adhered to was the appropriate one or not. The reason behind this doubt is the lack of the explanation of the term "physical contact" as "direct" or "skin to skin" physical contact within the act.

Nowhere is there a clear demarcation of what qualifies as physical contact and what does not. If there was a more definite elaboration of the term, one could have accorded benefit of the doubt to the judgment produced by Justice Ganediwala. However, the section she referred to simply talks about an ambiguous notion of physical contact. Often, in cases concerning women and children, there have been contradictory interpretations of the same law in the same case. Therefore, it is important for the POCSO judgments to be contextualised in this sociolegal background of feminist engagement with law in India and the

continuous challenges it has faced over the years.

Patriarchy in Law

The foundational problem in how women and children are treated by legal processes is in its deeply patriarchal structure of the state and the society. The POCSO cases in question illustrate that a woman in the judiciary can also not guarantee a progressive judgment towards empowerment of women and children. Structural inequalities are such that they often become ingrained within individuals to the extent that they cannot think outside of it. The objective, legal-rational structure of law is in fact profoundly representative of the masculine perspective, as Catharine MacKinnon (1987) points out. The structure of law and legal processes is built in a way that invariably alienates the marginalised sections of the society.

Carol Smart (1990) writes how the law always reflects the phallocentrism ingrained in the society. Even when it comes to laws against sexual assault or violence against women, the laws and legal processes are written from a masculine point of view. She illustrates this with the example of how, in a rape trial, the constant interrogation and the compulsion to repeat the sequences and details of the assault start to become a voyeuristic experience for the audience of the court room. Thus, MacKinnon (1987) writes that one of the earliest legal struggles for feminists was to attempt to change the laws against sexual assault to look at the case from the point of view of the victim or the survivour. In a law like POCSO, which is the outcome of several years of struggles by feminist movement in India, there is an effort to make the legal processes less masculine and less "objective" to that extent. This is not to say that the POCSO is devoid of flaws.

Problem of Interpretation

While a broad definition of sexual assault might aim to cover wider range of issues under it, it also runs the risk of being distorted into conveying a narrower and shallower meaning if the judge in the case interprets it to be so. The POCSO Act is not a perfectly formulated act. But the movement behind its creation and the reforms in criminal law that it brought sought to provide better accessibility to justice for women and children. But Pratiksha Baxi (2014) argues that it is not only the written law that determines the procedure and outcome of a certain case, but it is also the "spoken law" that determines which path the case will take. The spoken law operationalises the written law in the courtroom. The operationalisation may be a progressive step towards social justice or it can consolidate and reify the existing status quo in the society. Whether a judgment will be "transformational" or not does not solely depend upon the law but also those who are at the helm of interpreting it and determining its effects (Bhatia 2019). In the POCSO cases, the problems lay not only in the broad definition of sexual assault in law but also in the way in which the law came into effect. But the POCSO judgment was not the first instance when feminists had to confront a regressive reading of a law that was actually intended to secure justice for women and children.

In 1978, Rameeza Bee was gang-raped by three policemen and her husband was beaten to death for protesting. The defence lawyers tried to discredit Rameeza's testimony by alleging that she was a woman of immoral character—she was a sex worker. After thorough investigation, the Muktadar Commission set up by the Andhra Pradesh High Court found the policemen guilty of rape, assault and murder. When the convicted policemen approached the Supreme Court, however, they were acquitted by the judge. The recognition of custodial rape was missing from the proceedings. The trial and the evidence that the sessions court found legitimate and sufficient to prove the policemen as guilty was considered inadmissible by the Supreme Court (Kannabiran 2012). Even in the recent Tarun Tejpal case,[2] the victim was pronounced to not be the "ideal victim" and the Court resorted to her previous sexual history to discredit her testimony in spite of the fact that it is unconstitutional to refer to past sexual history of the victim. In both these cases, the differing judgments of the two courts encompassing one progressive and one extremely patriarchal and phallocentric reading of the same law, highlights that written laws do not always mean that the interpretations will be progressive or transformational. Feminists have not only struggled to change the law but also to cope with this missing link between written law and the interpretation of it. The controversy of the POCSO judgment, therefore, does not constitute an aberration of how laws are interpreted to deal with cases of sexual assault of women and children, but it is situated within the very historical context in which feminists have always negotiated the rights of the feminist subject within laws.

In Pursuit of Gender Justice

Ganediwala's judgment constitutes a non-transformative interpretation where there is an attempt to make a literal interpretation of the written law rather than trying to read it in a more subversive and progressive manner. It not only trivialises the heinous nature of the sexual assault on a minor but also misinterprets the POCSO Act, thereby interpreting it as a conservative law that fails to attain justice for sexually assaulted minors in India. It tries to diminish the significance of the POCSO Act and as a consequence, discourages victims or guardians of victims from coming out with their complaints under POCSO.

The primary reason for this act was to make the criminal procedure friendly towards children and minors so as to avoid repetition of their trauma. By misinterpreting the act and resorting to the IPC, the entire social movement and intention behind the act gets defeated. It takes the entire judicial system back to the time when there was no POCSO to deal with complaints of sexual assault or harassment against minors. But if one looks at this regressive interpretation as an isolated problem of the law or the legal system, it will remain limited to call for a revision of this particular judgment and fail to address the structural problems that have always hindered the feminist pursuit of gender justice through law and continue to create

roadblocks to gender justice even today. Therefore, it becomes extremely important to understand the evolution of the feminist struggle for legal justice and locate this case in this context in order to fully engage with the issues that not only this case brings forth but also to counter the legal processes that continue to reflect the phallocentrism inherent in in law and society.

Conclusions

The National Commission for Women (NCW) has moved to the Supreme Court for its dissatisfaction with the judgment of the Bombay High Court (*Bar and Bench* 2021). The NCW has stated how the decision given by the Bombay High Court's Nagpur bench is a dangerous precedent for the cases of sexual assault against children that will come up in the future under the POCSO Act. In the meanwhile, the Supreme Court has put a stay order on release of the accused in the Bombay High Court judgment in the Satish Ragade case (Mandhani 2021). The judgment has been termed by the Attorney General for India as having a "disturbing conclusion." This is a significant step towards feminist engagement with law to make it more accountable and transparent. However, this might not be enough to fight against the inherently biased practices of law and its processes. Feminist critique of legal systems worldwide has shown that there are various issues that one must confront when deciding upon the manner in which feminists engage with laws. The challenge to the structural biases of law cannot be fulfilled by challenging particular judgments in isolation. It requires a deep immersion in the larger context of feminist engagement with law in India.

NOTES

1 *Satish Ragade v State of Maharashtra* AIR 2020, HC 161.

2 *Tarun Jit Tejpal v State of Goa* AIR 2019, HC 1246.

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Nine Years of Turmoil in Taxation

K L DATTA

In 2012, the finance ministry of the Government of India amended the Income Tax Act to tax capital gains from indirect corporate transactions. This law was applied retrospectively, permitting the finance ministry to tax companies for similar transactions in the previous half a century and creating consternation among foreign investors. The ministry decided to dispense with this in August 2021. Despite the altered legal position that this law will apply prospectively instead of retrospectively, the woes of the ministry are not over.

The merger and acquisition deals in India confronted a peculiar situation in 2007. An Indian asset was held by a foreign company and when an acquirer bought this holding company, the finance ministry of the Government of India (GoI) felt that the capital gains out of this transaction are liable to be taxed as the asset is located in India. Accordingly, the finance ministry ordered Vodafone, a British telecom giant, to pay withholding tax related to its acquisition of what later became Vodafone India from the Hutchison group. It was an indirect corporate transaction that took place in 2007. Vodafone refused to pay the tax and approached the Bombay High Court, where it lost the case. Undeterred, it appealed to the Supreme Court of India.

In January 2012, Vodafone won the case in the Supreme Court, which ruled that Vodafone need not have to pay taxes for the acquisition. The finance ministry, having lost the litigation in the country's top court, amended the tax laws in the central budget 2012–13 to allow it to tax similar transactions, and importantly, in a retrospective manner so that it can still tax the Vodafone transaction.[1] This law received the presidential accent in May 2012, and the tax dispute with Vodafone—estimated to be $2 billion—was reopened. It did not end with Vodafone. The retrospective application of the law permitted the finance ministry to tax companies for similar acquisitions in the previous half a century, specifically from the date of promulgation of the Indian Income Tax Act, 1961. Indian tax authorities hunted and eventually opened cases against a dozen and a half corporate entities.

The transnational corporations of the developed capitalist world viewed retrospective taxation as archaic, if not outright "tax terrorism." India's domestic corporate sector was up in arms against retrospective tax. It dented India's image as an international investment destination, and affected the flow of investment, specifically in industry and infrastructure, where most of the foreign investment are parked.

Amendment of Tax Laws

The moot point is how far the amendment of tax laws to reopen an old case is ethical. In other words, is it ethical on the part of the government to resort to retrospective changes in tax laws to get its way? It was a unilateral decision of the finance ministry. The central ministries, which are natural destination of foreign investment, did not consider retrospective taxation a wise decision. The Planning Commission did not support retrospective application of this law. Before the finalisation of the central budget 2012–13, Montek Singh Ahluwalia, the then deputy chairman of the Planning Commission, suggested to the finance minister that if he wanted to impose capital gains tax on indirect transfers, the law should be amended prospectively. Ahluwalia (2020) pointed out that retroactive amendment to overcome a Supreme Court judgment would have significant negative effects. It is also learnt that the Prime Minister did not favour the idea of retrospective taxation. Defying these, the finance ministry basked in its own wisdom and went ahead, claiming that this was "the intention of the law all along." Pranab Mukherjee, the finance minister, at whose earnest initiative the tax laws were amended in the central budget 2012–13 to ensure retrospective taxation, demitted office in a three-month time to become the President. His new assignment, though may be unrelated to this change in tax law, tells the truth that he did not have to face its outcome.

In 2012, another taxation-related measure of the finance ministry, the General Anti-Avoidance Rules (GAAR) threatened to erode investor confidence seriously. Although GAAR was to be applied in the case of the companies, routing money

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through tax havens (such as Mauritius), the investors, both domestic and overseas, viewed it as a tool to unusually empower the tax authorities. The investors were frightened as the tax authorities could use these powers effortlessly against the corporate sector. In a chorus, the domestic corporate sector demanded repeal of the GAAR. The finance ministry gave in to the demand of the corporate sector, only half-heartedly. The GAAR was deferred by two years. That was not enough to assure the investors and they remained indecisive.

Domestic Investment

The retrospective taxation affected domestic investment adversely and instantly. It became applicable from May 2012. The domestic investment rate (investment as per cent of the gross domestic product) in the six years before the retrospective tax legislation, that is from 2007–08 to 2012–13, are 39.1%, 38.4%, 38.9%, 39.8%, 39.0%, and 38.7% respectively. The average investment rate in this six-year period works out to 39.0% per year. The investment rate lowered sharply to 33.8% in 2013–14, that is by more than five percentage points from the average of previous six years (2007–08 to 2012–13). This decline in investment rate largely, if not entirely, is the impact of the retrospective tax. The investment rate in the next four years, 2014–15 to 2017–18, remained around the level of 2013–14.[2] Nobody questioned the finance ministry about how much of the decline in investment rate from 2013–14 is on account of its decision to tax the business in a retrospective manner. Unfortunately, such issues are not probed in India.

The lowering of investment rate should have been treated as a signal for deceleration in the growth rate of the economy. It was not because growth rate in the four-year period of post-retrospective taxation (7.3% per year, from 2013–14 to 2016–17) exceeded the growth rate in the four-year period of pre-retrospective taxation (6.4% per year, from 2009–10 to 2012–13). The higher growth rate (7.3% per year) in 2013–16 could be realised with a relatively lower investment rate (32.6%), whereas the lower growth rate (6.4% per year) in 2009–12 was realised when the investment rate (39.1%) was higher.[3]

The higher growth rate in the post-retrospective taxation period, 2013–16 despite the decline in investment rate can be the outcome of two factors. First, the economy may have become efficient in 2013–16 and, as a result, less investment yielded a higher growth rate. Second, the economy in 2013–16 is benefited from the investment made earlier in 2009–12. There is no evidence to demonstrate that the economy has become more efficient in capital use in 2013–16 as compared with that in 2009–12. The natural conclusion is that the higher growth rate in 2013–16 has been aided by the gestation lag of investments made in 2009–12. The higher growth rate in 2013–16 induced the government to put investment-related issues on the back burner.

The lowering of the investment rate in 2013–16 affected the economic growth rate as soon as the benefits from the higher level of investment of earlier years, 2009–12, tapered off. This is amply evident from the realised rate of economic growth in 2017–18 and afterwards. The economic growth rate was 6.6% in 2017–18, 6.0% in 2018–19, and 3.9% in 2019–20. The low rate of economic growth rate in these years was due to the lowering of the investment rate. This led to a corresponding decline in income, which had an impact on savings, and in its due turn, investment. This cycle of low income, low savings, low investment, and low growth was exacerbated by several proactive decisions of the government, such as demonetisation, to eliminate the unaccounted economy, or what is known in common parlance as black money, and a half-hearted and hurried implemented goods and services tax aimed at creating a unified common market in India.

Circa 2010, the analysts of the Indian economy, coined a term "policy paralysis," which has its origin in the inertia of the central government to take decisive action to promote investment and economic growth. The retrospective taxation exemplifies the policy paralysis as the finance ministry freely ventured into such a controversial area, displaying a tremendous lack of sense. The economic growth rate in two years prior to the retrospective taxation, that is, 2011–12 and 2012–13, was low and averaging 5.3% per year. The average domestic savings rate of these two years dipped by 2.5 percentage points. It was certainly not the right moment to experiment with the taxation process, especially when the idea is to tax the corporate entities for their deeds spanning over the previous half a century.

History is replete with the use of the power of taxation to destabilise the economy and create turbulence in political affairs. In this context, an example from pre-independence India may be appropriate. In the Interim Government of India that was constituted in 1946, Liaquat Ali Khan from the Muslim League was the finance minister (known as the finance member). There was already enough tension between the Congress and the Muslim League on political issues. In this charged political atmosphere, Khan levied a 25% tax on business profits in the budget. This created a lot of consternation as it was viewed as a ploy of the Muslim League to harm the interests of the Hindu businesspersons and, by implication, the Congress. The Muslims were hardly in large businesses, and the Hindu businesspersons overwhelmingly supported the Congress. The government was in a crisis, which could be averted at the intervention of Lord Mountbatten, the viceroy (Menon 1957). Khan did not abolish the tax altogether but was compelled to lower the rate significantly at the instance of the viceroy. This episode showed how economics and politics are intertwined; independent India carries that legacy.

A question may be raised as to why the retrospective part of the law was not scrapped in July 2012, when Mukherjee, at whose insistence this law was enacted, demitted office. Outright scraping of the law may not have been easy for several reasons. The laws enacted by Parliament carry with it the dignity of the country's democratic institutions. In conformity with this tradition, P Chidambaram, who succeeded Mukherjee, may have refrained from dispensing with this law. In May 2014, Arun Jaitley became the finance minister. Jaitley, a legal eagle, instead of annulling the act,

actively pursued the cases filed by the finance ministry, with a simple assurance to appoint a committee to oversee the implementation of the act.

The retrospective taxation ended in August 2021 when Nirmala Sitharaman, the finance minister, hurriedly withdrew it through a bill—the Taxation Laws (Amendment) Bill, 2021—that could be cleared by Parliament in the din. The din, of course, was not caused by the existing law or is an after-effect of the same. That the finance minister was compelled to table the bill for approval in Parliament in such a noisy environment, shows the urgency of the matter. Ironically, Parliament had no occasion to discuss the laws on retrospective taxation, either in its formulation or in its abolition. In order to pave the way for retrospective taxation, the tax law was amended without any hue and cry, if not surreptitiously, in the 2012–13 central budget. It was done away with in August 2021 without a debate in Parliament, ending nine years of turmoil in taxation. Now onwards, no tax demand can be raised for any indirect transfer of Indian assets if the transaction took place before 28 May 2012, which is the date on which the retrospective taxation came into force. Needless to say, the transactions after this date would come under taxation.

Altered Legal Position

Sitharaman stated that the government is not in favour of retrospective taxation and does not believe in the idea. She argued that the retrospective tax militated against the principle of tax certainty and damaged India's reputation as an attractive investment destination.[4] It has now come a full circle with the failure of the government to collect much revenue and losing the cases filed by the affected transnational companies in international tribunals. With the back to the wall, the finance minister has scrapped the nine-year-old law, and it is appropriate now to order an in-house enquiry to find out how such a regressive idea was allowed to penetrate into the central budget. The finance ministry owes it to the people of India at least a statement spelling out the factors that it had considered essential to enact such an archaic law.

The legal issues are not sorted out entirely. India has agreed to refund the amount of money collected from the litigants by way of retrospective taxation with the stipulation that they (the litigants) would withdraw the cases and would not demand interests or costs. How the aggrieved parties react to this change of heart of the finance ministry is yet to be seen. The litigants may not give up the matter so easily, especially in view of the penalty and costs that have been imposed on India by the international courts and tribunals. It is a large sum of money, and the affected foreign companies have incurred legal expenses. No one knows what will happen in the future. Until now, their responses are either silence (from Vodafone) or at stages of "monitoring the situation and will provide a further update in due course" (from Cairn Energy). So, the agony of the finance ministry does not seem to be over despite the altered legal position that this law will apply prospectively, instead of retrospectively.

The short-sightedness of the finance ministry in this case is stamped in its failure to anticipate that the aggrieved parties can drag the GoI to arbitration in a foreign country. India is engaged with one and a half dozen companies on cases related to retrospective tax. Until August 2021, the finance ministry raised the income tax demand in 17 cases. In two cases, assessments were pending due to stay granted by the high court. Arbitration under the Bilateral Investment Protection Treaties with the United Kingdom and the Netherlands had been invoked in four cases. In two cases, the Arbitration Tribunal ruled in favour of the taxpayer and against the finance ministry.[5] Why did the finance ministry rule out that they may lose the cases and be asked to pay interest and costs of arbitration, which could be large amounts? The dearth of knowledge and false wisdom of the mandarins in the North Block put India in an awkward situation. The government is thoroughly embarrassed by the actions of some of the litigants to attach Indian properties located abroad even as this may not fetch them much. The urgency shown by the finance ministry to dispense with the retrospective taxation after nine turbulent years, in all likelihood, is rooted in its desire to escape from this unwelcome situation.

The retrospective taxation put the government in a tight spot and dealt a blow to the economy. It is crystal clear now that if the finance ministry acceded to the views of the Planning Commission in 2012, the setback from the retrospective taxation could have been averted. The central ministries are responsible for the implementation of projects and programmes falling within their domain, and their expertise does not go beyond financial accounting. The finance ministry is not an exception. With the disbanding of the Planning Commission, its replacement, the NITI Aayog should be equipped with sufficient power and expertise to advise the central ministries and provide a holistic view. This can help the government to ward off similar setbacks in the future.

NOTES

1 In the 2012–13 central budget, the Income Tax Act was amended to provide for the rationalisation of international taxation provisions. These amendments took effect retrospectively from 1 April 1962. See Finance Bill, 2012, Provisions Relating to Direct Taxes, Section F: Rationalisation of International Taxation Provisions, p 19, http://indiabudget.nic.in.

2 The investment rates are calculated using 2011–12 as the base year.

See (a) Press Note on National Accounts Statistics, Back Series 2004–05 to 2011–12 (Base 2011–12), Central Statistics Office, Ministry of Statistics and Programme Implementation, Government of India, 28 November 2018; (b) Press Note on First Revised Estimates of National Income, Consumption Expenditure, Saving and Capital Formation, 2018–19, National Statistical Office, Ministry of Statistics and Programme Implementation, Government of India, 31 January 2020.

3 The growth rates are derived from the estimates of gross value added at basic prices using 2011–12 as the base year. See (a) Press Note on National Accounts Statistics, Back Series 2004–05 to 2011–12 (Base 2011–12), Central Statistics Office, Ministry of Statistics and Programme Implementation, Government of India, 28th November, 2018; (b) Press Note on First Revised Estimates of National Income, Consumption Expenditure, Saving and Capital Formation, 2018–19, National Statistical Office, Ministry of Statistics and Programme Implementation, Government of India, 31 January 2020.

4 Para 4, Statement of Objects and Reasons, The Taxation Laws (Amendment) Bill, 2021.

5 Para 3, Statement of Objects and Reasons, The Taxation Laws (Amendment) Bill, 2021.

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Using Public Procurement Strategically
Lessons from the Pandemic

YUGANK GOYAL

The article examines policy decisions and practices in public procurement in India during the pandemic, and finds that bureaucracy could not use public procurement strategically and relied upon archaic and centralised management of procurement to (mis)handle the pandemic. The article also offers some lessons from China's procurement designs and calls for a major reform in this sector in India.

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Despite its overwhelming size and significance, in India, the topic of public procurement suffers from a deafening silence from scholars and academics. Indian public procurement constitutes about 25% of the gross domestic product (GDP) (the global average is 10%–15%), with consequences for public–private partnerships, government service provision, rent-seeking, scaling of small firms, and even distribution (Hazarika and Jena 2017; Goyal 2019). In fact, the poll promises of the political parties rely heavily on the ability of the government to do effective procurement. Yet, the field has escaped any major reform.

In this article, we show how the pandemic's severity in India may well be attributed, at least partially, to the unresponsive and rigid procurement policies. For comparison, we will examine the role that public procurement played in China, and argue for a more strategic view of public procurement in India. I also hope to add to the burgeoning field of public procurement in emergencies (Atkinson and Sapat 2012; Racca 2013; Buor 2019; Drabkin and Thai 2007), when crucial supplies may be hit, and governments often need to creatively interpret procedures that are otherwise rigid in routine, and remove procurement bottlenecks that lead to painful delays. In the wake of the severe stress on supplies of healthcare goods and services on account of the raging pandemic, procurement policies are being recalibrated across the world.

Indian Experience

We explore a wide range of policy decisions and practices adopted by the Indian bureaucracy on public procurement during the pandemic. Narrating these experiences as they played out during the last year, it appears that procurement decisions were highly centralised, taken *ex post* when tragedy had struck, rather than as *ex ante* strategic preparation, and were devoid of experimental, innovative thinking.

Flexibilities in existing institutions: India is one of the very few countries in the world which does not have a legislation on public procurement (a bill has been pending in Parliament since 2012). The governing rules come from the General Financial Rules, revised in 2017 and the Manual for Procurement of Goods, 2017. Section 8.2 of the Manual for Procurement of Goods, 2017 expounds procurement in urgencies/emergencies and disaster management. It allows for direct procurement without quotation, and by purchase committee, and single tender enquiry, with reduced time for submission of bids. In fact, the provisions also allow for drawing advance cash for procurement, and postponing accounts and vouchers to be submitted after the purchase. In the General Financial Rules, 2017, Rule 166 provides for single tender enquiry (with consent from a competent authority) and under Rule 194, the government can select the goods/services by directly nominating or negotiating during an emergency. Finally, the National Disaster Management Plan, 2019 empowers the National Disaster Management Authority (NDMA) to authorise for emergency procurement of materials for rescue and relief in threatening disaster.

In addition, various laws, government orders, statutes, bye-laws and policy documents on contracts, corruption, sale of goods, and arbitration are invoked for procurement at several levels. Further, a few states have also enacted state-specific legislations that add to complexities. Often, rules of procurement differ across departments too, like railways, defence, electronics, telecommunication, renewable energy, and micro-, small- and medium-scale enterprises. Even though this creates institutional layers to understand the underlying framework (which is often distilled through practice rather than institutions), it also allows a range of deviations which could ironically become useful in disasters. For instance, in Chapter IV of the Rajasthan Transparency in Public Procurement Act, 2013,

single source procurement (with some ceiling) is allowed for in the emergent situation. Similarly, Kerala's Stores Purchase Manual, 2013 states that in an emergency, single tender procurement may be adopted.

Procurement decisions and practice: The government released a memorandum in March 2020, which triggered the emergency provisions of public procurement in the General Financial Rules, 2017, whereby the concerned ministries were allowed to invoke Rule 166 (procurement from a single source in emergency) and Rule 204 (procurement by simple nomination). But this memorandum was valid only at the central level, only for some select ministries, and most tellingly, valid only for a month. One could observe the institutional reluctance for allowing innovative and discretionary decision-making in the bureaucracy for making even pandemic-related purchases.

Further, the rules were largely tweaked at the central level (primarily by Department of Expenditure at the Ministry of Finance), with little leeway at local levels. In fact, in April 2020, the government issued a circular invoking the Disaster Management Act, 2005 that asked state governments not to pursue any procurement of safety kits like personal protective equipment (PPEs), masks, gloves and ventilators, which will all be done by the Ministry of Health and Family Welfare, and later supplied to the state government (Suryawanshi 2020). This type of planning raised serious concerns in the state-level administration, but such centralised control of the pandemic's governance continued. Even as late as May 2021, the chief secretary of Andaman and Nicobar Islands had to request the Ministry of Finance to relax the procurement rules for them to allow procurement of medical supplies. The relaxation was granted, but only for a month.

In order to arrest the suppliers' tendency to manipulate prices, the Ministry of Textiles, in March 2020, announced the nomination of a central purchasing agency, HLL Lifecare, a public sector firm based in Kerala, to be the sole procurer in all central and state government hospitals (Lallion and Yukins 2020; Verma 2020). This centralisation may have been aimed to agglomerate quantities, but it curtailed swift, local-level responsiveness. The government had even restricted procurement on essential supplies only through government e-marketplace COVID-19 portal that had major supply limits (they diluted these restrictions in April 2020 though, realising the scale of the crisis).

Surely, some bureaucratic decisions on procurement were praiseworthy, namely removing of the profitability requirement from the bidder, or removing the requirement of taking prior approval for supplies from countries sharing land borders with India. But such orders did not have a larger institutional vision. They were time-restricted, strict top-down orders from Delhi; the underlying motivation was not to respond to feedback from the ground but, on the contrary, assuming the issues and doling out instructions. This is why considerable confusion prevailed even at the central level about what to do with the *force majeure* clauses in existing projects. It took two crucial months after the lockdown was imposed for the Department of Expenditure to explain the issues arising out of termination or extensions of ongoing projects, and allowing for time extensions and conditional partial refunds to those contractors who wanted to exit.

It is because of the paralysis that centralisation can often impose on local units that one could see the divergences in various state-level initiatives. For instance, states like Kerala had a relatively impressive performance given its decentralised institutions and management of the pandemic (Chathukulam and Tharamangalam 2021). In Telangana too, the government offered several relaxations in procuring medical supplies up to a certain value, and even allowed limited tendering (*ET Government* 2020). Even more significant were the state-level decentralised offices of state medical corporations (SMCs) that are responsible for procurement functions at the state level. It turned out that in Uttar Pradesh, the Uttar Pradesh Medical Supplies Corporation's COVID-19-related procurement got tainted with allegations of corruption (Rashid 2020), while in Odisha, the SMC took active initiatives like setting up of an emergency procurement committee, along with special interdepartmental committees to finalise purchase indents, audit documents, authorise different processes and even track the movement of materials, in addition to pursuing strategies like single sourcing (with or without tender inquiry), off-the-shelf purchases, employing existing rate contracts and even renewing some expired rate contracts to fast track the procurement during unpredictable and ever-increasing vulnerability of supply chains (Sarangi and Lal 2020). The most important feature was that the Odisha State Medical Corporation Limited (OSMCL) was granted full financial powers. Going against the standard practice, the OSMCL also offered special incentives for faster supply by ensuring payment within 24 hours of delivery, bearing transportation costs and testing charges, waiving penalty clauses on delayed supplies, lifting stocks from the open market, and many others. The officials of OSMCL met routinely to finalise procurement decisions and executed the contracts keeping all the protocols intact with auditable document (even ratification by ministerial offices) and paper trails to ensure accountability.

It is this lack of local-level empowerment, coupled with mistrust against suppliers, that led to all kinds of knee-jerk decision-making early on. Bureaucratic response to price gouging and black marketing of COVID-19-relevant items such as masks and hand sanitisers was a strong crackdown against the druggists who were selling these products at higher prices. From an economic perspective alone, this policy was misguided—price increase was not just a result of high demand but also because of an inelastic supply. The raw materials had become more expensive too, leading to increase in retail price. But fearing the bureaucracy and police, prices went up and black-marketing increased. This was worsened when government enlisted masks and its raw materials, and even hand sanitisers under the Essential Commodities Act (ECA), 1955, which not only capped their prices but imposed heavy penalties against violators. Most druggists do not understand the ECA and for the fear of being impounded, they stopped selling these products, leading to a further shortage. This was short-lived

as the supply resumed, but for some time in the beginning; instead of fast tracking or subsidising procurement, government's disastrous response led to unmet demand.

Use of technology: Through all this, government's launch of COVID-19 platform on the Government e-Marketplace (www.gem.gov.in) was commendable. The registration and listing process of COVID-19-relevant suppliers on the portal was eased and fast-tracked. For instance, the bidding time was reduced from a usual frame of two weeks to three days. Delivery period for essential commodities was reduced to two days. Buyers were allowed to filter sellers based on their lead time inputs. For orders less than ₹50,000, buyers were allowed to do a "direct purchase" of the product without going through the bidding. It eased the comparative process for finding L1 (lowest bidder) also had provision for the "reverse auction" in which sellers call for the order, out-lowering each other's bids.

Data on the portal shows that for the one year starting in March 2020, the orders inflated, with almost 15,000 unique sellers and 25,000 unique products on the portal, leading to an upward of a quarter million unique orders in both medical (antigen test kits, ambulances, PCR test kits, sanitisers and masks) and auxiliary (desktop computers, waste bins, printers, sanitary napkins and plastic chairs) categories each. Intriguingly, there is a wide disparity amongst states for the procurement values on the portal, indicating low take-up of revised and more flexible norms across the country. In auction type, we note that direct purchase and L1 method were still preferred, to the tune of 20–25 times that of reverse auction.

The problem, however, was that flexibilities were allowed only for small-value orders. Also, the government did not make any special provision in its categorical and process-based rules (Rule 149 of GeM) during the pandemic, except reducing bidding time. (Note that the high usage of direct purchase option may also be due to the fact that buyers perhaps kept on giving repeat orders that were allowed.)

Procurement of oxygen and the second wave: The second wave of the pandemic was disastrous in India, and is often attributed to the lack of medical oxygen for COVID-19 patients. If one looks at it closely, however, public procurement was at the heart of it. Despite the need for ramping up supply of medical oxygen in the first wave was clear in April 2020, bureaucrats invited bids for setting up oxygen plants in 162 hospitals across various cities only in October, eight months later! By the time the second wave had hit the country in April 2021, only 20% had been set up (Lalwani and Saikia 2021). Setting up the oxygen plant beside a hospital is not a lengthy affair, nor as expensive (for all the 162 plants, the total tender value was estimated to be around ₹200 crore). Yet, it was not done.

Investigations revealed classic coordination problems. Firms and hospitals blamed each other for their part of responsibilities. Interestingly, tender documents had mentioned a few things that were to be the responsibilities of the hospitals (for instance, laying the connecting pipes, identifying the land parcel beside the hospital for the oxygen manufacturing plants). But these tenders were floated centrally, by the Central Medical Services Society (CMSS), an autonomous body under Ministry of Health and Family Welfare, which may have had little coordination with the 162 hospitals directly.

In April–May 2021, the government began scrambling for medical oxygen and even other medicines, floating large-value global tenders for import (again centrally, by HLL). If one reads the two tenders, namely the CMSS's domestic and the HLL's global tender, the policy attitude surfaces. The CMSS tender is (traditionally) lengthy, verbose, meandering and all over the place. It is 154 pages long, gives 20 days for bidders to apply, has stringent clauses on earnest money deposits, and requires a 10% security deposit. It stipulated such excruciating details like bidders should add page numbers in their bids, and that all products as well as packaging should have a red-colour sticker of "Govt of India Supply—Not for Sale," and that sticker cannot be a rubber stamp, and that it must be approved! Even though floated centrally by the Ministry of Health and Family Welfare, it had put the responsibility of oxygen pipelines, electric supply, physical space allocation to the hospitals directly, but without ascribing any accountability (this was part of the reason why the execution failed).

The global tender (floated by HLL) is 63 pages long, expects applications in four days, has waived off the earnest money deposit criteria, requires a 3% security deposit. This is arguably the biggest irony. The rigidity with which public procurement takes place in India stands at a stark contrast with the unprecedented flexibility it offers, except that it is not done in preparing for an emergency but only when people have begun dying. Despite all allowances, only three bidders applied, and none for the whole amount! In May 2021, the government even had to exempt procurement from "Make in India" preference.

Chinese Experience

China, despite the early criticisms, was able to suppress the spread of the virus with an aggressive disease containment strategy (WHO 2020). Chinese public procurement laws (Government Procurement Law and Tendering and Bidding Law) carry procurement flexibilities but not relating to the pandemic. What China did was to promulgate two orders through their ministry of finance (see MOF Notice No 23 on 26 January 2020 and No 29 on 6 February 2020). The first one mandated procurement of all pandemic-related goods, projects and services under the so-called "Green Channels," which allowed state institutions to not comply with methods and procedures of procurement as mandated in the laws and proceed without approvals (even for imported materials). This was to be accompanied by internal control systems, documentations of receipts for continuous process improvement. The second order suspended or postponed all non-urgent procurement activities if they cannot be either carried out due to the pandemic or cannot adhere to the prescribed timelines, and on-site purchase of non-urgent items was advised to be done through online, telephonic sources. Corresponding notices were published at provincial (state) level too.

The Chinese strategy, contrary to popular perception, was of extensive

decentralisation. In general, in China, even though strategic decisions are taken in Beijing, the central government encourages local policy innovation and apolitical experimentation (Teets and Hasmath 2020; Heilmann 2008). With policy objectives being decided by the centre, and implementation decisions given to the local governments, there are considerable local flexibilities (Zhou 2010). It is noteworthy that whenever a crisis has struck the country (Great Famine in 1960, reform era of 1970s, or the political crises of 1989), it has swiftly adopted major policy shift in favour of decentralisation, encouraging local officials to take initiatives addressing local problems more creatively, displaying an impressive policy resilience (Zhou 2020).

What the central command does, is an excellent work of organising and mobilising the bureaucracy particularly in crises by ensuring effective coordination and significant adaptability (He et al 2020)—the nine governmental working groups made in Beijing headed by a ministerial leader, the leading group was on "coordination" (WHO 2020). Soon alongside, China launched the State Council Joint Mechanism for COVID-19 Prevention and Control, with central ministries on public health emergencies roped in, to break down policy coordination barriers. The central command structure was imitated at local levels, with the establishment of local command headquarters for COVID-19 prevention and control, with party secretaries serving as administrative chiefs of local commands taking full responsibility of task execution in their regions (He et al 2020).

Further, even the expiry of MOF and other such central notices was to be decided by the provincial governments. The government allowed all clarificatory guidelines on its notices to be published by the provincial governments. For instance, notices on renegotiation of procurement contracts or that on strengthening procurement to support small enterprises during the pandemic came from provinces and not Beijing. In fact, the rapid construction of field hospitals—1,000-bed Huoshenshan hospital and the 1,600-bed Leishenshan facility in nine and 12 days, respectively, during January–February 2020—was possible because the work was done directly under the provincial command.

In addition, the unique nature of communist-style solidarity programmes helped (Mei 2020; He et al 2020). For instance, in an innovative one-to-one paired assistance programme, a set of 19 Chinese provinces were assigned to adopt 16 epidemic-hit cities in Hubei as their beneficiaries, and the provinces were made responsible for sending medical teams, equipment and necessary supplies to their respective cities. This devolved the procurement responsibilities of affected regions to non-affected ones.

Conclusions

It is high time for reforming India's public procurement systems. Disasters often expose the regulatory and institutional cracks in the systems, otherwise hidden under the everydayness of bureaucracy. The pandemic has done it, most tellingly on our public procurement practice. As discussed in the article, despite the presence of flexibilities, the practice of public procurement in India reflects a deep-rooted attitude of mistrust against the suppliers, anxiety against rent-seeking and favouritism, and crippling burdens of cosmetic compliance of procedures that restrain creative, innovative and bold thinking in the sector. More importantly, barring a few half-baked attempts, we do not utilise public procurement strategically either. The practice is highly centralised and often a result of the archaic mindset in which bureaucracy has traditionally viewed expenditure. Even China, which is otherwise considered a heavily centralised one-party government, devolved powers considerably to manage the pandemic. In fact, states that responded to the pandemic well, like Odisha or Kerala, exhibited considerable decentralisation even unto the panchayat levels to manage the pandemic.

When governments promise things to citizens, they need to buy those things too. Analytically therefore, how do governments purchase things for us, should bother us as much as tax does. And yet, the field suffers from a deafening silence from scholars and opinion makers. If this crisis has taught us anything, it is to bring on the table the agenda on how our governments do their purchases.

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Plantation Workers and the OSHWC Code, 2020

Scope for Improvement

KINGSHUK SARKAR, VINIT GHOSH

Welfare provisions for plantation workers in the Occupational Safety, Health and Working Conditions Code, 2020 are subject to how respective state governments frame rules and can have wide variations too. A basic standard template from the central government would have been better, preventing wide variations, as well as ensuring a basic threshold. Further, there is a need to recognise the use of technology in ensuring better occupational safety and health outcomes.

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The Plantations Labour Act (PLA), 1951 was merged and incorporated as a chapter (Part VIII in Chapter XI to be precise[1]) in the Occupational Safety, Health and Working Conditions Code, 2020 (OSHWC Code, 2020). When the new OSHWC Code, 2020 would be in operation in the near future, the PLA, 1951 would be null and void, and welfare and safety provisions would be governed by Part VIII of Chapter XI pertaining to plantation labour. The question then is whether this chapter in the OSHWC Code, 2020 can provide the kind of safety and welfare provisions that the PLA, 1951 currently provides.

The PLA, 1951 provides for the welfare of plantation labour and regulates the conditions of work in plantations. The act is administered by the state governments and applies to any land used as plantations which measure 5 hectares or more and in which 15 or more persons are working. In the present context, the PLA, 1951 is the only comprehensive piece of legislation encompassing specific features of plantation labour. There are serious issues regarding its implementation, yet it cannot be denied that provisions in the PLA, 1951 remain very relevant in the present context (Rao 2020).

Plantation Labour

Plantation labour has certain specific characteristics. Plantations are mostly located in remote areas that have varied terrain and are usually difficult to access. Workers mostly reside on the plantations. Conditions of employment in the plantation dictate that workers must reside in the plantation. Most of the plantations, particularly in the north-eastern region (Assam and northern part of West Bengal) were developed in the initial period (during the first three decades of the 19th century) as an enclave economy. Each estate is a world in itself. Workers are permanent migrants from other parts of the country. There is intergenerational continuity of employment which guarantees assured availability of a workforce. Plantation activities were organised and run in such a way, both at the time of inception and subsequently, which necessitated that workers reside in the plantation itself. Hence, the PLA, 1951 provides certain welfare facilities which are exclusive to plantation workers. A plantation is an agriculture-based manufacturing industry in the organised sector which predominantly employs resident labour. Thus, it becomes imperative that workers are provided with housing facilities with sanitation and drinking water, medical facilities, educational and recreational facilities, canteen and creche facilities, etc. Justification of having the PLA, 1951 lies here.

Also, a major part of plantation activities is field-based, with plucking of green leaves from the tea bush constituting the main activity of the tea plantation. These tea bushes are spread over open fields, and involve a rigorous and difficult working environment with activity resembling agricultural operations. Workers are generally exposed to various occupational hazards and as they work in the open, they end up working mostly in harsh conditions. To protect plantation workers from such occupational hazards, the PLA, 1951 has several safety and health provisions like use of protective gears while spraying pesticides and fertilisers, protecting oneself from severe heat and rain, etc. Tea-growing areas have relatively high rainfall and most of the tea-plucking workers are regularly exposed to heat and rain in alternative sequences. Humidity is also very high. Working in the open amidst such weather phenomenon leads to certain occupational diseases. The use of pesticides has increased manifold in the last two decades and these have serious health repercussions.

When the codification of existing occupational safety and health (OSH) related acts is being conceptualised and put into place in the form of the OSHWC Code, 2020, it is expected that such codification will consider technological advancements that are presently available in

ensuring safe working conditions for plantation workers. Therefore, this article tries to examine whether Part VIII of Chapter XI of the OSHWC Code, 2020 does justice to the welfare and safety needs of the plantation workers in the present context.

Welfare Facilities

Housing: Section 92(1)(a) of the OSHWC Code, 2020 deals with plantation labour and does provide for housing facilities:

> the state government may prescribe requiring every employer to make provisions in theirplantation fornecessary housing accommodation including drinking water, kitchen and toilet to every worker employed in the plantation (including their family).

In the PLA, 1951, Section 15 requires every employer to provide housing accommodation for every worker and family. In addition, Section 16 requires the state government to make necessary rules relating to housing facilities and also provides a template for such rule-making in sub-sections 16(a) to 16(f). Provisions of such a template ensures certain uniformity and basic standards pertaining to rule-making. However, in the OSHWC Code, 2020, such a template is missing.

Crèche: Further, Section 92(1)(b) mentions

> crèche facilities in the plantation where fifty or more workers (including workers employed by any contractor) are employed or were employed on any day ofthe preceding twelve months.

And goes on to state that

> an establishment may avail common crèche facility of the central government, state government, municipality or private entity or provided by non-governmental organisation or by any other organisation.

It also gives the liberty to a group of establishments to pool their resources for setting up of a common crèche also. In the PLA, 1951, Section 12(1) requires every plantation having at least 50 women workers to provide crèche facilities with certain explicit specifications. Such detailing is missing in the new OSHWC Code, 2020 pertaining to crèche facility. Rule-making is entirely left with the respective state governments.

Education, recreation, and health: The OSHWC Code, 2020 provides for "educational facilities for the children of the workers employed in the plantation where the children of workers between the ages 6–12 years, exceed 25 in number" under Section 92(1)(c). It also mandates health facilities to every worker employed in the plantation (including their family) or provides coverage under the Employees State Insurance Act, 1948, along with recreational facilities for the workers employed in the plantation, under Sections 92(1)(d) and 92(1)(e) respectively. In the existing PLA, 1951, health facilities are provided in Section 10, recreational facilities are provided in Section 13, and educational facilities are provided under Section 14.

Scope of welfare provision: In the PLA, 1951, the responsibility of providing various welfare facilities rests with the employer. In the OSHWC Code, 2020, involvement of the state or local bodies is also permitted. The new regime suggests that the employer is solely responsible for providing welfare facilities and making them available in their own premise. Otherwise, an employer can avail facilities provided by the government, municipality, or panchayat located near the plantation area for such a purpose. Two employers may also share such facilities too.

This is a welcome addition made in the OSHWC Code, 2020. It has been observed in many instances that plantation workers do not receive benefits of government-run (both central and state) welfare schemes meant for the general population. Plantation estates are considered as private property and workers get excluded from government-sponsored welfare initiatives. Now, under the OSHWC Code, 2020, it is legally possible to extend government-sponsored welfare schemes to plantation workers also. Also, in certain cases, as plantations are located in close proximity to each other, they may come together and provide certain welfare facilities like crèche on a common basis. This makes economic sense too.

However, the draft OSHWC Code Rules, 2020[2] does not specify the details of welfare and safety facilities to be provided by the employer. In the absence of such a specific mention, it is implied that relevant rules would be formulated by the respective state governments. This could mean considerable variations from state to state. The central government should have set a basic template in the draft rules that would allow state governments the option of adopting the basic template by making necessary customisation that it may deem fit. This would have guaranteed a basic level of uniformity across states pertaining to welfare and safety facilities to plantation workers.

Occupational Safety and Health

As per Section 93 of the OSHWC Code, 2020,

> in every plantation, arrangement shall be made by the employer to provide for the safety of a worker in connection with the use, handling, storage and transport of insecticides, pesticides and chemicals and toxic substances.

The state government may prescribe for special safeguards for employment of women or adolescents in using or handling hazardous chemicals. Further, as per Section 93(3),

> the employer of a plantation shall appoint persons possessing the prescribed qualifications to supervise the use, handling, storage and transportation of insecticides, chemicals and toxic substances in his plantation.

Safety training: Section 93(4) of the OSHWC Code, 2020 stipulates that every employer of a plantation

> shall ensure that every worker in plantation employed for handling, mixing, blending and applying insecticides, chemicals and toxic substances, is trained about the hazards involved in different operations in which they are engaged in, the various safety measures and safe work practices to be adopted in emergencies arising from spillage of such insecticides, chemicals and toxic substances and such other matters as may be prescribed by the state government.

Safety provisions are not explicitly mentioned under the PLA, 1951.

Health monitoring: Further, under Section 93(6) of the OSHWC Code, 2020,

> every worker in a plantation who is exposed to insecticides, pesticides, chemicals and toxic substances shall be medically examined periodically in such manner as may be prescribed by the state government.

The OSHWC Code, 2020 further mandates in Section 93(6) that

> every employer of a plantation shall maintain a health record of every worker in the plantation who is exposed to insecticides, pesticides, chemicals and toxic substances which are used, handled, stored or transported in a plantation, and every such worker shall have access to such record. Such provisions are not there in the existing PLA, 1951.

Facilities and information: In addition to this, under Section 93(7)(a)(b)

> every employer of a plantation shall provide—washing, bathing and cloakroom facilities; and protective clothing and equipment, to every worker engaged in handling insecticides, pesticides, chemicals and toxic substances in such manner as may be prescribed by the state government.

Also, as per Sections 93(7) and 93(8) of the OSHWC Code, 2020,

> every employer of a plantation shall display in the plantation a list of permissible concentrations of insecticides, pesticides, chemicals and toxic substances in the breathing zone of the workers engaged in the handling and application of insecticides, pesticides, chemicals and toxic substances in the plantation. Every employer of a plantation shall exhibit such precautionary notices in the plantation as may be prescribed by the state government indicating the hazards of insecticides, pesticides, chemicals and toxic substances.

These types of provisions are not available in the existing PLA, 1951. At the time of the enactment of the PLA, 1951, the use of insecticides and pesticides were very minimal. Over the years, the use of such substances have increased manifold. Also, individual workers' occupational health issues were not in focus at the time of the enactment of the PLA, 1951. The priority area at that time was to provide basic living and working conditions. The PLA, 1951 was more concerned with welfare issues.

Technology Omission

It is good that provisions in the newly enacted OSHWC Code, 2020 explicitly include occupational safety and health provisions. These are certainly improvements over the existing PLA, 1951 provisions. However, while including these provisions, the new code could have further reinforced effective implementation through the use of the available technology. Surprisingly, the new code seems to be oblivious about the immense possibilities and opportunities that emerging technologies can bring to the safety, health and working conditions of plantation labourers. The new code does not imply any technological adoption(s) or specification(s) related to safety and health measures. In contrast, Occupational Safety and Health Administration (OSHA) plans to periodically evaluate technologies that can provide operational and safety visibility, streamline processes, and aid in the record-keeping of safety data (Triax 2017).

Agriculture-based workers often suffer from skin diseases and severe headaches due to hand-held pesticide sprayers (Tomenson and Matthews 2009). The International Labour Organization (ILO 2004) mentions some of the occupational hazards such as injuries from cutting tools, musculoskeletal injuries, respiratory issues from coffee dust, etc. Modern technologies are capable of managing these issues to a large extent. Smart spraying technologies rely on video/image capture data and use artificial intelligence (AI) to identify infected weeds to auto spray herbicides. Apart from enabling a profitable and sustainable production, such technological intervention ensures pluckers' safety from occupational hazards caused by proximity to pesticides.

Studies reveal that fatigue and musculoskeletal problems are some of the major hazards faced by plantation workers (Myzabella et al 2019). Further, the advent of the internet of things has marked a new beginning of smart environmental monitoring. In agricultural lands, a good chunk of workers' mortality occurs because of snakes and other poisonous insect bites. AI monitoring using sensors in the area of snake infected zones may be helpful. Cloud technologies can facilitate collecting, storing and accessing real-time data about agricultural land and plants. Data about the quality of the plantation land, water and soil can also be gathered and sophisticated prescriptive analytics/algorithms provide insights and directions for future actions.

The Road Ahead

It is imperative that the basic contour of welfare facilities be provided in the OSHWC Code Rules, 2020 itself such that basic standards pertaining to housing, medical facilities are put in place. This will ensure basic uniformity across states and avoid welfare facilities going below a certain basic threshold. With regards to occupational safety and health issues, provisions, as conceptualised in the OSHWC Code, 2020, can further be strengthened with the help of available technology. Certain occupational hazards can easily be avoided through the innovative use of existing technology. In today's context, occupational health and safety and technology are interrelated. As a major part of plantation activity is carried out in the open and exposes workers to all sorts of occupational hazards and diseases, sophisticated, yet easily available technology can be used to map such activities and steps can be initiated to prevent occurrences of hazards and diseases. As the rules are still in the process of finalisation, there is still scope to improve the welfare and safety provisions considerably.

NOTES

1 See OSHWC Code, 2020, viewed on 10 July 2021, https://labour.gov.in/sites/default/files/OSH_Gazette.pdf.

2 See draft OSHWC Code Rules, 2020, viewed on 11 July 2021, https://labour.gov.in/sites/default/files/OSH_Rules.pdf.

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District-level Estimates of Unemployment Rates in Odisha

An Empirical Study Using PLFS 2018–19 Data

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This article describes the possibilities of using an alternative method, such as small area estimation, for generating district-level unemployment estimates with higher precision. The SAE method is applied to generate the unemployment rate of different districts of Odisha combining the Periodic Labour Force Survey 2018–19 data of the National Sample Survey Office and the auxiliary variables from other secondary data sources.

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An immediate fallout of the COVID-19 pandemic was the shrinkage in the economy and the rise in unemployment or underemployment. According to the Centre for Monitoring Indian Economy (CMIE), the unemployment rate (UR) slowed from 6.7% during October 2020 from the peak rate of 23.5% in April 2020 after the nationwide lockdown. The latest Periodic Labour Force Survey (PLFS) 2018–19 of the National Sample Survey Office (NSSO) reported that the usual status UR, including principal status (ps) and subsidiary status (ss), in Odisha was 7%. The urban unemployment was 12.7%, and rural unemployment 6%.

Planners and policymakers need statistical data for efficient policymaking at the district level. Despite its importance, the URs at the lower administrative levels like the district are generally unavailable (Anjoy et al 2019). The sample size of large-scale surveys like PLFS, which provides unemployment data at the national/state/regional levels, is small and cannot provide reliable district-level estimates with adequate precision. Some alternative methods such as small area estimation (SAE), which borrows strength (information) from other related areas to arrive at reliable estimates with lower standard errors at the small area level, are becoming important in survey sampling and is emerging as a viable and cost-effective solution (Chandra et al 2011).

This article uses the PLFS 2018–19 data of NSSO, obtains URs for 30 districts of Odisha through the SAE technique, and also discuss the challenges posed in direct survey estimates and small area estimates generated by the SAE method. The article initially provides the empirical result of the URs across all states, including the URs at three regional levels in Odisha. Then it discusses the data and model specifications used in SAE analysis and briefly illustrates the SAE methodology. It further discusses the district-wise UR estimated using the SAE techniques and finally presents the concluding remarks.

Unemployment across States

The problem of unemployment or underemployment has remained a serious policy issue for decades. The various data sources, such as the decennial census, Employment–Unemployment Surveys (EUSs) by the NSSO, and the CMIE provide unemployment statistics to planners and policymakers. The NSSO has launched a new regular EUS, namely the PLFS from April 2017 with certain changes in the survey methodology, data collection mechanism, and sampling design vis-à-vis the earlier quinquennial (once in every five years) EUSs.

According to PLFS 2018–19, the UR in usual status (ps+ss) was 5.8% nationally, while it was 7% in Odisha (NSO 2020). However, it varied across states, ranging from 5.3% to 10.2% (Table 1). The UR was highest at 10.2% in Bihar, followed by 9.0% in Kerala, and 8.4% in Telangana. Andhra Pradesh registered an UR at 3.9%. The rural–urban break up of unemployment depicts an entirely different picture. The URs in urban areas are generally higher than those in rural areas. The urban unemployment in Odisha was 12.7%, followed by 11.2% in Telangana, and 10.5% in Bihar, while it averaged 7.7% at the national level.

The unemployment varied among the three administrative regions of Odisha: central, northern, and southern Odisha (Table 2, p 24). The central region reported the highest UR of 9.2%, 2.2 percentage points higher than the state average of 7%. The southern and northern regions recorded UR of 6.4% and 5.8% respectively.

Table 1: Unemployment Rate by Usual Status (PS + SS) and Relative Standard Error in Selected States in 2018–19 (All Ages) (%)

State	Rural	Urban	Total	RSE
Andhra Pradesh	4.5	7.3	5.3	7.0
Tamil Nadu	6.4	6.7	6.6	5.4
Bihar	10.1	10.5	10.2	7.8
Kerala	8.4	9.7	9.0	5.1
Odisha	6.05	12.7	7.0	7.2
Punjab	7.7	7.0	7.4	8.3
Telangana	6.8	11.2	8.4	7.5
All India	5.1	7.7	5.8	2.0

Source: PLFS 2018–19 and authors' calculation.

The urban unemployment in the three regions varied between 11.7% and 13.7% (Table 3). The northern region recorded an UR of 13.7%. The rural UR was 4.1% in the northern region, followed by 5.7% in the southern region, and 8.5% in central region (Table 3). The estimated UR at the regional level appeared to be statistically reliable with lower relative standard error (RSE) varying from 11.1% to 14.2% (Table 2). The district-wise URs by the direct survey estimate are presented in Table 6 (p 26). The estimate suffers from low precision as the RSE varied between 14% and 74.3%. The UR of Nabarangpur district is less than 1% with a RSE of 60.6%, which may not be acceptable.

Model Specification

The primary sources of the data used to measure URs in the 30 districts of Odisha using the SAE are the PLFS 2018–19 of Odisha, the decennial population census (projected), and the agriculture data. Initially, the EUSs were the main source of labour market data at the national and state levels in the country. The EUSs were conducted quinquennially beginning 27th round (October 1972–September 1973). Nine such comprehensive surveys were conducted so far by the NSSO, the last one being conducted during the NSS 68th round (July 2011–June 2012). The surveys were conducted through interviews of a representative sample of households selected randomly through a suitable sampling design and covering almost the entire geographical area of the country.

Considering the need for availability of labour force data at more frequent intervals, the PLFS was launched in 2017–18 with new interventions in the survey design. The first annual report was based on data collected in the PLFS during July 2017–June 2018. The subsequent PLFS 2018–19 was conducted in the July 2018–June 2019 period. The sampling design used in the PLFS 2018–19 was a stratified multistage random sampling with districts as strata. The first-stage units (FSUs) were the urban frame survey (UFS) blocks in urban areas and 2011 decennial population census villages in rural areas. The ultimate stage units (USU) were households. As is usual in NSSO rounds, in the case of large FSUs, one intermediate stage unit, called hamlet group/sub-block, was formed. Although, these surveys provide reliable and representative national- and state-level estimates, they cannot be used directly to produce reliable estimates at the district level due to the small sample sizes.

In the PLFS 2018–19, a total of 3,945 households covering 15,172 persons from the 30 districts of Odisha were surveyed. The sample size for unemployed persons surveyed was 5,855 persons and the district sample sizes ranged from 37 to 740 with an average of 195 (Table 4). It is evident that these district-level sample sizes are relatively small, with an average sampling fraction of 0.0790. Due to this sample size limitation, it is challenging to generate reliable and representative district-level direct estimates with associated standard errors from this survey (Rao and Molina 2015). This article addresses this small sample size issue in the PLFS 2018–19 data for producing district-level estimates by adopting the SAE approach and using auxiliary information from the 2011 population census (projected for 2018–19) and agriculture statistics for 2018–19 to strengthen the limited sample data from the districts.

These auxiliary variables are only available as percentage at the district level and so, SAE methods based on local level small area models must be employed to derive the small area estimates. There are seven such auxiliary variables that are available for use in the SAE analysis. A generalised linear model between district-specific sample proportions of unemployment rate and the set of seven auxiliary variables has been fitted for choosing the appropriate auxiliary variables. This model is fitted using the *glm()* function in R and specifying the family as "binomial" and the district-specific sample sizes as the weight. The primary purpose is to build a good explanatory and predictive model based on the available auxiliary data.

Finally, four auxiliary variables, namely proportion of crop area to total crop area (Croparea), proportion of Scheduled Caste and Scheduled Tribe (SC and ST), literacy rate (Lit_rate), and female SC literacy rate (FSC_lit) are identified for the SAE. The results from the model fitting are reported in Table 5. The null deviance of the fitted model is 124.831 with 29 degrees of freedom with an Akaike information criterion (AIC) value of 191.62. Adding four auxiliary variables in the model reduced the residual deviance to 55.018 with a loss of four degrees of freedom. This final model is then used to produce district-wise estimates of URs in Odisha using an empirical plug-in predictor (EPP) method of SAE as described later in the article.

Methodology

Let y_{di} denote the value of the variable of interest for unit i ($i = 1, \ldots, N_d$) in small areas (or areas or districts here) d. The variable of interest, with values y_{di}, is binary (e.g., $y_{di} = 1$ if person i in district d is unemployed and 0 otherwise), and the aim is to estimate the proportion of unemployment, $P_d = N_d^{-1} \sum_{i \in U_d} y_{di}$, in district d. Let w_{di} denote the survey

Table 2: Unemployment Rate and Relative Standard Error across Different Regions of Odisha at 95% Confidence Interval (All Ages) (%)

Region	Code	Unemployment Rate	Relative Standard Error	95% CI Lower	95% CI Upper
Central	211	9.2	11.1	7.2	11.1
Southern	212	6.4	11.1	5.0	7.8
Northern	213	5.8	14.2	4.2	7.4

Source: Authors' calculation.

Table 3: Unemployment Rate in Rural and Urban Areas of Different Regions of Odisha (All Ages) (%)

Region	Code	Rural	Urban
Central	211	8.5	12.5
Southern	212	5.7	11.7
Northern	213	4.1	13.7

Source: Authors' calculation.

Table 4: Summary of Sample Size, Sample Count, and Sampling Fraction in the PLFS 2018–19

Description	Minimum	Maximum	Average	Total
Sample size	37	740	195	5,855
Sample count	2	122	17	523
Sampling fraction	0.023	0.165	0.0790	2.372

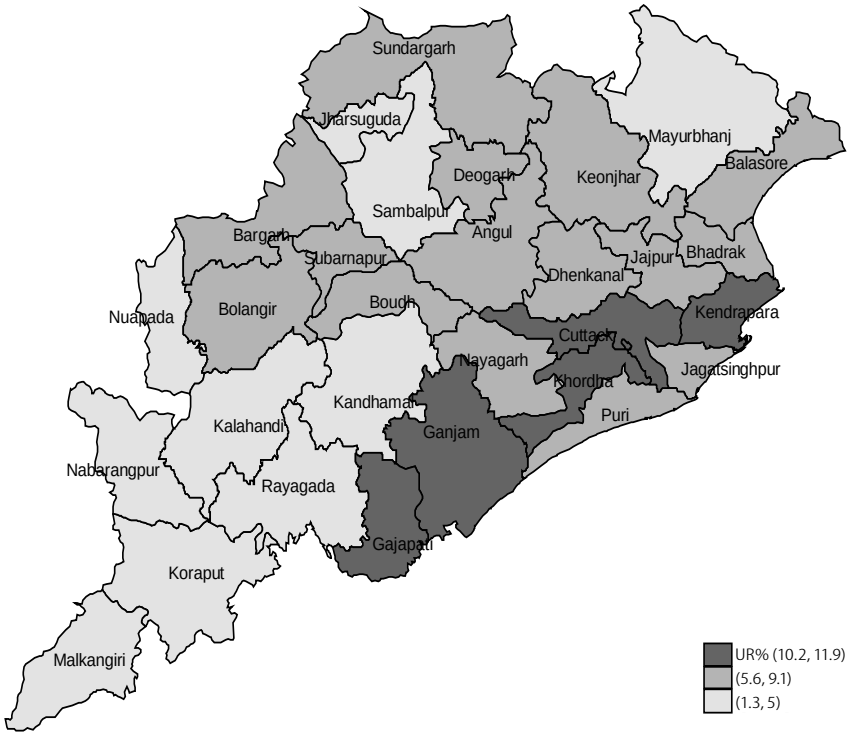
Source: Authors' calculation.

Table 5: Model Parameters for the Generalised Linear Model for Unemployment Rate

Parameters	Estimate	Standard Error	z value	Pr(>|z|)
Intercept	-2.241835	1.091021	-2.055	0.03990*
Croparea	0.054816	0.037359	1.467	0.14230
SCST	-0.007642	0.005066	-1.509	0.13138
Lit_rate	0.048286	0.018590	2.597	0.00939**
FSC_lit	-0.051719	0.020258	-2.553	0.01068*
AIC	191.62			
Null deviance	124.831 with 29 degree of freedom			
Residual deviance	55.018 with 25 degree of freedom			

*p< 0.05, **p< 0.01, ***p< 0.001.
Source: Authors' calculation.

Figure 1: District-wise Unemployment Rate Generated by Emperical Plug-in Predictor Method of Small Area Estimates in Odisha in 2018–19



Source: Authors' compilation.

weight for unit i in district d, then the direct survey estimator (denoted by Direct) for P_d is $\hat{p}_d^{Direct} = \sum_{i \in s_d} w_{di} y_{di} \Big/ \sum_{i \in s_d} w_{di}$, where U_d and S_d are the population and sample of sizes N_d and n_d in district d. The estimate of variance of the direct estimate is

$$v(\hat{p}_d^{Direct}) \approx \left(\sum_{i \in s_d} w_{di}\right)^{-2} \left\{\sum_{i \in s_d} w_{di}(w_{di}-1)(y_{di} - \hat{p}_d^{Direct})^2\right\}.$$

Let $\boldsymbol{X}_d$ be the k-vector of covariates for district d available from the secondary data sources. Following Chandra (2018), the model linking the probability π_d with the covariates $\boldsymbol{X}_d$ is the logistic linear mixed model (LLMM) of form

$$\text{logit}(\pi_d) = \ln\{\pi_d(1-\pi_d)^{-1}\} = \eta_d = \mathbf{X}_d^{\mathrm{T}}\beta + u_d, \quad \ldots (1)$$

with $\pi_d = \exp(\mathbf{X}_d^{\mathrm{T}}\beta + u_d)\{1+\exp(\mathbf{X}_d^{\mathrm{T}}\beta + u_d)\}^{-1}$. Here β is the k-vector of regression coefficients and u_d is the district-specific random effect that captures the district dissimilarities. We assume that u_d is independent and normally distributed with mean zero and variance σ_u^2. Under Model (1), the EPP of P_d in district d is

$$\hat{p}_d^{EPP} = \exp(\mathbf{x}_d^T\hat{\boldsymbol{\beta}} + \hat{u}_d)\left\{1+\exp(\mathbf{x}_d^T\hat{\boldsymbol{\beta}} + \hat{u}_d)\right\}^{-1} \quad \ldots (2)$$

The Model (1) is based on unweighted sample counts, and hence it assumes that sampling within districts is non-informative given the values of the contextual variables and the random district effects. Consequently, the predictor (2) ignores the complex survey design used in the PLFS data. We, therefore, model the survey weighted probability estimate for a district as a binomial proportion, with an "effective sample size" that equates the resulting binomial variance to the actual sampling variance of the survey weighted direct estimate for the district. Hence, in our analysis, we replaced the "actual sample size" and the "actual sample count" with the "effective sample size" and the "effective sample count" respectively (Chandra et al 2019).

Results and Discussions

Table 6 reports the district-wise direct estimates and small area estimates generated by the EPP method given in equation (2) along with 95% confidence interval (CI) and percentage RSE of the UR in Odisha. The direct estimates of unemployment are unstable with RSEs that vary from 14% to 74.3% with an average of 44.1%. In contrast, the RSE values of unemployment estimates generated by the EPP method range from 15.2% to 34.9% with an average of 24.6%. The relative performance of the small area estimates, as compared to the direct estimates, improve with the decreasing district-specific observed sample sizes. The estimates computed from the EPP method (2) are more reliable and provide a better indication of URs. Districts such as Ganjam, Cuttack, Gajapati, Khurdha and Kendrapada recorded significantly higher URs of 11.9%, 11.8%, 11.4%, 11.1%, and 10.2% respectively. It is lower in Malkangiri, Nabarangpur, Koraput, and Mayurbhanj at 1.3%, 1.4%, 2.8%, and 3% respectively.

Figure 1 presents a map showing the estimates of URs in different districts of Odisha produced by the EPP method of SAE. This map in Figure 1 provides district-wise degree of inequality with respect to distribution of URs in 30 districts of Odisha. This map is supplemented by the results set out in Table 6, where we report the district-wise estimates along with the RSEs. Districts with high rates of unemployment in 2018–19 are from the coastal region, namely Cuttack, Khordha, and Kendrapada, and two districts of the southern region, namely Ganjam and Gajapati, with the rates ranging from 10.2% to 11.9%. However, seven districts in the southern region, two districts in the northern region, and one district in the coastal region showed a low rate of unemployment ranging from 1.3% to 5%. The URs in the rest of the districts (six coastal and nine northern) varied between 5.6% and 9.1%. These unemployment numbers would

Table 6: District-wise Sample Size and Sample Count of Direct and EPP Estimates of Unemployment Rate# (All Ages)

District	Sample Size	Sample Count	Direct				EPP Method SAE			
				95% CI		RSE		95% CI		RSE
			UR	Lower	Upper	(%)	UR	Lower	Upper	(%)
Bargarh	153	5	3.4	-0.3	7.2	55.5	5.9	2.6	9.2	28.4
Jharsuguda	107	5	3.6	-0.8	7.9	61.7	5.0	2.4	7.6	26.1
Sambalpur	220	11	3.1	0.5	5.7	42.6	4.7	2.3	7.1	26.1
Debagarh	99	5	6.4	-2.1	14.8	68.0	6.5	3.2	9.8	26.2
Sundargarh	371	44	7.7	3.9	11.5	25.1	7.4	5.0	9.8	16.6
Kendujhar	315	28	8.7	3.3	14.1	31.8	7.5	5.2	9.8	15.8
Mayurbhanj	273	12	2.9	0.5	5.3	42.8	3.0	1.5	4.5	25.8
Baleshwar	313	26	7.8	3.1	12.5	30.6	7.5	4.7	10.3	18.9
Bhadrak	158	10	4.2	1.8	6.6	29.3	5.9	2.8	9.0	26.8
Kendrapara	132	15	11.3	4.3	18.2	31.4	10.2	5.9	14.5	21.5
Jagatsinghapur	125	14	8.7	0.8	16.5	46.3	9.1	4.6	13.6	25.1
Cuttack	353	44	12.8	7.4	18.3	21.4	11.8	8.3	15.3	15.2
Jajapur	194	14	8.3	1.7	14.9	40.2	7.5	4.5	10.5	20.7
Dhenkanal	100	12	8.2	2.1	14.2	37.8	7.2	3.6	10.8	25.6
Anugul	119	12	7.6	1.9	13.2	38.3	7.5	3.7	11.3	26.0
Nayagarh	116	13	6.2	2.1	10.4	34.0	7.9	3.6	12.2	27.7
Khordha	254	25	11.1	5.4	16.9	26.4	11.1	7.2	15.0	17.8
Puri	192	18	8.1	2.0	14.1	38.1	8.5	4.9	12.1	21.7
Ganjam	740	122	11.9	8.6	15.1	14.0	11.9	7.7	16.1	17.8
Gajapati	93	12	16.2	5.4	27.0	34.0	11.4	6.0	16.8	24.3
Kandhamal	128	6	4.5	-1.6	10.6	68.3	4.4	2.3	6.5	24.9
Baudh	37	4	7.0	-3.2	17.1	74.3	6.4	2.2	10.6	33.1
Subarnapur	76	2	3.8	-1.1	8.8	66.1	5.6	2.4	8.8	29.3
Balangir	205	19	10.0	3.9	16.0	30.8	8.7	4.9	12.5	22.4
Nuapada	96	4	2.3	-0.6	5.2	65.2	3.6	1.5	5.7	30.4
Kalahandi	87	5	3.3	0.4	6.3	45.0	3.5	1.1	5.9	35.0
Rayagada	160	10	3.8	0.7	6.9	41.4	3.4	1.6	5.2	26.3
Nabarangapur	171	4	0.7	-0.1	1.4	60.6	1.4	0.5	2.3	31.9
Koraput	224	9	1.9	-0.6	4.4	67.7	2.8	1.3	4.3	27.7
Malkangiri	244	13	1.2	-0.1	2.6	54.9	1.3	0.7	1.9	24.3

at 95% CI and percentage relative standard error (RSE) in Odisha.
Source: Authors' estimations.

be highly useful for planners to take policy decisions at the district level.

Concluding Remarks

The SAE method defined by EPP (2) provides significant gains in efficiency for generating district-level estimates of URs in Odisha. This application clearly demonstrates the advantage of using the SAE technique to address the small sample size problem in producing cost-effective and reliable disaggregate-level estimates and CIs from existing survey data by combining auxiliary information from different published sources with direct estimates.

The direct estimates of unemployment are unstable with the RSEs that vary from 14% to 74.3% with an average of 44.1%. In contrast, the RSE values of unemployment estimates generated by the EPP method range from 15.2% to 34.9% with an average of 24.6%, which appears to be more reliable. Although India has experienced a sustained growth in the recent past and there has been substantial decline of poverty, there are still significant interregional variations on various parameters across the states. Despite progress on sustainable growth, gaps persist.

A spatial map produced from the estimates generated by the EPP provides reliable evidence of inequality in the distribution of URs across different districts in Odisha. The availability of reliable district-level estimates of URs is advantageous for various departments and ministries of the government for their policy research and strategic planning. The policymakers can achieve better results by using evidence to inform these decisions and enable the government to fund and improve programme performance.

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Family, State, and Ideal Populations
Unearthing Histories of Population Planning

APRAJITA SARCAR

BOOK REVIEWS

Reproductive Politics and the Making of Modern India by Mytheli Sreenivas, *Seattle: University of Washington Press, 2021; pp 274,* ₹*2,250.*

Reproductive Politics and the Making of Modern India examines the significance of family planning in the economic modernisation in India. National worries about overpopulation influenced statist visions of sovereignty and individual freedom. Family planning embodied grand visions of modernity through reproductive choices, while also showcasing worries about the quality of the population. The book illustrates the proximity of developmental economics to eugenics. Mytheli Sreenivas embeds reproductive politics in India in its planned economy of the 1920s till the 1970s. She contributes to the rich scholarship on histories of birth control in late colonial India. Additionally, this literature has been put in a conversation with global histories of population.

The book can be analysed in three layers: the first layer studies change in marriage practices and birth control advocacy; the second layer examines the links between population planning and economic development; and the third layer links family planning to famines and food security. With clear and concise language, the book is paving the way for historians to study links between population planning and modern statecraft. The period of the book is from the late colonial to the postcolonial period leading up to the 1970s. It ends with a note on how the 1980s saw shifts in the statist vocabulary around women's health. The book slowly lays out how reproductive politics accrued coercive techniques over the decades. Constructed as a solution to poverty, targeted birth control advocacy allegedly brought economic prosperity.

Sreenivas undercuts the limits that national boundaries place on studying the planned family. She lays out the way it became a site for global population control movements to converge, change, and experiment policies on birth control.

The Family

Through the structure of the book, the author expands on the intentions of her earlier work on conjugality in colonial Madras (Sreenivas 2008). Conjugality (the relations between a man and a woman who are unrelated and tied through affection and romance) in the late colonial Madras reshaped the extended family and its associated laws of property inheritance. This new family formation moved away from traditionally large ones. In the present work, Sreenivas extends the analysis of this family unit to the ideal family that embodied the national programme. This family unit was necessarily heterosexual and reinforced a home in which modernisation could circumvent other family formations.

Through Tamil posters, calendar art, and propaganda campaigns, Sreenivas drew a continuity between late colonial politics of sexuality to postcolonial anxieties of sovereignty and statehood. The book successfully imbricates the Hindu nuclear family within a schema of statist vision, national economy, and sexual desire by showcasing the wife's will to be sterilised as her acquiescence to a happy marriage (p 179).

The book adds to the existing social histories of population control by placing different historiographies in conversation with each other. The historiography on family exists on two scales. We have regional histories of the small family and birth control. These histories focus on the new family formations and conjugal relations in the late colonial India (Majumdar 2009; Hodges 2008; Devika 2008). Concomitant with these clusters are histories of transnational advocates for birth control (Annie Besant, Margaret Sangerm, and Marie Stopes are examples) in the same period (Ahluwalia 2008; Nadkarni 2014).

The other cluster of work locates population planning as a central imperative that transforms decolonisation. They focus on the effect of Malthusian family planning on global diplomacy, circuits of power, and knowledge communities. Predominant in this cluster is the United States' love for demographic transition in the newly independent countries, especially during—but not limited to—the Cold War (Connelly 2008; Bashford 2013). The book collates these differing historiographies. Literature on birth control in colonial India can now be read along contemporary global discussions on population.

Population Planning

Many social histories of birth control start off from Foucauldian governmentality, while not limiting themselves to a single framework. This book follows a similar pattern, by treating the planned family as a heuristic device to understand eugenics dressed as economic modernisation. Sreenivas identifies the neat divide between family planning and population control as problematic. Scholars have maintained that the concepts are different as family planning entails people voluntarily accepting contraceptives; while population control has a streak of coercion that is sharpened around targeted sterilisations. The book is successful in analysing how the voluntary acceptance falls within the ambit of coerced sterilisations, in the name of improving the nation. This analysis carries Alison Bashford's (2013: 350) work forward in questioning the way a state persuades its people to reduce family size. In this way, the author questions how the Indian state structured governance around fertility control; it became the sole way out of poverty and malnourishment.

There is a recent spurt in literature on the Emergency years. Part of the notoriety of 1975–77 was the forced vasectomies of "target" populations. Gyan Prakash (2019) has observed how sterilisations were consonant with populist authoritarianism. The author's project is different. The book smoothly circumvents the Emergency years to show that the state functioned between coercion and incentive even before and after those years. Curbing fertility accrued coercive techniques over the decades, right after being spelt out in terms of economic prosperity. Mohan Rao (1994) has already critiqued the Malthusian influences on the national programme (Hartmann 1987). What Sreenivas brings to the discussion is how positive eugenics sat very comfortably along rhetoric around improving living conditions of people.

Another facet of the book delineates how neo-Malthusianism informed governmental decisions on food security and sustenance. Starting from the famine of 1876–78, shortage of food was blamed on the colonised population's reproductive behaviour. As the author notes,

> the new regimes of counting that developed during the late 19th century, and the accompanying importance of numbers in the administration, prompted a new economisation of life, whereby the benefits of lives saved was calibrated against the cost. (p 43)

The colonial state saw famines as positive checks that would bring the population numbers down. Famines would also be sieves that ensure only upper-caste privileged families, unaffected by the food shortage, would be encouraged to procreate. The health of an individual family was tied to its prosperity. However, such thinking had its critics. M G Ranade and Dadabhai Naoroji rejected this form of legitimising famines and moved away from this link between the family and economy (pp 52–54). They blamed imperialism for the food shortage. Notwithstanding such a critique, birth control activist and Congress leader Annie Besant blamed overpopulation for poverty and rallied for birth control to improve national economic conditions. The book examines interwar years' discussion of birth control through Katherine Mayo's *Mother India* (1927). This popular text was useful in rendering poor Indian families as regressive. This narrative was crucial in enabling a transnational consensus on the need for population control and advocating safe birth practices in India. Even as the Indian National Congress rejected the racist narrative of the book, it accepted the need for birth control.

The book also examines how the imperial state used population control to limit the global movement of people towards settler colonies. This chapter draws heavily from Bashford's (2013) analysis of Radhakamal Mukherjee. Both authors observe how Mukherjee advocated for free movement populations to "empty lands" of Australia and other settler colonies. This advocacy assumed emptiness by erasing the indigenous claims of First Nations to these lands. It assumed that migrants from India would make good use of these vast territories and not let them go to waste; simultaneously, their migration would lessen the population density in India.

Elite Anxieties

This question of land and settling populations influenced Indian feminists, too. The chapter on transnational feminist advocacy for birth control is deeply intertwined with Sanjam Ahluwalia's (2008) work. This segment explains how elite networks of birth control advocacy

fostered a national community of privileged women. Many literate and upwardly mobile women worked to disseminate contraceptive information. In the 1940s, Congress leaders like Dhanvanthi Rama Rau drew a direct link between gendered family planning to the national economy that was emerging through the Planning Commission. One part of their advocacy was a latent worry about nurturing productive citizens. This anxiety about the quality of births was linked to the national development. Simultaneously, this elite worry about access to contraceptives served eugenic prerogatives. Feminists accepted that overpopulation caused India to be poor and its people malnourished. Intergenerational poverty was causing degeneracy.

The network of middle-class women spoke for and over subaltern women. By the 1950s, contraceptive use was no longer a simple mode of planning children but stood for so much more. The upper-caste women who were worried about the unhygienic and unsafe birthing conditions propagated contraceptives as tools of empowerment. The All India Women's Conference and Margaret Sanger were allies in this twofold worry about lowering population numbers and bettering the "quality" of births in the world. Such advocacy found its critics, too. Kamaladevi Chattopadhyay discussed people's access to sustenance and space without citing birth control as the sole method to reach this goal. The first health minister of India Rajkumari Amrit Kaur resisted this logic, too. However, her motivation might have been different. Even as she rejected economic development through contraceptives, she endorsed the rhythm method—one that had M K Gandhi's approval. These critics were sidestepped as the First Five Year Plan supported mass advocacy campaigns instilling contraceptive-use to outgrow poverty.

In the middle of the last chapter, Sreenivas asserts (through an inspection of state-sponsored campaigns) that the Indian state reinforced the heteropatriarchal notion of inheritance through son preference amongst the new visions of home and family. Sreenivas states that in the archives, she did not come across any publicity text that showed the ideational children to be of one gender (p 179). This point has been left underanalysed. I believe regional specificities of the population control programmes demanded changes in the rhetoric around the national campaign. The author could have asked how this statist avoidance of son preference may have changed according to political geographies: Indian states may have avoided the question using differing rhetoric. These different enunciations would further the analysis of efforts to reduce family size without disturbing the region's specifically traditional kinship ties. The book had the potential at this point to integrate the interviews that the author had with women in Tamil Nadu to revisit the way the Tamil programme had aspects that were unique to it and not commensurable with the programmes in other states.

Future Scholarship

The book turns particularly bold towards the end of the last chapter and the epilogue. This part of the book can be read almost as a manifesto for future scholarship on family planning and population control. The author has opened the field up to studying the universal small family within global modernisation policies. Studying "family planning" as a historical object necessitates looking at national population programmes within global networks of power. Such studies will help understand how population planning transformed developing countries. In a parallel trajectory, Sreenivas also underlines neo-Malthusian influences on climate activism. Here too, advocates for reduced carbon emissions call for family planning. Reduced birth rates, once again, becomes the sole solution—this time, for environmental conservation. Thus, the "framework of crisis" that overwhelms every discussion on birth rates is not new and mutates ever so insidiously as solutions to political problems (p 206). Future scholars have the twofold responsibility of tracing the regional specificities of demographic planning while analysing Malthusian influences on discussions regarding the biosphere.

As the lineage of literature has shown, this book is of vital importance to scholars of postcolonial states, modernisation, and population control. Even if the book is situated within South Asian historiography, many of the claims work within a transnational context too. The way it merges social histories of family and kinship with global histories of population control will ease the work of setting a national problem in an international scale. Scholars must expand on these existing analyses to explain how population control remains relevant across ideological spectrums and changing regimes of governments. Such a book should find a home in syllabi on medical histories and demography. The scale of the book makes it an important contribution to sociological studies too. Finally, it is an important read for students of population studies to understand how, historically, family units—their primary data points—have been governed.

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Constructing Hijras as Colonial Subjects

GEE SEMMALAR

Governing Gender and Sexuality in Colonial India: The Hijra, c 1850–1900 by Jessica Hinchy, *Cambridge, New York, Port Melbourne, New Delhi and Singapore: Cambridge University Press, 2019; pp xviii + 305, price not indicated.*

Recorded anthropological and ethnographic interest in gender variance, especially of hijras or "eunuchs" (a term used in colonial records and some contemporary ones) in the subcontinent now referred to as India, dates back several centuries to the British rule. The interest continues in contemporary academia with book length monographs, such as Serena Nanda's *Neither Man Nor Woman: The Hijras of India* (1998), and Gayatri Reddy's *With Respect to Sex: Negotiating Hijra Identity in South India* (2005) being the earlier, oft-cited works. Anjali Arondekar's *For the Record: On Sexuality and the Colonial Archive in India* (2009) is a departure from these anthropological modes of enquiry as the book relies on a Derridean deconstructive analysis of the colonial archive to destabilise the relentless search for a "queer subject."

The latest monograph on gender variance in India, Jessica Hinchy's *Governing Gender and Sexuality in Colonial India: The Hijra, c 1850–1900* (2019) analyses how criminality was attributed to eunuchs in the mid- to late-19th century, with particular focus on Part II of the Criminal Tribes Act, 1871 in the North-Western Provinces (NWP) administered by the British. The book is divided into three sections and has a total of nine chapters with a conclusion that summarises the whole book and a postscript that draws linkages to contemporary state practices and hijras. The author has done extensive research to identify "sources" related to the "subject" in the Uttar Pradesh State Archives, National Archives of India, and the British Library. The methodological, citational, and analytical components of the book are critically reviewed in depth below.

Methodological Approach

In the introduction, Hinchy points towards the gap she perceives in scholarship on the "criminal tribes" by focusing on "the gender structures of colonial criminal law," an area she identifies as one we do not know much about (p 6). This is one of the earliest indications of the author's mode of enquiry, which is quite clearly fixated on a desire to know rather than an interrogation of the processes involved in knowing or how we come to "know" things. The author relies on a recuperative archival project by reading or rather (re)constructing the eunuch/hijra from the 19th-century colonial records. For an archival history book, she spends very little time on methodological issues and the book is ultimately heavily positivist. Hinchy digs the archives for "facts" from the colonial period, does not interrogate methods of historiography, and builds a narrative of a coherent and systematic project to "exterminate" hijras in the NWP from the 1850 to the 1900s. Critiquing Arondekar's method of rejecting a "recovery" mode of historical research, Hinchy says such a method makes it "difficult to examine the effects of archival and classification practices on Hijras and other colonised peoples who were labelled 'immoral'" (p 15). But, she does not answer the obvious question of how the "effects" of state classificatory practices on hijras could possibly be accessed or narrativised in the first place. In a chapter titled "Hijra Life Stories," the author claims to rely on life history approaches and microhistory methodology as opposed to what she calls the "collectivising tendencies of most 19th century accounts" (p 139).

However, she undercuts what she proposes to do by contradictorily claiming to move back and forth between the microhistory methodology and "generalising types of historical records such as ethnographies" in her bid to give the reader what is ostensibly a fuller picture (p 139). By relying on fragmentary biographical details recorded on the Muzaffarnagar district registers of eunuchs from 1872 to 1873, which mostly recorded their kinship, property, and occupation details, and comparing/contrasting them with British ethnologists' narratives across regions from the late 19th to the early 20th centuries, she once again elides the methodological issues of "sources," form, timelines, geographic specificities, historiographical narratives, and what "life history" can be recuperated from state registers if at all one were to attempt to do so.

Supplanting theories of governmentality that Michel Foucault developed in relation to the transition from sovereign power to governmental power in the 16th and 18th centuries in Europe to apply to British colonial strategies around gender nonconformity in India, as the author has done is problematic, to say the least, because of the particularities of the social, political, and cultural contexts of the subcontinent (pp 9–10, 100). Similarly, she supplants Indrani Chatterjee's (2013: 57–98) theory of monastic governmentality, a form of political society based on student–teacher residential households from the 2nd to the 18th centurries CE in eastern and Himalayan India onto hijra households and theorises them as "monastic" (p 154).

Citational Politics

Throughout the book, there are claims that are not supported by even the archival evidentiary paradigms Hinchy adopts. For instance, she makes the claim that in the 18th and 19th centuries, "slaves were interchangeably referred to as chelas and as adopted children, highlighting that slavery, discipleship and kinship were discursively entangled" and cites an email communication on 12 December 2016 between her and one Nicholas Abbott, without any references to the person or their expertise (p 159). Drawing from Hindu mythological origin stories recorded by British ethnologists, she makes the claim that hijras' "self-representation as spiritual ascetics and their right to

collect alms were related to beliefs about fertility" (p 146).

How she could possibly extract the "self-representation" narratives of hijras from the 19th century by merely relying on colonial narratives is a question that remains unanswered. The sources she relies on for these religious origin myths are British ethnologists, namely Russel (1916), Enthoven (1922), Crooke (1896), Rose (1911) (p 146). Herein lies the biggest oversight of the book in terms of citational politics—the uncritical citing of colonial knowledge as sources to "access" the past and the attendant reinvestment in their truth narratives by doing so. Other oversights like crediting the photograph of the "[Portrait of] Meah Sahub. Eunuch" [BL/IOR/Photo 269/1(86)] to Lucknow-based photographer Abbas Ali (active late 1860s–80) instead of Ahmad Ali Khan (active 1850s–62) could perhaps have been avoided with more attention to historical detail. However, the captioning of the photograph as that of a *Khwajasarai* with explanations of the term and links to the Criminal Tribes Act seem to be unnecessary and inaccurate extrapolations by the author, especially so, because the photo is dated 1856–57, at least 14 years before the Criminal Tribes Act, 1871 came into force.

Central Arguments

The major arguments placed forward by the book are that there were provincial projects within British India like the NWP campaign in the 1860s that constructed eunuchs as criminal due to a "hijra panic" around what the British considered to be an immoral and ungovernable group among the natives. By starting the book with an 1852 murder case, *Government v Ali Buksh* in which castration and prostitution are referred to, the author builds the moment as the catalyst for the "hijra panic." She repeatedly refers to "the rediscovery of the 1852 case as the moment that the Hijra community was first 'exposed'" (p 37). However, Laurence Preston's work shows archival documentation of commentaries among British officials, court cases, and inheritance and initiation laws imposed on hijras in Bombay and Satara in the 1830s (Preston 1987: 371–87). Moreover, it is widely accepted that the subcontinent was composed of princely states before the British invasion with the concomitant uneven expansion of the empire resulting in some princely states being administered with varying degrees of independence by native rulers even as the British directly controlled other regions. Hence, the provincial character of administrative and legal regimes of the time are an accepted historical premise by most, if not all, historians of South Asian colonialism. Many of the claims of the book, such as the particularity of the campaign to exterminate hijras in the NWP remain unsubstantiated. How is the 1852 murder case a catalyst for laws and amendments enacted several decades later? What were the shifts and continuities in administrative policies of the East India Company and the Crown (post 1858)? Why was there a "hijra panic" in this particular region and what differentiated it from other British administered regions? Indeed, the issue with most positivist histories is that they are often caught in a loop of creating causal answers to complex historical processes.

The book argues that the "extermination project" launched by the British in the NWP was social and cultural involving the criminalisation of adult eunuchs, their registration and control through colonial laws, removal of children who were attached to hijra households, and disallowing public performances and begging, some of the major sources of livelihood for hijras at the time (pp 93, 106). However, later, the author argues that the NWP administration allowed *chelas* (younger kins of hijra mothers/gurus) to inherit their deceased guru's property if they were eunuchs and lived with the deceased attributing it to the low value of their properties and avoidance of administrative burden by the British (p 223). But, if it was indeed a systematic extermination plan, the allowance for property to be passed on internally within the hijra households, regardless of the value of the property, rests uneasily with that claim.

The most glaring gap in terms of analysis in the book is the under-exploration of the caste and racial contexts of British colonial rule. Although there is an entire chapter that addresses Indian "middle class" morality and hijras, the author theorises what she calls "the overlaps in middle-class Indian and colonial accounts of the Hijra" as a result of the appropriation of colonial morality/modernity by the Indian middle class, north Indian class politics, and debates about social issues (p 91). Although it is mentioned in passing that for Hindus and Sikhs, "quotidian caste practices were an important ingredient of class identity" (p 83) the focus is more on class and respectability. Perhaps the author is under the belief that caste does not exist in Islam evidenced by the glossary for Ashrafs that says "people of aristocratic or eminent families" (p x). In the newspaper correspondence and letters to the government quoted, it is the opinions of mostly Ashraf men (the exception being Lalla Badri Pershad of the Indian Reform League) that are used as evidence for native prejudicial attitudes to hijras. It must be emphasised that history writing has implications for contemporary society, and the recuperation of hijras/eunuchs in Hindu origin myths and the disproportionate focus on Ashraf men's opinions to the exclusion of dominant caste men of any other religion have grave implications for the ongoing project of depicting Hinduism/Hindutva as one that is accepting of gender variance and alternate sexualities.

The Gender and Sexuality Lens

The lens the author uses is a narrow one, unfortunately, shared by many scholars of gender and sexuality. Hinchy argues that in the case of the "hijra community," "it was not race so much as colonial understandings of gender, sexuality and the body that ruled out the production of self-disciplining Hijras" (p 12). Colonial and Indian commentators are repeatedly quoted referring to hijras as a "race" (p 100). However, Hinchy claims, "late 19th-century ethnography in India emphasised socio-cultural knowledge over physiological theories of race, unlike ethnology elsewhere in the British Empire" (p 40). However, Hinchy herself relies on ethnological work such as that of William Crooke that are heavily racialised and steeped in a discourse of colonial

anthropology. For instance, Crooke's introduction to his four volumes on tribes and castes in NWP and Oudh in 1896 has an entire chapter dedicated to anthropometry with detailed measurements of cephalic, nasal indices, and face angles of different castes if only to show that there was similarity in racial background across castes (pp xxvii–cxxxvii).

By seeing the categories of gender, caste, sexuality, and the body as separable from racialised colonial systems, the author presents an account that is based on an uncritical use of colonial archives as sources to extract history from, in spite of claiming to pay attention to the form of the archive and not just the content as Stoler (2002) urges us to do (pp 87–103). Although Hinchy refers to plural forms of knowledge, she does not pay attention to the different forms—statistics, official reports, newspapers, police registers, etc, and only engages in a discourse analysis from different sources highlighting heterogeneous narratives. Hinchy says, "the plural forms of knowledge in colonial archives allow us to piece together a fuller view of 19th century Hijras' lives" (p 138). In a bid to give us a "full view," Hinchy embarks on a hurried search for an assumed stable subject—the eunuch/the hijra (although fleeting references are made to *bhagatiyas*, *sakhis*, and cross-dressing performers who might trouble the category) within the archives, imposing a coherent narrative of an ostensibly systematic, intentional extermination campaign in the NWP by the British, often even filling in the "gaps" in the archives. Nevertheless, this book is a welcome change from the anthropological studies of hijras conducted by earlier scholars. It attempts to, in some ways, shift focus away from the study of hypervisibilised deviant bodies to an examination of colonial systems of governance and control.

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COVID-19 Lockdown and Human Development

Deprivation and State Response in Maharashtra

CHANDRIKA SINGH, SHOUMELI DAS, ANURADHA NAIR

Maharashtra has emerged as the epicentre of the COVID-19 pandemic. In the trade-off between lockdowns to flatten the infection curve and saving an already slow economy, there is a significant human cost, thus exposing and deepening the existing structural inequalities. The article maps and analyses the impact of the first wave of the COVID-19 pandemic and the subsequent lockdown based on the three dimensions of human development—health and nutrition, education, and livelihood. Given the acute shortage of food supplies for certain groups during the period, the article examines the government response by analysing the implementation of food programmes.

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Almost two years following the outbreak of the COVID-19 pandemic, nearly every country in the world continues to grapple with the increasing pressures on health systems and resources. India has been among the worst affected. Apart from the loss of lives and long-term impact on health, the first wave of the pandemic also spelt doom for the Indian economy. In an attempt to contain the spread of the virus and time to build the health infrastructure, the Government of India had announced a national lockdown on 24 March 2020. This stringent lockdown (Hale et al 2020), which lasted for nearly 40 days, was followed by a staggered opening of the economy from 4 May. This lockdown period witnessed complete closure of all activities, barring a few essential services, such as pharmacies, medical clinics and hospitals, grocery stores, and vegetable/fruit markets. With economic activity coming to a grinding halt, India's gross domestic product (GDP) contracted by 23.9% in the April–June quarter of the financial year (FY) 2020–21. In the process, significant human suffering was experienced, exposing and deepening existing structural inequalities.

Socio-economic vulnerabilities originate from the intersecting structures of caste, class, and gender. These manifest in the form of inequitable access to or control over resources, which in turn determines the ability of individuals or groups to cope with crises. In the context of the COVID-19 humanitarian crisis, the most vulnerable were low-income or resource-deprived households, who were further pushed into the downward spiral of poverty. These included homeless people, slum dwellers, migrants, and informal workers. Additionally, ailing people, persons with disabilities, transgender persons, the elderly, and children were susceptible to deprivations due to their specific vulnerabilities.

Maharashtra emerged as the epicentre of the pandemic during the first wave, accounting for nearly one-fourth of all cases across the country. Some of the worst-affected districts included Mumbai, Pune, and Nagpur where the urban poor comprise a sizeable part of the population. "COVID-19-appropriate behaviour" did not mean much for residents of these cities, many of whom reside in cramped housing amidst deplorable sanitation and hygiene conditions, have insecure livelihoods and lack access to state-provided relief.

Against this background, the article aims to fulfil two objectives. First, it gauges the impact of the COVID-19 lockdown on the most vulnerable during the first wave of the pandemic in Maharashtra. We map the multiple deprivations under the three dimensions of human development—health and nutrition, education, and livelihood—for a comprehensive picture of the human cost of the peak lockdown months and the cascading effects thereafter. Second, given the evidence on widespread hunger and starvation, we examine government response through food programmes during the year, with a focus on the period between April and June 2020.

Methodological Limitations

The authors would like to clarify that the overall count of vulnerable people is an underestimation owing to unavailability of reliable data. The data for this article has been compiled using highly disparate sources. Where state aggregates were unavailable, we provided data for a specific city or a small population group. Further, the categorisation of population groups is neither mutually exclusive nor homogeneous, and the analysis does not reflect the regional inequalities within the state.

Costs of Pandemic

The outbreak of the pandemic in early 2020 presented policymakers with the classic catch-22 situation of saving lives versus livelihoods. While human lives were

the priority, the looming recession if not managed well could lead to financial crises and sectoral collapses with long-term consequences for welfare and poverty (Loayza and Pennings 2020; Vos et al 2020).

The two key features of the economic impact of COVID-19 were: first, it was simultaneously a negative demand and negative supply shock, and second, it was accompanied by a contagious global shock (Loayza and Pennings 2020). A simultaneous negative demand and negative supply shock meant it reduced the ability of people to work and firms to produce, and it lowered incentives and possibilities for people to consume and for firms to invest (UN ESCAP 2020; Kennedy et al 2006: 8–13). A contagious global shock is the impact owing to globalisation and interconnectedness, through channels, such as reduced international trade, travel, fall in oil prices, and other export-dependent sectors (Jonas 2013: 12; Financial Stability Forum 2006: 3–4).

According to Jonas (2013: 11), such economic shocks typically lead to offseting or cascading social effects depending on a "country's preparedness … informed by vulnerabilities across sectors." The article predicted a substantial rise in poverty in the aftermath of such a crisis. In the case of the COVID-19 pandemic, the disproportionate impact on women in terms of domestic and unpaid care work and heightened risk of violence was also evident (UN Women 2020). Drawing attention to children's special needs early on in the pandemic, the United Nations (2020) claimed they would be among the worst hit in the long run—especially those from the poorest countries, poorest neighbourhoods, or the already disadvantaged and vulnerable.

It emerged in the early months that policy response to COVID-19 could not simply be restricted to conventional measures and would need to work "in unison with complementary policies in social protection, urban management, public communication, and financial and goods markets*: a whole-of-government* approach" (Loayza and Pennings 2020: 5; WHO 2020). The World Bank also advocated for providing support to citizens, especially the poorest, as an immediate response (Özler 2020). The need to strengthen social protection systems and public infrastructure to increase people's resilience could not have been stressed more.

Mapping the Deprivation

In this section, we map the impact of the lockdown on the most vulnerable in Maharashtra based on the three dimensions of human development—education, livelihoods, health and nutrition. We highlight vulnerabilities across these dimensions for the period of the lockdown, as well as the cascading effects after the economy started to open up.

Repercussions on education: The prolonged, and in some cases, indefinite closure of educational institutions impacted about 2.23 crore students between Classes 1 and 12 across all government and private schools in Maharashtra (MHRD 2018).

While online teaching emerged as the way forward, it exposed the population's digital divide. The lack of electricity, unavailability of gadgets and limited access to the internet hindered learning. According to a survey conducted by the Maharashtra State Council of Educational Research and Training (MSCERT) and UNICEF in June, only 57% of students in the state had internet connectivity, 60% could access a smartphone, and less than 1% had access to desktops and laptops (MSCERT and UNICEF 2020). The same survey found that even for those with access to technology, learning was impacted as students struggled to sustain attention on virtual platforms. Adjusting to online education has been even harder for children with disabilities. A national survey showed that one in two children with special needs were planning to drop out of education (PTI 2020b). For students in secondary school, uncertainty regarding transitioning to senior secondary and higher education remained throughout the year.

In addition, financial distress within households forced many students to drop out of school. As per the Annual Status of Education Report (ASER 2020), the share of all children not enrolled in schools in rural Maharashtra increased from 1.1% in 2018 to 2.1% in 2020. The risks are much higher for adolescents, especially girls, who are pushed into household and other labour. ASER (2020) data shows that 6.8% of girls between ages 15 and 16 were not enrolled in school in rural Maharashtra during 2020, as compared to 5.1% of boys in the same age group.

The fall in enrolment rates and increase in dropouts among schoolchildren may also be correlated with the rise in the incidence of child trafficking and marriage in the state. Even before the pandemic, Maharashtra had high rates of girl child marriage—about 22% (MoHFW 2020), but state government data reported a 78.3% rise until September 2020 as compared to 2019 (Chakraborty 2020).

Effects on income and livelihoods: The impact on livelihoods in urban areas during the April–June period is evident from the sixfold rise in the unemployment rate (35.5%) among ages 15 and above as compared to 6.2% in the preceding quarter of January–March 2020 (MoSPI 2021). This was not only highest among all the states, but much higher than the all-India average of 20.8%. The unemployment rate among 15–29 years was even higher, 46.3%, that is, almost every second person was unemployed during the period. Among the worst affected were those employed in industries categorised as "non-essential," that is, industries prohibited from operating during the lockdown, such as manufacturing, trade, hotels and construction (Estupinan et al 2020; GoM 2021c). For activities classified as "essential," such as farming and health, the impact was relatively less. The possibility to "work from home" determined whether workers were able to retain and continue their jobs (Bhatt 2020). Thus, for sectors like transport and hospitality, where work from home was not possible, workers were laid off en masse (Saraswathy 2021).

A large proportion of those adversely affected were informal workers in the unorganised sector, involved in low-skilled jobs (Estupinan et al 2020; IHD and UNICEF 2020). For example, 24% of domestic workers completely lost their jobs, while 62% lost their jobs partly, that is, they retained work with some employers (Ganapatye 2020). It may be recalled that women constitute more than 90% of the 15 lakh domestic workers in the state (Table 1, p 35). Most of these workers

Table 1: Number of Informal Workers across Employment Categories in Maharashtra

S No	Employment Category	Indicator	Number
1	Domestic workers	Number of workers engaged in domestic work	>15 lakh
2	Construction workers	Number of registered construction active (live) workers	11.9 lakh
3	Owner-drivers	Registered vehicles as on 31 March 2018 (provisional)*	Taxis: 3.37 lakh Autos: 8.63 lakh
4	Street vendors	Registration forms received from hawkers for licence by BMC (2014)	99,435
5	Female sex workers	FSW covered under AIDS control programme	66,066

* Based on number of taxis (meter fitted and tourist cabs) and autos plying in the state.
Sources: As per the serial numbers given in the table, (1) GoM (2018a); (2) Maharashtra Building and Other Construction Worker's Welfare Board (2020); (3) GoM (2018b); (4) Deshpande (2019); (5) MoHFW (2016).

are not registered with the government and were unable to access state welfare schemes (Tirodkar 2021).

Similarly, construction workers were stranded in metro cities, and had to struggle for food and necessities (Singh and Sriraman 2020). With only a small fraction registered with the state's labour board (11.9 lakh), most survived at the mercy of private contractors (Kumar 2020). For those who returned to work in the first week of May, uncertainties regarding work and return to native places remained (Rajput and Bhalerao 2020). Street vendors, too, faced severe loss of income during this period as they were not permitted to set up their stalls owing to the fear of spreading the disease (Goradia 2020). Again, as only a few are licensed hawkers, many were not eligible for the relief packages announced by the government in May 2020 (Sen 2020).

Drivers and cleaners employed with the private transport sector, such as bus and taxi services, were rendered jobless as schools and offices remained closed and people worked from home (Saraswathy 2021). Cab drivers affiliated to aggregators like Ola, Uber and Meru reported a rise in debt levels during the lockdown months. Even those who were able to resume work from May, continued to face large losses because of low demand and high operating costs amidst rising fuel prices (James 2020).

Commercial sex workers (CSWs) were faced with a complete loss of income and starvation during March to May (Sharma 2020; Bose 2020). While the fear of contracting the virus made it difficult to resume work, lack of education or employable skills left them with few options. Many were unable to avail cash relief and dry ration announced by the government for CSWs owing to the lack of identity proof and bank accounts (*Wire* 2020).

A conservative estimate suggests that, taken together, domestic workers, construction workers, drivers, street vendors, and female sex workers add up to about 40 lakh persons (Table 1), that is 9% of the total workforce of the state. The average daily earnings of these workers are low. Prior to the pandemic, in 2017–18, average wage earnings per day for casual labour engaged in works other than public works in urban areas ranged between ₹269 and ₹291 among males and about ₹156 and ₹174 among females (MOSPI 2019). The pandemic impoverished them further, affecting their access to food, healthcare, and education of their children.

Impact on health and nutrition: The impact on health, due to pre-existing health conditions or special health requirements and food insecurity, was a very crucial aspect.

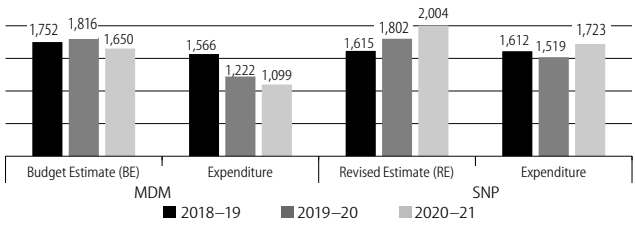
While the direct impact of COVID-19 has already been substantial, its impact on other health concerns due to discontinuation and delays in access to services have been immense. Healthcare services, including immunisation, maternal, and new-born care, were disrupted (Nagarajan 2020). Some of the reasons included hospitals being overburdened with COVID-19 patients, reduced availability of public transport hindering access to tertiary care, inability of the health department to conduct outreach programmes and hospital-avoiding behaviour among people (Kumari et al 2020; Torgalkar 2020). There was, thus, a substantial drop in institutional delivery (Lok Sabha 2020a) and child vaccination (Torgalkar 2020; Lok Sabha 2020b), putting many children at risk of diseases, such as measles, rotavirus, and tetanus. A similar decline in other services for children, such as institutional support to the severely undernourished through nutrition resource centres, was observed (GOM 2021b).

Then, the plight of ailing people who required hospitalisation and medical support needs to be given due attention. In Maharashtra, more than 47 lakh people are hospitalised every year (MOSPI 2014), that is, a monthly average of 4 lakh admissions. Given the additional strain on health resources, patients were unable to access regular facilities. This led to indefinite postponement of surgery/treatment, resulting in disease progressing to an advanced stage. For instance, the number of new paediatric cancer cases treated in one of the biggest cancer hospitals in Mumbai was halved between 2019 and 2020 (Barnagarwala 2021a). Similarly, there was a drastic decline (of about 44%) in the tuberculosis notification for the state between March and July in relation to same period in 2019 (Barnagarwala 2021b).

Further, the impact of the lockdown on the mental health of people has been worrying and there has been a significant rise in the number of people seeking psychiatric help (PTI 2020a). People struggled with stress, anxiety, depression, insomnia, etc, owing to financial uncertainty, isolation, and restrictions on mobility. The surge of people experiencing physical and mental health concerns highlighted above is likely to burden the already strained health system in the years to come.

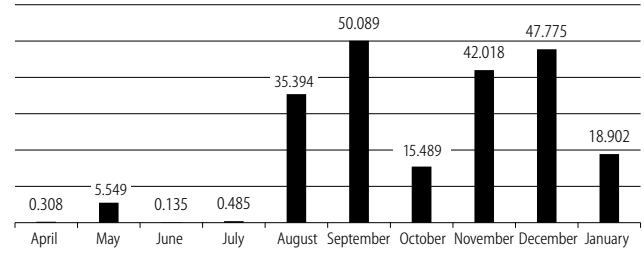
Even before the lockdown, levels of hunger and undernutrition in the state were high (MOHFW 2020). This significantly worsened during the lockdown, when the loss of income constrained the ability to buy food (Kakodkar 2020). The worst affected were migrants, homeless people, and slum dwellers. As per Census (2011), there are about 16 lakh unskilled migrants in the state, who work as manual labourers. They are generally excluded from social security programmes as they do not possess the relevant identity proof to avail these services (Bhagat 2018). Likewise, nearly 10.5% or 1.18 crore of Maharashtra's population lives in urban slums. Settlers in slum dwellings, especially in cities such as Mumbai, Pune, Aurangabad and Nagpur, were prone to hunger and malnutrition because of disruptions in the supply chain. During the early phase of the lockdown, the state government formed a committee to ensure food, shelter and medical support to workers and homeless people (GOM 2020a). However, preliminary surveys in Maharashtra, where many workers were

Figure 1: Budgets and Expenditure for MDM and SNP for the Last Three Fiscal Years (values in ₹ crore)



Budgets for SNP indicate revised estimates as a large portion was added in supplementary grants.
Source: Budget has been collated by authors from Maharashtra state budget books and finance department MIS (GoM 2021a).

Figure 2: Month-wise Offtake of Foodgrains for MDM (values in thousand tonnes)



Source: Collated by authors from *Food Grain Bulletin*, Department of Food and Public Distribution, https://dfpd.gov.in/food-grain-bulletin.htm.

stranded, suggested that people in the state had the least access to cooked food from any source (SWAN 2020).

From the discussion above, two things emerge. First, there has been a steep deterioration in all dimensions of human development during this period, especially for the most vulnerable populations. Second, the loss of income and livelihoods resulted in widespread hunger and starvation during the peak lockdown and the period thereafter. The analysis of government food programmes in the next section serves to point at the inadequate coverage of these schemes in the state.

Food Security Programmes

Hunger and starvation induced due to the lockdown, necessitated additional measures from policymakers to prevent further deprivation and exclusion. The response was through existing food security programmes of the central and state governments. The central government programmes consist of the following: the targeted public distribution system (TPDS), supplementary nutrition programme (SNP) under Integrated Child Development Services (ICDS), midday meal (MDM), and scheme for adolescent girls (SAG). The state government programmes are A P J Abdul Kalam Amrut Aahar Yojana (AAY) and Shiv Bhojan. In our analysis, we focus only on central government flagship schemes TPDS, SNP and MDM, along with Shiv Bhojan, which was the key state initiative during the pandemic.

The SNP and MDM are centrally sponsored schemes, with fund sharing between central and state governments. The TPDS, under the National Food Security Act, 2013 (NFSA), is operated by both the central and state/union territory governments. Foodgrains under the PDS, ICDS, and MDM are provided by the Food Corporation of India (FCI) to state governments at subsidised rates.

Midday meal: The MDM programme ensures that each primary school (Classes 1–5) and upper-primary school (Classes 6–8) student is provided a nutritious meal on school days. In mid-March, the then Ministry of Human Resource Development decided to provide MDM or food security allowance (FSA)[1] to all eligible children during the closure of the schools—a one-off measure for the pandemic (MHRD 2020a).

The release of the FSA summer vacation component was delayed by the centre, and the state government received it only in the third quarter (around end of November 2020) (MoE 2020), months after summer vacations were over. Also, only 40% of the approved MDM budget for the state was released by the centre till December 2020 (Accountability Initiative 2021a). Meanwhile, the state government decided to cut its expenditure by 67% across all departments, except a few priority departments, such as public health, drug administration, etc (GoM 2020b). This fiscal measure, notified in May, had an impact on MDM as well.

The state spent 67% of the MDM budget in FY 2020–21 (Figure 1), but no expenses were incurred till July 2020. In terms of coverage, approximately 87 lakh children received FSA in the state between March and August 2020 (Lok Sabha 2020c), which was 19% less than the revised approved beneficiaries (approximately 107 lakh) for the summer vacation FSA and 12% less than the initial approval of about one crore primary and upper-primary schoolchildren (MHRD 2020b). This was less than the number of children who availed this scheme in 2018–19 and 2019–20, which was about 99 lakh and 93 lakh, respectively (GoM 2021d). The offtake of foodgrains (rice) was 2% till July, which reached 70% of the allotted amount by January 2021 (Figure 2).

The state's performance for the scheme had been below par even before the pandemic. In FY 2019–20 and FY 2018–19, 67% and 89% of the allocated budgets was spent on the scheme (Figure 1). The state has also been slow in fulfilling basic requirements such as building kitchen-cum-stores[2] (Rajya Sabha 2021), which are necessary to prevent children from fire accidents and other health hazards.

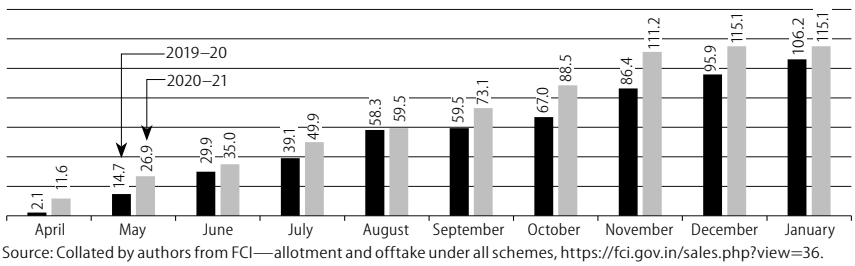
The discussion above shows us that: first, schoolchildren did not receive any support during the peak lockdown period; second, lakhs of children were left out of the benefits of the scheme, even after the scheme picked up pace later in the year; and third, for children who did receive FSA, they did not get their due entitlement, which was of 222 days for regular school days and 34 additional days under summer vacation FSA.

Supplementary nutrition programme (under ICDS): During the period of the lockdown, anganwadi centres were closed across the state. Anganwadi workers and helpers delivered take-home ration (THR) at the doorsteps of beneficiaries, which include children and pregnant and lactating women (P&LW). In mid-April, the scheme was expanded to include migrants who were returning to their home districts. Accordingly, the foodgrain offtake for the scheme by the state was relatively higher than 2019 (Figure 3, p 37). Overall, the offtake till January for FY 2020–21 was 115 thousand tonnes, in comparison to 106 thousand tonnes till January 2019–20.

In budgetary terms, the central government had released 41.2% of its share of the approved annual budget for the scheme by August 2020 (Lok Sabha 2020d), and

Figure 3: Month-wise Cumulative Offtake of Foodgrain of SNP in FY 2019–20 and FY 2020–21

(values in thousand tonnes)



Source: Collated by authors from FCI—allotment and offtake under all schemes, https://fci.gov.in/sales.php?view=36.

the state government, too, had spent 38% of the initial budget estimate by then. However, the overall expenditure in FY 2020–21 was 14% less than the revised estimate for the year (Figure 1).

Besides, the scheme has been underfunded in the last few years. As per a report by Accountability Initiative (2021b), the approved SNP budget for the state (combined central and state shares) is less than half of the amount required for full coverage of the target population. Similarly, the Parliamentary Standing Committee report of Rajya Sabha, pointed out low allocations for the scheme by the central government as compared to the projected demand (Rajya Sabha 2018). During a pandemic year (2020–21), immediate rise in uptake for the scheme to nearly 62 lakh children, compared to 56 lakh in 2019–20, indicates unmet demand for the scheme (GoM 2021b).

Overall, while the scheme provided the entitled nutrition to children and P&LW during the peak lockdown period, the coverage remained limited.

Targeted public distribution system: Under the NFSA, there are two "entitled" categories of ration cardholders—Antyodaya Anna Yojana (AAY) households, who constitute poorest of the poor, and priority households (PHH), identified by the states for the scheme. Each AAY cardholder is entitled to 35 kg of foodgrains per month and PHH cardholder to 5 kg grain per person per month. Additionally, as part of the COVID-19 relief measures, 5 kg foodgrains and 1 kg pulses per person per month were to be given free of cost to the NFSA ration cardholders under the Pradhan Mantri Garib Kalyan Anna Yojana (PMGKAY). The scheme was to be initially implemented for a period of three months from April to June but was later extended till November 2020. Later, as part of the Atmanirbhar Bharat (ANB) package, the PMGKAY scheme was extended to migrants, who did not have access to the public distribution system (PDS) as most were seasonal workers and did not possess ration cards valid at their location of work.

About 700 lakh people, including 108 lakh AAY and 592 lakh PHH are covered under the PDS in the state. Between April and June 2020, nearly 1,151 thousand tonnes of foodgrains (wheat and rice) were allocated under NFSA for Maharashtra. Out of this, 82% was lifted by the state and 90% of the allocated amount was distributed (Table 2). The distribution to AAY and PHH beneficiaries was 93% and 90%, respectively. However, by February 2021, only 79% of the allotted grains were distributed to the NFSA beneficiaries.

Under PMGKAY between April and June 2020, 1,050 thousand tonnes of foodgrains was allocated by the ministry. Of this, 90% was lifted by the state and 96% of the lifted amount was distributed (Table 2). Overall, 86% of the allocated amount under the PMGKAY for eight months was distributed to 135 lakh cardholders[3] in the state. Additionally, about 55 thousand tonnes of dal was distributed during the period.

Under the ANB, 5 kg foodgrains per month and 1 kg whole chana per household were to be provided free of cost to migrant labourers for two months, that is, May–June 2020. Initial estimates by central government for coverage under the ANB suggested 10% of total beneficiaries under the NFSA, that is, about 70 lakh. However, the state intended to reach 15 lakh migrants (Lok Sabha 2020e), and hence, only a quarter of the allocated amount of 70 thousand tonnes was finally distributed, along with 760 tonnes of chana.

The state had a scheme for above poverty line (APL) cardholders, which was accessed by nearly eight lakh cardholders. As part of COVID-19 relief, the central government announced a package for non-NFSA cardholders for a three-month period (April–June 2020), consisting of wheat and rice at ₹21 per kg and ₹22 per kg, respectively. Simultaneously, the state government decided to distribute 3 kg wheat at ₹8 per kg and 2 kg rice at ₹12 per kg for the months of May and June to about three crore APL cardholders (GoM 2020c). The total allocations by the centre and the offtake by the state was 188 thousand tonnes (Table 2). Between April and June 2020, the distribution was only 30% of the allotted amount to about 8.6 lakh non-NFSA cardholders (Table 2). There was thus a huge gap between the intended beneficiaries and numbers actually reached out. Moreover, by July 2020, the regular monthly distribution to APL beneficiaries had stopped.

Overall, PDS provided the crucial support to many during the pandemic but coverage was inadequate. Migrants and non-NFSA cardholders, who were the most vulnerable, were largely left out of the benefits. Moreover, only 59% of the population is covered through NFSA and other state ration cards, against the requirement

Table 2: Foodgrain (Rice and Wheat) Allocation, Offtake and Distribution under Various Schemes between April and June 2020 and Total for FY 2020–21

(Figures in thousand tonnes)

Schemes	Between April and June 2020			Total		
	Allocation	Offtake	Distributed	Allocation	Offtake	Distributed
NFSA*	1,151	953	1,042	4,604	3,705	3,636
PMGKAY**	1,050	948	907	2,800	2,453	2,417
ANB***	70	34	17			
Non-NFSA#	188	188	57			

* NFSA total allocation and offtake are up to February 2021. ** PMGKAY—Total data refers to period April–November 2020. *** ANB scheme was for May–June 2020; only rice was distributed. # Non-NFSA—Allocation under this scheme during April–June 2020.

Source: Allocation and offtake figures are taken from *Food Grain Bulletin*, https://dfpd.gov.in/writereaddata/Portal/Magazine/FoodgrainBulletinforFebruary2021.pdf.

Total allocation for NFSA for the year is taken from FCI, https://fci.gov.in/sales.php?view=36.

Distribution data has been collated by authors from the state PDS portal, http://mahaepos.gov.in/Pmgkay_Int.jsp.

ANB distribution data from https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1656294.

of about 63% as per the act (Khera and Somanchi 2020). The limited commodity basket of the PDS (foodgrain and dal), too, is not enough to fulfil the daily nutrition requirement of a household, especially at a time when the ability to buy food from other sources was limited and food inflation was high (GoM 2021c).

Shiv Bhojan: In January 2020, the state government had started a programme to provide one full meal[4] a day to the poor and needy, at a subsidised rate of ₹10 per plate. During the pandemic, this was revised to ₹5 per plate, with a target of 1 lakh thalis per day. This target was too small in comparison to the state's poor and migrant population engaged in low-income jobs. As per the state government's PDS portal, about 85.42 lakh thalis were distributed between April and June. Of the ₹190 crore allocated for the scheme for FY 2020–21, only 65% was spent by the state in the year.

Conclusions

The article provides a comprehensive picture of the extent of the human suffering experienced by the most vulnerable populations in Maharashtra during the first wave of the COVID-19 lockdown. By diving into the data available on implementation of existing food programmes, which was the main channel through which relief measures were undertaken at the time, we also comment on the adequacy of government response.

We find that the pandemic has again proved the strong correlation between poverty and the systemic deprivation of basic needs pertaining to health, education and livelihoods. Given the multidimensional nature of these deprivations, poverty traps have only been exacerbated during the current crisis. The mapping of deprivation done provides evidence regarding the worsening of lives of the poorest of the poor, including migrants and informal workers. Given that many construction labourers, domestic workers, commercial sex workers, taxi drivers, and street vendors are not registered with government agencies, they were not eligible for state benefits and were left to face starvation and hunger on their own accord, especially during the peak lockdown period. The lockdown also caused irreversible and long-term damage on those with precarious health conditions and on children's learning and development.

Amidst this scenario, the government response to alleviate hunger in the state was inadequate and failed to reach the most vulnerable. The implementation of flagship schemes, such as the MDM and SNP, as we demonstrate through our analysis, was far from satisfactory, considering reduced access to food during the period and high levels of undernutrition among children and P&LW. Although the coverage of PDS was expanded for non-cardholders, the scale of the ongoing crisis necessitated better outreach, especially for those who are otherwise undocumented and invisible from policy priorities.

Going forward, as policymakers at the centre and the state construct a long-term economic revival plan, it is critical that the human development needs of the last mile are prioritised. Towards this, ensuring better coverage of food programmes and provision of social safety nets across the lifecycle, contextualised to differential vulnerabilities, will be crucial.

NOTES

1 FSA consisting of quantity of foodgrains as per entitlement of the child, and cooking cost prevailing in the state.

2 Kitchen-cum-stores are spaces provided for safe storage of foodgrains and fuel, and cooking of midday meal in a hygienic environment.

3 Authors' calculation based on data available on the state's PDS portal, http://mahaepos.gov.in/index.jsp.

4 Meal consists of one bowl vegetable, one bowl dal, one bowl rice, and two chapatis.

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Drivers of Foodgrain Productivity in Uttar Pradesh
Panel Data Analysis

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The present study using district-wise panel data for the period between 2000–01 and 2016–17 assesses trends and acceleration or deceleration of growth in area, production and productivity of foodgrains in Uttar Pradesh. Though agriculture production growth in the state is primarily attributed to productivity gains, the crop-wise analysis suggests the scope for productivity-led growth in the case of wheat. The significant decline in area under nutri-cereals and pulses over time is another concern. Increasing cropping intensity, irrigation coverage and strengthening extension outreach are major suggestions for bolstering productivity in the long run.

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Agriculture productivity growth has remained a subject of intense debate in scientific as well as policy circles in India. Large numbers of studies have been taken up across the country for understanding the agricultural growth pattern over time at the national level (Mahadevan 2003; Tripathi and Prasad 2008). However, understanding the pattern of agricultural growth and development at the regional level is a pre-requisite for evolving strategic decentralised development strategies to ensure inclusive growth in the country in the long run (Mathur et al 2006; Kumar and Elumalai 2007; Bhalla and Singh 2009; Kumar and Jain 2012).

As states are the appropriate administrative units to study regional dimensions of agricultural growth and development, the present study has analysed the performance of agriculture in terms of crop-wise productivity growth over time in Uttar Pradesh (UP). The choice of the state is guided by its highest share (around 17%) in national foodgrain production and, thus, its obvious importance in national food security. The state economy is predominantly driven by agriculture, which covers a sizeable part of the highly fertile upper and middle Gangetic plains and engages around 59% of the total workers (GOUP 2018).

Nonetheless, few studies in the recent past on assessing trends in productivity growth have also considered UP as an important case (Singh and Chandra 2001; Goyal and Kumar 2013; Bajpai and Volavka 2005; Verma et al 2017) as the state engrosses prominent position in the agricultural development of the country. However, they have largely ignored the drivers of productivity growth in the state, information on which is crucial for accelerating agricultural growth with strategic intervention. While another study emphasising productivity growth as a crucial factor for rural development and poverty reduction in UP, Pandey and Reddy (2012) recognised fertiliser and irrigation as important determinants for productivity growth, but ignored social and institutional factors that accentuate productivity growth pattern of a region.

The survey of literature on assessing growth pattern of an area, production and productivity of crops revealed that the previous studies assumed linear relation of growth with time (Singh and Chandra 2001; Sharma 2012; Sharma 2013; Roy et al 2015; Gulati et al 2017). As growth is seldom unidirectional, capturing rate of change in the growth rate over time more clearly depicts instantaneous increment or decline in growth rate of the parameter of our interest (Holt 2008). Against this backdrop, we have attempted to explore the trends in growth of

area, production and productivity of foodgrains in UP along with their acceleration or deceleration over time and identified drivers of foodgrain productivity at a more disaggregated level for strategic planning and prioritising allocation of resources for accelerating productivity growth in the state.

Data and Approach

The study is based on district-level panel data collected from various secondary sources for a comprehensive period of 2000–01 to 2016–17. The district-wise data pertaining to areas under foodgrains (rice, wheat, nutri-cereals, total cereals and pulses) and their production, gross cropped area, net sown area, area under irrigation were sourced from the website of the Directorate of Economics and Statistics, Ministry of Agriculture and Farmers' Welfare. The information on the number of agricultural labourers and rural literacy rate was gathered from population census conducted every 10 years. The data regarding the number of small and marginal farmers and agricultural credit were obtained from the agricultural census organised every five years. For inter-census periods, linear interpolation technique was used to fill the data gaps. The mean kharif and rabi rainfall for each district were sourced from India Meteorological Department (IMD), Pune at a spatial resolution of 0.25 × 0.25 degree. Data on district-wise fertiliser (NPK) consumption, number of tractors and length of road were compiled from the Statistical Abstract of UP, Directorate of Economics and Statistics, Government of UP, for the different years. Since changes in district boundaries pose challenges in preparing uniform district-level panel data set, district boundary adjustment was done for partitioned districts considering 2016–17 as the base, following Choudhary (2017). The districts carved out from two or more districts were adjusted by providing population weights that permit easy construction of panels (Murthi et al 2001; Banerjee and Iyer 2005; Kumar and Somanathan 2009).

Growth performance of agriculture: The compound annual growth rate of area, production and productivity of crops over a comprehensive period of triennium ending (TE) 2000–01 to TE 2016–17 and for the two subperiods PI and PII, viz, TE 2000–01 to 2010–11 and TE 2010–11 to 2016–17, respectively, as well as acceleration and deceleration in its growth rates were estimated using the following log-quadratic model (Boyce 1986):

$$\ln Y_{it} = a + bt + ct^2 + u_t \quad \ldots (1)$$

where,

Y_{it} = Area/production/productivity of ith crop in "t" time period

i = Paddy, wheat, nutri-cereals, total cereals, pulses, total foodgrains

t = TE 2000/01-2010/11, TE 2010/11-2016/17, TE 2000/01-2016/17

Estimated value of b and c gives the measure of growth rate and acceleration or deceleration, respectively. If c is significantly positive, it indicates acceleration, significant negative value shows deceleration in growth rate and insignificant value implies stagnation in growth process (Ghosh 2010). The inclusion of time squared term on the right-hand side of equation (1) gives rise to the problem of multicollinearity. This is avoided by the normalisation of time in mean deviation form, that is, by setting $t = 0$ at the midpoint of the series, and this allows the time (t) and its square (t^2) to become orthogonal (Boyce 1986).

Determinants of foodgrain productivity: The drivers of foodgrain productivity were identified through panel data modelling approach. Foodgrain productivity as dependent variable was regressed with 12 different socio-economic and climatic factors utilising panel for time period 2000–16.

$$\begin{aligned}\ln (FG\_Y)_{it} = {} & \beta_0 + \beta_1 \ln (FERT)_{it} + \beta_2 \ln (CI)_{it} + \beta_3 \ln (IRRI)_{it} + \\ & \beta_4 \ln (TW)_{it} + \beta_5 \ln (AL)_{it} + \beta_6 \ln (TRAC)_{it} + \\ & \beta_7 \ln (RD)_{it} + \beta_8 \ln (KR)_{it} + \beta_9 \ln (RR)_{it} + \\ & \beta_{10} \ln (RL)_{it} + \beta_{11} \ln (SMF)_{it} + \beta_{12} \ln (AC)_{it} + \beta_{13} D1 + \\ & \beta_{14} D2 + \beta_{15} D3 + \varepsilon \quad \ldots (2)\end{aligned}$$

where, *FG_Y* indicates foodgrain yield (qtl/ha), *FERT* implies fertiliser use per hectare of gross cropped area (kg/ha), *CI* is cropping intensity (%), *IRRI* is gross cropped area under irrigation (%), *TW* shows contribution of tube well as source of irrigation (%), *AL* indicate agricultural labour use per unit of gross cropped area (no/ha), *TRAC* depicts number of tractors per hectare of gross cropped area (no/ha), *RD* is road density (length per sq km), *KR* and *RR* are the average kharif and rabi rainfall (mm), respectively. *RL* describes rural literacy (%), *SMF* is the number of small and marginal holding farmers (no), *AC* shows the agricultural credit disbursed by commercial banks per unit of gross cropped area (₹/ha). "i" and "t" represents district and year, respectively, where i = 1, 2,…..75; t= 2000, 2001, …. 2016.

The panel data estimation technique involves fixed and random effect model; however, choice of the model is guided by the Hausman test (Baltagi and Liu 2016). The fixed effects assume that the individual specific effect is correlated to the regressors, while random effects assume that individual specific effects are uncorrelated with the regressors. Both fixed and random effects model were attempted and based on the Hausman test, and fixed effect model was selected (Annexure I, P 45).

Given the large size of the state and its diverse geography and climatic conditions, UP is divided into 4 economic regions—western, central, eastern and Bundelkhand (GoUP 2009) (Annexure II, p 45). Therefore, to take into account the individuality of each region or cross-sectional unit, intercept is varied by using dummy variable for fixed effects. The model is popularly known as the least square dummy variable (LSDV) model (Wooldridge 2002). Dummy for Bundelkhand region is used as comparison. D1, D2 and D3 are dummies for central region, eastern region, western region, respectively.

$\beta_1, \beta_2 \ldots\ldots B_{15}$ are the output elasticities of the respective input variables. For ease of interpretation and policy prescription, the above regression model was estimated as double log function. The analysis has been carried out using Stata/SE.

Results and Discussion

The performance of agriculture in the state over time has been analysed in terms of growth in area, production and productivity of foodgrains. The average area, production and yield of

foodgrains and its various crop components, viz, paddy, wheat, nutri-cereals, total cereals and pulses during the overall period TE 2000–01 to TE 2016–17 and two sub-periods TE 2000–01 to 2010–11 (PI) and TE 2010–11 to 2016–17 (PII) have been presented in Table 1. During the overall period, foodgrain production increased significantly in the state at an accelerated rate with CAGR 0.824%. This growth was mainly attributed to the increase in the productivity of foodgrains, since the area remained stagnated during the same time period. It is noteworthy here that in the sub-period I foodgrain area declined significantly accompanied by acceleration in its growth rate, as shown in Table 2.

The production of total cereals during the overall period increased at an accelerated rate and the growth was absolutely yield-driven since the area under the same has not increased significantly during the same time period. Similar pattern has been observed in the growth performance of paddy, which is the major cereal crop of the state. The two drought years, that is, the agricultural year of 2002–03 and 2009–10, lead accelerated decline in production and yield of paddy during sub-period I. It is interesting to note that the production growth of wheat in UP during the last 15 years has been primarily area-driven as productivity of the crop has remained stagnated. The striking increase of average area under wheat by 5 million hectares in PII from the previous period is also evident from Table 1. The productivity growth of nutri-cereals has been quite robust (CAGR 2.05%) during the overall period, despite the significant decline in area under the crops during the same period, as shown in Table 2.

The share of pulses in area and production of total foodgrains in the state hovered around 12% and 4%, respectively, during the overall period under consideration, as shown in Table 1. The growth in the production of pulses also revealed dismal trends in the state during the entire study period. The production of pulses in the state declined significantly at an annual rate of 1.50% during the overall time period and was mainly attributed to the significant decline in area (CAGR 1.35%) during the same period, though the area declined with decelerated rate. The period-wise analysis showed that area, production and productivity of pulses was on a declining trend during both the sub-periods, though the decline was significant during the decadal period of TE 2000–01 to TE 2009–10.

Table 1: Mean and Standard Deviation of Area, Production and Productivity of Different Crops for Different Time Periods

Crops	TE 2000–01 to TE 2009–10			TE 2010–11 to TE 2016–17			TE 2000–01 to TE 2016–17		
	A	P	Y	A	P	Y	A	P	Y
Paddy	58.25	117.19	20.10	59.20	134.94	22.78	58.64	124.50	21.20
	(1.22)	(5.06)	(0.66)	(0.98)	(7.61)	(1.03)	(1.19)	(10.82)	(1.58)
Wheat	93.57	252.70	27.14	97.93	287.10	29.35	95.37	266.87	28.05
	(1.15)	(12.72)	(0.93)	(0.41)	(24.00)	(2.46)	(2.39)	(24.73)	(2.00)
Nutri-cereals	22.59	32.19	14.28	20.03	34.96	17.45	21.54	33.33	15.59
	(1.85)	(2.12)	(0.48)	(0.11)	(2.37)	(1.15)	(1.90)	(2.57)	(1.79)
Total cereals	172.08	398.08	23.12	176.08	452.57	25.71	173.73	420.51	24.18
	(3.50)	(16.17)	(0.75)	(2.64)	(19.00)	(1.08)	(3.69)	(32.35)	(1.58)
Pulses	26.12	21.25	8.13	23.45	19.97	8.48	25.02	20.72	8.27
	(1.54)	(1.99)	(0.42)	(1.01)	(2.88)	(1.02)	(1.88)	(2.40)	(0.72)
Foodgrains	198.50	420.25	21.17	198.87	467.53	23.50	198.65	439.72	22.13
	(4.19)	(15.61)	(0.75)	(1.63)	(24.47)	(1.14)	(3.30)	(30.61)	(1.48)

Figures in parentheses show standard deviation.
A = area (million hectare), P = production (million tonnes), Y = productivity (qtl/ha).
Source: Authors' estimates.

Determinants of Foodgrain Productivity

Based on the district-wise average foodgrain productivity for 2000–16, the districts in each region of the state have been delineated into three categories, namely high (23.50–32.27 qtl/ha), medium (14–23.49 qtl/ha) and low (8.34–14.15 qtl/ha), using *k* means clustering approach (Saxena et al 2017).

Table 2: Area, Production and Yield Dynamics of Different Crops in Uttar Pradesh

Periods	Area		Production		Yield		Periods	Area		Production		Yield	
	Growth Rate	Acceleration/ Deceleration	Growth Rate	Acceleration/ Deceleration	Growth Rrate	Acceleration/ Deceleration		Growth Rate	Acceleration/ Deceleration	Growth Rate	Acceleration/ Deceleration	Growth Rrate	Acceleration/ Deceleration
Paddy							Total cereals						
TE 2000–01 to	-0.107	0.277	-0.163	0.860**	-0.035	0.585**	TE 2000–01 to	-0.420	0.352*	0.124	0.873*	0.547	0.530**
TE 2009–10	(-0.44)	(1.58)	(-0.32)	(3.19)	(-0.09)	(2.45)	TE 2009–10	(-2.29)	(4.49)	(0.26)	(3.90)	(1.69)	(2.88)
TE 2010–11 to	0.695*	-0.187	1.547	-2.234**	0.857	-2.056*	TE 2010–11 to	0.626*	-0.293**	-0.382	-1.911**	-0.984	-1.621**
TE 2016–17	(4.78)	(-1.15)	(1.62)	(-4.37)	(1.00)	(-5.16)	TE 2016–17	(4.59)	(-3.03)	(-0.45)	(-3.64)	(-1.31)	(-3.07)
TE 2000–01 to	0.166	0.011**	1.278*	0.075*	1.122*	0.064*	TE 2000–01 to	0.156	0.012**	1.099*	0.061*	0.951*	0.048*
TE 2016–17	(1.74)	(2.37)	(4.44)	(5.60)	(4.70)	(5.55)	TE 2016–17	(1.55)	(2.50)	(4.12)	(4.32)	(4.36)	(3.92)
Wheat							Pulses						
TE 2000–01 to	0.344*	0.125**	1.218**	0.458	0.562	0.578**	TE 2000–01 to	-1.583*	-0.823*	-3.045*	-0.409	-1.444*	0.434
TE 2009–10	(4.67)	(3.13)	(3.15)	(1.66)	(1.65)	(3.11)	TE 2009–10	(-3.54)	(-3.86)	(-10.62)	(-2.20)	(-4.82)	(2.25)
TE 2010–11 to	0.112	-0.127	-2.868**	-2.231**	-2.919**	-2.125	TE 2010–11 to	-1.727**	-0.479	-4.467	-5.358**	-3.015	-5.009**
TE 2016–17	(1.58)	(-1.93)	(-2.42)	(-2.22)	(-2.50)	(-1.99)	TE 2016–17	(-3.70)	(-0.87)	(-1.90)	(-3.76)	(-1.41)	(4.32)
TE 2000–01 to	0.469*	0.025*	1.128*	0.052**	0.561	0.024	TE 2000–01 to	-1.354*	-0.072*	-1.498*	-0.079*	-0.183	-0.009
TE 2016–17	(11.32)	(9.42)	(3.16)	(2.47)	(1.74)	(1.31)	TE 2016–17	(-8.06)	(-7.64)	(-3.11)	(-3.00)	(-0.42)	(-0.40)
Nutri-cereals							Foodgrains						
TE 2000–01 to	-2.521*	0.353	-1.761*	0.594	0.758**	0.269	TE 2000–01 to	-0.601*	0.198**	-0.068	0.795*	0.539	0.604**
TE 2009–10	(-9.17)	(1.86)	(-4.29)	(2.25)	(2.65)	(1.23)	TE 2009–10	(-5.02)	(2.92)	(-0.15)	(3.79)	(1.49)	(3.01)
TE 2010–11 to	-0.017	-0.230	2.719**	-1.867*	2.732**	-1.649*	TE 2010–11 to	0.184	-0.350**	-1.052	-2.092**	-1.230	-1.749**
TE 2016–17	(-0.15)	(-2.71)	(3.50)	(-5.10)	(3.93)	(-4.65)	TE 2016–17	(1.23)	(-4.49)	(-1.08)	(-3.04)	(-1.47)	(-2.78)
TE 2000–01 to	-1.516*	-0.071*	0.536	0.043**	2.047*	0.115*	TE 2000–01 to	-0.091	0.002	0.824**	0.044*	0.918*	0.046*
TE 2016–17	(-8.32)	(-5.03)	(1.47)	(2.43)	(9.29)	(12.97)	TE 2016–17	(-1.13)	(-0.36)	(2.96)	(3.01)	(3.83)	(3.43)

* Significant at 1%, ** Significant at5% level of significance.
Figures in parentheses show two-tailed t-statistics.
Source: Authors' estimates.

Table 3 indicates that most of the districts in the western region are highly productive, while more than three quarter of the districts lying in the eastern region have productivity below 14 qtl/ha.

Table 3: Distribution of Districts

Region	High (23.50–32.27 qtl/ha)	Medium (14.16–23.49 qtl/ha)	Low (8.34–14.15 qtl/ha)	Total
Bundelkhand region	0	6	1	7
Central region	4	6	0	10
Eastern region	4	2	20	26
Western region	25	7	0	32
Overall	33	21	21	75

Source: Authors' estimates.

The descriptive statistics of the variables used in the model are summarised in Table 4. The data set tested negative for the problem of heteroscedasticity and multicollineraity. The estimated result of the LSDV model with two-way fixed effect, that is, cross-sectional and period, are presented in Table 5. Cross-sectional fixed effects are assumed to absorb the unobserved district-specific time-invariant variable that influence foodgrains' yield and minimise estimation bias due to omitted variables. Period fixed effects control for annual differences in productivity within the cross-section, which might have arisen due to changes in technology, infrastructure and other omitted variables.

As can be seen in the lower part of Table 5, the coefficient of multiple determination (R^2) is statistically significant, thus indicating that our model is of good fit. The regression estimates have the expected sign and a large number of them are significant. The importance of fertiliser in enhancing the productivity of crops has been unanimously reported (Sharma and Thaker 2011; Chand and Pandey 2008). Interestingly, this variable has a significant effect in increasing the yield of foodgrain in the present study. Likewise, cropping intensity is also yield-enhancing in its effect with elasticity of 0.23. Along with fertilisers, irrigation and its sources (tube wells) as well as mechanisation have emerged to be the critical factor in determining foodgrains productivity in the state. These factors help in raising the cropping intensity through timeliness and better quality of operations and precision in the application of the inputs (Patil and Sirohi 1987; Verma 2008). In concordance with a priori expectations, irrigation, tube well irrigation and use of tractors, all have positive and significant effect on foodgrain yield. On the contrary, the estimated elasticity of agricultural labour on productivity is -0.043.

Agriculture in India is still highly dependent on monsoon rainfall, thus the importance of rainfall in augmenting the agricultural crop production does not need much emphasis (Kumar et al 2004; Prasanna 2014). It is noteworthy to mention that while kharif rainfall has a significant yield-triggering effect, rainfall in the rabi season adversely affects foodgrain productivity. Rural literacy, which shows the quality of human resources, is found to improve the foodgrain yield significantly. Emphasising its importance in agriculture, Mittal and Kumar (2000), Meitei and Devi (2009) and Choudhary (2017) in their study opined that literacy plays a critical role in enhancing human capabilities for adopting modern agricultural technologies, and thus increases productivity gains.

The relationship between farm size and productivity has been a debatable issue. Few previous studies at the national level (Binswanger and Rosenzweig 1986; Raghbendra et al 2000; Chand et al 2011) have provided convincing evidences on positive relationship between marginal holdings and crop productivity; however, the

Table 4: Mean and Standard Deviation of the Variables across Regions

Variables	Bundelkhand Region	Central Region	Eastern Region	Western Region	Overall
Foodgrains' yield	12.5	22.59	21.42	27.64	23.40
	(4.10)	(4.32)	(3.90)	(4.66)	(6.18)
Fertiliser use	68.9	157.83	158.70	174.82	157.15
	(40.54)	(59.77)	(63.97)	(57.51)	(65.79)
Cropping intensity	128.96	152.81	156.00	159.78	154.64
	(19.38)	(16.64)	(13.10)	(14.45)	(17.13)
Irrigation	42.77	78.9	70.1	88.49	76.57
	(11.10)	(8.57)	(20.82)	(18.18)	(22.23)
Tube well	28.13	73.99	71.67	74.01	68.92
	(22.68)	(13.55)	(26.11)	(18.15)	(24.90)
Agricultural labour	0.26	0.39	0.39	0.34	0.35
	(0.12)	(0.14)	(0.13)	(0.17)	(0.15)
Tractor	29.66	31.23	30.98	48.56	38.37
	(12.65)	(13.38)	(11.89)	(31.15)	(24.04)
Road density	0.37	0.63	0.84	0.74	0.72
	(0.11)	(0.25)	(0.37)	(0.51)	(0.42)
Rainfall	594.65	636.22	666.73	527.91	596.67
	(298.06)	(331.61)	(374.78)	(300.10)	(337.07)
Rabi rainfall	65.26	70.63	73.46	59.17	67.35
	(31.39)	(29.68)	(37.83)	(27.36)	(33.87)
Rural literacy	62.49	62.21	61.11	63.26	62.29
	(11.21)	(11.38)	(13.09)	(12.24)	(12.35)
Small and marginal farmers	1,68,122.30	4,00,203.40	3,54,698.50	2,12,939.50	2,82,751.00
	(36,322.39)	(1,34,194.60)	(1,37,326.90)	(1,01,551.30)	(1,42,675.40)
Agricultural credit	6,861.98	8,193.68	11,826.43	30,119.05	18,667.89
	(16,304.99)	(17,179.99)	(45,663.76)	(72,625.73)	(55,965.10)

Figures in parentheses show standard deviation.
Source: Authors' estimates.

Table 5: Determinants of Foodgrains' Yield

Dependent variable: Log (foodgrains' yield)
Method: Least Square Dummy Variable Model
Effect Specification: Cross-sectional and Period Fixed Effect

Variables	Coefficient	t-ratio
Constant	0.5376**	2.12
Fertiliser	0.0347**	2.30
Cropping intensity	0.2367*	4.39
Irrigation	0.1278*	5.32
Tube well	0.0589*	9.01
Agricultural labour	-0.0436*	-2.82
Tractor	0.0991*	8.22
Road density	- 0.0036	-0.24
Kharif rainfall	0.0665*	7.29
Rabi rainfall	-0.0022	0.97
Rural literacy	0.1593*	4.50
Small and marginal farmers	-0.0377*	-3.11
Agricultural credit	.0079**	2.40
Central region	0.4528*	15.99
Eastern region	0.4156*	15.28
Western region	0.5519*	20.59
R^2	0.7283*	
Total panel (balanced) observations		1,275

* Significant at 1%, ** significant at 5% level of significance.
Source: Authors' estimates.

relation varies across states (Dev 2012) and with food commodity groups (Thapa and Gaiha 2011). The findings of the present study suggest that with unit percentage increase in the number of small and marginal holdings, the productivity of foodgrains declines significantly by 0.037%. The results of National Sample Survey Office 2003 farmers' survey establish that in UP, Madhya Pradesh, Himachal Pradesh, Kerala and Tamil Nadu, large farms have higher productivity (in value terms) than marginal farmers. As availability of agricultural credit catalyses the usage of modern inputs (Narayanan 2015; Kumar et al 2017), its significant effect on foodgrain productivity, as shown in Table 5, is obvious.

Table 6 represents the intercept values for different economic regions of the state accounting the individuality of each cross-sectional unit. Nevertheless, dummies for all the regions have positive and significant relationship with foodgrain yield (Table 5); the higher intercept value (1.0895) of western part of the state represents highest land productivity of the region. The western region which lies in upper Gangetic plains of India are endowed with higher water table and have more conducive climatic conditions for growing crops than other parts of the state (Srivastava 2006).

Table 6: Regional Intercept Value (Fixed Effect)

Economic Regions	Intercept Value
Bundelkhand region	0.5376
Central region	0.9904
Eastern region	0.9532
Western region	1.0895

Source: Authors' estimates.

Conclusions

In UP, the performance of agriculture measured in terms of foodgrain production and yield varies considerably over time and across regions. The growth in production of total foodgrains over the past one and half decade is mainly productivity-led growth, since the area under the same was stagnant during the same period. Crop-wise analysis shows significant increase in the production of paddy and wheat owing to their significant increase in productivity and area, respectively, during the overall study period. It is noteworthy that the stagnant yield growth of wheat in the state would pose serious challenges in meeting the future availability needs of the major staple crop at the national level as well. Hence, research and development breakthrough for genetic advancement to enhance the yield potential of the wheat crop would be a desirable policy intervention in this direction.

Further, in spite of the accelerated and significant growth in productivity of nutri-cereals during the overall period 2000–01 to 2016–17, there has been no significant increase in production due to marked decline in its area during the same period. The decline in the production of pulses in the state is mainly attributed to shrinkage of area under the crop. This decline in area under nutri-cereals and pulses over time signals the inclination of farmers towards rice–wheat monocropping. The diversification of the food plate of consumers towards nutrition-rich diets calls for crop area substitution with nutri-cereals and pulses. Therefore, the state government should intervene for augmenting area under these climate-smart crops through strengthening marketing and price support policies.

The analysis has revealed the crucial role of cropping intensity, irrigation and rural literacy in enhancing the foodgrain productivity. The unit percentage increase in cropping intensity increases the foodgrain yield by 0.24%. Since the cropland area is difficult to increase, intensifying the land use is the only option. In this direction, crop sequencing and supplementing the crop intensification with proper water and nutrient management would be more policy-imperative in the long run. Another important message from this study is that interventions towards increasing the irrigation coverage under the crops will be critical to enhance productivity gains. About 80% of the available water is used in agriculture in India, yet more than half of the cropped area remains rainfed. However, if rainwater were properly harvested, conserved and utilised, an additional 25%–30% of the area can be provided with irrigation (Sharma et al 2010). Hence, investment to create on-farm structures for harvesting, storage and distribution of water and to promote micro-irrigation techniques such as drip and sprinkler systems of irrigation in the state would be an important policy prescription. The findings of the study further accentuate the critical role of rural literacy in enhancing the productivity of foodgrains. Therefore, the state government has to play a major role in strengthening rural educational infrastructure for harnessing untapped potential of rural workforce. Mainstreaming practically oriented, participatory and interactive model like farmer field school programme, to educate the farmers about modern farm practices, and strong extension services should be the prior policy thrust of the government to boost the foodgrain productivity in the state.

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Annexure I: Hausman Fixed and Random

Coefficient	Fixed	Random	Difference	Standard Error
Fertiliser use	0.0421	0.0232	0.0189	0.0018
Cropping intensity	-0.0264	0.3600	-0.3864	0.0491
Irrigation	0.1236	0.2915	-0.1678	0.0222
Tube well	-0.0275	0.0221	-0.0497	0.0095
Agricultural labour	-0.0025	0.0184	-0.0209	0.0113
Tractor	-0.0180	0.1354	-0.1534	0.0364
Road density	0.0627	0.1274	-0.0647	0.0124
Kharif rainfall	0.1079	0.0983	0.0096	0.0006
Rabi rainfall	0.0345	0.0203	0.0142	0.0012
Rural literacy	-0.0594	-0.0194	-0.0400	0.0176
Small and marginal farmers	2.3357	-0.0375	2.3732	0.3373
Agricultural credit	-0.0111	-0.0034	-0.0077	0.0013
Chi^2 value		129.55*		

*Significant at 1%, ** significant at 5% level of significance.

Annexure II: Economic Region of Uttar Pradesh

S No	Region	Districts
1	Western	Agra, Mainpuri, Firozabad, Aligarh, Kasganj, Bareilly, Badaun, Bulandshar, Etah, Etawah, Farrukhabad, Mathura, Meerut, Ghaziabad, Muradabad, Pilibhit, Rampur, Muzaffarnagar, Saharanpur, Bijnor, Shahjahanpur, Baghpat, Gautam Buddha Nagar, Hathras, Amroha, Kannauj, Auriya
2	Central	Bara Banki, Fatehpur, Hardoi, Kanpur Nagar, Kanpur Dehat, Kheri, Lucknow, Raebareli, Sitapur, Unnao
3	Eastern	Allahabad, Kaushambi, Azamgarh, Mau, Ballia, Bahraich, Basti, Siddharth Nagar, Deoria, Faizabad, Ghazipur, Gonda, Gorakhpur, Maharajganj, Jaunpur, Mirzapur, Sonbhadra, Pratapgarh, Sultanpur, Varanasi, Balrampur, Shravasti, Chandauli, Sant Ravidas Nagar, Kushi Nagar, Sant Kabir Nagar, Ambedkar Nagar
4	Bundelkhand	Jhansi, Jalaun, Hamirpur, Mohaba, Banda, Chitrakoot, Lalitpur

Source: GoUP (2009).

Resolving Disagreements in Panchayats

Elected Representatives and Local Bureaucracy Interface in West Bengal

SUMAN NATH, BHASKAR CHAKRABARTI

Based on the long-term ethnographic research in four districts during a political transition in West Bengal and analysing narratives of disagreements between elected representatives and local bureaucrats in their gram panchayats, it is argued that the interface between the elected members and the bureaucracy is dialectical and is influenced by external as well as local contexts. Conflicting demands from stakeholders as well as factors like conflict, violence, elite control, and resistance from certain sections of the society could result in such disagreements. While there are instances of political "deep probe" in local bureaucracy, resultant decisions are often unpredictable and can come through unforeseen mechanisms. Informal mechanisms of resolution of disagreements, often associated with corruption, are either challenged by the counterpublics or give rise to an altered form of corruption to adjust itself to the process of political change.

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In this paper, we study the mechanisms by which political disagreements are addressed by elected representatives and bureaucrats in panchayats and, in turn, the effect of such disagreements on the local policy decisions. Elected representatives and the bureaucracy are the two major actors in any local government institutional network. Political disagreements between these key actors often affects the process of decision-making (Oosterwaal et al 2011). Scholars have reflected on the interplay of differences in decision-making and the context of local history where tradition and electoral systems have significant influence over such disagreements (Jatto et al 2013; Warioba 2008). While the dichotomy remains (Stocker and Thompson-Fawcett 2014), disagreements can have positive effects on decisions (Hammond and Knott 1996) or can have negative effects on the outcomes (Thomson and Torenvlied 2010).

There are models of politics/administration dichotomies and complementarities with limited explanatory capacities (Stocker and Thompson-Fawcett 2014), but factors that result in positive or negative outcomes of political disagreements are largely unknown (Franchino 2004; Huber and Shipan 2002; Thomson and Torenvlied 2010). Scholars have shown how elected members often carry power over the bureaucracy within constitutional arrangements and the ways in which bureaucratic leaders handle conflicting demands (Page and Jenkins 2005; Christensen and Opstrup 2018). The exact process of how political disagreement translates to the degree of discretion available to the local government institutions remains unresolved (Oosterwaal et al 2011).

We locate our study within the context of political disagreements and its impact on the dialectical relationship between the bureaucracy and the elected representatives who work at the lowest of the three-tier rural local governance system in India—the gram panchayat (GP). We attempt to understand how disagreements are dealt within the GPs and the way these disagreements influence policy implementation process at the grassroots.

Three mechanisms—compromise, agency preference, and coalition support—are used in addressing disagreements (Oosterwaal et al 2011). With high levels of disagreement, compromised decisions resulting in an implementing agency having discretion is often visible (Huber and Shipan 2002; Torenvlied 2000). This happens because the implementers wish

to reduce any transaction costs (Thomson and Torenvlied 2010). However, such strategies depend on the resources available to decision-makers (Huber and Shipan 2002) as well as their willingness to use such resources based on their perception of policy importance (Torenvlied 2000). Agency preference calls for an alley principal where one seeks to implement decisions of their own preference if there is a disagreement (Bendor and Meirowitz 2004; Epstein and O'Halloran 1999). Here, the implementer's policy preference could be different from the policy itself (Thomson and Torenvlied 2010). Hierarchical institutional mechanisms with an uneven distribution of authority, like in the GPs, result in a higher level of discretion in policy implementation (Thomson and Torenvlied 2010). A coalition support mechanism emerges from the conflicting preferences of stakeholders, which makes it difficult to take decisions as implementing agencies face multiple dilemmas (McCubbins et al 1989).

Four Districts in Bengal: Context and Methods

West Bengal experienced 34 years of continuous Left Front (LF) rule, with the Communist Party of India (Marxist) (CPI[M]) as the dominant party, under which the panchayati raj system had flourished (Mathew 2001; Bhattacharyya 2016). In the three decades of LF rule, the party–panchayat boundaries became blurred (Dasgupta 2009) and a distinct "party society" developed in rural areas. It transcended other competing institutions of formal as well as informal governance (Bhattacharyya 2009, 2016). West Bengal saw a political changeover in 2011 when the Trinamool Congress (TMC) and the Indian National Congress (INC) party alliance replaced the LF in the state assembly elections. The TMC continues to rule West Bengal although the TMC–INC alliance was called off later. West Bengal provides an interesting context to study the process of addressing disagreements at the local government level for two reasons. First, studying disagreements would provide insights into the effect of regime continuity over administrative decisions at the grassroots. Second, it would help in situating disagreements within the context of a political changeover. Studying such disagreements in West Bengal, therefore, provides insights into the party administration interface during a regime change.

We chose four GPs with different political compositions from four districts—Bankura, Paschim Medinipur, Purba Bardhaman, and Purba Medinipur (Table 1) to understand the process of disagreements between the elected representatives and bureaucrats. We did fieldwork before, during, and after the political changeover as well as during the panchayat elections of 2013. We employed political ethnography, that is, we located our ethnography in the context of studying the allocation of resources through conflict of interests at the local level. Our approach is inspired by anthropologists who focus on policy-making and politics (Wedel et al 2005; Abeles 2004). We visited each of the purposively chosen "fields" repeatedly over a period of eight years (2008 to 2016), interviewed key informants, and coupled it with intensive participant observation.

Table 1: Political Composition and Administrative Location of the Four GPs

GP	Block	District	Year of Election	Winning Party
GP1	Khatra	Bankura	2008	CPI(M)
			2013	TMC
GP 2	Garbeta II	Paschim Medinipur	2008	CPI(M)
			2013	TMC
GP 3	Purbasthali I	Purba Bardhaman	2008	TMC
			2013	TMC
GP 4	Ramnagar I	Purba Medinipur	2008	TMC
			2013	TMC

Source: Authors' own research.

Political capture of the panchayat system in West Bengal by the LF has been extensively studied. We bring the notion of political "deep probe" into the administration to explain the percolation of party politics into the administration (Svara 1994; Frederickson et al 2014). While the "deep probe" can completely undermine the democratic potential of the GP, it can also form "counterpublics." Such formation becomes "parallel discursive arenas where members of subordinated social groups invent and circulate counter-discourses …" (Fraser 1990: 67) and an outcome of "a constant struggle between opposition hegemonic political projects" (Mouffe 1996). We show that political disagreements between different stakeholders in the GP demand close attention for understanding the nature of disagreements during exercising power political change and unpacking the intricate nexus of local politics, bureaucracy, and other stakeholders—a nexus that is expected to have faced severe challenges with the political changeover. Elected representatives in GPs are usually (made) dependent on local political dynamics (Bhattacharyya 1998). They work with the bureaucracy where the dynamics of their interactions are unknown. Surfacing such interactions also implies a better understanding of the decision-making related to the allocation of resources. Farazmand (2009a, 2009b) argues that whoever controls the government at the local level also controls and uses the bureaucracy as an instrument of power. Politicians take action to get the bureaucrat to respond as they desire (Hedge and Scicchitano 1994). Actions include direct orders (Chaney and Saltzstein 1998), political appointments (Wood and Waterman 1991), and "deck-stacking" administrative procedures (McNollgast nd). Proximity of politics brings GP bureaucratic system closer to party politics in West Bengal. We present four cases to show the nature of disagreements and the mechanisms of handling such disagreements in different GPs in broad political context.

Gram Panchayat 1: Dependence of the Bureaucracy on Local Political Leaders

GP 1 in the forest tract of Bankura district experienced Maoist and *harmad* (armed mercenaries of the CPI[M]) fighting from 2008 to 2010. The CPI(M)-led LF ruled the GP since the 1970s till 2013 when TMC came to power. However, 2011 onwards, with the retreat of CPI(M) leaders and harmad, TMC controlled the GP from the backstage. One of our informants, Mahato (name changed), a local CPI(M) leader having a strong influence over the GP decisions, was murdered, allegedly by the Maoists, in August 2009. It resulted in an unprecedented confusion regarding decisions to be taken by the GP. Mahato's murder resulted in of the hasty departure of most of the local

CPI(M) cadre, despite being from the then-ruling party. This, in turn, resulted in a sudden leadership vacuum. Such an incident was symptomatic of the GP's dependence on a few key local leaders.

To understand the nature of such dependence, we have closely studied each of the decisions related to resource allocation during 2008–09 and then interviewed key GP members, both from the administrative and political wings. We found that since public services and resources under schemes as the Indira Awaas Yojana, Indira Gandhi National Old Age Pension Scheme, and Backward Regions Grant Fund (BRGF) are limited, there are conflicting demands and disagreements on the distribution of such resources among the elected representatives, party workers, and GP officials. Mahato and his followers in the party had devised a strategy to allocate such resources. They made a formula based on the percentage of votes acquired by a particular member for the first year after a fresh panchayat election as the beginning of the benchmark. Later, they used the percentage of voter turnout at the party rallies. It continued until the next election as the benchmark. For instance, if an elected representative secured 60% of the total votes polled they was entitled for six points and if the other had secured 80%, their score was eight. Now, for a particular scheme, the person having eight points would get a greater share of the resources and the person scoring lesser would get a lesser. Hence, the entire delivery of public services, especially mass benefit schemes like road construction, depended on this calculation. However, there were exceptions based on the distribution of beneficiaries. If a sansad (ward) had more eligible beneficiaries for a particular targeted and individual benefiting scheme even after scoring less (fewer votes), they would get a bigger share. This system of avoiding disagreements between the elected representatives, party cadres, and officials was disrupted after the murder of Mahato, who was the guiding force for resolving conflicts related to the sharing of resources by elected representatives. Essential service delivery at the GP had totally ground to a halt. Local bureaucrats like the GP secretary reflected on their helplessness in implementing development-related schemes in the absence of local political leaders.

> We have an annual action plan to follow, but we do not know where to start the work. That decision was in the hands of the local politicians. They are the people to tell us where to implement projects and we follow those instructions ... with the absence of such leaders our office becomes paralysed ... We tried to talk to the elected members [at the upper echelons] but they are also clueless. There are other problems too. We do not know who will take the contract [in case of a housing scheme]? Who will provide the material? What amount of extortion money will go to the party fund and to leaders? Until these questions are settled nothing can be done.

Earlier, local bureaucrats had little to do apart from doing the paperwork and assisting in the implementation of party decisions. It was possible to remain relatively free from making decisions through disagreements. The system of handling or forestalling disagreements seemed to work perfectly until a leadership vacuum was created. The phase of indecision finally got over when the harmads arrived, apart from the Central Reserve Police Force (CRPF) personnel installed to protect the CPI(M) leaders. The GP activities resumed and continued under the CPI(M) party discretion until the removal of the harmad camps in January 2011, when the CPI(M) leaders went absconding again. Another short phase of extreme disagreements surfaced. It continued until the GP was forcibly intruded and controlled by the TMC leaders who compelled the CPI(M)-elected executives to follow their directions. No matter how short-lived, the second phase of disagreements was quite intense. It was between two groups of bureaucratic leaders on whether the GP should establish its alliance with TMC and resume its development-related activities. One group wanted a quick alliance with the local TMC leaders as the party was the only viable alternative to the CPI(M). However, the other group wanted to give it some more time before establishing such an alliance. There have been numerous instances of threat and physical violence towards the unwilling stakeholders, all of whom ultimately surrendered to the TMC leadership after the party managed a massive victory in the state assembly election in 2011. From 2011 to 2013, TMC continued to work from the backstage to make the GP do whatever they decided. Official political transformation took place in the panchayat election of 2013. During several group discussions, it was revealed that during the CPI(M) rule, disagreements were mostly about the distribution of resources and the percentage share of extortion money from the contractor. This new development, especially the disagreements between the bureaucratic leaders on issues related to possible alliance with TMC, indicates an already existing political fissure within the bureaucracy.

Our ethnographic work in GP 1 reveals multiple dimensions of disagreements, especially with the leadership vacuum. Although the core issue of disagreement has remained the same, that is, decisions related to the allocation of resources and services, the dimensions have differed. For elected representatives, it was the percentage share of the resources and extortion money and for the bureaucracy, they could not agree on whether to start the work without sufficient clarity about such shares among the political players. Later, the disagreement was shifted to whether the GP should go for an immediate alliance with the TMC or not. It also indicated the existence of inner political divisions, which could only surface during the leadership vacuum. The GP initiated a political probing within the bureaucracy to such an extent that the entire functioning of the GP was halted for months. The system of distribution of resources based on the calculation of electoral mass support almost completely excluded the opposition-run wards. The bureaucracy, even with their existing political differences, remained silent. One reason for such an absence of disagreements during the LF government is associated with the fact that bureaucratic leaders had no choice other than to follow the instructions of the pradhan[1] who always worked under the directives of the local political leaders. The very design of the GP hierarchy and activity map, therefore, is one of the major reasons for a complete submission of the bureaucratic leaders to the local political clout. The formal meetings of the gram sabha have largely been dysfunctional, and therefore, the local

decisions were neither made through deliberation nor through a competing channel of disagreement between the two pillars of the GP—which escalated control over the bureaucracy by local polity.

Gram Panchayat 2: Bureaucracy and Its Use of Counterpublics

In GP 2 of Paschim Medinipur, similar party-sponsored harmad activities started around November–December of 2009 to contend with the Maoist attacks on CPI(M) leaders after several of them were killed or had gone missing. Eventually, the harmads started to threaten local opposition leaders and many of them absconded. The GP-level disagreements between the bureaucracy and elected representatives came into the forefront when local CPI(M) leaders wanted to take panchayat funds from the rural employment schemes to sustain these harmad activities. The GP secretary and the diploma civil engineer designated as nirman sahayak of the GP were against such proposals. They refused to prepare false documents on non-existing schemes as it posed a considerable risk to their career. However, because of the ambience of "fear and political pressure," they began and continued to prepare such documents and statements of expenditure for non-existent schemes. The bureaucracy had to execute the CPI(M) leaders' dictate; they nevertheless continued to show their disapproval and dissatisfaction to the elected representatives, including the pradhan. Elected representatives could not stop such corrupt practices because of their relatively weaker position in the party hierarchy and their dependence on the local leaders. The GP secretary in a group discussion in June 2009 reflects:

> We did not want to participate in corrupt practices … I asked for a transfer so that my name does not get involved in the malpractices that started to emerge with the party's CPI(M) fight against the Maoists. They [local CPI(M) leaders] did not allow me to apply to the higher authority so that I can at least show that I was unwilling to work in the said GP … I knew I could not lodge a complaint to my superiors because people at the block as well as the district were also working under CPI(M) leadership [at that time] … It was difficult to raise a voice because no opposition was left in the region who could give us any assurance … We continued to follow their instructions … to see MGNREGA, BRGF fund being utilised to build bunkers and check posts for harmads … licensing them to roam around in different villages … villagers were tasked with providing them food and cleaning services.

Evidently, because of the lack of administrative help being extended and the lack of opposition, the GP bureaucracy continued to participate in the gross misappropriation of public funds.

The situation started to change after the parliamentary election of 2009 when the TMC managed to gain power in several constituencies. By the end of 2009, an amalgam of anti-CPI(M) groups and common villagers started a supposedly "anonymous people's" movement consciously avoiding political affiliation. Hundreds of people who were absconding because of the harmad attacks started to band together to discuss and devise strategies to return home. This movement continued with anti-harmad protests for months until the assembly election was declared and the harmad camps were removed after the Netai incident where the existence of the harmad surfaced and got media attention. Harmad activities weakened the CPI(M) party's mass base primarily because the villagers did not approve such armed movements against the Maoists that compromised the privacy of villagers and their everyday lives.

Whilst there was a change in the political ambience going on, the said secretary took a chance to involve the political opponents of CPI(M) by establishing contact with one of the local anti-CPI(M) leaders.

> I thought of going to anti-CPI(M) leaders several times … they were organising rallies in our region. I knew one of the notorious leaders and to be honest my office was suffering … even booth level (CPI[M]) workers started threatening us … we could not say a word in the office as there are several workers who continued to support the CPI(M) and reported whatever we discussed in the office. I first met him [the anti CPI(M) leader] in Jhargram [about 100 km away from the GP 2] as I did not want anyone to know that we have met … (GP 2 Secretary, February 2010).

The GP secretary presented several documents to establish the misappropriation of funds at the GP and demanded an intervention from the anti-CPI(M) group. The local anti-CPI(M) leaders made this an important agenda for mass mobilisation. From early 2010, there were frequent visits by these leaders along with hundreds of followers to the GP office demanding transparency in fund allocation at the GP. They demanded the resumption of the gram sabha and the sansad sabha so that people's participation can be ensured. With repeated visits and heated debates with the elected representatives, fund misappropriation was reduced to a significant extent. The harmads became restricted to their outposts where they anticipated Maoist intrusions.

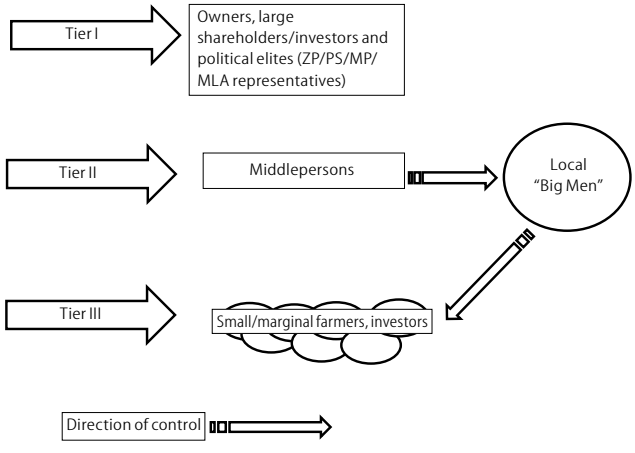
Political "deep probe" is notable in this case that compelled the bureaucracy to get involved in corruption and fund misappropriation (Newland 1994). What happened later in the GP with the involvement of counterpublics is an example of the contribution of political disagreement to democracy (Barabas 2004; Mutz 2002, 2006; Price et al 2002). The case reflects two obvious issues. First, because of a political "deep probe" into the bureaucracy, the lack of available administrative help, and an ambience of violence, the GP bureaucracy was forced to accept several unlawful activities. Second, with the alternatives available, they made conscious attempts to act on the issues of disagreement. Notably, the system of local governance involving a blend of elected representatives eased the pathway for a political "deep probe" and twisted existing rules. Consequently, it has given rise to a system of corrupt practices surrounding the GP. However, the case also reflects two major issues of disagreement. First, it can be said that there is a distinct potential for the political opposition to capitalise on issues of disagreement to utilise democratic means to defeat a regime. It also supports the concept of dynamism within the concept of power as a net-like organisation and not as a simple dichotomous existence of haves and have-nots. Moreover, such dynamisms, even within a violent atmosphere, carries the potential for political mediation through the involvement of the public sphere. Therefore, the disagreements between the two arms of the GP are not simply disagreements but are embedded

within the public sphere. Opposition forces in democratic formations have the potential to take up issues of disagreement from any possible multiparty democratic space.

Gram Panchayat 3: Disagreements, Corruption, and Compromise

GP 3 in Purba Bardhaman falls within a complex nexus of local and regional leaders, cold-storage, and rice mill owners, as well as investors who have a significant impact on the everyday life of small and medium farmers. There exists a three-tier structure filled with people from different political and economic hierarchies. People in Tier I have the greatest economic strength. Large investors along with storage and rice mill owners having a strong political alliance with the local as well as the regional political leaders are in this tier. Tier II constitutes a variety of middlepersons who work directly under the Tier I constituents to control the local "goons." They attempt to persuade small farmers and investors in Tier III to accumulate and store their products in the cold storages (Figure 1) either directly or through these local hooligans. This process of "negotiation" continues over the months after the harvest until people constituting the Tier I gain have almost exclusive control over a major section of the agro-produce in the region (Nath and Chakrabarti 2011).

Figure 1: Economic Exchange and Negotiation in GP 3



Source: Authors' own research.

While this hierarchy was formed and functioned during the LF regime, it did not alter much with the political change-over in the region. People in positions of power did not change primarily because the local elites transcended and withstood political disruptions. The major changes that have taken place are among the Tiers II and III constituents where several earlier mediators have now become small and marginal investors because of the loss of political backing. In addition, new faces have emerged from Tier III to become powerful mediators.

In 2009, a major project was taken up by the GP in collaboration with the panchayat samiti (PS)—the middle tier panchayat. Together, they planned to construct an elevated road along the nearby parched riverbank to promote better connectivity and make use of the road as an embankment to avoid yearly floods in the region. Since it involved a huge sum of money, selection of the contractor was a critical decision. The project involved funds from a combination of the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) and the BRGF schemes. Under the MGNREGS, the GP arranged for local people to make the basic earthworks, while the BRGF funds were used to create concrete slabs and fix them on either side of the mud wall. The Public Works Department (PWD) was involved by the PS to initiate the road construction.

Major disagreements surfaced at three levels. First, there were disagreements between the bureaucracy and elected representatives on the complicated planning required for the difficulties in synchronising different schemes. The GP bureaucracy did not want to take up the complicated work, whereas the elected representative wanted to get it done. It was hard to convince the PWD staff about the importance of the project, but this project was difficult to implement without their active support. The PWD was also accused of asking for "extortion money" from contractors. The bureaucratic leaders at the GP allegedly also looked for a percentage from the extortion money, and they were reasonably sure of not getting any part of it. Hence, there was a lack of interest from their part as well. Second, a section of the local TMC functionaries thought this whole effort was meaningless as the yearly floods would anyway wash away the embankment; they tried to convince the leaders not to initiate any such scheme. Third, there was a serious resistance from people of Tier I as the construction of the new road would enable local farmers to access other storage houses in the region, which would put an end to their monopoly.

Elected representatives at the GP organised several meetings with the bureaucracy at the GP and the block, the section of TMC cadres against the project, the PWD officials, and some cold storage owners were also called in. These meetings, however, remained unsuccessful in resolving any of the disagreements. One of the elected representatives argued that the primary interest of each of the stakeholders is in the amount of "extortion money." The matter was taken up by the TMC's *anchal samiti* (local area committee covering several GPs) along with the GP secretary.

> We devised a strategy to feed the hungry mouths viz the PWD, and also our party men who were against the project. We made inflated estimates in the budget so that some amount of money can be given to these people asking for the undue "ransom." Even then, it was really difficult to convince the storage owners, the project was going against their interest ... They could simply send their "team of hooligans" to beat up the construction workers ... we had a hard time convincing them! (TMC anchal samiti secretary in January 2010)

To resolve the disagreement, it was decided that the contract for the project would be given to one of the agencies allied with storage owners' association to make it easier for them to share the "profit." With the inflated estimate, the agency was asked to pay 25% of the total project cost as a "bribe." In a meeting between the GP secretary, the anchal samiti secretary, representatives of the local bureaucracy, the PWD, and the storage

owners, it was decided that the PWD, bureaucrats from the block, and the GP would share three-fourths of the bribe and the rest would be shared by local leaders and party cadres. Although the project started after this compromise, it could not be completed. The embankment was made, but the construction of the motorable road over the embankment did not even start. The GP could not transcend the vested interest of the Tier I constituents and the ensuing disagreements, thus the power game continues till date.

These accounts reveal multiple levels of disagreement as also the fragmentations within important individual leadership positions. Multiple stakeholders, including those with political as well as economic stakes, complicate these decisions. Compromises, especially by allowing corrupt practices, are evident. Even with such compromises, these projects can barely transcend the interest of the power blocs of the region. Clearly, even when disagreements are resolved, initiatives like these still carry unpredictable consequences. This case is an indication of the complex interface of corrupt practices, role of individual leadership, and the power exercised by the local elite through disagreements. The project establishing connectivity to different storages was perceived as a new opening by the small and marginal farmers. The local elite felt threatened about losing the network of farmers dependent upon them. Local bureaucrats, elected representatives, and party leaders found it to be a good money-making venture, allegedly through extortion. The importance of the anchal samiti secretary shows us the rising importance of local leaders in resolving disagreements instead of the party organisation as was prevalent during the LF period. Once the disagreements related to the sharing of extortion money were resolved, the elite-marginal conflicts became prominent and stopped the project midway. Local-level decisions, to a large extent, still depend on the local elite and their interests.

Gram Panchayat 4: Vertical Coordination and the Bureaucratic Use of Politics

GP 4 in Purba Medinipur was facing a crisis in resolving disagreements between various factions in the TMC. The disagreement was between those who were "with the party" since the beginning and the "newcomers" who joined the party after the 2011 assembly election when TMC came to power. These newcomers were mostly involved in the local tourism and fishing businesses. A major disagreement between the two factions emerged in 2012 when the GP wanted to initiate the construction of a road in the village. While the GP members and the older faction wanted to build such infrastructure to connect villages with the main road that can further connect to the district town, the "new member" faction wanted to renovate a different road that connected the local fish warehouses with the main road. Due to the "new member" faction's stronger vertical coordination, the block-level leaders supported their decision of renovating the road connecting the fish warehouses. When the old faction was about to give up, the data entry operator[2] of the GP office took an initiative to prioritise the construction of village roads. Being a resident of one of the villages within the GP, he wanted his interest to get priority, and he had the power as well. He first convinced the panchayat secretary about the possibility and then communicated the same to the TMC old-timer's faction on one hand and with the block development officer (BDO)[3] on the other.

> I wanted to establish an ally with the old group, I knew that most of the block level leaders wanted to prioritise the fish trade at the expense of the village road because it involved a lot of money ... however, I also knew that the old group was the backbone for the change in the GP almost ten years prior to the 2011 assembly election and that the leaders belonging to the old group have their mass base... I wanted to mobilise it. In fact, I was also being supported secretly by the pradhan and a few other members who could not say a word against the top-level political leaders ... (Data entry operator in April 2012)

The leaders of the old-timer's group along with the panchayat secretary and the data entry operator himself contacted the BDO who was not interested in interfering in GP matters. In May 2012, we conducted an interview with the BDO. He reflected that intervening in the matters of a GP is beyond his jurisdiction, and he could only initiate investigation if there was some complaint. However, the secretary, leaders of the old-timer's group, and the data entry operator devised a plan to prepare amass mobilisation, first to the GP office, demanding speedy construction of village roads. Since there was every chance of the GP not paying heed towards such popular demands, they informed the BDO about bringing the agitation to the BDO office itself. Thereby, the BDO would be able to intervene into the matter officially. It was a hidden agreement between the BDO and the old TMC group, and the BDO agreed that this was the only viable option.

As planned, the leaders of the old-timer's group from August 2012 started to mobilise people against the GP. It was a difficult move by the old TMC group since there was a threat of being expelled by the party for organising rallies against their own party-controlled GP. Block-level political leaders pressurised them to withdraw the protest. However, the group continued with the movement that ultimately led to a blockade of the BDO office. The BDO finally intervened and had a meeting with the block-level TMC leaders along with the panchayat samiti sabhapati, asking them to mitigate the matter at their earliest. The movement was covered by the local newspapers and ultimately in January 2013, the road construction within the villages began.

Like GP 2, GP 4 also used the democratic potential of the panchayat system to overcome disagreements between two factions of the political party through the systematic use of protest politics. The role of bureaucratic leaders along with an effective vertical coordination as well as a hidden understanding was formidable. It demonstrated how a hidden network of internal understandings was used to overcome disagreements. It is a widely studied fact that there is a political "deep probe" in administration and especially so in West Bengal. It is quite conspicuous that party-controlled decisions often overrule existing disagreements between the two. Thus, we can easily discern that the dimensions and the role

played by disagreements are more nuanced than what is assumed by scholars like Bhattacharyya (2009).

'Deep Probe' in Action

Our study supports the contention that there is indeed a political "deep probe" and that the boundaries between party and panchayat are blurred. It supports the recent work of Chakrabarti (2016), Dasgupta (2009), Chattopadhyay et al (2010). We agree that because of the long dictate of "party society" (Bhattacharya 2009), the local bureaucracy has become heavily dependent on local politics. Interventions by local politicians, whether formally or informally, show prominent symptoms of corrupt practices. All four cases show political "deep probe" into the bureaucracy (Newland 1994). The political intervention in everyday matters and decisions of the GP highlight the political leaders' interest in having strong control over the bureaucracy (as widely studied by scholars such as Moe [1982, 1985], Wood [1988], Wood and Waterman [1991 and 1993], Waterman and Wood [1992, 1993] and Krause [1994]).

The role of disagreements at local- and micro-level politics and governance is more complicated and escapes simplification through streamlined theories like "party society." The disagreements between different stakeholders, their origins, dispersions, and their subsequent resolutions vary quite widely. It is interesting to note that disagreements do not always surface even when people with competing political inclinations and conflicting political interests work in the same office. It happens primarily because of strong leadership and control by external political leaders. Hence, in GP 1, Bankura, we have seen that disagreements only surfaced when there was a leadership vacuum. Decisions related to the use of GP resources often occupy a central position in the disagreements encountered. Often, corrupt practices are a major point of disagreement, such as decisions related to work allocation or the distribution of extorted money. Interestingly, all four cases of disagreements have something to do with corrupt practices, but the nature of the disagreements and their outcomes vary widely. Such variations have a lot to do with the political ambience of the region as well as the role played by the administration in dealing with political "deep probe." Therefore, on the basis of the local political ambience, we saw that bureaucratic leaders have established contact with opposition forces in Paschim Medinipur through their participation in the politics of protest, and in Purba Medinipur, there was vertical coordination and an informal understanding between the officials and a faction of the dominant political party. However, the conscious attempt to conduct misdeeds with public money in each of the above-mentioned events shows unpredictability. Therefore, we can conclude that there is a rather limited capturing of the GP activities by the dominant political party. Often, disagreements effectively contested such a capture. The present modus operandi of the panchayat does not allow the local bureaucracy to work without the support of political parties. However, the power uncertainty and the extent of collaboration to avoid certain misdeeds are formidable in places like Bankura and Paschim Medinipur. The unpredictability, no matter how context specific they may seem, indicates a systemic success of local governance and reinforces the importance of agreements in a deliberative democracy.

Different modes of handling disagreements in different places, along with a strategic combination of collaborative, adversarial or submissive relationships (Peters 2007) indicate several possibilities. First, our study shows that there is no permanent mode of collaboration, adversarial or submissive, in the GPs. They change frequently and can even coexist, thus making one difficult to isolate from another.

Second, the rise of counterpublics vis-à-vis the loss of the political base of the LF regime along with its use by the local bureaucracy, which helped in cutting off the supply line to the party-sponsored mercenaries, indicates that disagreements can be translated in favour of the local residents. No matter how small scale and regional this may seem, it indicates the strength of the local governance system and the public sphere as well as their possibility of working in collaboration. Therefore, with the presence of a viable political alternative, the bureaucracy can devise strategies to best serve the interests of the residents even in a violent political environment.

Third, disagreements within the same political party, as evident in Purba Medinipur, can lead to a favourable outcome for the locals. Therefore, even when there is lack of a viable opposition, factions within the same party can play a positive role in a deliberative democracy. The use of various political factions or the oppositions and counterpublics by the bureaucracy also indicate the contribution of disagreements in a deliberative democracy (Barabas 2004; Mutz 2002, 2006; Price et al 2002). The findings from three GPs indicate the possibility of the present system of local governance bureaucracy to fulfil their ethical obligations (Frederickson 1997).

Fourth, the case from Purba Bardhaman highlights the complicated nature of different disagreements regarding the implementation of a decision by different stakeholders. We see that to arrive at a settlement, the bureaucrats and local politicians worked together to make an inflated estimate. It also shows the strength of a politico-economic coalition by the agro-businesspeople to transcend the decisions of the GP and other stakeholders. GP 4 unearths the fact that the bureaucracy and local leaders carry the capacity to challenge (and to a certain degree, convince) the strong structural arrangement of "big-men politics."

Finally, we would like to reemphasise the fact that there is no predictability based on the nature of disagreements and their resultant outcomes. We found disagreements to be chaotic and impossible to categorise in simple positive or negative terms. However, it is interesting to note that the discretionary power of any of the stakeholders in the decision-making capability in local governance can be radically altered as per the circumstances, making the results highly unpredictable.

NOTES

1 A pradhan is an elected representative who heads the GP. They are chosen from the elected representatives of the winning party to lead the GP.

2 A person responsible to manage the data and prepare different reports for the GP. They are hired on contractual basis by the GP and usually is a local youth with knowledge of computers.

3 BDO is a state-level Civil Service "Group A" Gazetted officer, heading the block office work in coordination of the elected Head of the Panchayat Samiti, the Sabhadhipati.

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Why Human Development Should Precede Economic Growth in the States

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This paper presents a conceptual model of the relationship between human development and growth and between them and poverty. It then empirically tests the model. It is argued that to sustain economic growth, improvement in human development and income poverty reduction should be given the topmost priority in Indian states.

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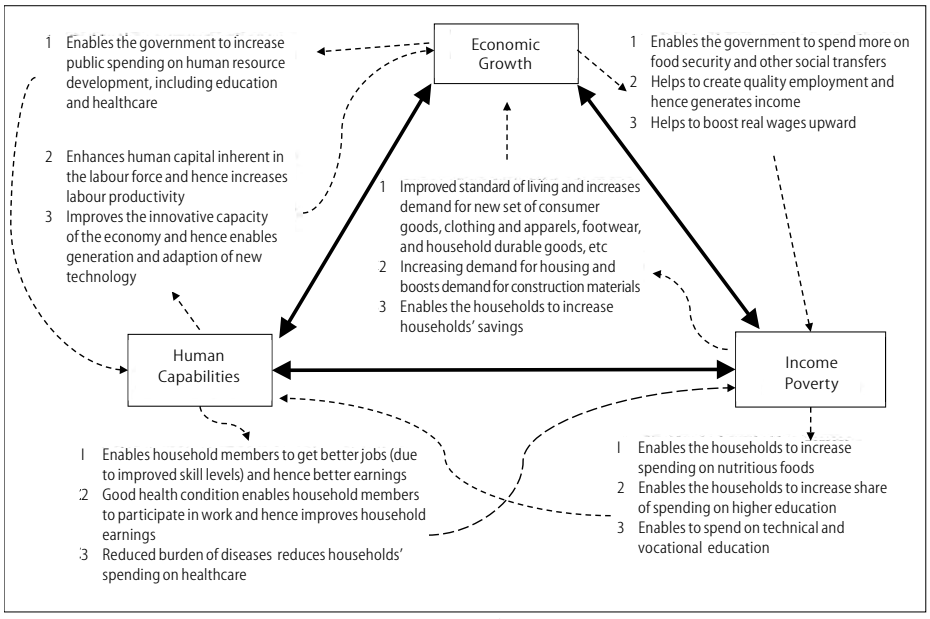
Though the Indian economy has grown at a much faster rate than ever before since 2002–03, at an average of about 7% per annum, until the COVID-19 pandemic struck hard, interstate disparity in term of economic growth has widened considerably. States like Kerala, Delhi, Tamil Nadu, Maharashtra, Punjab, Karnataka, Gujarat, etc, which could sustain high gross state domestic product (GSDP) growth (close to double digits) were also relatively advanced in terms of the human development (HD). In contrast, the relatively backward states (in term of HD rankings) like Jharkhand, Chhattisgarh, Bihar, Madhya Pradesh, Odisha, Uttar Pradesh and Rajasthan have registered under 5% per annum (on an average) economic growth (EG). These are the states where incidence of poverty, malnutrition and infant mortality rates (IMR) are very high (Chauhan et al 2016; Mohanty et al 2016). The mean years of schooling (MYS) in these backward states also remained low, which did not improve much during last two decades.

Mainstream economists tend to suggest that "economic growth typically does promote human development, and a strong positive relationship is evident from the line of best fit (the 'regression')" (Ravallion 1997; also see World Bank 2001). When growth and poverty or growth and enhancement of functioning's indicators are modelled, it is usually argued that it is growth that influences health indicators or poverty, and rarely the other way around. "Economic growth typically promotes human development" is usually the hypothesis, which is proven by the use of regressions, where the regression line is (by its construction) the expected effect of growth on a human development indicator or on poverty. Where growth failed to deliver income gains to the poor, or promote non-income dimensions of welfare (for example, access to schooling and healthcare), such cases are called "quite untypical" (Ravallion 1997). It is acknowledged that "there are deviations (the 'residuals') around this line; these are cases with unusually low, or unusually high, performance in human development at a given level of income" (Ravallion 1997). It is also argued that the human development approach, which we espouse, devotes "more attention to residuals" and "the regression line is ignored." Indeed, orthodox policy analysis has traditionally placed faith in the outcomes of cross-country (or inter-temporal) regression analysis, rather than explaining the reasons why some countries divert from these average trends and are "outliners." To us, the outliers demonstrate that it is possible for countries to relieve the non-income dimensions of poverty and achieve social indicators comparable to those

Figure 1: Feedback Loops—Growth, Poverty and Capability



Source: Authors' development model based on theoretical argument of Mehrotra and Delamonica (2007).

of industrialised countries regardless of the level of income (Mehrotra and Jolly 2000).

The poor should not have to wait for the benefits of economic growth. We do not downplay economic growth, but as economic growth is such a predominant part of the orthodox paradigm, the pace at which social outcomes improve appears to be at a discount. A synergy exists between poverty reduction, enhancement of functionings and economic growth, which does not put increasing the growth rate on a pedestal higher in the policy objectives hierarchy than the other two variables (that is, enhancement of functionings and direct poverty reduction). Instead, it calls for the integration of social and economic policy—with the main instruments in the hands of the state being consistent fiscal and macroeconomic policies, which promote all three desired objectives or ends simultaneously.

The analytical model of synergies (discussed above and at greater length in Mehrotra and Delamonica [2007] and Mehrotra [2016]) is illustrated in Figure 1. It shows that there is a mutually interactive relationship in place between economic growth and income poverty reduction; between income poverty reduction and human capabilities; and between human capabilities and economic growth. The enhancement (or deterioration) of one leads to the improvement (deterioration) in outcomes in the other variable. The modality through which these relationships work is also summarised in Figure 1.

According to Suri et al (2011), HD and EG tend to move together over the long run. In other words, economic growth can be sustained only if it at least accompanies improvements in human development; better still that improvements in HD precede EG, for the latter to be sustained. Sen (1984, 2000) and Ranis et al (2000) have also argued that income growth is an important contributor to enhance capabilities, which is the key to promoting human development. Moreover, Romer (1990), Nelson and Phelps (1966) and Krueger and Lindahl (2001) have stated that an increased level of human capital not only increases the innovative capacity of the economy, but it also enables generation and adaptation of new technology that promotes economic growth. Mayer-Foulkes (2005) has established that there exists a two-way relationship between EG and HD. Ranis et al (2000) mapped the link between EG and HD across a large group of developing countries. They see human development as both an input into and an outcome of the development process. However, the nature of feedback and dual causality between HD and EG has not yet been adequately examined in India.

The purpose of this paper is to sharpen the understanding of the link between human development and economic growth in Indian states in light of the conceptual model above,[1] and to examine whether high economic growth could bring improvement in human development or the latter would be a precondition for sustaining growth in Indian states.

Data and Methodology

This paper is based on secondary data, taken from Reserve Bank of India (*Handbook of Statistics on Indian States*), National Sample Survey (both *Employment-Unemployment Surveys* and Periodic Labour Force Surveys unit-level data) and a Planning Commission report (2012). While gross domestic product (GDP) and statewise GSDP at factor cost (both were converted to 2004–05 constant prices), gross capital formation (GCF), and IMR were compiled from RBI; data on poverty head count ratio (PHCR) for 1993–94, 2004–05, 2009–10 and 2011–12 are taken from Planning Commission report (2012). The statewise MYS and expected years of schooling are calculated using Barro and Lee[2] (2001) methodology, while average monthly per capita consumption expenditure (MPCE)[3] and total workforce are calculated using NSS and PLFS unit-level data.

The United Nations Development Programme (UNDP) methodology is adopted for calculating the human development index (HDI) under data limitations. For example, IMR (annual series) is used in the absence of annual life expectancy data; it is well known that life expectancy and IMR are very highly correlated. The log MPCE is used in place of log gross national income (purchasing power parity). For education index, we have the advantage of using NSS unit-level data to compute both MYS and expected years of schooling (EYS).

Before we could estimate the regression results and run causality models, we have checked for stationarity. The available panel data stationarity checking methods are employed. These methods can broadly be divided into two main categories. First set of methods test the null hypothesis of a "common unit

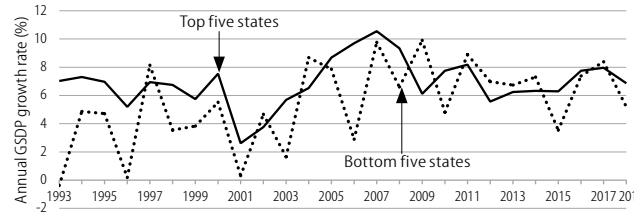
root process." The second group of tests have null hypothesis of an "individual unit root process." The test results suggest (Table 1) that all the variables are stationary (integrated of order zero that is, I [0]).

Since the variables under study are stationary, we have used ordinary least square (OLS) regression models. Both fixed effect and random effect models are used to explore the factors determining economic growth in Indian states. Moreover, we have run Granger causality (Granger 1969) models after fitting appropriate vector autoregressive (VAR) models[4] to find out the existing causal connection between (i) EG and HD, (ii) EG and poverty, (iii) EG and MYS, (iv) EG and IMR, (v) poverty and IMR, (vi) poverty and MYS, and (vii) MYS and IMR, respectively. The results of causality models are used to strengthen our theoretical argument of the feedback loops between the variables. Two variables (namely EG and HD) may be contemporaneously correlated by chance, but it is unlikely that the past value of one variable (let us say HD) will help in predicting the value of other (let us say EG), unless all past values of latter (EG) actually cause the former (HD). This relationship could be understood from equations 1 and 2 below:

$$EG_{it} = \sum_{j=1}^{p} \alpha_j \, HD_{it-j} + \sum_{j=1}^{K} \beta_j \, EG_{it-j} + u_{it} \quad \ldots (1)$$

$$HD_{it} = \sum_{j=1}^{p} \gamma_j \, HD_{it-j} + \sum_{j=1}^{K} \delta_j \, EG_{it-j} + \varepsilon_{it} \quad \ldots (2)$$

Figure 2: Trends of GSDP Growth by Human Development Index Rankings of Indian States



Source: Authors' calculation and plot based on statewise GSDP (at 2004–05 prices) data taken from the RBI.

Table 1: Panel Unit Root Test Results

Variables	Name of the Test	Test Results at the Level Form		
		Without Intercept and Trend	With Intercept But Not Trend	With Intercept and Trend
Null Hypothesis: Unit Root (assumes common unit root process)				
GSDP growth	Levin, Lin and Chu t	-6.38 (0.000)	-11.43 (0.000)	-9.18 (0.000)
	Breitung t-stat	–	–	-7.34 (0.000)
HDI	Levin, Lin and Chu t	-2.93 (0.001)	13.34 (0.000)	-12.58 (0.000)
	Breitung t-stat	–	–	-7.29 (0.000)
Poverty	Levin, Lin and Chu t	-4.32 (0.000)	-11.29 (0.000)	-8.15 (0.000)
	Breitung t-stat	–	–	-6.75 (0.000)
IMR	Levin, Lin and Chu t	-4.38 (0.000)	-16.23 (0.000)	-14.97 (0.000)
	Breitung t-stat	–	–	-9.45 (0.000)
MYS	Levin, Lin and Chu t	-2.96 (0.000)	-12.58 (0.000)	-11.47 (0.000)
	Breitung t-stat	–	–	-6.69 (0.000)
Growth of GCF	Levin, Lin and Chu t	-16.79 (0.000)	-11.44 (0.000)	-8.87 (0.000)
	Breitung t-stat	–	–	-1.23 (0.110)
Growth of workforce	Levin, Lin and Chu t	-15.52 (0.000)	-12.52 (0.000)	-11.03 (0.000)
	Breitung t-stat	–	–	-7.26 (0.000)
Null Hypothesis: Unit Root (assumes individual unit root process)				
Growth	Im, Pesaran and Shin W-stat	–	-12.75 (0.000)	-10.45 (0.000)
	ADF - Fisher Chi-square	119.18 (0.000)	273.73 (0.000)	216.03 (0.000)
	PP - Fisher Chi-square	222.21 (0.000)	473.16 (0.000)	549.1 (0.000)
HDI	Im, Pesaran and Shin W-stat	–	-13.45 (0.000)	-12.86 (0.000)
	ADF - Fisher Chi-square	47.09 (0.887)	287.32 (0.000)	260.56 (0.000)
	PP - Fisher Chi-square	55.94 (0.624)	438.26 (0.000)	601.93 (0.000)
Poverty	Im, Pesaran and Shin W-stat	–	-12.07 (0.000)	-8.55 (0.000)
	ADF - Fisher Chi-square	64.64 (0.317)	255.31 (0.000)	174.62 (0.000)
	PP - Fisher Chi-square	79.27 (0.048)	452.34 (0.000)	350.71 (0.000)
IMR	Im, Pesaran and Shin W-stat	–	-17.05 (0.000)	-16.01 (0.000)
	ADF - Fisher Chi-square	62.13 (0.401)	371.76 (0.000)	325.45 (0.000)
	PP - Fisher Chi-square	117.29 (0.000)	617.01 (0.000)	2,069.08 (0.000)
MYS	Im, Pesaran and Shin W-stat	–	-11.26 (0.000)	-9.14 (0.000)
	ADF - Fisher Chi-square	48.37 (0.859)	237.28 (0.000)	186.45 (0.000)
	PP - Fisher Chi-square	50.97 (0.790)	354.52 (0.000)	282.07 (0.000)
Growth of GCF	Im, Pesaran and Shin W-stat		-11.42 (0.000)	-8.49 (0.000)
	ADF - Fisher Chi-square	357.67 (0.000)	252.71 (0.000)	189.84 (0.000)
	PP - Fisher Chi-square	509.35 (0.000)	394.04 (0.000)	529.93 (0.000)
Growth of workforce	Im, Pesaran and Shin W-stat	–	-13.11 (0.000)	-11.27 (0.000)
	ADF - Fisher Chi-square	335.11 (0.000)	280.18 (0.000)	228.97 (0.000)
	PP - Fisher Chi-square	555.75 (0.000)	460.52 (0.000)	612.66 (0.000)

Probabilities of test statistics are in parentheses.
Source: Authors' estimation.

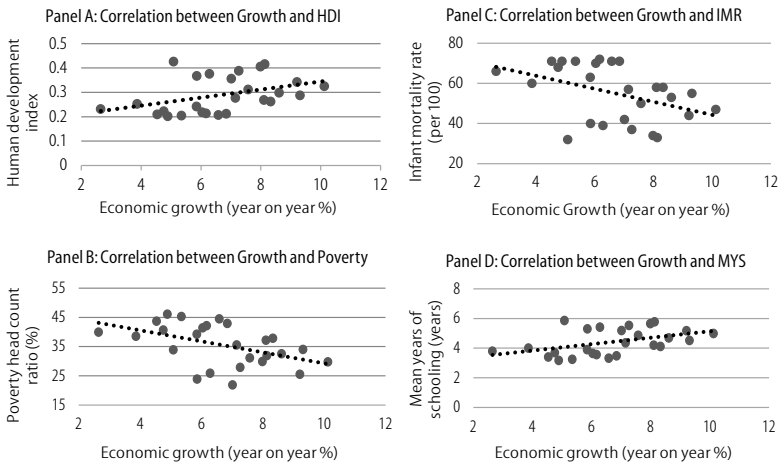
Granger causality based on equations 1 and 2 provide three possible cases: first, neither variable Granger-causes the other, that means there exists no feedback loop between the two; second, there exists a unidirectional (single directional) causality from one (say HD) to the other (say EG) but not vice versa; and finally, there exists bidirectional causality between HD and EG, that means both these variables cause each other or a feedback loop does really work between the two. Since our aim is to explore the existing feedback loops or synergic relationships among EG and HD, Granger causality method is an appropriate method. Both OLS and Granger causality results and their discussions are given below.

Results and Discussion

Economic growth and human development in India—Some stylised facts: Although India's economic growth performance has been good, averaging nearly 5% per annum since the New Economic Policy (1991) was adopted, but it is not consistent. It experienced a growth rate of above 5% during 1991–97, though this growth rate came down to below 5% during 1998–2002, it recovered and rose well above 7% again in the successive years until 2014–15, but since then it declined again to below 5%. It is noted that a few states have performed consistently well by registering a growth rate of their GSDP close to double digits, while many other states failed even to maintain a 5% growth rate of GSDP (Table 2, p 57 and Figure 1).

What also emerges from Table 2 is that the well-known divergence between per capita incomes and human development indicators between the well-performing, mostly southern/western states on the one hand, and the lower performing northern/eastern

Figure 3: Correlation between Growth and Development Indicators in India



Source: Authors' calculation and plot based on secondary data compiled from Reserve Bank of India and NSS and PLFS unit level data.

Table 2: Statewise Average Annual Growth Rate, 1993–2018

State	1993–2000		2001–10		2010–18	
	Average Annual Growth Rate (%)	Standard Deviation	Average Annual Growth Rate (%)	Standard Deviation	Average Annual Growth Rate (%)	Standard Deviation
Andhra Pradesh	5.2	5.7	7.0	3.4	7.8	3.3
Arunachal Pradesh	4.2	7.3	7.9	5.9	4.9	6.0
Assam	2.0	1.5	4.8	2.1	5.7	4.5
Bihar	3.1	12.4	7.0	9.2	9.0	3.9
Chhattisgarh	1.5	2.5	6.8	8.4	6.8	2.6
Delhi	8.0	5.3	8.6	3.3	8.0	1.6
Goa	9.3	8.7	6.2	4.6	11.0	12.6
Gujarat	9.4	12.2	8.6	6.6	7.8	3.6
Haryana	4.9	3.9	8.9	1.9	6.6	2.8
Himachal Pradesh	6.8	2.5	6.6	1.6	7.3	0.8
Jammu and Kashmir	4.7	0.5	4.8	1.4	5.3	6.0
Jharkhand	5.7	11.7	4.8	10.3	6.5	6.7
Karnataka	6.8	3.4	6.0	4.7	7.8	2.8
Kerala	6.3	2.7	7.3	2.3	5.1	2.2
Madhya Pradesh	6.8	2.9	4.9	6.8	6.6	3.8
Maharashtra	7.8	4.6	7.5	5.5	7.7	2.2
Manipur	5.2	5.2	4.7	5.1	5.3	4.3
Meghalaya	5.7	5.5	6.7	2.7	5.4	4.9
Mizoram	4.2	2.8	8.1	3.7	10.8	9.0
Nagaland	5.3	5.9	8.6	3.8	5.7	2.8
Odisha	3.9	6.2	6.4	6.0	6.3	3.0
Punjab	4.6	1.6	5.4	2.9	5.0	2.0
Rajasthan	7.2	8.7	6.3	11.6	8.2	2.9
Sikkim	4.7	3.3	14.6	20.9	8.5	2.3
Tamil Nadu	6.5	3.1	7.4	5.7	7.1	3.3
Tripura	7.7	4.3	8.3	2.5	9.8	1.5
Uttar Pradesh	3.7	3.9	5.1	2.1	6.7	1.4
Uttarakhand	5.9	7.5	11.9	4.0	7.4	2.2
West Bengal	6.7	1.6	6.0	1.8	5.8	2.4
India	5.6	0.9	7.2	2.4	7.1	1.3

Source: Authors' estimation based on Reserve Bank of India (*Handbook of Statistics on Indian States*) annual data.

states of India also emerges during the last three decades (from standard deviation figures).

The states which could sustain high growth of GSDP (that is >5% per annum) were in fact relatively advanced in human development (Figure 2, p 56). These include Kerala, Delhi, Tamil Nadu, Maharashtra, Punjab, Karnataka, and Gujarat, etc (Table 2 and Table 3, p 58). These are the states (particularly southern states) which had been investing a considerable share of their GSDP on both education and health dimensions of development over last two and half decades. As a result, most of these states had not only been performing consistently in terms of growth of HDI (and their relative rankings), but this might also have enabled them to maintain a consistent growth of their GSDP above 7% per annum during last two and half decades (also see Suri et al 2011, who argue on the basis of international evidence that HDI precedes growth).

However, relatively backward states (in term of HDI ranking) like Jharkhand, Chhattisgarh, Bihar, Madhya Pradesh, Odisha, Uttar Pradesh and Rajasthan, etc, have registered a below 5% per annum growth of GSDP (Table 2). These are the states where incidence of poverty and IMR are very high (Table 3). The MYS in these states is also still low, which does not improve much during last two decades (Table 3).

The incidence of poverty declined at the all-India level, as well as across the states of India. While the PHCR fell from 45.3% to 21.9% between 1993–94 and 2011–12 (Table 3), the number of poor also declined, for the first time, from 407 million to 138 million between 2004–05 to 2011–12 (Planning Commission 2013). However, incidence of poverty is still very high in the states which could not achieve their growth objective. These states include Jharkhand, Chhattisgarh, Bihar, Madhya Pradesh, Odisha and Assam. Conversely, incidence of poverty is comparatively much lower in the states like Delhi, Kerala, Tamil Nadu, Maharashtra, Punjab, Karnataka, Gujarat and Haryana (Table 3). Hence, it can be stated that poverty reduction not only improved the HDI ranking of these states, but it also helped these states to achieve substantial improvement in their GSDP growth rate (above 7%) over the last one and half decades.

The positive correlation between growth and HDI (Figure 3: Panel A) and negative correlation between growth and incidence of poverty (Figure 3: Panel B) could be explained through these synergy of events (as the conceptual model postulates). Reduction in poverty incidence not only improves the standard of living of the people, but it is also likely to change their family spending behaviour following Engel's law (with a declining share of expenditure on food, clothing, etc, and with a corresponding increase in the share of expenditure on housing, education and healthcare, etc). Hence, it can be argued that poverty reduction is likely to boost growth of output through increased demand for goods and services. Furthermore, due to the rising share of expenditure on education and health, these outcomes are likely to improve, which have positive implications for growth of HDI.

We also find a negative correlation between growth and IMR (Figure 3: Panel C). This is consistent with our argument in the above paragraph that major Indian states like Kerala, Delhi, Tamil Nadu, Maharashtra, Punjab, Karnataka, and Himachal

Pradesh, etc, which managed to sustain their growth of GSDP above 7% per annum, also had very low IMR (Table 3) as compared to the other states of India. It is further noted that these states spent more than 1% of their GSDP on the health sector, while almost all the other state governments could not manage to do. More government spending on healthcare is likely to reduce the healthcare burden on the poor, which is otherwise very high and rising at a faster rate (Hooda 2015; Mohanty et al 2016) since the last decade. This will have implications for poverty reduction, on improvement of HDI and on growth of output in the long run.

At the all-India level, MYS increased from about 3.6 years to about 5.9 years between 1993–94 and 2017–18, due to increased enrolment at secondary and above level of education (NUEPA 2016). We have also found a positive correlation between growth and MYS (Figure 3: Panel D). But it is also seen that the states which sustained their growth of GSDP over 7% have also achieved relatively higher MYS (Tables 2 and 3). Although other states also achieved improvements in MYS during the post-2004–05 period due to substantial union government investment in education through Sarva Shiksha Abhiyan (SSA) and Right to Education (RTE), the absolute value of this indicator is still relatively low in a few states. This is true particularly in those states where incidence of poverty and IMR are very high (Table 3). As educational outcomes have positive implications for employability and earnings,[5] in the long run it is likely to reduce income poverty, improve HDI and boost economic growth through increasing labour productivity.

To sharpen our understanding on this synergic relation further, we are going to examine whether these development indicators are really determining the GSDP growth. If yes, then does any causal connection or feedback loop exist between growth and development indicators?

Econometric results: Since all our variables are stationary (at the level), we have the privilege of running OLS regression models. Both fixed effect and random effect models are estimated for comparison. Fixed-effects model controls for all time-invariant differences between the cross-sections and its coefficients cannot be biased due to omitted time-invariant characteristics like culture or religion (Stock and Watson 2011); random effects model is used if differences across the cross-sections have some influence on the dependent variable (Green 2012). The choice between fixed and random effects models is normally made using the Hausman test (Hausman 1978). As per the Hausman test, if there is no significant difference between the coefficients of fixed and random

Table 3: Trends of Human Development Index and Other Development Indicators across States

State	Poverty Head Count Ratio (%)			Infant Mortality Rate (per 1,000 Live Births)			Mean Years of Schooling (Years)			Human Development Index (HDI)					
										Index Value			Rank of States		
	1993–94	2004–05	2011–12	1997	2005	2018	1993–94	2004–05	2017–18	1993–94	2004–05	2017–18	1993–94	2004–05	2017–18
Andhra Pradesh	44.6	29.9	9.2	63	57	32	2.3	3.2	4.7	0.19	0.26	0.42	21	21	21
Arunachal Pradesh	54.5	31.1	34.7	47	37	34	1.8	3.6	5.6	0.21	0.30	0.45	18	13	18
Assam	51.8	34.4	32.0	76	68	42	3.6	4.3	6.1	0.20	0.25	0.39	20	22	24
Bihar	60.5	54.4	33.7	71	61	36	2.2	3.0	4.7	0.17	0.22	0.39	22	27	25
Chhattisgarh	50.9	49.4	39.9	NA	63	37	2.4	3.4	5.3	0.14	0.23	0.36	28	24	28
Delhi	15.7	13.1	9.9	35	35	16	7.5	8.6	8.2	0.35	0.40	0.61	5	6	5
Goa	20.8	25	5.1	19	16	6	5.3	6.7	8.7	0.39	0.48	0.79	3	4	1
Gujarat	37.8	31.8	16.6	62	54	28	3.6	4.8	6.4	0.22	0.28	0.47	13	20	15
Haryana	35.9	24.1	11.2	68	60	31	3.4	4.8	6.6	0.21	0.28	0.45	18	19	17
Himachal Pradesh	34.6	22.9	8.1	63	49	23	3.2	4.9	7.5	0.22	0.31	0.51	13	12	10
Jammu and Kashmir	26.3	13.2	10.4	NA	50	22	3.8	4.1	6.3	0.26	0.29	0.50	7	16	11
Jharkhand	60.7	45.3	37.0	NA	50	27	2.2	3.3	4.7	0.15	0.24	0.44	26	23	19
Karnataka	49.5	33.4	20.9	53	50	22	3.2	4.2	5.9	0.22	0.28	0.48	13	18	14
Kerala	31.3	19.7	7.1	12	14	8	5.7	6.7	8.5	0.44	0.51	0.76	2	2	2
Madhya Pradesh	44.6	48.6	31.7	94	76	45	2.4	3.5	5.0	0.16	0.22	0.36	25	27	27
Maharashtra	47.8	38.1	17.4	47	36	17	4.1	5.5	7.3	0.25	0.34	0.54	8	8	8
Manipur	65.1	38	36.9	30	13	9	5.0	5.8	7.8	0.31	0.49	0.69	6	3	3
Meghalaya	35.2	16.1	11.9	54	49	37	3.5	4.7	6.4	0.22	0.29	0.44	13	16	19
Mizoram	11.8	15.3	20.4	19	20	25	5.7	6.6	8.1	0.38	0.56	0.50	4	1	12
Nagaland	20.4	9	18.9	NA	18	10	5.8	6.9	7.9	0.45	0.48	0.65	1	4	4
Odisha	59.1	57.2	32.6	96	75	42	2.2	3.3	5.2	0.15	0.21	0.35	26	29	29
Punjab	22.4	20.9	8.3	51	44	19	3.8	5.1	7.0	0.25	0.32	0.54	8	11	9
Rajasthan	38.3	34.4	14.7	85	68	39	2.2	3.0	4.6	0.17	0.23	0.39	22	24	23
Sikkim	31.8	31.1	8.2	51	30	14	3.6	4.2	7.1	0.24	0.35	0.57	11	7	7
Tamil Nadu	44.6	28.9	11.3	53	37	15	3.6	4.8	6.7	0.23	0.33	0.57	12	9	6
Tripura	32.9	40.6	14.1	51	31	22	4.0	4.4	6.3	0.25	0.33	0.49	8	10	13
Uttar Pradesh	32	32.7	11.3	85	73	41	2.7	3.6	7.8	0.17	0.23	0.38	22	24	26
Uttarakhand	48.4	40.9	29.4	NA	42	36	3.2	5.0	5.3	0.09	0.30	0.41	29	13	22
West Bengal	39.4	34.3	20.0	55	38	23	3.7	4.4	5.4	0.22	0.30	0.46	13	14	16
All India	45.3	37.2	21.9	71	58	32	3.6	4.7	5.9	0.20	0.27	0.43	–	–	–

Source: Authors' compilation and estimation based on RBI, and NSS and PLFS unit-level data.

effect models, then random effect is the correct specification. In our case random effect model is appropriate (Table 4).

We have estimated four separate models within the neoclassical framework (used labour and capital as key determinants of growth along with other controlling variables) to explore whether human development indicators play any role in determining economic growth or not (Table 4). First, we find that HDI has positive and statistically significant effect on the economic growth of the states (model 1). That means if policies focus on the improvement of the HDI, it will have significant positive effect on the growth of GSDP and on overall GDP. This was clearly evidenced from Indian states, since the states ranked at the top in terms of HDI were in position to sustain their growth of GSDP above 7% per annum, while others did not.

To explore further the meaning of the components of HDI which have individual impacts on growth, we have use them as separate regressors in different models (models 2 through 4). Controlling both growth of workforce (labour) and growth of gross capital formation (capital), we have found that poverty head count ratio has negative and statistically significant coefficient. That means poverty reduction policies will have a positive effect on growth of GSDP. Hence, to promote economic growth and sustain it in Indian states, poverty reduction measures should be given the topmost priority.

In fact, the poverty elasticity of growth had been compromised by the continued high dependence of employment upon agriculture and informal sectors. However, the recent fall in the poverty incidence across the states, particularly since 2004–05 periods, could be due to the commencement of structural transformation (Mehrotra and Parida 2021). During this period, not only had the number of workers in agriculture declined (about 5 million per annum) with a corresponding rise (although at a slow rate) of non-farm sector jobs, but also the standard of living of the people improved due to increased real wages. It is therefore expected that labour productivity has also increased across the states where the incidence of income poverty is quite low, and hence these states have managed to sustain above 7% per annum growth of GSDP. This fact is clearly reflected by the negative and statistically significant coefficients of poverty (PHR) in the growth equation (model 2).

Moreover, we find positive and statistically significant coefficient for the MYS in the growth equation (model 3). This result is as expected. It again implies that the rising education level of the workforce should have helped increase labour productivity, which is reflected in the growth of output in states. Starting the 1990s to the most recent period, investment in both school education and tertiary education increased. Particularly in the southern states, it increased more rapidly, as a result most southern states have achieved and maintained a higher rate of GSDP growth as compared to many northern and eastern states.

The negative significant coefficient for IMR in growth equation (model 4) is also as expected. It reveals that better health outcomes due to rise in investment in the health sector can also impact the growth of output positively through its feedback loop with poverty. Based on these findings, it can now be argued that policy measures that aim to reduce poverty not only directly impact growth of output through increased aggregate demand, but it also affects growth positively through its interlinkages with both IMR and increased MYS.

These regression results in fact motivated us to check whether there also exist any causal connection or feedback loop between growth and development indicators. The causality result will enable us to draw our conclusion on feedback loop with much greater confidence as it includes the lag values of all the variables into consideration apart from their current values.

Granger causality results: We have fitted a stable linear VAR model at lag 7 and then checked Granger non-causality between growth and HDI. The causality result suggests that

Table 4: Determinants of Economic Growth (OLS Regression Results)

Variables	Model 1				Model 2				Model 3				Model 4			
	FE		RE		FE		RE		FE		RE		FE		RE	
	Coef	t-value	Coef	Z-value	Coef	t-value	Coef	Z-value	Coef	t-value	Coef	Z-value	Coef	t-value	Coef	Z-value
Intercept	4.14	4.9***	4.6	6.9***	8.63	12.0***	8.25	14.4***	2.72	2.6***	3.99	5.4***	9.32	12.1***	8.46	15.7***
Workforce growth	0.045	1.1	0.037	0.9	0.04	0.9	0.04	0.9	0.05	1.28	0.04	0.89	0.04	1.1	0.0315	0.8
GCF growth	0.0001	0.8	0.0001	0.7	0.0001	0.6	0.0001	0.7	0.0001	0.6	0.0001	0.54	0.0002	0.8	0.0001	0.67
HDI	7.34	3.0***	6.03	3.3***	–	–	–	–	–	–	–	–	–	–	–	–
PHR	–	–	–	–	-0.07	-2.9***	-0.05	-3.1***	–	–	–	–	–	–	–	–
MYS	–	–	–	–	–	–	–	–	0.79	3.9***	0.54	3.8***	–	–	–	–
IMR	–	–	–	–	–	–	–	–	–	–	–	–	-0.06	-3.6***	-0.04	-3.8***
Sigma_u	1.32		0.775		1.33		0.789		1.42		0.758		1.38		0.718	
Sigma_e	5.65		5.64		5.65		5.65		5.62		5.62		5.63		5.63	
Rho	0.051		0.018		0.052		0.019		.0603		0.017		0.057		0.0159	
Observation	780		780		780		780		780		780		780		780	
Number of groups	30		30		30		30		30		30		30		30	
Wald Chi-Square	–		11.99***		–		10.87**		–		15.7***		–		15.55***	
F-statistics	3.4**		–		3.13**		–		5.25***		–		4.66***		–	
R-square (within)	0.0135		0.0135		0.0124		0.0123		0.0206		0.0206		0.0184		0.0183	
R-square (between)	0.0871		0.0871		0.0730		0.0743		0.1004		0.1003		0.1310		0.1306	
R-square (overall)	0.0163		0.0163		0.0146		0.0147		0.0205		0.0206		0.0210		0.0210	
Hausman Chi-square	0.95				0.95				3.42				2.77			

FE-Fixed Effect, RE-Random Effect; ***, ** and * implies 1%, 5% and 10% statistical significance levels.
Source: Authors' estimation.

there exists one-way (or unidirectional) causal connection from HDI to growth (Table 5). The HDI to growth causality is very clear, which suggests that states need to improve their human development base in order to achieve and sustain higher economic growth. This is already being manifested in a few states. However, the statistically insignificant causal connection from economic growth to HDI is found mainly because of the growth inconsistencies in many states which is owing to their poor human development base.

Table 5: Panel Granger Causality Results

Directions of Causality	Tested Null Hypothesis	Test Statistics	Probability of Test Statistics	Degree of Freedom	Observations
Causality between growth and HDI					
Growth and	Growth does not cause HDI	6.07	0.531	7	570
HDI	HDI does not cause growth	16.28**	0.027	7	570
Causality between growth, poverty and capability indicators					
Growth and	Growth does not cause poverty	6.65*	0.083	3	690
poverty	Poverty does not cause growth	9.97**	0.018	3	690
Growth	Growth does not cause IMR	7.91	0.340	7	570
and IMR	IMR does not cause growth	18.92***	0.008	7	570
Growth and	Growth does not cause MYS	5.43	0.710	8	540
MYS	MYS does not cause growth	17.18**	0.028	8	540
MYS and	Poverty does not cause MYS	136.15***	0.000	3	690
poverty	MYS does not cause poverty	133.58***	0.000	3	690
IMR and	IMR does not cause poverty	96.64***	0.000	7	570
poverty	Poverty does not cause IMR	331.68***	0.000	7	570
IMR and	IMR does not cause MYS	84.78***	0.000	8	540
MYS	MYS does not cause IMR	118.25***	0.000	8	540

***, ** and * implies 1%, 5% and 10% level of statistical significance, respectively.
Source: Authors' estimation.

Furthermore, we have run causality tests between growth and income poverty, between growth and two societal-level indicators of human functionings (that is, MYS and IMR). Finally, we run a causality test between income poverty and the same indicators of human functioning indicators within the framework of Mehrotra and Delamonica (2007).

We have found bidirectional causality between economic growth and income poverty (Table 4). This means both economic growth and incidence of poverty are influencing each other in the states. The sharp decline in the absolute number of poor in the period of high growth indicates that high growth caused a reduction in poverty. This is also explained earlier that the states which sustain a high growth of GSDP have succeeded in reducing income poverty substantially. This reduction in income poverty could be partly due to a rise in real wages. In the period of high growth, both rural and urban real wages increased for several reasons: a rise in minimum support prices at which the government purchases grains (wheat and rice) for storage as a price stabilisation measure and household-level food security measure; the introduction of employment guarantee of 100 days of work[6] to any rural household that demands work; and Sixth Pay Commission (of the government which impacted not just wage rates in the public but also the private sector); and a construction sector boom which provided millions of new non-farm jobs for unskilled rural labour, which tightened the rural labour market. For these reasons, there was a rise in real wages, resulting in an improvement in the standard of living and reduction in poverty in India (Mehrotra et al 2014).

The causal connection from poverty to growth can be explained through the rise in domestic demand for goods and services. Since a large number of people came out of poverty, there was the emergence of large numbers of new non-poor (as well as growth in middle-class population). Domestic demand for a number of consumer goods grew sharply after 2004–05 (Mehrotra et al 2014). This led to an increase in employment in labour-intensive manufacturing sectors, and the resulting consumer demand should have contributed to enhanced economic growth. It is already noted that the states with relatively low incidence of poverty (and with maximum decline in PHCR) have managed to achieve GSDP growth above 7% per annum.

Similarly, we have found unidirectional causality from MYS (one of the indicators of human functioning) to economic growth. Increasing MYS has direct implications for labour productivity, which influences economic growth positively. The impact of education and skill (human capability) on growth is positive, which is also argued theoretically by Lucas (1988), and it has already been empirically verified by many earlier studies (by Jorgenson and Fraumeni [1992] in the United States; Jung and Thorbecke [2001] in Tanzania and Zambia; by Ogujiuba and Adeniyi [2005] in Nigeria). However, many Indian states need to increase their education spending considerably to initiate the feedback loop between MYS and growth that would help sustain the latter at a higher level.

Similarly, the Granger causality between economic growth and health outcomes (another measure of human functioning) reveals a unidirectional causality from health to growth but not vice versa (Table 5). In the first subsection too we had noticed improved health status and a negative correlation between IMR and growth. As improvement in health conditions has direct implication for labour productivity and on growth (Ribero 1999), measures for the development of the healthcare sector should be given utmost priority in the states, for sustaining economic growth as well as to achieve higher level of human development. The reason for not establishing a causal connection from growth to health could be mainly due to the low level of government spending on healthcare. For last three decades, only about 1% of GDP is spent on healthcare (Hooda 2015; Patel et al 2015). The situation is even worse at the state-government level, as most of the northern states spend less than 1% of their GSDP on healthcare.

Finally, to complete the checking of feedback loop, we ran Granger causality between poverty and human capability indicators (MYS and IMR). We have found bidirectional causality between poverty and IMR, and between poverty and MYS.

Poverty reduction causes improvement in health status, because with improvement in living conditions, the households' consumption patterns also change. With improvement in living conditions, households normally start consuming more nutritive foods and hence the probability of illness falls. Illness can limit productivity and reduce earning ability that

perpetuates poverty (WHO 2002), while an improvement in MYS and health status increases the earning capability of the family. More importantly, rising income enables households to devote a larger share of expenditure on healthcare (which is necessitated by an under-funded, dysfunctional public health) and education. While improvement in health conditions improves physical/mental capacity to work, which increases earning capability of household members, the rising years of schooling is likely to increase the labour force participation of the individuals. This would increase household income, and hence, it is also likely to reduce income poverty due to the existing feedback loops.

Concluding Remarks

This paper examines the link between economic growth and human development in the states. The major findings of the paper suggest that provincial states which achieved and sustained higher rate of economic growth were mostly advanced in term of HDI. Moreover, the link between growth and human development is established through a feedback loop between growth and income poverty reduction, and feedback loop between income poverty and improvement in educational and health outcomes. Based on our findings, it is argued that provision of basic social services is a fundamental factor in triggering the virtuous circle between economic growth, income-poverty reduction and enhancement of functionings.

Thus, state intervention in promoting expansion of functionings, reduction of poverty and economic growth support and strengthen each other in a synergistic way or through various feedback loops. For instance, it is argued that economic growth will be faster and more sustainable if poverty is reduced simultaneously with improvement in education and if the health status of the poor is targeted. Similarly, the policy impact of poverty reduction on economic growth depends on the level of human functionings attained by the population. Hence, we suggest that human development should be given topmost priority and it should either precede or be simultaneous with economic growth in India, if the latter is to be sustained.

NOTES

1 Mehrotra (2021), in a new book in Spanish, discusses this model and its applicability to the Latin American economies and their middle-income trap; Mehrotra (2021) demonstrates the ability of this same model in India at length.

2 MYS is computed for the age group 25 and above years, and expected years of schooling is calculated for the age group 6 to 24 years of population. Expected years of schooling refers to the number of years a child is expected to spend in school either full time or part time during their life.

3 The average monthly per capita expenditure is adjusted to inflation (GDP deflator at 2004–05 prices).

4 After satisfying the Autocorrelation (LM test), heteroscedasticity (White test), Normality (JB test) and stability checking (through inverse roots).

5 Contrastingly educated youth unemployment started rising since 2011–12 (Mehrotra and Parida 2021).

6 Through the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA).

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Utilisation of Public Healthcare Facilities
Have They Improved?

T R DILIP, NARAYANAN DEVADASAN, SUNIL NANDRAJ

This is in response to an earlier article which claims that there has been a significant increase in the utilisation of public healthcare facilities by the poor and a reduction in out-of-pocket expenses in healthcare. However, this article cautions on methodological issues and the possible errors of interpretation in the earlier article. It also highlights the possibility of a fundamental flaw in either the 71st or 75th survey rounds.

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The article "Invest More in Public Healthcare Facilities: What Do NSSO 71st and 75th Rounds Say?" (Muraleedharan V R et al 2020) claims that there has been a significant increase in the utilisation of public healthcare facilities by the poor for outpatient and inpatient care. They then claim that this has led to a reduction in out-of-pocket expenses (OOPE). The article concludes with the assertions for strengthening the public healthcare facilities. This article wholeheartedly agrees with the authors on the need for substantial investment in the public healthcare system. However, this article is in disagreement with some of their selective use and interpretation of the data, methods, assertions, and conclusions. This article specifically highlights (i) the possibility of a fundamental flaw in either 71st round survey (for 2014) or the 75th round survey (for 2017–18) data set; (ii) the fact that the increase in outpatient and inpatient care in government facilities is not uniform; (iii) that there is no correlation between the shift to government facilities and the fall in OOPE; and lastly (iv) there has not been an increase in government expenditure on healthcare.

Flaw in Data Sets

If we examine the data in the two surveys rounds, we note that there is a significant reduction in the number of persons reported as ailing as well as in the number of people using outpatient and inpatient services. Muraleedharan et al (2020) acknowledges that there is a "drastic fall in the reported morbidity from 98 per 1,000 persons in 2014 to 75 per 1,000 persons in 2017–18." They attribute this fall to the fact that certain "minor ailments (skin, body aches, abdominal pain)" were included in the 71st round questionnaire but were excluded from the 2017–18 survey questionnaire. We would like to point out that, as in the 75th round, only "minor skin ailments," "minor headaches and bodyaches," and "minor gastric discomfort after meals" were excluded, not the whole gamut of skin ailments, bodyaches, and abdominal pain. These are different disease entities and can give rise to erroneous interpretation.

Moreover, when we scrutinise the survey instructions to the field staff, we note that both National Sample Survey (NSS) rounds had the same exclusion criteria for these minor ailments without any activity restriction among the person with reported ailment (NSSO 2013, 2017). These ailments listed by authors were independent categories in the list of ailments in the survey schedule/questionnaire used in 71st and 75th rounds. Hence, the risk of under reporting is "not likely to be vastly different between surveys, especially for ailments where treatment was taken in last 15 days." In addition, the authors cite large difference in sample size between the two NSS rounds as the other reason for the fall in self-reported morbidity, which cannot be a valid reason.

Moreover, such an exclusion should not have any effect on the inpatient services as this is an independent question. Yet, we see a systematic reduction in the total inpatient care between the two periods. While the 71st round had an annual admission rate of 35 and 44 per 1,000 population in rural and urban areas, the 2017–18 admission rates are only 26 and 34 respectively. This is a reduction of 23% to 26% admissions in a span of three to four years. How does one explain this? Our explanation is that there is probably a flaw in the weightage provided to the data sets. Households surveyed in the 71st and 75th rounds were selected separately in rural and urban areas using a multistage stratified sampling procedure. The first-stage units (FSUs) were the census villages in the rural sector and NSS urban frame survey (UFS) blocks in the urban areas. All the households in the selected FSUs were listed and then stratified into three groups: (i) households having at least one child aged less than one year, (ii) from the remaining, households

with at least one member (including deceased former member) hospitalised during the last 365 days, and (iii) other households. A total of eight households were selected without replacements from each of the selected FSUs, of which two each were from Groups 1 and 3 and remaining four from Group 2. The population-based estimates were then obtained by applying the multiplier (similar to sample weights) provided with the data file. The multiplier provided for each of the selected household in the NSS data indicates the estimated number of cases with the respective characteristic in the country. These multipliers were based on the probability of selecting the respective household in the house listing operation related to the survey and hence will be identical for all households in each of the three second-stage stratum with an FSU. Any errors in computation of multiplier could bring about an upward or downward bias in estimates from such surveys. Considering the unaccounted variation in reported morbidity and hospitalisation, the National Sample Office (NSO) needs to clarify if there were any errors in the multipliers posted in the data file, for any of these two surveys.

Utilisation of Services

Muraleedharan et al (2020) state that there has been a shift from the private sector to the public sector for both outpatient and inpatient services, although they accept that this is more in the non-empowered action group (EAG) states. However, when we disaggregate the results by states and use the 95% confidence interval to assess whether the increase in the utilisation of public facilities is statistically significant, then we get a different picture. The proportion of outpatients utilising government facilities increased between the 71st and 75th survey rounds in 14 states. However, it has declined or there has been no statistically significant changes in 17 other states (mostly EAG or North East states). Regarding the utilisation of inpatient care, the proportion utilising government facilities have increased in only nine states, while it declined or remained static in 22 other states (Table 1).

Use of Government Facilities

Muraleedharan et al (2020) state that there is a reduction in the OOPE and attributes it to this shift from the private sector facilities to that in the public sector. If this was true, then we would expect to see a correlation between the increased

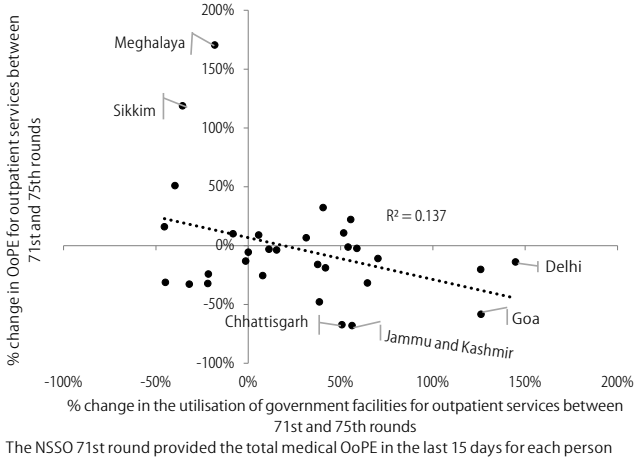
Table 1: Changes in the Percentage Utilising Government Facilities for Inpatient and Outpatient Care Services Between the 71st (2014) and 75th Round (2017–18) Surveys

	Percent Utilising Inpatient Care from Government Facilities					Percent Utilising Outpatient Care from Government Facilities [$]				
	2014		2017–18		Nature of Change	2014		2017–18		Nature of Change
	% Using Govt Facilities	[95% CI], Number of Cases (N)	% Using Govt Facilities	[95% CI], Number of Cases (N)	Between 2014 and 2017–18	% Using Govt Facilities	[95% CI], Number of Cases (N)	% Using Govt Facilities	[95% CI], Number of Cases (N)	Between 2014 and 2017–18
Jammu and Kashmir	92.2	(89.9–94); 697	91.2	(89.7– 92.5); 1,767	no change	44.3	(39.4–49.4); 304	69.2	(66.5–71.8); 1,184	increase
Himachal Pradesh	75.5	(72.1–78.7); 650	77.3	(75.1–79.3); 1,414	no change	44.7	(39.6–50); 295	67.8	(64.6–70.8); 908	increase
Punjab	29.6	(26.9–32.5); 1,000	29.4	(27.5–31.3); 2,116	no change	18.5	(16.4–20.7); 1123	14.5	(12.8 –16.3); 1,597	decline
Uttarakhand	47.6	(42.1–53); 353	35.7	(32.3–39.4); 795	decline	48.2	(41.2–55.3); 166	32.8	(27.3–38.9); 269	decline
Haryana	27.0	(24.2–30); 985	31.1	(28.9–33.5); 1,732	no change	8.5	(6.5–11.2); 479	19.2	(16.9–21.8); 955	increase
Delhi	45.4	(41.6–49.2); 639	61.8	(58.4–65.1); 750	increase	18.1	(13.2–24.3); 171	44.3	(38.6–50.1); 279	increase
Rajasthan	54.3	(51.8–56.7); 1,910	50.5	(48.5–52.5); 2,982	no change	37.3	(34.2–40.4); 794	39.4	(36.7–42.1); 1,297	no change
Uttar Pradesh	29.7	(28.3–31); 4,976	27.1	(26.0–28.3); 6,484	no change	14.2	(13.1–15.5); 2759	14.0	(–12.9–15.1); 3,779	no change
Bihar	42.2	(39.7–44.8); 1,802	37.8	(35.5–40.2); 2,498	no change	13.3	(10.8–16.4); 523	18.3	(15–22.1); 511	no change
Sikkim	68.0	(62.6–73.1); 324	79.9	(76.1–83.2); 446	increase	80.6	(69.9–88.2); 61	51.9	(43–60.7); 136	decline
Arunachal Pradesh	88.4	(84.3–91.6); 317	91.6	(89.6–93.3); 841	no change	99.2	(94.7–99.9); 116	91.0	(86.2–94.2); 191	decline
Nagaland	64.1	(58.2–69.5); 294	73.4	(69.5–76.9); 638	no change	81.6	(51.3–94.9); 28	49.2	(24.5–74.3); 15	no change
Manipur	85.9	(82.9–88.5); 725	79.7	(77.3–82); 1,310	decline	50.2	(39.4–60.9); 62	82.6	(74.4 –88.5); 114	increase
Mizoram	73.5	(68.8–77.7); 410	80.0	(77.0–82.7); 840	no change	62.7	(51.6–72.6); 61	67.6	(59.2–75); 155	no change
Tripura	92.4	(90.5–93.9); 912	94.9	(93.6–96); 1,236	no change	56.8	(49.8–63.6); 197	31.3	(24.5–39); 162	decline
Meghalaya	76.9	(71.3–81.6); 349	85.0	(81.4–88); 565	no change	65.5	(51.5–77.3); 46	53.6	(31.8–74); 15	no change
Assam	81.8	(79.0–84.3); 1,025	70.9	(68.2–73.4); 1,600	decline	78.8	(73–83.7); 186	43.0	(37.5–48.8); 296	decline
West Bengal	68.9	(67.3–70.4); 3,388	69.2	(67.9–70.5); 4,663	no change	18.5	(17.2–19.9); 3038	28.5	(27.2–29.9); 4,436	increase
Jharkhand	35.2	(31.6–39); 810	40.7	(37.9–43.6); 1,468	no change	24.1	(19.9–29); 357	26.8	(23.8–30.1); 765	no change
Odisha	76.8	(74.6–78.8); 1,535	72.2	(70.4–73.9); 2,617	decline	72.5	(69.7–75.2); 928	56.6	(53.7–59.4); 1,245	decline
Chhattisgarh	45.0	(41.3–48.8); 693	54.0	(51.3–56.6); 1,590	increase	27.8	(22.8–33.3); 278	41.9	(38.2–45.7); 662	increase
Madhya Pradesh	49.6	(47.4–51.8); 2,302	47.9	(46.0–49.8); 3,047	no change	26.7	(24.2–29.4); 942	30.8	(28.2–33.5); 1,153	no change
Gujarat	23.4	(21.6–25.3); 2,059	31.1	(29.2–33); 2,434	increase	18.8	(16.8–21); 1,278	24.7	(22.3–27.2); 1,233	increase
Maharashtra	19.5	(18.3–20.8); 3,704	22.2	(21.1–23.3); 5,506	increase	17.7	(16.1–19.4); 1,775	25.1	(23.7–26.6); 3,638	increase
Andhra Pradesh	22.3	(20.5–24.2); 1,806	27.8	(26.1–29.5); 2,714	increase	13.6	(12.2–15.1); 1,928	21.6	(20.1–23.2); 2,740	increase
Karnataka	23.6	(21.9–25.5); 2,104	26.6	(25.0–28.3); 2,713	no change	21.5	(19.6–23.6); 1,400	21.5	(19–24.2); 968	no change
Goa	59.6	(51.4–67.3); 134	65.7	(60.2–70.8); 266	no change	26.1	(19.4–34.1); 108	59.0	(52.1–65.5); 206	increase
Kerala	34.1	(32.4–36.0); 2,392	38.3	(36.8–39.7); 3,918	increase	33.8	(32.4–35.4); 3,631	47.5	(46.2–48.8); 5,705	increase
Tamil Nadu	34.6	(33.0–36.3); 2,818	49.9	(48.4–51.4); 4,047	increase	34.6	(32.8–36.3); 2,400	53.8	(51.7–55.9); 2,118	increase
Pondicherry	51.0	(44.0–57.9); 180	69.0	(64–73.7); 318	increase	38.3	(32.4–44.7); 229	65.2	(55.8–73.6); 105	increase
Telangana	25.8	(23.2–28.7); 912	21.0	(19.2–22.9); 1,993	decline	14.8	(12.3–17.8); 575	20.5	(17.8–23.3); 809	no change
All India	38.4	(37.9-38.9); 42,869	42.0	(41.6-42.4); 66,239	increase	25.1	(24.6-25.6); 26,774	30.0	(29.5-30.5); 38,235	increase

$ Among those reporting ailments in the last 15 days in the survey, cases where medical advice was not taken, and cases where person was hospitalised were excluded to obtain the share of outpatient care services provided by the government facilities.

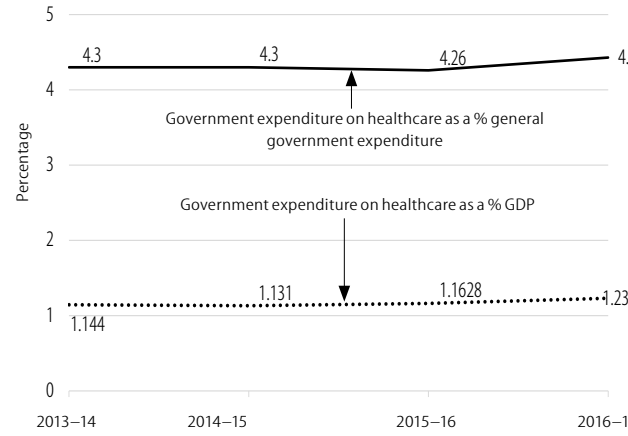
Source: Computed using the NSSO 71st (2014) and 75th round (2017–18) data on Social Consumption: Health.

Figure 1: Percentage Change in OOPE by Percentage Change in the Utilisation of Government Facilities for Outpatient Services (71st and 75th Rounds)



The NSSO 71st round provided the total medical OoPE in the last 15 days for each person irrespective of the number of ailments, while in the 75th round, it was provided for each episode of ailment. Hence, the comparison of percentage change in OoPE between the rounds was performed for those persons reporting only one ailment in the last 15 days.

Figure 2: The Levels of Government Expenditure on Healthcare in India, 2013–14 to 2016–17



Figures are presented for 2013–14 to 2016–17 as these are the years for which the official estimates of government expenditure on healthcare are released by the Ministry of Health and Family Welfare (2019).

use of public sector facilities and the reduction in OOPE. We performed this analysis for outpatient care where a relatively larger number of states had witnessed an increase in the utilisation of government facilities than for inpatient care. However, as our analysis shows, there is no such correlation between the increased use of government facilities and the reduction in OOPE between the 71st and 75th survey rounds (Figure 1). Most of the states cluster around the x axis, indicating that although there may be an increase in the utilisation of government facilities, there has not been a corresponding fall in the OOPE for outpatient care. The Pearson's coefficient is –0.370, thus indicating a lack of correlation. It is to be specified that these correlation coefficients will remain same even if we adjust for inflation.

Reduction in Expenditure

Lastly, the authors state that the reduction in OOPE because of an increase in use of public healthcare facilities is a good reason for higher investment in the government healthcare sector. The nature of changes in the government expenditure in India between the inter survey period is presented in Figure 2. The government expenditure on healthcare as a percentage of general government expenditure and that of the gross domestic product was nearly static at around 4.3% and 1.2% respectively. This indicates that there is limited evidence to indicate any substantial increase in government expenditures between the two surveys, which was also specified in their article. Hence, it is clear that the authors have taken a very simplistic position on investing in public health systems and their analysis does not support the conclusions drawn.

Moreover, investment in public healthcare is not the only condition for improving the availability of government healthcare facilities. A governance structure which ensures that the doctors in government payroll are regularly attending and providing services in healthcare facilities could also augment the availability of government healthcare facilities in the country.

Conclusions

To summarise, the statement that there has been an increase in the utilisation of government facilities in the 75th round is misleading as it pertains to only a few states. Further, the argument that this shift has resulted in significant reduction of OOPE expenses is also incorrect, as we do not see any association between the two. Finally, to state that the increased investment in government healthcare services will lead to better, affordable, and accessible healthcare services that in turn will lead to reduced OOPE is a leap of faith without any evidence from the NSSO rounds. Given the possibility of error in the weightage, it would be best that we clarify this with the NSO before attributing the fall in outpatient, inpatient, and OOPE to any cause.

The reason why we have raised these issues is that the NSSO rounds are important policy documents and are used both by policymakers as well as researchers for calculating various indicators. Unless we are sure that they are flawless, there is a danger that our indicators will be erroneous, and we will make policies based on this faulty information. There is the danger of data users coming up with contradictory interpretations to explain these changes in the inter survey period. One could also relate such outcomes to positive outcomes of governance in healthcare, all of which needs a thorough scrutiny and proposed clarification from the NSO.

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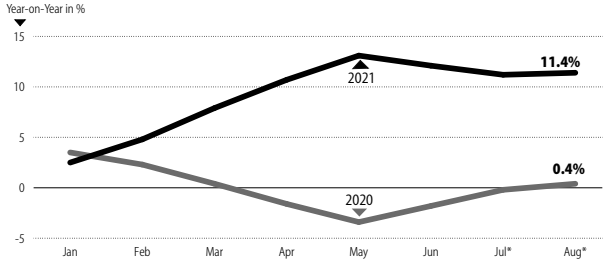
Wholesale Price Index

The year-on-year (y-o-y) WPI-inflation rate stood at 11.4% in August 2021 against 0.4% registered a year ago and 11.2% a month ago. The index for primary articles increased by 6.2% compared to 1.9% recorded a year ago and 5.7% a month ago. The rate of inflation for food articles declined to -1.3% from 4.4% reported a year ago. The index for fuel and power was up by 26.1% against -9.1% registered a year ago. The index for manufactured products rose by 11.4% compared to 1.4% reported a year ago.

Consumer Price Index

The CPI-inflation rate decreased to 5.3% in August 2021 from 6.7% registered a year ago and 5.6% a month ago. The consumer food price index was down by 3.1% against 9.1% reported a year ago and 4.0% a month ago. The CPI-rural inflation rate decreased to 5.28% and the urban-inflation rate to 5.32% from 6.66% and 6.80%, respectively, recorded a year ago. As per Labour Bureau data, the CPI for agricultural labourers (CPI–AL) decreased by 3.92% in July 2021 against 6.58% reported a year ago and the CPI for industrial workers (CPI–IW) by 5.26% compared to 5.33%

Movement of WPI Inflation January–August



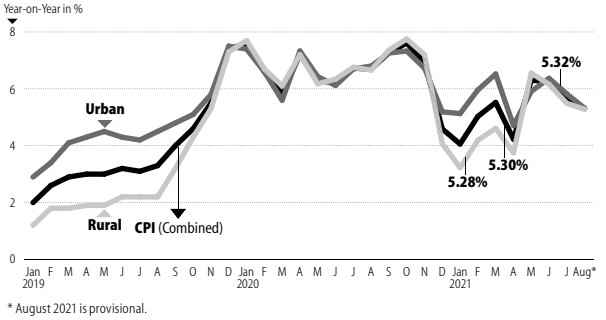
* Data is provisional; Base: 2011–12 = 100.

Trends in WPI and Its Components August 2021* (%)

	Weights	Over Month	Over Year	Financial Year (Averages) 2018–19	2019–20	2020–21
All commodities	100	1.0	11.4	4.3	1.7	1.3
Primary articles	22.6	1.6	6.2	2.7	6.8	1.7
Food articles	15.3	-0.2	-1.3	0.3	8.4	3.2
Fuel and power	13.2	1.5	26.1	11.5	-1.8	-8.0
Manufactured products	64.2	0.8	11.4	3.7	0.3	2.8

* Data is provisional; Base: 2011–12=100. Source: Ministry of Commerce and Industry.

Movement of CPI Inflation January 2019–August 2021



* August 2021 is provisional.
Source: National Statistical Office (NSO); Base: 2012=100.

Inflation in CPI and Its Components August 2021* (%)

	Weights	Latest Month Index	Over Month	Over Year	Financial Year (Avgs) 2019–20	2020–21
CPI combined	100	162.9	0.2	5.3	4.8	6.2
Consumer food	39.1	162.7	-0.1	3.1	6.7	7.7
Miscellaneous	28.3	159.6	0.4	6.4	4.4	6.6
CPI: Occupation-wise#						
Industrial workers (2016=100)		122.8	0.9	5.3	7.5	5.0
Agricultural labourers (1986–87=100)		1061.0	0.4	3.9	8.0	5.5

* Provisional; # July 2021; Source: NSO (rural and urban); Labour Bureau (IW and AL).

Foreign Trade

The trade deficit widened to $13.8 bn in August 2021 from $8.2 bn reported a year ago. Exports increased by 45.8% to $33.3 bn and imports by 51.8% to $47.1 bn from $22.8 bn and $31.0 bn, respectively, registered a year ago. Oil imports stood at $11.7 bn compared to $6.5 bn recorded a year ago and non-oil at $35.4 bn compared to $24.6 bn. During April–September 2021–22, exports increased by 67.3% to $164.1 bn and import by 80.9% to $219.6 bn from their respective values of $98.1 bn and $121.4 bn reported in the same period last year.

Index of Industrial Production

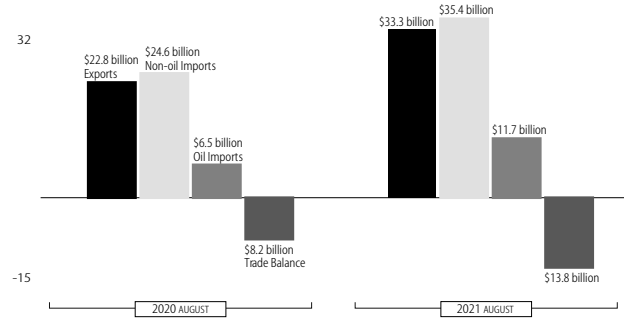
The general index stood higher at 131.4 in July 2021 compared to 117.9 registered a year ago and 122.6 a month ago. The index values for manufacturing stood at 130.9, mining at 104.6 and electricity generation at 184.7 compared to their respective values of 118.5, 87.5, and 166.3 reported a year ago. As per use-based classification, the index of production for capital goods stood at 91.8 and that of infrastructure goods at 143.5 compared to their respective values of 70.9 and 128.6. The index for consumer durables stood at 119.5 and non-durables at 146.6 against their respective values of 99.4 and 149.3.

Merchandise Trade August 2021

	August 2021 ($ bn)	Over Month (%)	Over Year (%)	April–August (2021–22 over 2020–21) (%)
Exports	33.3	-6.1	45.8	67.3
Imports	47.1	1.5	51.8	80.9
Trade balance	-13.8	25.9	68.4	137.7

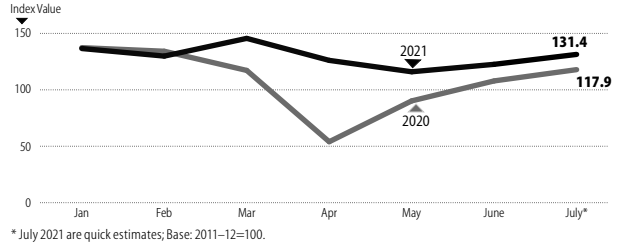
Data is provisional. Source: Ministry of Commerce and Industry.

Components of Trade August 2020 and August 2021



Oil refers to crude petroleum and petroleum products, while non-oil refers to all other commodities.

Movement of IIP January–July



* July 2021 are quick estimates; Base: 2011–12=100.

Industrial Growth: Sector-wise July 2021* (%)

	Weights	July 2020	July 2021	Financial Year (Avgs) 2019–20	2020–21
General index	100	117.9	131.4	-0.8	-8.4
Mining	14.4	87.5	104.6	1.6	-7.8
Manufacturing	77.6	118.5	130.9	-1.4	-9.6
Electricity	8.0	166.3	184.7	1.0	-0.5
Industrial Growth: Use-based					
Primary goods	34.0	114.3	128.5	0.7	-7.0
Capital goods	8.2	70.9	91.8	-13.9	-18.6
Intermediate goods	17.2	125.4	143.1	9.1	-9.4
Infrastructure/construction goods	12.3	128.6	143.5	-3.6	-8.7
Consumer durables	12.8	99.4	119.5	-8.7	-15.0
Consumer non-durables	15.3	149.3	146.6	-0.1	-2.2

*July 2021 are quick estimates; Base: 2011–12=100.
Source: NSO, Ministry of Statistics and Programme Implementation.

Comprehensive current economic statistics with regular weekly updates are available at: http://www.epwrf.in/currentstat.aspx.

India's Quarterly Estimates of Final Expenditures on GDP

₹ Crore | At 2011–12 Prices	2019–20 Q1		Q2		Q3		Q4		2020–21 Q1		Q2		Q3		Q4		2021–22 Q1	
Private final consumption expenditure	2024421	(7.6)	2019783	(6.5)	2173139	(6.4)	2104358	(2.0)	1494524	(-26.2)	1793863	(-11.2)	2112186	(-2.8)	2160413	(2.7)	1783611	(19.3)
Government final consumption expenditure	392585	(1.8)	434571	(9.6)	359174	(8.9)	355412	(12.1)	442618	(12.7)	332582	(-23.5)	355547	(-1.0)	455997	(28.3)	421471	(-4.8)
Gross fixed capital formation	1233178	(13.3)	1125882	(3.9)	1164138	(2.4)	1207218	(2.5)	658465	(-46.6)	1029574	(-8.6)	1194243	(2.6)	1338227	(10.9)	1022335	(55.3)
Change in stocks	39608	(-37.8)	39414	(-40.0)	38146	(-40.0)	41217	(-40.8)	26611	(-32.8)	40726	(3.3)	40701	(6.7)	46238	(12.2)	38817	(45.9)
Valuables	43887	(-5.5)	44242	(-12.3)	37119	(-16.4)	39279	(-22.1)	3059	(-93.0)	42253	(-4.5)	41092	(10.7)	81381	(107.2)	17012	(456.1)
Net trade (Export–Import)	-170515		-129409		-95372		-95230		34071		6502		-80299		-131715		-62084	
Exports	706991	(3.0)	710581	(-1.3)	707760	(-5.4)	701307	(-8.8)	552524	(-21.8)	696182	(-2.0)	682938	(-3.5)	762743	(8.8)	768589	(39.1)
Less imports	877506	(9.4)	839990	(-1.7)	803132	(-7.5)	796537	(-2.7)	518453	(-40.9)	689680	(-17.9)	763237	(-5.0)	894458	(12.3)	830673	(60.2)
Discrepancies	3544	(-89.2)	27048	(-42.1)	-68714		181145		36074		51218		-39203		-54206		16858	
Gross domestic product (GDP)	3566708	(5.4)	3561530	(4.6)	3607630	(3.3)	3833400	(3.0)	2695421	(-24.4)	3296718	(-7.4)	3624266	(0.5)	3896335	(1.6)	3238020	(20.1)

India's Overall Balance of Payments (Net): Quarterly

Item	2019–20 ($ mn) Q1	Q2	Q3	Q4	2020–21 ($ mn) Q1	Q2	Q3	Q4	2019–20 (₹ bn) Q1	Q2	Q3	Q4	2020–21 (₹ bn) Q1	Q2	Q3	Q4
Current account	-15004	-7579	-2630	558	19058	15250	-2235	-8161	-1044 [-2.1]	-534 [-1.1]	-187 [-0.4]	40 [0.1]	1446 [3.7]	1134 [2.4]	-165 [-0.3]	-595 [-1.0]
Merchandise	-46774	-39650	-36040	-35042	-10990	-14816	-34602	-41745	-3253	-2793	-2567	-2536	-834	-1102	-2552	-3043
Invisibles	31769	32070	33410	35600	30048	30066	32367	33583	2209	2259	2380	2577	2280	2236	2387	2448
Services	20075	20941	21879	22027	20758	21086	23237	23485	1396	1475	1558	1594	1575	1568	1714	1712
of which: Software services	20998	21064	21455	21125	20774	22021	23470	23475	1460	1484	1528	1529	1576	1638	1731	1711
Transfers	17964	19952	18893	18400	16974	18386	19258	18842	1249	1405	1346	1332	1288	1368	1420	1373
of which: Private	18224	20188	19132	18673	17217	18619	19494	19108	1267	1422	1363	1352	1306	1385	1438	1393
Income	-6270	-8822	-7361	-4827	-7685	-9405	-10128	-8743	-436	-621	-524	-349	-583	-700	-747	-637
Capital account	28624	13580	23626	17350	1376	15943	34141	12261	1991 [4.0]	956 [1.9]	1683 [3.3]	1256 [2.4]	104 [0.3]	1186 [2.5]	2518 [4.6]	894 [1.6]
of which: Foreign investment	18835	9791	17572	-1782	114	31422	38597	9959	1310	690	1252	-129	9	2337	2847	726
Overall balance	13984	5118	21601	18794	19846	31568	32483	3389	973 [2.0]	360 [0.7]	1539 [3.0]	1360 [2.6]	1506 [3.9]	2348 [5.0]	2396 [4.4]	247 [0.4]

Figures in square brackets are percentage to GDP.

Foreign Exchange Reserves

Excluding gold but including revaluation effects	3 September 2021	4 September 2020	31 March 2021	Variation Over Month	Over Year	Financial Year So Far 2020–21	Financial Year So Far 2021–22	Financial Year 2016–17	2017–18	2018–19	2019–20	2020–21
₹ crore	4968836	4238615	3935032	83787	730220	405933	502160	25300	353270	68050	668976	590416
$ mn	680536	579534	538180	22015	101001	71149	69671	10160	53217	-14168	56831	94535

Monetary Aggregates

₹ Crore	Outstanding 2021	Variation Over Month	Over Year	Financial Year So Far 2020–21	Financial Year So Far 2021–22	Financial Year 2018–19	2019–20	2020–21
Money supply (M_3) as on 27 August	19328505	-43530 (-0.2)	1680533 (9.5)	848008 (5.0)	483927 (2.6)	1469479 (10.5)	1367898 (8.9)	2044614 (12.2)
Components								
Currency with public	2830920	-8434 (-0.3)	247809 (9.6)	233363 (9.9)	79092 (2.9)	292497 (16.6)	297538 (14.5)	402080 (17.1)
Demand deposits	1926054	-43314 (-2.2)	266847 (16.1)	-78486 (-4.5)	-69066 (-3.5)	142801 (9.6)	111180 (6.8)	257427 (14.8)
Time deposits	14525375	8159 (0.1)	1159684 (8.7)	691675 (5.5)	475097 (3.4)	1026348 (9.6)	952412 (8.1)	1376262 (10.9)
Other deposits with RBI	46156	59 (0.1)	6192 (15.5)	1456 (3.8)	-1195 (-2.5)	7835 (32.8)	6766 (21.3)	8843 (23.0)
Sources								
Net bank credit to government	6075960	23597 (0.4)	462221 (8.2)	653377 (13.2)	225586 (3.9)	387091 (9.7)	571872 (13.0)	890012 (17.9)
Bank credit to commercial sector	11608342	-16153 (-0.1)	732105 (6.7)	-162407 (-1.5)	-60124 (-0.5)	1169004 (12.7)	655925 (6.3)	629822 (5.7)
Net foreign exchange assets	4893905	-81092 (-1.6)	691529 (16.5)	401340 (10.6)	315059 (6.9)	148545 (5.1)	730196 (23.8)	777810 (20.5)
Banking sector's net non-monetary liabilities	3276826	-30047 (-0.9)	205995 (6.7)	44405 (1.5)	-3195 (-0.1)	235395 (10.7)	590556 (24.2)	253595 (8.4)
Reserve money as on 3 September	3695296	-22136 (-0.6)	479294 (14.9)	186295 (6.1)	95315 (2.6)	351702 (14.5)	259225 (9.4)	570274 (18.8)
Components								
Currency in circulation	2939009	-14902 (-0.5)	251653 (9.4)	240044 (9.8)	85245 (3.0)	307423 (16.8)	310541 (14.5)	406452 (16.6)
Bankers' deposits with RBI	709691	-7626 (-1.1)	220866 (45.2)	-55063 (-10.1)	10824 (1.5)	36444 (6.4)	-58081 (-9.6)	154979 (28.5)
Other deposits with RBI	46596	392 (0.8)	6775 (17.0)	1313 (3.4)	-755 (-1.6)	7835 (32.8)	6766 (21.3)	8843 (23.0)
Sources								
Net RBI credit to government	1300733	146754 (12.7)	263623 (25.4)	44918 (4.5)	201047 (18.3)	325987 (68.5)	190241 (23.7)	107494 (10.8)
of which: Centre	1290226	143456 (12.5)	271908 (26.7)	28577 (2.9)	193880 (17.7)	326187 (68.8)	189268 (23.6)	106605 (10.8)
RBI credit to banks & commercial sector	-868286	-177570 (25.7)	-467134 (116.4)	-200259 (99.7)	-498929 (135.1)	89478 (141.2)	-353744 (0.0)	-168464 (0.0)
Net foreign exchange assets of RBI	4538963	-49668 (-1.1)	592963 (15.0)	355597 (9.9)	339563 (8.1)	87807 (3.2)	741815 (26.0)	608997 (17.0)
Govt's currency liabilities to the public	27124	71 (0.3)	673 (2.3)	103 (0.4)	211 (0.8)	235 (0.9)	461 (1.8)	565 (2.1)
Net non-monetary liabilities of RBI	1303237	-58278 (-4.3)	-89170 (-6.4)	14065 (1.0)	-53423 (-3.9)	151805 (16.7)	319547 (30.2)	-21682 (-1.6)

Scheduled Commercial Banks' Indicators *(₹Crore)*

(As on 27 August)	Outstanding 2021	Variation Over Month	Over Year	Financial Year So Far 2019–20	Financial Year So Far 2020–21	Financial Year 2017–18	2018–19	2019–20
Aggregate deposits	15517046	-32001 (-0.2)	1340253 (9.5)	609301 (4.5)	403534 (2.7)	1147722 (10.0)	993720 (7.9)	1546020 (11.4)
Demand	1790971	-42176 (-2.3)	253257 (16.5)	-79289 (-4.9)	-70222 (-3.8)	141004 (10.3)	105716 (7.0)	244190 (15.1)
Time	13726075	10175 (0.1)	1086996 (8.6)	688590 (5.8)	473756 (3.6)	1006717 (10.0)	888005 (8.0)	1301830 (10.9)
Cash in hand	101721	5582 (5.8)	14469 (16.6)	-9 (-0.0)	10973 (12.1)	14811 (24.7)	12385 (16.5)	3487 (4.0)
Balance with RBI	641437	-33560 (-5.0)	202026 (46.0)	-96775 (-18.0)	98745 (18.2)	40021 (7.6)	-29521 (-5.2)	6506 (1.2)
Investments	4592897	-51220 (-1.1)	231675 (5.3)	613873 (16.4)	130372 (2.9)	62603 (1.9)	366292 (10.8)	715176 (19.1)
of which: Government securities	4591573	-51220 (-1.1)	232237 (5.3)	620640 (16.6)	129942 (2.9)	61595 (1.9)	359694 (10.6)	722935 (19.3)
Bank credit	10897463	-12953 (-0.1)	681305 (6.7)	-154703 (-1.5)	-52046 (-0.5)	1146298 (13.3)	599138 (6.1)	578648 (5.6)
of which: Non-food credit	10828662	-4276 (-0.0)	678446 (6.7)	-168880 (-1.6)	-59592 (-0.5)	1146676 (13.4)	588984 (6.1)	569158 (5.5)

Capital Markets

	9 September 2021	Month Ago	Year Ago	Financial Year So Far Trough	Financial Year So Far Peak	2020–21 Trough	2020–21 Peak	End of Financial Year 2018–19	2019–20	2020–21
S&P BSE SENSEX (Base: 1978–79=100)	58305 (52.7)	54403	38194 (2.8)	47706	58305	27591	52154	39714 (12.4)	29816 (-21.8)	49009 (63.7)
S&P BSE-100 (Base: 1983–84=100)	17650 (55.1)	16546	11381 (2.4)	14482	17650	8180	15462	12044 (9.1)	8693 (-25.2)	14689 (68.2)
S&P BSE-200 (1989–90=100)	7514 (57.6)	7038	4767 (3.6)	6136	7514	3416	6520	4987 (7.1)	3614 (-25.1)	6211 (71.1)
CNX Nifty-50 (Base: 3 Nov 1995=1000)	17369 (54.0)	16258	11278 (2.5)	14296	17378	8084	15315	11923 (11.1)	8660 (-24.3)	14507 (67.9)
CNX Nifty-500	14836 (59.7)	13935	9290 (3.5)	12024	14836	6638	12765	9805 (5.3)	7003 (-26.3)	12149 (73.7)

Figures in brackets are percentage variations over the specified or over the comparable period of the previous year. | (-) = not relevant | - = not available | NS = new series | PE = provisional estimates

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The situation became so critical in the month of June 2020 that there was no other choice but to implement a temporary measure of reducing staff salaries from July 2020. The financial situation of *EPW* is being reviewed periodically and the salary cut is being reduced gradually. The situation, however, still continues to look grim.

In these difficult and troubled times, an institution of *EPW*'s stature and credibility is needed more than ever before. Well-wishers of *EPW* have been reaching out and urging us to do whatever necessary to ensure *EPW*'s sustainability.

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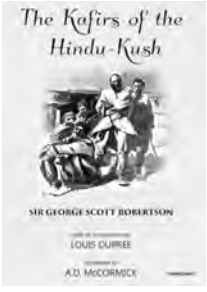
AFGHANISTAN

THE KAFIRS OF THE HINDU KUSH

SIR GEORGE SCOTT ROBERTSON



A remote and mysterious ethnic group, the Kafirs of Kafiristan continue to cast a spell similar to the one they cast on George Scott Robertson in 1890. Locked in the fastness of the Hindu-Kush mountains of Afghanistan and Pakistan, their relationship with the world beyond their valleys, with administrative authority, and with Islam has always been an ambiguous one and their unique culture persists to the present day.

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G.T. VIGNE

This book is the record of a journey which the author embarked in 1936 from Punjab to Kabul. It was a time of great political ferment.

The political climate of the region had changed since the time when Alexander Burns had travelled here for the British. Dost Mohammad of Afghanistan and Ranjit Singh of Punjab were trying to play each other to gain further influence in that region.

G.T. Vigne (1801-63) was the first Englishman to visit Kabul, and met the emir Dost Mohammad.

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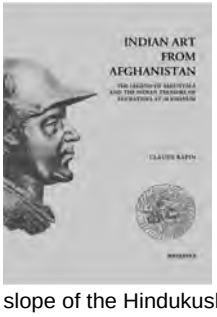
INDIAN ART FROM AFGHANISTAN

The Legend of Śakuntalā and the Indian Treasure of Eucratides at ai Khanum

CLAUDE RAPIN



The discoveries at the site of Ai Khanum, on the northern frontier of Afghanistan, reveals it to be one of the best colonies of the hellenistic Far East. The treasury of the royal palace was stocked with various precious goods and objects relating to Indian Art which seems to prove that their presence at Ai Khanum is to be connected with the military expedition of Eucratides who made a number of raids against the Indo-Greek territories on the southern slope of the Hindukush.

Claude Rapin studied archaeology at the University of Lausanne.

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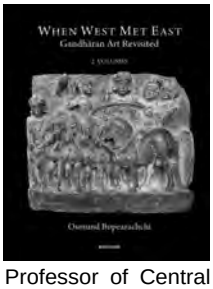
WHEN WEST MET EAST

Gandhāran Art Revisited (2 Volumes)

OSMUND BOPEARACHCHI



The work based on hitherto unpublished or partly published sculptures and artefacts from Gandhāra and Greater Gandhāra dispersed in public and private collections across Asia, Europe, and the United States. Its subject is a form of figurative sculpture that emerged in the Gandhāran region between the second and fifth centuries CE.

Osmund Bopearachchi is adjunct Professor of Central and South Asian Art, Archaeology, and Numismatics at the University of California, Berkeley.

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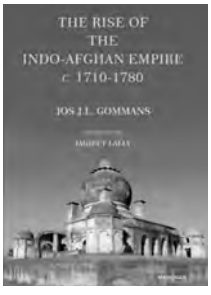
THE RISE OF THE INDO-AFGHAN EMPIRE *c.* 1710-1780

JOS J.L. GOMMANS



In The Rise of the Indo-Afghan Empire, Jos Gommans skilfully weaves together the histories of the environment, horse trade, military service, and migration to explain the final – but no less remarkable – instance of Afghan state-formation on the Indian subcontinent. The eighteenth century witnessed the emergence of two types of Indo-Afghan polities. The first was the rise of the Durrani Empire, founded by Ahmad Shah in 1747, which expanded into north India and Iran. The second were those states created in the mid-eighteenth century by free Afghan horse dealers and mercenaries, such as Rohilkhand and Farrukhabad.

Jos J.L. Gommans is Professor of Colonial and Global History at Leiden University.

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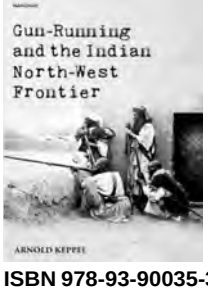
GUN-RUNNING AND THE INDIAN NORTH-WEST FRONTIER

ARNOLD KEPPEL



The crisis on the frontier in the autumn of 1910, as a result of the suppression of the arms traffic in the Persian Gulf, had the effect of switching the limelight to this region. The British were beginning to realize that if the arming of the Pathans continued, a frontier rising in the future could be dangerous.

Arnold Keppel (1858-1942) was a British soldier.

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