

## UNEMPLOYMENT RATE ESTIMATED FROM PLFS SURVEY FOR 30+ MUCH LOWER THAN 15-29 AGE GROUP

Issue No. 17, FY20  
Date: 14 JUNE 2019

A closer look at the PLFS report raises several questions that begs an answer. **First**, the methodology adopted for the PLFS is based on education level of households where larger weights are assigned to households having higher number of 10th pass members above 15 years cannot be compared to earlier Survey of EUS which is based on expenditure (urban) or livelihood (rural) of households. **Second**, the report reveals that the extent of formalization in the economy has declined between FY12 and FY18, that is really surprising. For example, as per payroll estimates more than 11 crore of out of 50 crore (assuming) working population get a salary every month and thus formalization in the economy is around 22%. This is not bad and it makes India the 3 largest payroll employee country in the world after China and US.

**Third**, PLFS survey reported the unemployment in the age-group 15-29 years is as much as 17.8% and it significantly declines to 6.1% for age group of 15-59 years. We believe this huge variation could be due to change in employment pattern, with the percentage of men/women in the education system being very high in the age-group of 18-23 (35 million!) and not being part of the labour force. Thus, it could push up the unemployment rate in the 15-29 age bucket as a pure statistical artefact (lower labour force/ denominator). **Fourth**, the survey does not report unemployment rates for the 30+ age group. Nevertheless, based on the unemployment estimates and the age group wise population shares provided, we estimated the infer the unemployment rates for the 30+ age group. Our estimates based on 2011 census data, show that the unemployment rates for the 30+ age group are much lower than the 15-29 age group. For e.g. in 15-29 age group, the PLFS reported unemployment rate for Rural Male was 17.4% whereas our estimated unemployment rate for 30+ age group came at 2.7% significantly lower. The same discrepancy was also observed among all Rural Female, Urban Male and Urban Female. In fact, there are instances where the unemployment rate turns out to be negative. Such negative values are possibly reflecting incorrect weights, for instance, the 15-29 age group is considered working age, but the entire population in this age group may not be in the labour force. We believe the NSSO report is a veritable storehouse of data and it should be used for constructive discourse and proper policy making. Specifically, we believe that there is a dire need to adopt state-specific employment generation policies, as North India has the highest no of enrolment of graduates with as much as 10 mn!

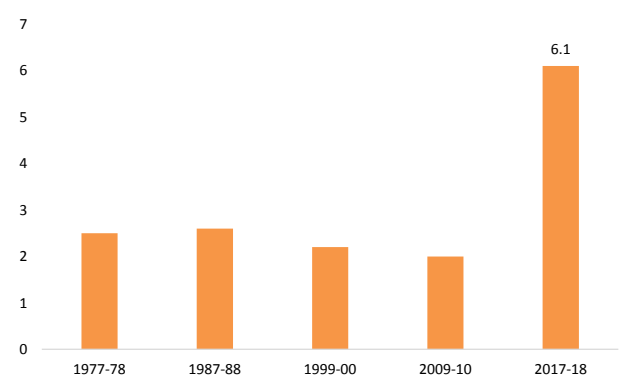
### NSSO REPORT ON EMPLOYMENT

- ◆ To overcome the issues of existing EUS-NSSO surveys like representation, periodicity and timeliness, the Ministry of Statistics and Programme Implementation (MoSPI) had decided to undertake the Periodic Labour Force Surveys (PLFS) from 2017-18.
- ◆ According to the report, the unemployment rate in the country was 6.1% in 2017-18, at its highest level since 1972-73. The report also provides unemployment rates for rural and urban areas with male and female categories in the age group of 15-29 years, which are almost two to three times more than the 2011-12 rates (based on EUS survey).

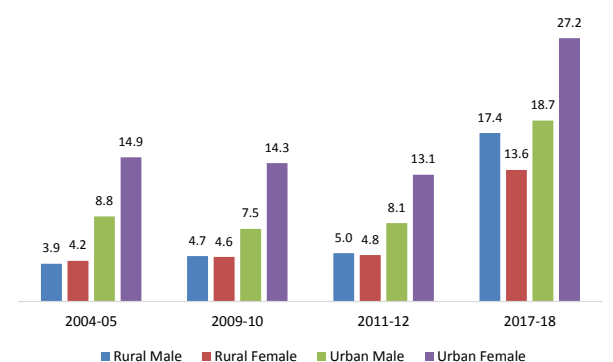
### READING BETWEEN THE LINES

- ◆ First, the methodology adopted for the PLFS is different from the earlier Survey. It is a two-year pilot started in July 2017 based on education level of households where larger weights are assigned to households having higher number of 10th pass members above 15 years, whereas the EUS is based on expenditure (urban) or livelihood (rural) of households. Thus, PLFS and EUS are not strictly comparable.
- ◆ Second, the report also reveals that the extent of formalization in the economy has declined between FY12 and FY18, that is really surprising. The survey results also show an increasing trend of workers without any formal job contract. But, the formal jobs are currently around 2.5 crore in Government, including both Center and State, 7.0 crore from the EPFO and 1.5 crore from ESI. Thus, 11 crore is total number of people on payroll who get a salary every month and are formal employees. Even if we assume a working population of 50 crores, this implies formalization in the economy is around 22%!

Unemployment Rate (%)



Unemployment Rate- Rural and Urban (15-29 yr,%)



Source: NSSO; SBI Research

- ◆ Further, Ghosh and Ghosh (2018) had estimated that yearly there is an addition of 70.4 lakh jobs to formal sector. So, the fallacy of extent of formalization is declining could be negated.
- ◆ Third, as per the PLFS survey, the unemployment in the age-group 15-29 years is as much as 17.8%. However, in the age-group 15-59 years it significantly declines to 6% (overall at 6.1%). The critiques will argue this is a case of serious youth unemployment, but it's actually a reflection of changing employment pattern, with the percentage of men/ women in the education system being very high until the age of 23-24. Earlier, it used to be only up to 17 years. As per PLFS, these people are not counted in labour force because they are still in colleges! This could thus push up the unemployment rate in the 15-29 age bucket as a pure statistical artefact (as unemployment rate is explained as a %age of labour force). Interestingly, as per the MHRD data, the total number students enrolled for graduation and diploma (under and post graduation) was as much as 36 million in FY18, of which 10 million is from North alone! How do one account for this shifting employment pattern?
- ◆ In our view, there should be more discussion taking account the classic papers by Diamond, Mortensen and Pissarides (2010 Nobel winners) on search unemployment. The search theory indicate that in many markets, buyers and sellers do not always make contact with one another immediately. This concerns, for example, employers who are looking for employees and workers who are trying to find jobs. Since the search process requires time and resources, it creates frictions in the market. On such search markets, the demands of some buyers will not be met, while some sellers cannot sell as much as they would wish. Simultaneously, there are both job vacancies and unemployment on the labor market.
- ◆ We believe such shift in employment pattern will result in very different unemployment rates for higher age buckets. Unfortunately, the survey does not report unemployment rates for the 30+ age group (the EPFO does!). Nevertheless, based on the unemployment estimates and the age group wise population shares provided, it is possible to infer the unemployment rates for the 30+ age group. Our estimates based on 2011 census data, show that the estimated unemployment rates for the 30+ age group are much lower than the 15-29 age group. For e.g. in 15-29 age group, the PLFS reported unemployment rate for Rural Male was 17.4% whereas for the estimated Unemployment rate for 30+ age group was comedown significantly to 2.7%. The same discrepancy also observed among all subcategory.
- ◆ In fact, there are instances where the unemployment rate turns out to be negative. Such negative values are possibly reflecting incorrect weights, for instance, the 15-29 age group is considered working age, but the entire population in this age group may not be in the labour force, thereby substantiating our case. If this is true, the weights employed in generating state and national level estimates may be flawed, leading to an overestimation of unemployment in the 15-29 age group!

Total Enrolment				
Region	Total Enrolment during Age 18-23* (in Lakh)			Major States/Uts
	FY17	FY18	% YoY	
Central	22.6	24.4	8.1	MP, Chhattisgarh
East	52.9	52.3	-1.0	Bihar, Odisha, WB, Jharkhand
N-E	10.1	10.6	5.3	Assam
North	99.8	103.9	4.1	UP, Delhi, Haryana, HP, Punjab
South	94.2	94.8	0.6	AP, Karnataka, Kerala, TN, Telangana
West	72.3	74.7	3.4	Maharashtra, Gujarat, Rajasthan
All-India	351.8	360.7	2.5	-

Source: MHRD; SBI Research; \* includes UG, PG, Diploma, PG Diploma

Population Shares (%) by Age Group & Inferred Working Age Share				
Age Group	Rural Male	Rural Female	Urban Male	Urban Female
0-4	10.1	9.8	8.0	7.8
5-14	23.2	22.5	18.6	18.0
15-29	27.1	26.5	29.1	29.0
15+	66.4	67.3	73.0	73.8
30+	39.2	40.8	43.9	44.8
Working Age (15-64)	61.0	61.4	68.2	68.4
Population Share (15-29)	27.1	26.5	29.1	29.0
Working AgeShare (15-29)	44.5	43.2	42.6	42.5
Working AgeShare 30+	64.3	66.4	64.4	65.5

Source: Census 2011; SBI Research

Estimated Unemployment Rates (UR) in Usual Status for 30+ Age Group (%)						
	Population Share (15-29, %)	Working Age Share (15-29, %)	UR 15+ (%)	UR 15-29 (%)	UR30+ (Using Population Share)	UR30+ (Using Working Age Share)
Rural Male	27.1	44.5	5.8	17.4	2.7	-2.2
Rural Female	26.5	43.2	3.8	13.6	0.5	-2.6
Urban Male	29.1	42.6	7.1	18.7	3.8	-0.6
Urban Female	29.0	42.5	10.8	27.2	6.5	0.2

Source: Census 2011, SBI Research

- ◆ The possible imprecision in weights could be a result of the change in the criteria in the PLFS Survey for the selection of households in the second stage for both rural and urban areas, based on the number of members in the household having general education up to secondary level (10th standard). This brings a huge bias. By doing so, we are assuming the first criteria of having a job (formal or informal) is having secondary education. This might be true for formal, but there are no such criteria for informal jobs!
- ◆ Such criteria are also not representative of the population if we look at census 2011. The percentage of people above secondary education is 35.2% in urban and is only 15.3% in rural! Given that household-level secondary education was not readily available from Census 2011, the PLFS survey might have used some proxies. Also, overall literacy rate is at 63.07%. but as per PLFS, only 25% is sampled from this population. Thus, by doing second stage stratification dependent on secondary education, we are making the sampling highly skewed (under sampling).

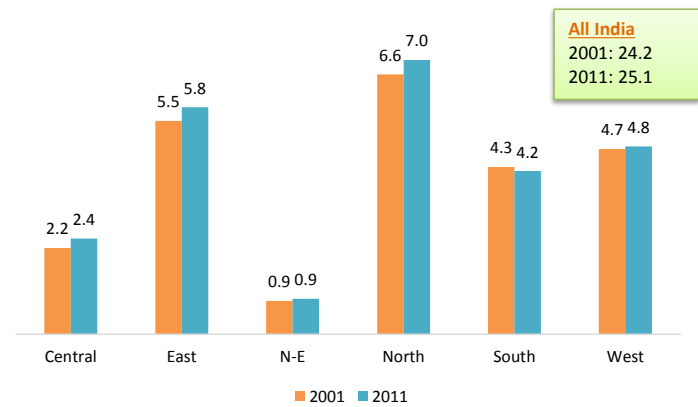
- ◆ The meaning of employment is changing fast. We are in a gig economy where jobs and earning are no longer same - at least to the millennials. This change of perception in earnings and job is critical and any survey needs to reflect this new phenomenon. Hence, if a surveyor simply asks "are you employed", the immediate answer will be an emphatic "no", since employment means permanent salary every month. If one asks the same person, if his/her income is "zero", again the answer will be an emphatic "no", implying he/she has income.
- ◆ In the NSSO PLFS 2017-18 questionnaire, block 5.1 of Schedule 10.4 states the question related to the status of employment and the response are like are you self employed or an employer, or worked as helper or didn't work but was seeking and available for work. If the question is based on income and whether he/she is earning is "Zero" income, then the response could have been different.

#### OUR REMARKS

- ◆ We believe that there is a dire need to adopt state-specific employment generation policies. When we analyse the total enrolment of students under age band of 18-23 (includes UG, PG, Diploma, PG Diploma courses), the North India has the highest enrolment with yoy growth more than national level also. Hence it will be always a challenge to provide enough job opportunities in North India compared to say West or South India.
- ◆ Further the data regarding babies born (after adjusting infant mortality rate from total live birth) also indicate that both North India and East India are driving the over all population growth. And these two regions are facing more challenges as compared to the Southern and Western region. Further, the region wise migration data also support this argument where larger part of labour force from East and North eastern region are migrating to South and western region for searching jobs.

\*\*\*\*\*

#### Region-Wise: Babies Born (in Million)



Source: Census; SBI Research

#### Net Interstate Migration Rate (per 100 of population)

State	Census, 1991-01	NSS, 2007-08	Census, 2001-11
Andhra Pradesh	-0.31	-0.87	-2.02
Assam	-0.69	-0.5	-2.21
Bihar	-2.67	-5.64	-3.39
Gujarat	1.67	1.63	1.64
Haryana	4.07	3.52	2.01
Himachal Pradesh	0.98	-	-0.4
J & K	-0.42	-1.24	0.37
Karnataka	0.29	0.97	1.68
Madhya Pradesh	-0.04	-0.68	0.48
Maharashtra	3.02	4.1	2.7
Odisha	-0.65	-1.26	-0.55
Punjab	1.66	1.27	0.77
Rajasthan	-0.59	-0.93	-1.34
Tamil Nadu	-0.68	-1.42	4.92
Uttar Pradesh	-2.04	-3.1	-1.94
West Bengal	0.37	1.34	-0.5

Source: Census, Mistri A (2015), SBI Research,

**Disclaimer:** The Ecowrap is not a priced publication of the Bank. The opinion expressed is of Research Team and not necessarily reflect those of the Bank or its subsidiaries. The contents can be reproduced with proper acknowledgement. The write-up on Economic & Financial Developments is based on information & data procured from various sources and no responsibility is accepted for the accuracy of facts and figures. The Bank or the Research Team assumes no liability if any person or entity relies on views, opinion or facts & figures finding in Ecowrap.

#### Contact Details:

Dr. Soumya Kanti Ghosh  
Group Chief Economic Adviser  
State Bank of India, Corporate Centre  
M C Road, Nariman Point  
Mumbai - 400021  
Email: soumya.ghosh@sbi.co.in  
gcea.erd@sbi.co.in  
Phone: 022-22742440  
:@kantisoumya