Inequality during COVID-19: An interstate analysis

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COVID-19 had an unprecedented impact on Indian Economy, resulting in one of the worst crises that India faced in the recent past. The pandemic and the subsequent containment measures had seriously affected both the aggregate demand and aggregate supply. Therefore, there was a significant reduction in household consumption. In this study, we try to estimate the impact of COVID-19 on consumption for major Indian states. We employ CMIE CPHS data on consumption and income from January 2019 to June 2021 for the purpose of our analysis. We explore disparity consumption based on some socio-economic dimensions. Our results show that gaps across socio-economic groups increased during the pandemic period. Our results show that sustained State intervention was the only thing that could rein in the increased inequality. Using the household consumption data, we identify vulnerable sections based on their industry and occupation so that targeted assistance programs could be formulated to lift the aggregate demand.

Introduction

Despite income being a less direct of measure of well-being, developed countries usually use income as the main indicator of well-being. This is because, in formal settings, it is easier to get data on income with greater accuracy compared to consumption (Noll and Weick 2015). However, in the case of developing countries, the same logic may not apply as informal structures and institutions dominate the economy (La Porta and Shliefer 2014). In such situations, surveys may capture information on consumption with greater accuracy as compared to income. Moreover, since one of the objectives of the current study is to

understand the impact of the pandemic shock on well-being in developing country context, consumption certainly takes precedence over income. This is because of several reasons. Firstly, in times of pandemic, income loss may be huge, but families may be able to sustain their minimum consumption based on their savings, accumulated assets and by accessing credit (Deaton 1989). Secondly, insurance provided to households and individuals through welfare programmes in the form of in-kind and cash transfer programs is more likely to reflect in consumption than in income (Noll and Weick 2015). In the context of the ongoing pandemic, such transfers become critical for the lower economic strata. For example, if an in-kind transfer is a valuable source of insurance for low-income families during the pandemic, it would not be reflected in their income. However, that would show up in their consumption.

Therefore, the overarching objective of this article is to thoroughly examine changes in consumption of various sub-groups of population based on different dimensions of socio-economic classifications to examine the differentiated impacts of pandemic. This is particularly relevant at this juncture to identify the most vulnerable groups in the economy. While we delve deeper insights into the situation of consumption in Kerala, we do so in a comparative perspective to examine Kerala's relative resilience in maintaining the well-being of population measured in terms of consumption in times of pandemic. In this article, we examine the trends and patterns of consumption expenditure among Indian states with special reference to Kerala. We employ household level monthly time series of consumption expenditure data collected by Centre for Monitoring Indian Economy (CMIE) through their Consumer Pyramid Household Survey (CPHS) between January 2019 to June 2021. CPHS tracked nationally representative sample of close to 175,000 households for this period resulting in longitudinal data for a period of 30 months. For the purpose of the analysis, we study 18 major Indian states. We split the states into two categories based on the 2018-19 per-capita income, i.e. High income and low income states. We compare Kerala's performance with each of these state groups to arrive at a conclusion. We present the state classification in Table 1. Here, HIS stands for high income state and LIS stands for low-income state. We compare Kerala's performance with HIS, LIS and all-India average.

Table 1: State classification based on per-capita income	
State	**State groups**
Andhra Pradesh	HIS@
Gujarat	HIS
Haryana	HIS
Karnataka	HIS
Maharashtra	HIS
Punjab	HIS
Tamil Nadu	HIS
Telangana	HIS
Kerala	KL
Assam	LIS#
Bihar	LIS
Chhattisgarh	LIS
Jharkhand	LIS
Madhya pradesh	LIS
Odisha	LIS
Rajasthan	LIS
Uttar Pradesh	LIS
West Bengal	LIS
@ HIS is for high income states and #LIS is for low income state	

Interstate comparison of consumption shocks during the pandemic

We observe a decisive, historic, and abrupt dip in monthly per capita consumption expenditure (MPCE) at the start of lockdown across all the states of India, irrespective of pre-existing economic positioning of states. States with better economic status and consumption levels tended to experience the brunt of the pandemic, for example, states like Punjab, Kerala, Tamil Nadu, Haryana etc. The depth of the impact is much higher in these states compared to other states like Assam, Bihar, Madhya Pradesh, Odisha and Uttar Pradesh (Figure 1).

When it comes to Kerala, the average MPCE before the lockdown was at Rs. 5,004.3 (All India average being Rs 3526.5) and it hit the rock-bottom at 2,546.8 (All India average of Rs. 2,194.3) during the peak of the lockdown, indicating almost 50 per cent decline in Kerala as compared to a lower decline (37%) at the national level to eventually recover to Rs 3845.2 (All India average of Rs. 3,120.7) in the post-lockdown period, which deteriorated again to Rs. 3427.9 (All India average of Rs. 3,139.02) as the second wave began in May 2021. Thus, we observe a stunted V-shape kind of recovery and a stable level of consumption post June 2020. This pattern gets replicated for almost all high-income states, with the notable

exception of Punjab and Gujrat, where the reported MPCE has almost reached the pre-pandemic levels.

**Figure 1:** MPCE for major states since January 2019 to June 2021

Understandably, states with high MPCE like Kerala, Punjab, Haryana, Tamil Nadu experienced a severe reduction in consumption due to complete halt of mobility, closure of retail shops. But in some cases, even poor states also had severe dips (e.g., West Bengal and Chhattisgarh). Such a shock in consumption is perhaps one of its kind, at least during last century which affected the entire nation simultaneously. Surely, this consumption shock affected other sectors of the economy in an unprecedented manner. The abrupt announcement of the lockdown of the entire nation within four hours of notice period affected both supply and demand side of the economy at the same time.

Consumption by socio-economic categories

As we know, caste is a determining factor of all facets of Indian society. Even after the modernization of the economy, caste remains as a major determinant of socio-economic and production relations in India. Therefore, it makes sense that differential consumption patterns may exist between different social groups. Existing research shows that caste is a determining

factor for consumption inequality in India (Kumar et.al.,2019). CMIE's CPHS data provides information on the social group category of households under survey. We employ three social categories viz. Upper caste, Other Backward caste (OBC), and Scheduled Cates (SC) and Scheduled tribes (ST) combined as the last category. We combine the SC and ST groups as one category for analysis because of very thin sample size of ST category in case of Kerala. We find expected patterns of social group-based gradation in MPCE. Overall, the upper caste's MPCE is higher than the other marginalized groups (Figure 2). This is evident for Kerala as well as rest of India. In the pre-pandemic period, all the social groups posted the highest MPCE in case of Kerala. Further, the disparity between MPCE among different caste groups are also the highest in Kerala. In the post-pandemic period, we see that SC-STs were the most affected group for Kerala. Their MPCE had almost halved during the peak of the first lockdown despite their consumption level being the lowest among all groups. Even though there was a recovery, they never reached the pre-pandemic levels. The MPCE was also affected by the second wave, however the impact was significantly reduced compared to the first wave. For the low-income states and the all-India scenario, we see that the MPCE of SC-ST and OBCs are almost converging, indicating that there is not much difference between the consumption patterns of the marginalized groups. In the pre-pandemic period, OBCs and SC-ST households of Kerala had MPCE level similar to of upper caste households of the high-income states, indicating that the well-being of marginalized communities was much better in Kerala compared to rest of India. In the post-pandemic period, we see that there is a significant reduction in consumption levels between the groups for Kerala. For the other groups, we do not see this trend. This was made possible by the battery of interventions made by the Government of Kerala during the pandemic period to protect the vulnerable communities.

Figure 2: MPCE of major social groups
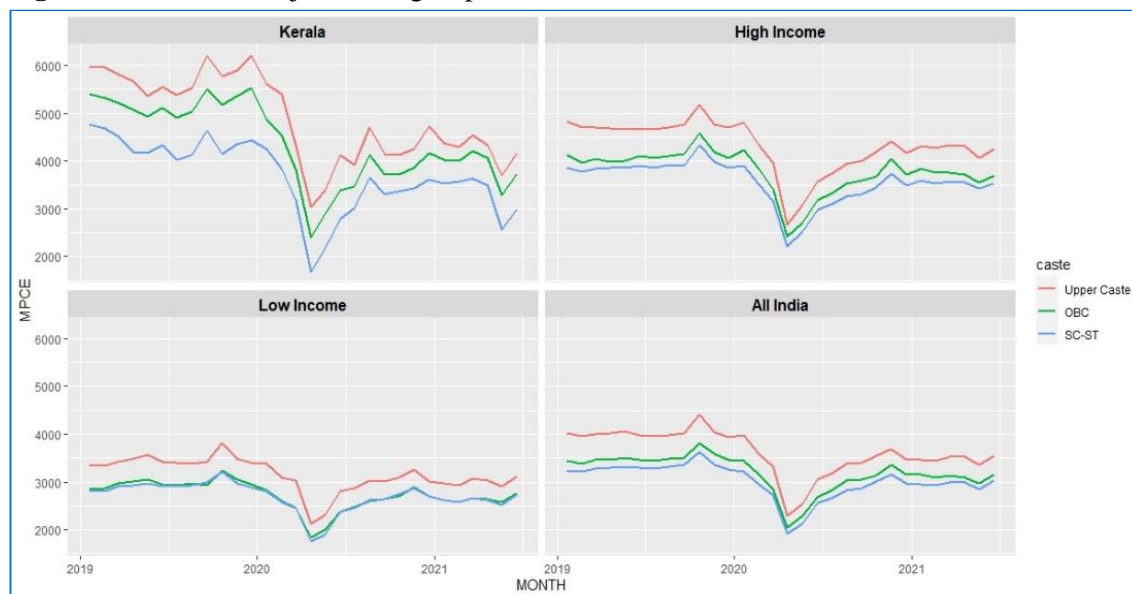
Identifying the most vulnerable groups affected by the pandemic

For informed policy decisions, it is important that we see deeper into the dynamics of the issue under study. Here, we delve deeper into the issue by analyzing MPCE of different industry and occupation groups. We see that the consumption patterns are of heterogenous nature. CPHS data provides a detailed classification of industry and occupation groups of the households. From that, we have constructed 12 broad industry classifications and six occupational classifications. While it is possible to construct more disaggregated measures, we stop at these so that sample size for each category is sufficient for us to produce statistically reliable estimates.

In the pre-pandemic period, we observed that MPCE of Kerala was higher than the high-income states in all industry based categories (Figure 3). For industrial categories like fisher folks, Kerala's MPCE was much higher than the high-income states and the national average. In the pandemic period, we observe that Kerala's MPCE for various industrial group are in tandem with the overall trend, indicating the nation-wide impact of COVID-19.

We see that households depending on the agriculture sector were least affected by the pandemic because demand for agricultural goods was stable during the pandemic. However, the same cannot be said about the fishing community. The prospects of fishing industry was affected by the disruption of its logistical network due to the stringent lockdown. We see that

their MPCE was more than halved during the peak of the first wave. Even though the MPCE recovered, it is of a stunted nature and far from pre-pandemic level. We can see a similar trend in the retail trade segment as well. Here too, the retail trade dependent households were affected during the pandemic due to the lockdown measures. Another concerned group is the construction industry dependent households. We see a significant drop in MPCE of construction dependent households in the aftermath of the first wave. There is a stunted recovery, coinciding with the laggard manner of recovery of the construction sector dependent households.

Another group of households that is seriously hit by pandemic is the travel/tourism/hotel industry based households. As these occupations are dependent upon physical presence of customers, the impact of COIVD was severe upon them. As there were restrictions on international and inter-state travelers, the travel and tourism segment were seriously affected. We also observe a significant dip in MPCE of Education & health sector and Financial Services sector dependent households. We see a stunted recovery for these households as well.

Overall, the impact of second wave on the MPCE of industry groups are minimal compared to the first wave across the country. In case of Kerala, we see a small dip in almost all segments, due to the strict lockdown measures adopted in the state during second wave which was not as strong in other states.

Figure 3: MPCE of major industry groups
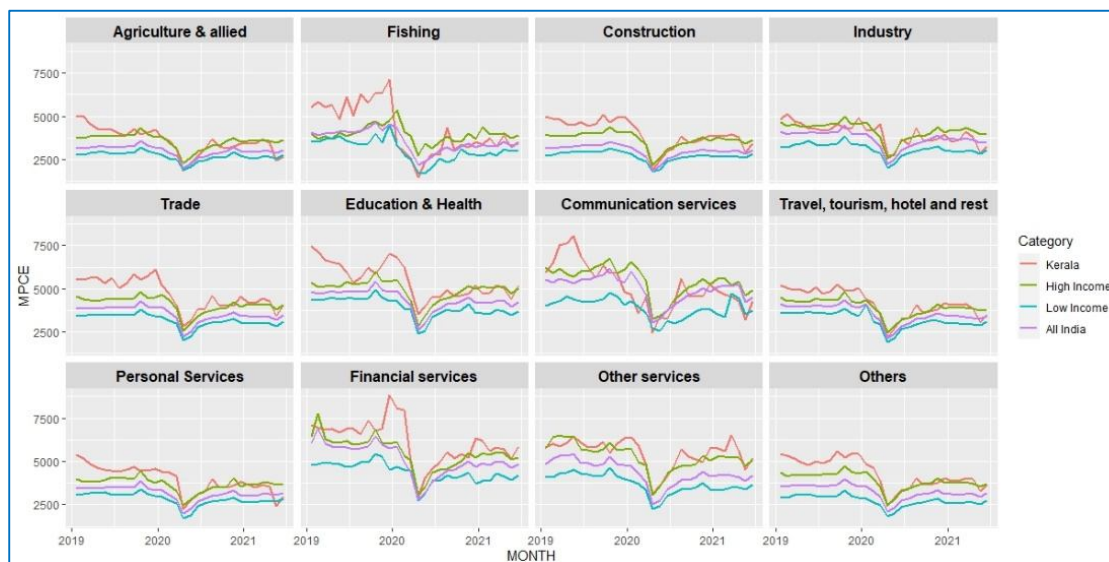
Looking into the occupational categories, we see a much more clear picture (Figure 4). Like in the previous case, Kerala's MPCE for these groups were at par with the high income state MPCE in the pre-pandemic period. In case of self-employed (formal), Kerala's MPCE was much higher than the high-income state and the national average. In the post-pandemic period, we see that farm sector has recovered to a certain extent. The same can be said about white-collar and formally self-employed households. However, we see that the blue-collar worker households and informally self-employed households were deeply affected by the pandemic, followed by Retired/aged households. The self-employed(informal) occupational group in Kerala roughly corresponds to industry groups that were earlier identified as seriously hit by the pandemic — fisheries, travel, tourism & hotel and trade based households and construction sector. We see that MPCE of 'Others' households also reduced significantly for Kerala.

Figure 4: MPCE of major occupation groups
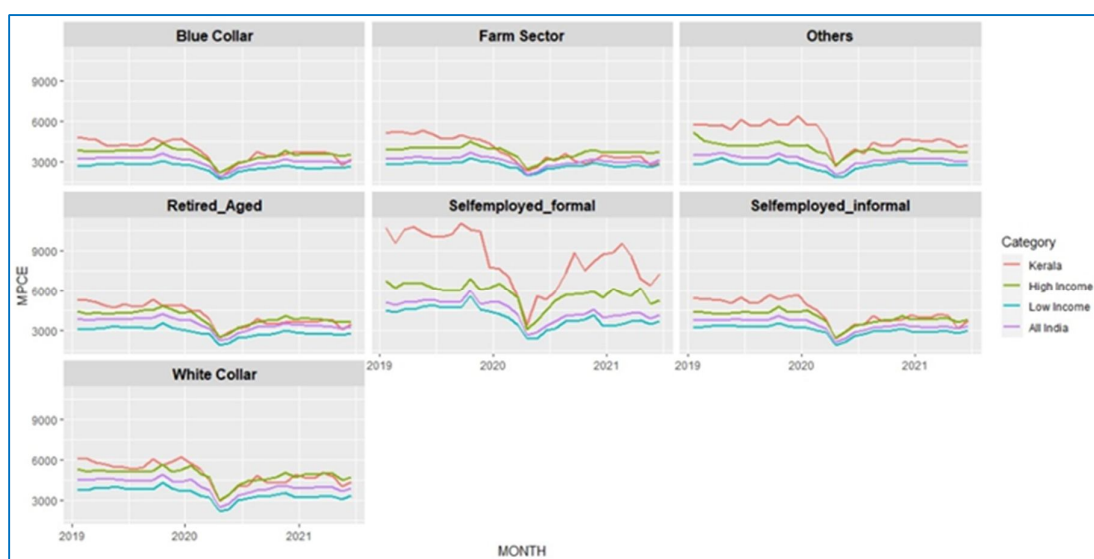
Conclusion

Being one of the highest consuming states (Rs 5004 vis-à-vis all India average of 3527), Kerala's drop in consumption expenditure was around 50% compared to the national average of 37% during the lockdown of COVID-19 first wave. However, MPCE recovered to Rs 3845.2 (All India average of Rs. 3,120.7) in the post-lockdown period, which deteriorated again to Rs. 3427.9 (All India average of Rs. 3,139.02) as the second wave began in May 2021. We observe a stunted V-shape kind of recovery and a stable level of consumption post

June 2020. We see that SC-ST household MPCE almost reduced by half during first wave from initial level of Rs 4300. Even though recovered to Rs 3500, they have not reached the pre-pandemic levels. It further deteriorated during the second wave to Rs 2700. Consumption inequality has slightly increased during the pandemic. However, it was kept in check by government intervention, while in many other states inequality in consumption has skyrocketed. This was possible on account of battery of affirmative action by states for various vulnerable groups in some or the other forms. Our analysis identified most vulnerable groups in Kerala as these have remained far from recovery in consumption expenditure so far. Fishermen folks, construction workers, trade, travel and tourism base households have been worst sufferers of this pandemic in the state of Kerala. Based on occupation classification blue collar workers, followed by self-employed (informal) and retired/aged were the most affected ones. Industry based identification of vulnerable groups closely correspond with occupation-based identification of households.

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