AN ESTIMATION OF RISE IN UNEMPLOYMENT AND INCOME LOSS DUE TO COVID-19 LOCKDOWN IN INDIA: AN ANALYSIS BASED ON PLFS DATA (APRIL TO JUNE 2020)

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ABSTRACT

This paper seeks to estimate the unemployment rates during the first three months of lockdown due to COVID-19, considering the decline in LFPR to be involuntary and workers with zero income to be unemployed. An attempt has also been made to understand the proportion of individuals impoverished during the same period by estimating the proportion of labour force with zero income, with income below Rs.100 per day and that below Rs.200 per day across gender, caste categories, religious groups and states (separately for rural and urban areas), using the Periodic Labour Force Survey (PLFS) unit level data of 2019-20. Our results have been very striking with actual unemployment rate increasing from 8.7% before lockdown to 22.5% during lockdown; the increase being higher in urban areas and among women. Income decline had also occurred more among SCs and STs relative to other groups. The paper concludes with the policy suggestion of a universal "employment of last resort". programme.

Keywords: *Unemployment, Poverty, COVID-19, Lockdown*

JEL Classification Code: *E24, I32, J21*

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1.   Introduction

The onslaught of the lockdown that was imposed to prevent the spread of the coronavirus pandemic in India at the end of March 2020 resulted in a sudden breakdown of economic activity and substantial employment loss. The objective of this paper is to estimate the proportions of labour force with zero income, with income below Rs.100 per day and with that below Rs. 200 per day. The estimates have been derived across gender, caste categories, religious groups and states (separately for rural and urban areas) during the first three months of lockdown (April-June,2020), based on the Periodic Labour Force Survey (PLFS) unit level data provided by the National Statistical Office (NSO), Government of India. In this context, it is important to mention that according to the official estimate of the Government(NSO press release dated 14th March, 2022), the aggregate unemployment rate rose sharply from 9.1% in January-March2020 to 20.8% in April-June2020 in urban areas according to the Current Weekly Status (CWS).The urban unemployment rate has been reported to be 13.2% in July-September 2020, 10.3% in October-December2020, 9.3% in January-March2021, 12.6% during the second wave in April-June 2021, 9.8% in July-September 2021 and 8.7% in October-December 2021 (NSO press release dated 6th May, 2022).These figures are not available for the rural areas yet (as on 8thMay 2022).

It is our contention, however, that these unemployment figures underestimate the actual impact of lockdown on the labour market. This can be attributed to two issues – methodological and conceptual. First, a sudden fall in the labour force participation rates (LFPR) in the first quarter of lockdown as compared to the average of the preceding three quarters has been considered to be voluntary. Second, workers with zero income during the lockdown have also been considered to be employed in the official estimates. Since the involuntary unemployment rate is defined as the proportion of unemployed people in the total labour force, the unemployment rate is influenced by changes in the LFPR. As per our estimates, the quarter-wise LFPR declined during April-June of 2020 as compared to the average LFPR of the previous three quarters from 38.6% to 37.6% (i.e., by 1 percentage point), driven primarily by a 2 percentage points fall (from 20.5% to 18.5%) in the labour force participation among women. We think that the aforementioned sudden decline in LFPR within a quarter cannot be considered voluntary, rather it was 'forced' upon the workers by the situation created under lockdown. Hence, in this paper, we have considered those who were pushed out of the labour force to be involuntarily rather than voluntarily unemployed. Several studies have also shown this fall in LFPR to be a 'discouraged worker' effect which means the lockdown and the ensuing socio-economic crisis could have resulted discouraging workers, i.e., those "who are willing to secure a job but have stopped job searches" (Roychowdhury et al.,2022).Further, the issue is particularly vexing for the female labourforce.

The pandemic had a worse impact on women LFPR vis-à-vis men LFPR because a higher burden of unpaid care and household work fell on women during lockdowns across the globe (World Employment and Social Outlook, 2021).

Moreover, while economic collapse resulted in the loss of jobs for several million individuals, several regular wage/salaried employees also experienced pay-cuts (or not receiving salaries at all) during the lockdown period, as can be expected with the growing informalisation even within the formal sector (Jha & Kumar, 2020). Furthermore, as the restrictions were imposed and markets shut down, the earnings of several self-employed individuals were reduced to zero, making them essentially unemployed for all intents and purposes. The PLFS definition of unemployment is not linked to earnings but considers an individual unemployed, if and only if, she/he did not work for at least an hour in the reference week but was available for work. We argue that earnings in the specific context of containment measures also reflect an important criterion for assessing the impact of lockdown on the labour market. This is because there has been a significant rise in the number of workers with zero income under lockdown. Anand & Thampi (2021) have also argued that the PLFS reports underestimated the 'pain' of the lockdown on average earnings by excluding those with zero income. There is a possibility that some of the regular wage/ salaried workers received partial or full payment for the lockdown period later. However, our unit-level analysis based on PLFS 2019-20, revealed that 74.4% of workers with zero income were self-employed during the quarter April-June2020 and only the remaining 25.6% were regular wage/salaried employees. Furthermore, there is no information available in the PLFS data about deferred full/partial payments.

Thus, this paper attempts to re-estimate the unemployment rates considering the decline in LFPR to be involuntary and workers with zero income to be unemployed. The paper also attempts to understand the income loss experienced by the poorer sections of the workforce (earning less than the daily average wage rate under the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS)) during the first quarter of the lockdown vis-à-vis the previous three quarters. Section 2 elaborates the data and methodology used, followed by an inquiry into the impact of the first phase of lockdown on employment and income loss across gender in rural and urban areas at all-India level. These effects have also been analysed across various caste categories and different religious groups in section 4. Section 5 provides the state-wise estimates of unemployment rates and income loss for the poorer sections of the workers during the first three months of lockdown. We close the paper with a few brief concluding remarks in section 6.

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2. Data and methodology

The latest available unit level data from PLFS (2019-2020, NSO) has been used in this paper. It covers four quarters from July to September 2019, October to December 2019, January to March 2020, and April to June 2020– the last quarter corresponds to the first three months of lockdown. For all the estimates the first visit data have been used based on the Current Weekly Status (CWS),and the MGNREGS workers have been considered to be employed and not unemployed. The quarterly labour statistics have been re-estimated while (a) considering those employed under PLFS methodology but had zero income as unemployed; and (b) accounting for the discouraged workers (as indicated by the fall in LFPR during lockdown) by estimating the unemployment rates assuming that LFPRs had not fallen but remained at the level of the average of the previous three quarters. It is important to mention here that the helpers in household enterprises are viewed as unpaid family workers as per PLFS methodology. We have assumed the wage rate of these workers to be greater than Rs.200 per day (instead of zero). We refer to the unemployment rate estimated in this manner as the "actual unemployment rate". If the income of such helpers is taken as zero then proportions of labour force earning zero income, less than Rs 100 and Rs.200 per day in all quarters would obviously increase. Further, for all comparisons of the lockdown employment/income statistics (April-June2020) with the pre-lockdown figures, the averages of the preceding three quarters (from July 2019 to March 2020) have also been estimated.

The average per day wage rate under MGNREGS was Rs.202 in 2021. We have estimated the proportion of labour force earning less than or equal to Rs.200 per day before and during the first three months of lockdown. Further, to understand the increase in the abject poverty in the country, we have also estimated the proportion of labour force earning less than Rs.100 per day at the aggregate level. The PLFS provides data on earnings separately for the self-employed, regular wage/salaried workers and casual labourers. While for the former two employment categories, earnings during the last 30 days and the preceding calendar month are provided respectively, for casual labour, wage earning for each day of the reference week is given. To facilitate comparison, per-day wage was estimated for self-employed and regular wage/salaried workers by dividing the monthly wage by 30. The estimates have been derived separately for males and females in rural and urban areas for different caste categories and religious groups. From the unit-level data we have also estimated these figures for all the states, separately for males and females. The required unit level data of PLFS has been sourced from the NSO, Ministry of Statistics and Programme Implementation (MoSPI), Government of India (GoI).

3. Impact of lockdown on labour market

The unemployment rate (including the workers with zero income) rose sharply from the pre-lockdown rate of 8.7%to 20.6% during April-June 2020 at all-India level. Adjusting for LFPR, the unemployment rate during the lockdown period would be even higher– to the tune of 22.5%. Therefore, the actual unemployment rate increased enormously by 14 percentage points (from 8.7% to 22.5%) during the first three months of lockdown. The urban unemployment rate increased from less than 11% to almost 33% and rural unemployment rate went up from 7.9% to 18.5%.Including both rural and urban areas, the growth in unemployment rate was by 140% for male and 227% for female (Table 1).The estimated unemployment rates of different categories in the quarter under lockdown and the growth rates in unemployment rates as compared to the averages of the previous three quarters have been given in Table 1.

Table 1: Increase in Unemployment Rates Due to Lockdown in India

Sectors	Proportion of Labour force With Zero Income April-June, 2020			Percentage Increase in Actual Unemployment Rate		
	Male	**Female**	**Person**	**Male**	**Female**	**Person**
Rural	18.2%	21.1%	18.5%	116.5%	236.3%	135.0%
Urban	30.4%	38.2%	32.9%	190.9%	217.6%	204.3%
Total	21.7%	25.5%	22.5%	139.8%	226.8%	157.3%

Source: Authors' calculations from PLFS 2019-20 unit level data.

Figures are based on the first visit. Unemployment rates are calculated corresponding to respective pre-lockdown LFPRs(average of previous 3 quarters) i.e., assuming that the LFPR did not fall due to the lockdown.
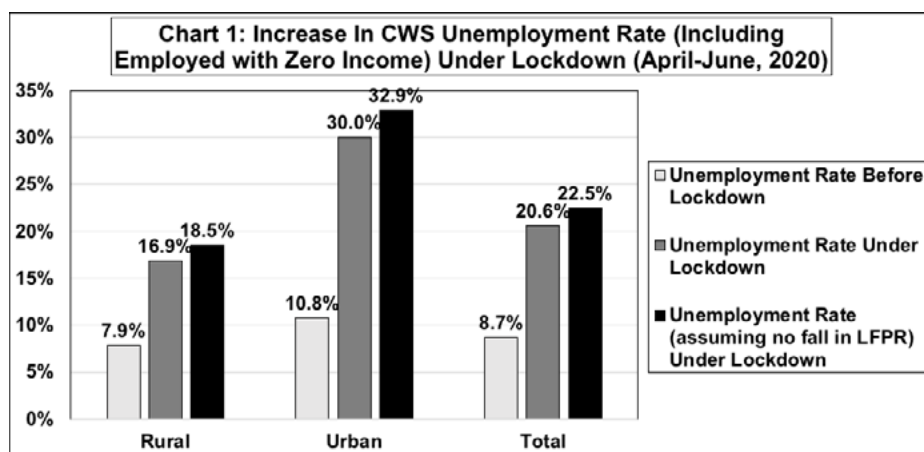
Source: Authors' calculations from PLFS 2019-20 unit level data.

Figures are based on the first visit.

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The above graph (Chart 1) shows the pre- and post-lockdown unemployment rates and the unemployment rates corresponding to the pre-lockdown LFPR. It is evident that the rural (CWS) unemployment rate increased from less than 8% to 18.5% and the urban unemployment rate increased from less than 11% to almost 33% (i.e., one-third of the labour force) in the first three months of the lockdown. This calls for an urgent need of expanding the employment of last resort programme in the urban areas too, so as to mitigate the effects of sudden shocks to the economy.

The pandemic also resulted in a sharp fall in the earnings for majority of the workers pushing them further into poverty during the first year of the pandemic (State of Working India, 2021). Anand & Thampi (2021) had shown a decline of 7.6% in real average earnings among regular wage/salaried employees in April-June2020, according to PLFS relative to the same quarter in 2019. Several studies based on primary surveys have also attested to a sharp fall in earnings. As per a survey of about 5000 workers across 12 states conducted between April-May2020, there was a dramatic fall in earnings as the informal workers still employed during the lockdown faced more than 50% reduction in their earnings. It was also found that roughly 50% of the regular wage workers either received no salary or experienced a pay-cut during this period (Kesar et al., 2021).

To get an overall picture of the impact of lockdown on the population, this paper attempts to understand the income loss particularly among the poorer sections of the population due to lockdown. For this purpose, the proportion of labour force with monthly income less than or equal to Rs.200 a day (or Rs.6000 a month) and the proportion of labour force earning Rs.100 a day, on an average (or Rs.3000 a month), has been calculated. The minimum wage rates vary state to state and they are different for rural and urban areas. However, those are way above the MGNREGS wage rates. Table 2 clearly shows that the proportion of labour force including the unemployed earning zero income went up enormously because of the lockdown. As high as 42.5% of the labour force either did not get any job or could earn less than Rs.200 a day during the first three months of lockdown as compared to 32% of the labour force earning Rs.200 or less, on an average, before lockdown.26.5% of the labour force could earn less than Rs.100 a day under lockdown as compared to 15% of the labour force before lockdown. The urban areas bore the brunt of the lockdown quite disproportionately relative to the rural areas, with the aforementioned proportions increasing massively under lockdown relative to the pre-lockdown situation.

Table 2: Percentage of Labour-force Earning Zero Income, Less than Rs. 100 and Less than Rs. 200 per day Before and After Lockdown in India

Sectors	Zero Income		Less than Rs.100		Less than Rs.200		Rs.0 to Rs.100		Rs.100 to Rs.200	
	Before	After	Before	After	Before	After	Before	After	Before	After
Rural	7.9%	16.9%	14.6%	23.3%	34.9%	42.2%	6.8%	6.4%	20.3%	18.9%
Urban	10.8%	30.0%	15.2%	34.4%	25.8%	43.6%	4.4%	4.4%	10.6%	9.2%
Total	8.7%	20.6%	14.8%	26.4%	32.1%	42.6%	6.1%	5.8%	17.3%	16.2%

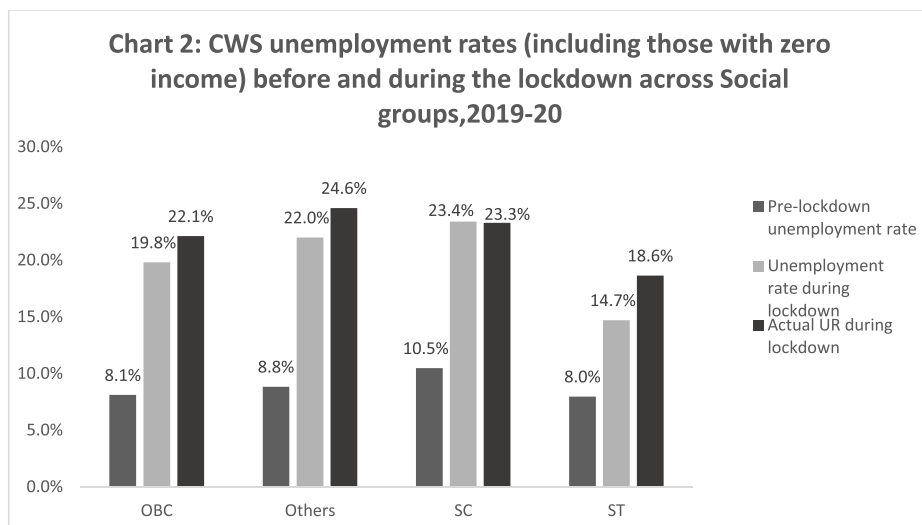*Source:* Authors' calculations from PLFS 2019-20 unit level data.

Figures are based on the first visit.

It is interesting to note here that the proportions of labour force earning between Rs.100 to Rs.200 a day and that earning Rs.0 to Rs.100 a day remained more or less same under lockdown but they are not the same individuals. Basically, around 11% of the labour force who used to earn more than Rs.200 a day, could manage to earn less than that under lockdown and 12% of the workers could not earn anything. 7% of the rural labour force and 18% of the urban labour force who used to earn more than Rs.200 a day could earn less than that during the first three months of lockdown. Similarly, 19% of the urban labour force and 9% of the rural labour force who used to earn more than Rs.100 a day earlier could earn less than that. Further, 30% of the urban and 17% of the rural labour-force (including the unemployed) could not earn anything during the initial phase of lockdown. Earlier, these percentages were 11% and 8% respectively according to the CWS, on an average, in the last three quarters before lockdown. Overall, there was an increase of 12 percentage points in the proportion of labour force with zero income. Further, upon adjusting for the sudden drop in LFPR, the rise in the labour force with zero income was around 14 percentage points due to lockdown.

Assuming India's population to be 132.6 crore in 2020 (census projection), the estimated size of the labour force would be 50.8 crore and 14% of that would be more than 7 crore. Given the worker-population ratio to be 35% for the entire year according to PLFS 2019-20 data, including the family members of these 7 crore workers, income of more than 20 crore people may have become zero during the first three months of lockdown. It is not difficult to understand that the extreme poverty and hunger must have sky-rocketed following the lockdown in India. Some could manage with their past savings and many have become directly or indirectly more indebted. Nonetheless, to some extent, widespread starvation and deaths could be avoided due to some government initiatives including free distribution of food-grains through the public distribution system and some employment generation through the MGNREGS (Sikdar& Mishra, 2020).

4. Impact of lockdown across various social and religious groups

The paper also attempts to re-assess the inter-caste and inter-religion differences, if any, stemming from the lockdown on employment through the lens of our income-driven approach to unemployment as well as on the income losses. Bifurcating the entire labour force into four social groups – scheduled castes (SC), scheduled tribes (ST), other backward castes (OBC) and unreserved castes (Others), we observe that the LFPR increased by 0.1% for SCs, while for the remaining social groups the LFPR declined by 2%, 1.1% and 1.3% respectively during the initial three months of the lockdown vis-a-vis the pre-lockdown rate. If the LFPRs hadn't been declined, the actual unemployment rate would have gone up by 12.8 percentage points for SC, 10.7 for ST, 14 for OBC and 15.8 percentage points for Others (Chart 2). It is interesting to note that the actual unemployment rate was the highest among 'Others' after adjusting for the fall in LFPR during April-June 2020, driven by the decline in LFPRs in both rural and urban areas, as discussed in the foregoing paragraphs. Without adjusting for LFPR, however, the actual unemployment rate was the highest among SCs as the LFPR among SCs in rural areas rose during this period.

Chart 2: CWS unemployment rates (including those with zero income) before and during the lockdown across Social groups,2019-20

Source: Authors' calculations from PLFS 2019-20 unit level data.

Figures are based on the first visit.

There were differences between rural and urban areas also. In rural areas, the increase in actual unemployment rates in percentage points was the lowest among SCs (9.4), followed by STs(10.1) and OBCs (10.9).It was the highest among Others (11.8). This is because the LFPR increased for SCs (from 38% to 38.7%) and STs (from 44.1% to 42%) during the first three months of lockdown

as compared to the pre-lockdown rates, while that for Others and OBCs declined in rural areas. In contrast, in urban areas the highest increase in the actual unemployment rates in percentage points was among SCs(an increase of 25.7 percentage points). The lowest increase was reported for STs (18.8 percentage points) followed by OBCs and Others (roughly 21 percentage points). The urban LFPRs declined across all social groups, roughly by 2 percentage points for SCs, STs and Others. The decline was about 1 percentage point among OBCs. As noted earlier, the aggregate level fall in LFPR occurred primarily due to the fall in female LFPR. In rural areas the female LFPRs have traditionally been higher among SCs and STs relative to other social groups because of high poverty levels of the households belonging to these social groups, and higher mobility and lesser restrictions, particularly with respect to jobs involving manual labour (IWWAGE, 2021)".

Regarding the income loss, as high as 48% of the SC labour force, 46% of ST, 43% of OBC and 42% of Others labour force could earn less than Rs.200 a day under the lockdown quarter. More than 55% of the urban SC labour force earned less than Rs.200 a day and 43.5% of the urban labour force could earn less than Rs.100 a day during the lockdown months of April-June 2020 (Table 3). These ratios were higher for OBCs than Others and STs, on an average, and they were higher in urban areas than in rural areas, in general. Although the cost of living is higher in urban areas, the proportions of labour force earning less than Rs.100 and Rs.200 a day were higher in urban areas than in rural areas across caste categories, excepting the urban STs earning above Rs.100 and below Rs.200 a day. Clearly, the income of the people in urban areas and that for the SCs were more severely affected due to the COVID-19 pandemic-induced lockdown in India.

Table 3: Caste-wise Proportion of Labour-force Earning Zero Income, Less Than Rs.100 A Day and Less than Rs.200 A Day during April to June 2020

(In Percentage)

	Zero Income			Less than Rs.100 a day Income			Less than Rs.200 a day Income		
	Rural	**Urban**	**Total**	**Rural**	**Urban**	**Total**	**Rural**	**Urban**	**Total**
SC	19.2	38.4	23.3	25.3	43.5	29.0	46.6	55.2	48.3
ST	17.7	29.3	18.6	24.5	33.7	25.3	46.9	41.6	46.4
OBC	17.8	32.9	22.1	24.0	36.9	27.6	41.5	45.6	42.8
Others	19.8	31.0	24.6	26.1	34.9	29.9	41.3	42.8	42.1

Source: Authors' calculations from PLFS 2019-20 unit level data.

Figures are based on the first visit.

It is evident that the increase in proportion of labour force earning zero income was the highest for urban SCs, followed by urban OBCs and Others. However, if we look at the overall picture including rural and urban areas, the increase was highest for Others followed by OBCs and SCs. The same trends are visible for the people earning less than Rs.100 and Rs.200 a day. In percentage terms, the growth in proportion of labour force with zero income in urban areas was the highest for unreserved caste categories (216%), followed by SCs (202%) and OBCs (196%). Including rural and urban areas, the maximum growth in this category of unemployment happened for Others (179%) followed by OBCs (173%). Since, the unemployment rate was relatively higher among the SCs in the pre-lockdown period also, the growth rate in unemployment was relatively lower. The proportion of labour force who could earn only between Rs. 100 and Rs. 200 per day among the ST and SC labour force was also found to be much higher than that for OBC and Others categories.

Across religious groups–categorised as Hindu, Muslim, Christian and Others (including Buddhist, Sikh, Jain, Zoroastrian etc.), we observe that the LFPR decreased during the initial three months of lockdown for Hindus, Christians and Others, but not for Muslims (Chart 3). However, the worker-population ratio declined for all the four religious groups.

Chart3: CWS unemployment rates (including those with zero income) before and during the lockdown across Religious groups,2019-20
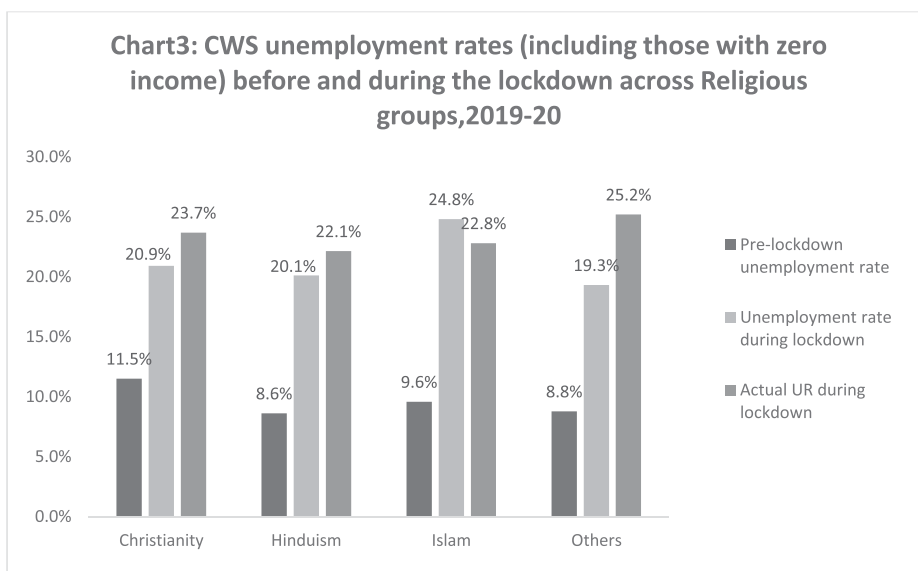
#*Source:* Authors' calculations from PLFS 2019-20 unit level data.

Note: Figures are based on the first visit.

The proportion of labour force earning zero income went upto 25% for Other religious group at all-India level and to 36% in the urban areas. It became 24% for the Christians, 23% for Muslims and 22% for Hindus after considering the fall in LFPR to be involuntary. However, it was slightly higher for Hindus

(33%) in urban areas as compared to that of Muslims (31%) and Christians (28%). 47% of the labour force from Other religious group, 44% from Hindus and Muslims and 42% from Christian labour force could earn less than or equal to Rs.200 a day during April to June 2020. These proportions were also higher in urban areas than in rural areas. As high as 42% of Other, 37% of Hindu, 36% of Muslim and 31% of Christian labour force could earn less than Rs.100 a day in urban areas under lockdown (Table 4).

Table 4: Religion-wise Proportion of Labour-force Earning Zero Income, Less Than Rs.100 A Day and Less than Rs.200 A Day during April to June 2020

(In Percentage)

Categories	Zero Income			Less than Rs.100 a day income			Less than Rs.200 a day income		
	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total
Hindu	18.3	32.7	22.1	24.4	36.8	27.7	43.0	46.1	43.8
Muslim	16.7	31.1	22.8	25.0	35.6	29.5	44.6	43.4	44.1
Christian	21.9	27.7	23.7	29.8	31.1	30.2	42.7	38.9	41.5
Others	22.5	36.0	25.2	28.6	42.3	31.5	46.5	49.3	46.7

Source: Authors' calculations from PLFS 2019-20 unit level data.

Figures are based on the first visit.

There was 251% growth in Other labour force with zero income under the lockdown in urban areas. This growth rate was 212% for Hindus, 150% for Muslims and 95% for Christians. Including rural and urban areas, this growth rate was 187%, 157%, 138% and 105% for the labour force belonging to Other religious group, Hindus, Muslims and Christians respectively. The proportion of labour force earning Rs.0-100 increased only for the Christians and not for the other religious groups. The proportion of labour force earning Rs.100-200 decreased for all religious groups excepting the rural Muslims. The proportion of labour force earning less than Rs.200 or Rs.100 a day increased mainly because of the increase in the labour force earning zero income.

5. State-wise scenario of unemployment and income loss

The unemployment situation and the loss of income due to lockdown varied widely across states in the quarter corresponding to the stringent lockdown. The LFPR declined in all other states except Andhra Pradesh, Bihar, Haryana, Jharkhand, Madhya Pradesh, Manipur, Mizoram, Nagaland, Uttar Pradesh under the lockdown as compared to the average LFPR of the previous three quarters. Within that, the female LFPR came down in Manipur and Uttar Pradesh as well. The earning member to population ratio came down almost everywhere barring the North-Eastern states of Mizoram, Nagaland and Tripura. The proportion of

labour force with zero income was as high as 42% in Chhattisgarh with 54% for female and 33% for male workforce. It was 39% for Kerala, 38% for Delhi, 32% for Goa and so on. As high as 47% of the labour force in Chhattisgarh, 46% in Kerala, 43% in Uttarakhand, 39% in Delhi and 37% in West Bengal could earn less than or equal to Rs.100 a day, on an average, during April-June 2020. As far as the income of Rs.200 a day is concerned, 63% of the labour force in Chhattisgarh, 59% in West Bengal, 53% in Kerala, 50% in Uttarakhand, Madhya Pradesh, Odisha and Assam, 49% in Maharashtra, Tamil Nadu and Andhra Pradesh, 47% in Jharkhand, and 44% of the labour force in Uttar Pradesh and Himachal Pradesh could not manage to earn even that during the initial months of lockdown (Table 5).

As far as the increase in unemployment (pre-lockdown labour force with zero income) rate due to lockdown is concerned, it went up by 35 percentage points in Chhattisgarh, followed by 27 in Uttarakhand, 25 in Delhi, 24 in Kerala and Goa and so on. There was some decrease in unemployment rate in Mizoram, Nagaland and Arunachal Pradesh. The female unemployment rates increased by 61 percentage points in Delhi, by 49 in Chhattisgarh and by 35 percentage points in Karnataka. The increase in male unemployment rate was highest in Uttarakhand (by 29 percentage points), followed by Kerala (26), Chhattisgarh (25), Sikkim (23), Goa (22) and Tamil Nadu (22 percentage points). The increase in the proportion of labour force earning less than Rs.200 a day was 26 percentage points in Goa and Chhattisgarh, 24 in Kerala and Delhi, 22 in Uttarakhand, and 20 percentage points in Tamil Nadu.

Table 5: State-wise and Gender-wise Proportion of Labour-force With Zero Income, Less Rs.100 and Rs.200 A Day Income (In %) During April-June 2020

State Name	Zero Income			Less than Rs.100 a day			Less than Rs.200 a day		
	Male	Female	Person	Male	Female	Person	Male	Female	Person
A & N Island	29.8	28.1	29.3	30.9	41.7	34.1	32.9	42.4	35.7
Andhra Pradesh	21.9	15.7	19.3	24.2	21.7	22.7	42.2	63.7	48.6
Arunachal Pradesh	8.8	14.3	3.8	10.9	23.0	7.6	26.4	63.7	26.7
Assam	25.4	45.7	26.8	29.5	51.3	31.2	44.7	76.9	48.9
Bihar	11.0	1.4	8.3	11.4	8.7	9.4	23.9	43.5	25.1
Chandigarh	27.3	10.8	21.7	27.3	10.8	21.7	33.0	20.5	28.2
Chhattisgarh	33.4	54.3	41.9	39.9	56.9	47.0	55.2	72.4	62.1
D & N Haveli	19.2	15.0	22.3	20.5	15.0	23.3	37.5	22.8	37.6
Daman & Diu	10.6	4.8	12.3	11.1	8.9	13.6	20.0	20.7	23.0
Delhi	32.6	74.5	38.6	32.6	75.2	38.9	37.4	77.2	43.4
Goa	29.6	38.0	31.9	29.6	38.0	31.9	33.7	39.4	35.4
Gujarat	18.3	9.1	15.1	20.8	20.5	20.0	39.2	44.3	40.2

Haryana	8.7	7.1	8.9	10.4	15.5	11.6	13.4	35.9	17.3
Himachal Pradesh	19.4	7.8	14.2	28.9	40.9	33.5	38.1	52.6	43.9
Jammu & Kashmir	10.1	15.0	10.8	13.7	26.7	16.9	17.8	47.4	25.8
Jharkhand	17.9	9.3	17.2	31.3	18.8	29.4	51.2	31.2	46.9
Karnataka	11.1	39.2	21.7	12.6	44.6	24.2	21.7	64.8	36.6
Kerala	38.3	42.3	39.4	43.5	51.5	46.2	50.2	59.1	53.1
Madhya Pradesh	24.7	31.3	25.9	31.5	38.5	32.8	49.4	53.1	50.0
Maharashtra	26.9	29.9	27.4	29.7	37.5	31.9	44.1	59.8	49.2
Manipur	7.1	12.1	8.9	7.6	24.3	13.2	16.9	39.7	24.2
Meghalaya	11.4	18.7	15.0	13.9	27.1	19.7	25.7	44.5	33.8
Mizoram	4.1	3.6	3.7	4.6	5.2	4.8	9.9	21.8	14.5
Nagaland	28.4	27.3	17.9	28.4	37.7	22.7	41.0	14.2	27.5
Odisha	25.2	26.2	25.6	29.6	36.7	31.5	48.1	55.0	50.0
Puducherry	19.7	19.1	20.9	20.8	20.8	22.1	25.3	45.5	32.6
Punjab	23.0	26.1	24.1	28.3	45.9	32.8	37.9	57.7	42.7
Rajasthan	20.7	16.7	19.0	24.8	24.9	24.4	38.4	39.1	38.2
Sikkim	27.4	10.3	20.8	34.1	15.8	27.2	45.3	21.8	36.4
Tamil Nadu	30.6	27.8	29.9	32.4	37.1	34.3	39.8	66.9	49.5
Telangana	10.6	26.4	16.6	11.6	32.4	19.6	19.3	44.9	29.0
Tripura	4.3	0.9	4.3	4.8	28.7	11.4	25.3	57.1	33.3
Uttar Pradesh	20.8	23.0	20.6	27.5	34.6	28.2	43.5	48.1	43.9
Uttarakhand	38.1	30.8	35.7	40.7	40.4	40.3	47.1	59.2	50.3
West Bengal	26.4	28.6	25.1	33.9	57.6	37.3	55.8	77.1	59.3

Source: Authors' calculations from PLFS 2019-20 unit level data.

Figures are based on the first visit. For Arunachal Pradesh, Bihar, Mizoram and Nagaland, the female LFPR of the lockdown quarter have been taken as they were and for all others, the average LFPR of previous 3 quarters have been considered for estimating the unemployment rates.

6. CONCLUSION AND POLICY IMPLICATIONS

It is evident that the unemployment rate in India increased by two-and-a-half times in the first months of lockdown (April-June, 2020) as compared to the average of the previous three quarters, at an aggregate level. In urban areas the unemployment rates became more than three times. Further, the proportion of labour force earning less than Rs.100 a day increased from 15% to 26.5% and that for less than Rs.200 a day increased from 30% to 42.5% due to lockdown. According to our calculations, the labour force with zero income also increased enormously from less than 9% during pre-lockdown to more than 20.5% during the first three months of lockdown. There were also substantial differences by gender with female unemployment rate increasing by 227% as compared to 140% rise among males.

Among social groups, 48% of SC, 46% of ST, 42% of OBC and 42% of the labour force among Others stood at less than Rs. 200 a day during April-June 2020.41.5% of Christian, 44% of Hindu and Muslim and 48% of the labour force from Other religious background earned less than Rs.200 a day during these months. In fact, the labour force in urban areas, women, Other religious group and SCs & STs have borne the brunt of the lockdown quite disproportionately. Across states, 62% of the labour force in Chhattisgarh, 59% in West Bengal, 53% in Kerala, 50% in Uttarakhand, Odisha, MP and Tamil Nadu, and 49% of the labour force in Maharashtra, Assam and Andhra Pradesh earned less than Rs.200 a day during the first three months of lockdown. At the all-India level, the proportion of labour force earning less than Rs.200 a day increased by more than 10 percentage points (from 32% to 42.5%) during the first phase of lockdown. Therefore, it is not difficult to understand that a large number of households became severely impoverished due to lockdown.

One of our main policy suggestions emerging from the above analysis is that, there is an urgent need to expand the employment of "last resort programmes" to the urban areas as well. A Universal Employment Guarantee Policy at enhanced wage rate, which can be achieved with an expenditure of just 1% of the GDP (Das, 2022), must be seriously deliberated upon. The government is already spending around 0.5% of GDP on the rural employment guarantee programme in the country. Therefore, the extra cost of providing a universal employment of last resort programme at a higher wage rate would only be around 0.5% of GDP or just around 2% of the combined government expenditure in the country. It is our opinion that, to eradicate extreme poverty and to improve human development, this step should be prioritised at the current juncture. Given the high marginal propensity to 'consume' of the poorest of the poor, the multiplier effect of this expenditure would be substantially high and the future revenue receipt of the government (as a function of national income) would also be higher. Therefore, this could also be a fiscally prudent policy initiative.

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