SBI Research

India’s Unemployment Rate is at a record low…India’s labour market is undergoing a deep structural transformation with self-entrepreneurship across all echelons and higher educational attainment emerging as key enablers….old fashioned rhetoric needs to be reinterpreted

14-November-2023

Please see the last page for disclaimer

Executive Summary….1/3

- The recently released sixth annual PLFS report from the NSSO gauging unemployment rates across rural and urban areas for Pan-India as also states with different levels of disaggregation like gender, age, etc. reveal a significant decline in unemployment rate from 6.1% in FY18 to 3.2% in FY23, with an accompanying increase in Labour Force Participation Rate /LFPR from 36.9% to 42.4%, with the Female Labour Force Participation Rate far outstripping the overall gain in LFPR

- Unemployment is always a contentious and political issue, more so for developing economies, and it is no surprise that even as the unemployment rates in PLFS survey data for the 5-year period ended has revealed a significant decline, there is a plethora of misplaced & ignorant data interpretations in public domain, some political, some economic and laced with old fashioned rhetoric…regarding….for example, the jump in self employed populace and youth unemployment

  - **Firstly, interpreting the jump in self-employed populace within the employment estimates (57.3% in FY23 now against 52.2% in FY18) with main traction coming from rising share of household helpers evidentially has been wrongfully interpreted by labour economists and others as a signal of shrinking employment opportunities**… **The fact is however….(a)** the central tendency of self employed in India's labour force has always been trending much above 50%, even during the NSS EUS days through 1980s and 90s to 2000s**…….(b**) **The Government emphasis on entrepreneurship through PMMY and even recent schemes post pandemic like PM-SVANidhi for those at bottom of the pyramid is imparting a structural transformation in labour markets in India** through formalization of credit for such family enterprises and it is heartening that the family enterprises are getting bigger and this is getting reflected through a rise in household helpers. Also, **(c)** with primary subsistence needs like food, shelter, medical needs being taken care by the Government through free ration for 80 crore people, PMAY and Ayushman Bharat, apart from additional state schemes, such people are making a clear trade-off between earnings & working in family enterprises.. earnings have actually increased across all categories…

  - **Secondly, the youth unemployment rate in PLFS survey (between age group of 15-29 years) even though shows a decline from 12.9% to 10% for the 3-year period ended FY23 is still cited wrongfully as a proxy for shrinking unemployment opportunities**. However, while there is a lot of noise about it being a barometer of serious youth unemployment, **we believe it's truly a reflection of changing employment-education pattern, with the men/women remaining in the education system at least until the age of 23-24 years** which used to be only up to 17 years earlier. As this sub-group **(~41 million in 2020-21 per MHRD data**, with 11 million from the northern states alone) is not counted in labor force, this could be pushing up the unemployment rate in the 15-29 age bracket as a pure statistical artefact….(low denominator in terms of labour force) if we reestimate the unemployment rates for 30+ group separately…**in 15-29 age group, the PLFS unemployment rate for urban male at 13.8% comes down to 2.9% in the 30+ age group urban male**

Executive Summary….2/3

- **Back in the angst filled days of mid-70s, when the unemployment rate was pegged at just 2.5% in an era of Hindu growth rate chequered with abysmal level of Gross Capital formations and Savings**, the decision to change the EUS with PLFS seems to be in sync with changing realities….**Strikingly, EUS-NSSO survey pegging unemployment at a meagre 2.0% in the heydays of global financial crisis in 2009-10 raises eyebrows for sure**

- Perhaps, the implausible variance in unemployment rates across the earlier NSSO and current PLFS survey stems from the starkly different methodologies employed by these two; **PLFS considers education level of households where larger weights are assigned to households having higher number of 10th pass members (above 15 years)** while previous survey of EUS-NSSO was based on expenditure (urban) or livelihood (rural) of households (*it is thus natural to have an unemployment rate of 2.5% in 1977-78 when PFCE was more than 75% of GDP*)

- The rapid increase in educational enrollments post secondary levels (as more students were lured to schools by state welfare initiatives in past decade), a greater portion qualified 'naturally' to seek post-secondary enrollments (dubbed higher education)..**It however seems the time may have come again to tweak the absolute, omnipotent benchmarking given to higher educational qualifications in PLFS** as education is the most critical factor in deciding the unemployment rate (In the last three years, maximum deceleration in unemployment rate is visible in the persons having education of secondary and above) and one needs to calibrate the education/employment matrix rationally**…. 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 bracket as a pure statistical artefact (as unemployment rate is explained as a percentage of labour force)…..**

Executive Summary….3/3

- An alternate employment survey by CMIE, CPHS too possibly suffers from innate flaws in its sample selection technique, thereby under-representing women and young children as also the poor while overrepresenting the other extreme (**Somanchi 2021**)… Interestingly, b**oth PLFS and CMIE give urban unemployment rate and their mean are nearly same for quarterly data of June 2018 to June 2023**

- But CMIE urban unemployment is more skewed, i.e. concentration is more towards higher values, signifying that unemployment measured through CMIE urban employment is more on upside in comparison to PLFS…. **As an example, kurtosis of CMIE urban unemployment is nearly double the kurtosis of PLFS signifying that there is too much concentration near high peak of central value, again signifying that CMIE urban employment is more on upside in comparison to PLFS**…..Urban Kurtosis might be high, because the respondents might be changing…. People in the lower part moves a lot and thus household addresses changes. So CMIE unemployment survey might be concentrating more on the stable households, thereby on stable income resulting in average higher echelon

- **PLFS might be more distributed as they do more granular stratified sampling**

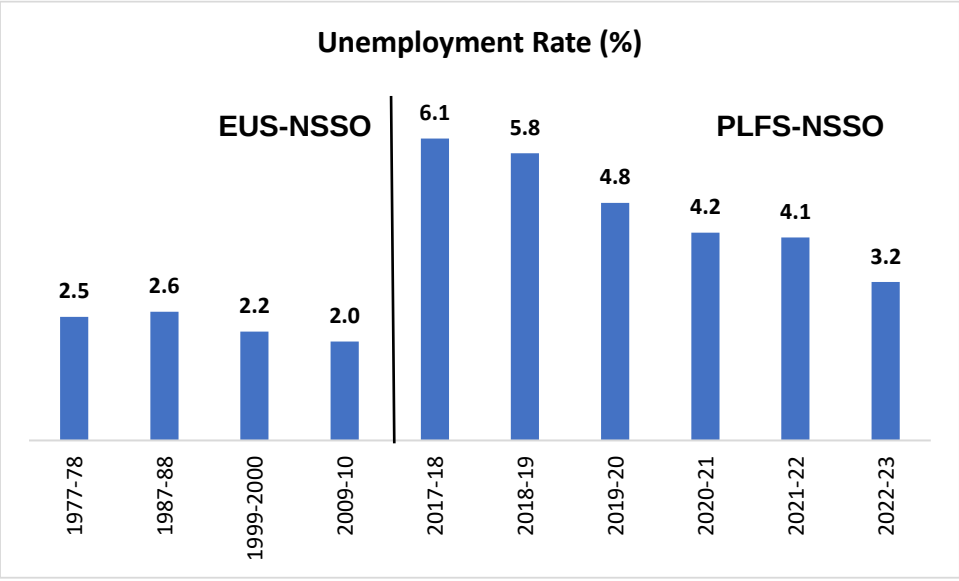
PLFS Survey

Backdrop

- Unemployment rate in India is based on the survey conducted by the Government, the Periodic Labour Force Survey (PLFS). PLFS surveys were initiated in 2017 to overcome the issues of the then existing Employment and Unemployment survey (EUS-NSSO) like representation, periodicity, and timeliness and since then the annual surveys are being conducted and reports are released
- The report provides unemployment rates for all India and state wise in both rural and urban areas with different levels of disaggregation like gender, age, etc. The estimate for the age group of 15-29 years is also given in the survey result
- The latest one released in Oct'23 is the sixth annual PLFS report brought out by the NSSO
- The survey uses a rotational panel sampling design in urban areas, wherein each selected household in urban areas is visited four times – in the beginning with first visit schedule and thrice periodically later with revisit schedule. However, there is no revisit in the rural samples

Unemployment Rate has shown a significant decline from 6.1% to 3.2%.....

- The overall unemployment rate as indicated by PLFS survey increased to 6.1% in 2017-18, higher than 2.0% in 2009-10 as indicated by the earlier EUS-NSSO survey. The unemployment rate of PLFS however has declined much over the years
- **However, the two are based on different methodologies which makes them incomparable**. 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 while **earlier survey of EUS was based on expenditure (urban) or livelihood (rural) of households, thus perhaps having a built-in mechanism of a downward bias as consumption expenditure in India is always on the higher side….in 2009-10 just after the crisis, the unemployment rate was estimated at a measly 2%, and even in 1970's at 2.5-2.6%....during periods of Hindu rate of growth…..**
- However, there are certain limitations of the survey-based estimates which need to be appreciated and rectified



Economic Indicators (decadal average)							
	Real GDP Growth (%)	combined FD as % of GDP	CPI IW	CAD as % of GDP	PFCE as % of GDP	GCF as % of GDP	Gross Savings as % of GDP
1977-78	3.3	5.7	5.7	-0.1	78.4	18.6	16.5
1987-88	5.7	7.7	9.3	-1.8	73.7	22.0	18.6
1999-2000	5.8	7.4	7.7	-1.2	65.3	26.2	23.3
2009-10	6.3	7.7	9.5	-0.7	59.7	32.8	31.7
Source: RBI, SBI Research							

Distribution of workers

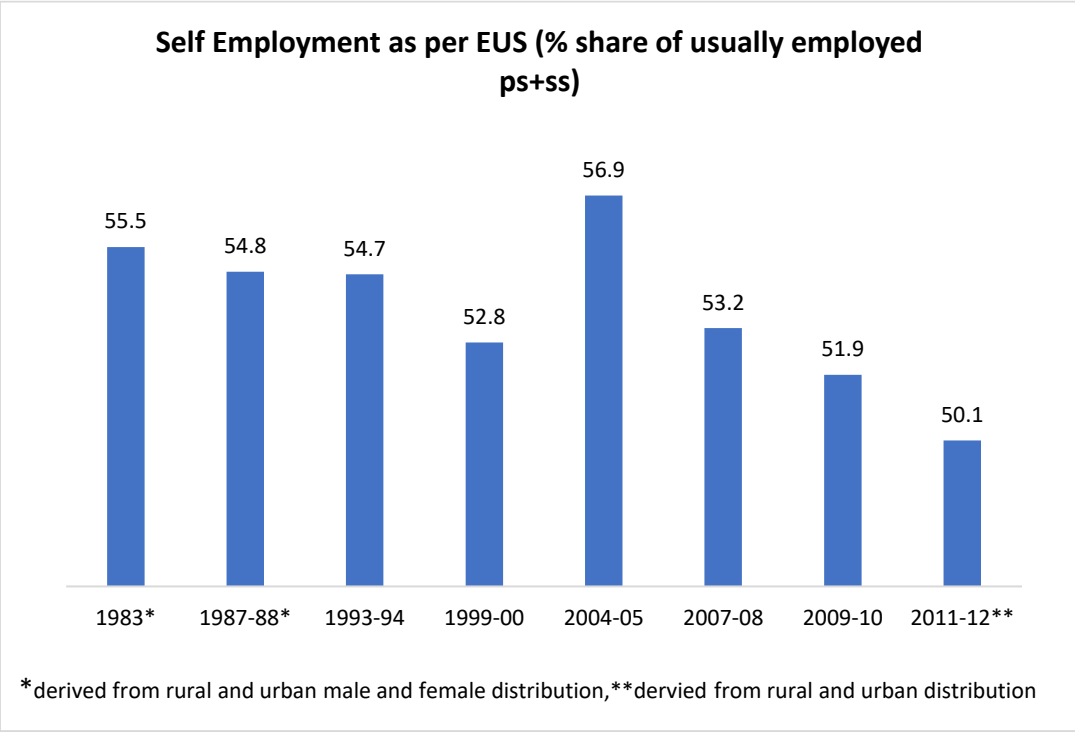
- Self employment share in employment estimated shows an increase to 57.3%. Within self employed, helpers in household enterprise have increased from 13.6% in 2018 to 18.3% in 2023
- Average monthly earning of casual workers has increased by ~1.3 times during 2018-2023

Distribution of workers in usual status (ps+ss) by status in employment estimated (%)						
	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Self-employment	52.2	52.1	53.5	55.6	55.8	57.3
of which, own account worker and employer	38.6	38.8	37.6	38.2	38.3	39.0
Helper in household enterprise	13.6	13.3	15.9	17.3	17.5	18.3
Casual Labour	24.9	24.1	23.6	23.3	22.7	21.8
Regular/Salaried wage	22.8	23.8	22.9	21.1	21.5	20.9
Source: SBI Research, PLFS Survey Report						

Apr-Jun Quarter in each year						
	2017-18	**2018-19**	**2019-20**	**2020-21**	**2021-22**	**2022-23**
Self-employment (Average gross earnings in Rs during the last 30 days)	14,878	10,648	9,541	10,363	12,186	13,347
Casual wage (Average earnings in Rs per day)	316	291	293	327	383	403
Regular wage (Average wage/ salary earnings in Rs during the preceding calendar month)	17,473	16,196	17,600	17,509	18,585	20,039

Distribution of workers – Self Employment

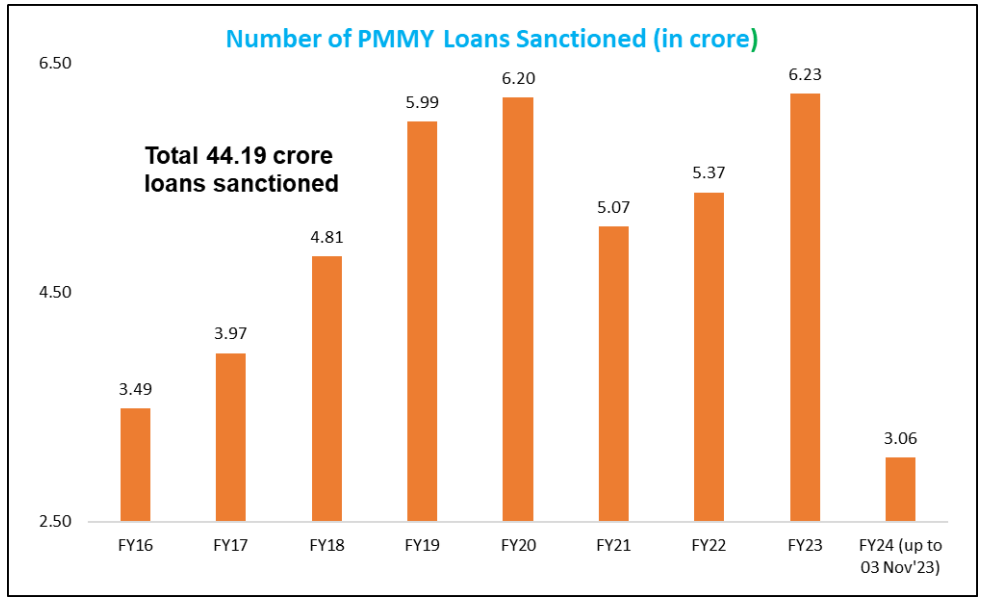
- Indian labour market is always characterized by a larger than proportionate share of self employment in employment…has always been higher (more than 50%)…And the share of helpers has been large…
- Its share in usually employed as per NSS EUS reports stood at 55.5% in 1983. It reached a high of 56.9% in 2004-05 and declined thereafter, however it was still above 50%



Distribution of workers in usual status (ps+ss) by status in employment estimated (%)			
	2007-08	2009-10	2011-12
Self-employment	53.2	51.9	50.1
of which, own account worker and employer	38.2	35.3	34.8
Helper in household enterprise	14.9	16.3	15.3
Source: SBI Research, EUS-NSSO, own account workers and helpers in household enterprise are estimated based on rural agri and non agri labours under self employment			

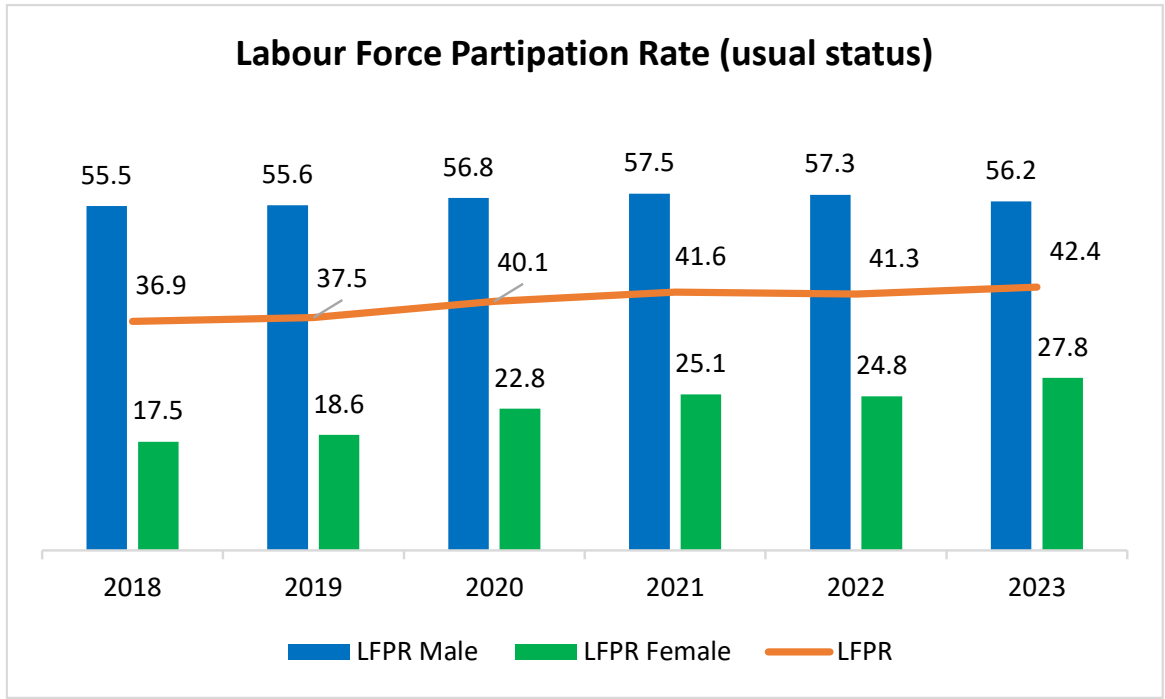
PMMY / MUDRA & PM SVANidhi: How Self-employment is getting formalised

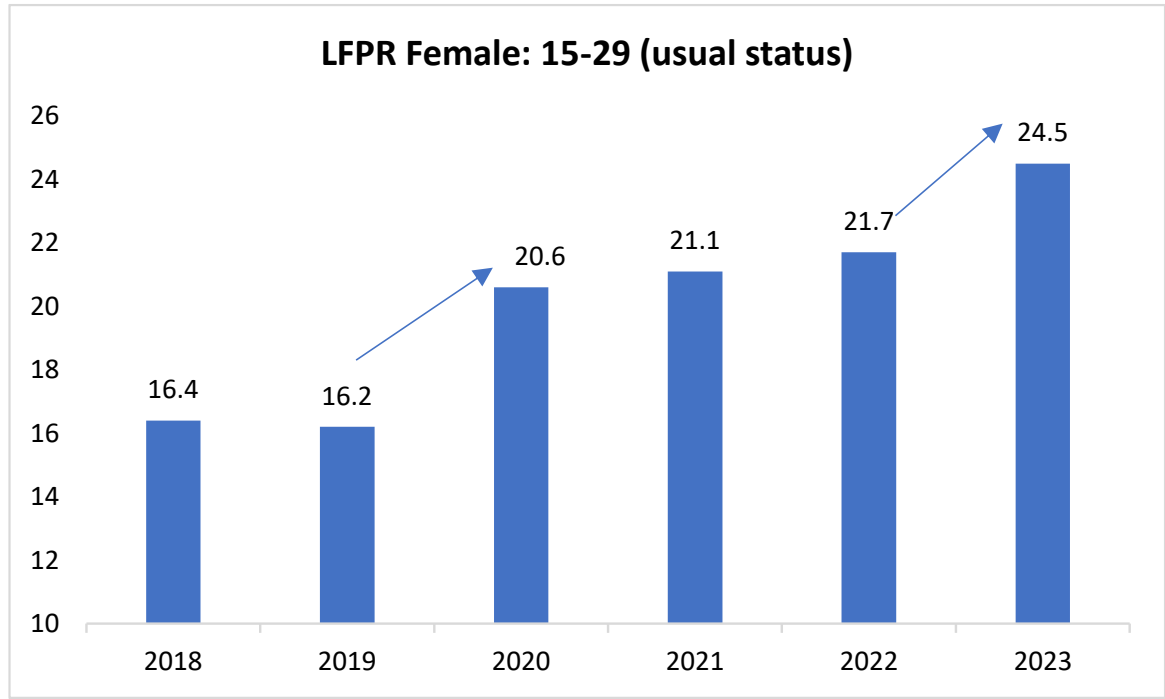
- A telescopic view of the total disbursement under the scheme shows that since its launch, the Unique Selling Proposition of PMMY has been well received by diversified intended beneficiary classes, raising the economic clout of the bottom
- The growth in amount of loans disbursed average 33% in the first three years but declined there after due to COVID-19. Again, disbursal increased by ~36% in FY23
- Average ticket size of the loans have nearly doubled; ~Rs 72,000 in FY23 from ~Rs 38,000 in FY16
- The PM SVANidhi Scheme launched post pandemic and till date around 72 lakh loans disbursed in all three tranches, benefiting over 55 lakh street vendors, with a total value exceeding Rs 9,400 crore.. The persistency ratio (2nd loan/1st loan repaid) is increasing indicating need and popularity of PM SVANidhi Scheme
- **The Government emphasis on entrepreneurship through PMMY and even recent schemes post pandemic like PMSVanidhi for those at bottom of the pyramid is imparting a structural transformation in labour markets in India through formalization of credit for such family enterprises and it is heartening that the family enterprises are getting bigger, and this is getting reflected through a rise in household helpers**



Labour Force Participation Rate

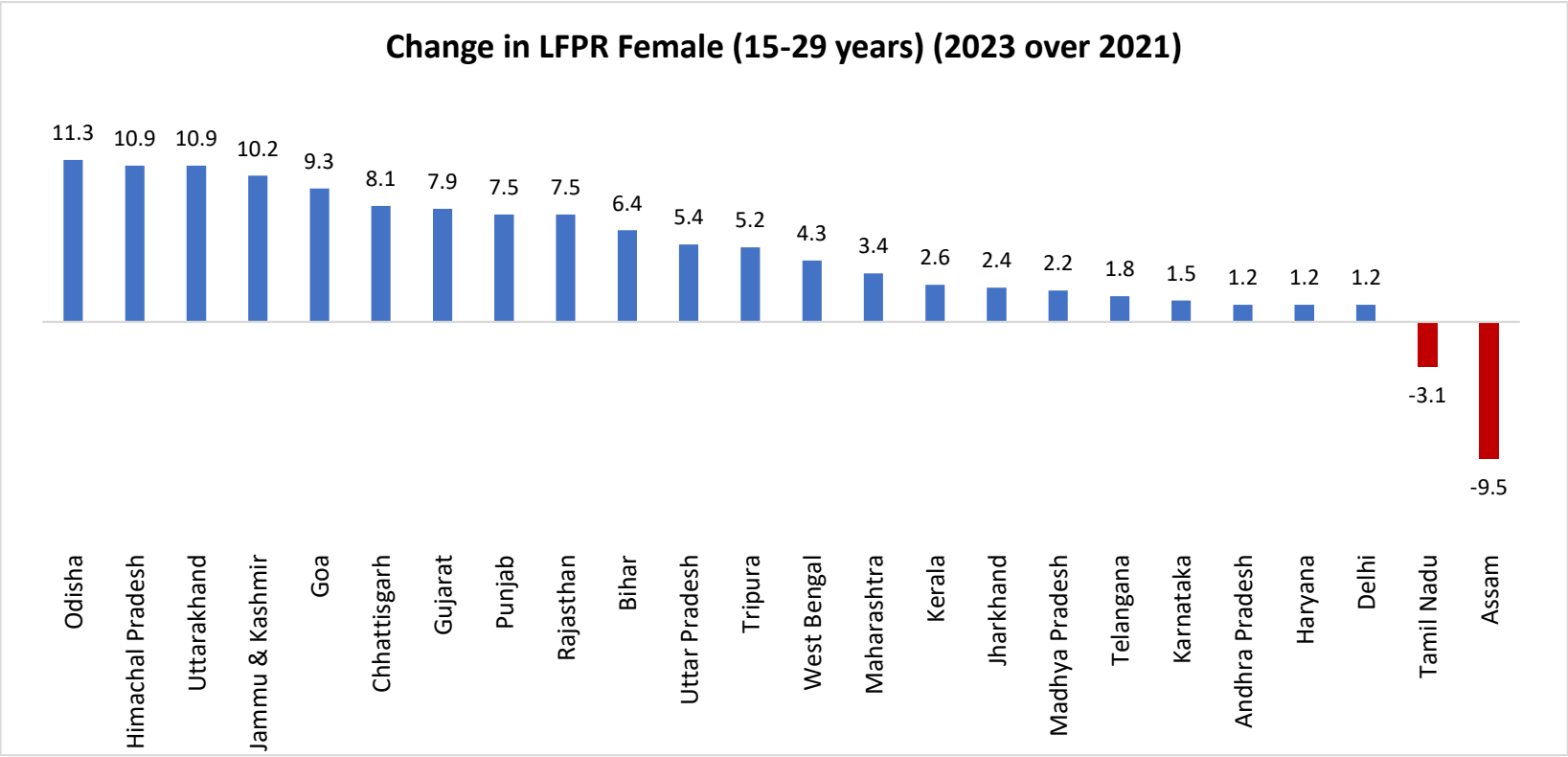
- Labour force participation rate (usual status) as per PLFS has increased from 36.9% in 2018 to 42.4% in 2023, with major increase in female LFPR (17.5% to 27.8% during the same period)
- LFPR of female between 15-29 years has increased from 16.4% in 2018 to 24.5% in 2023





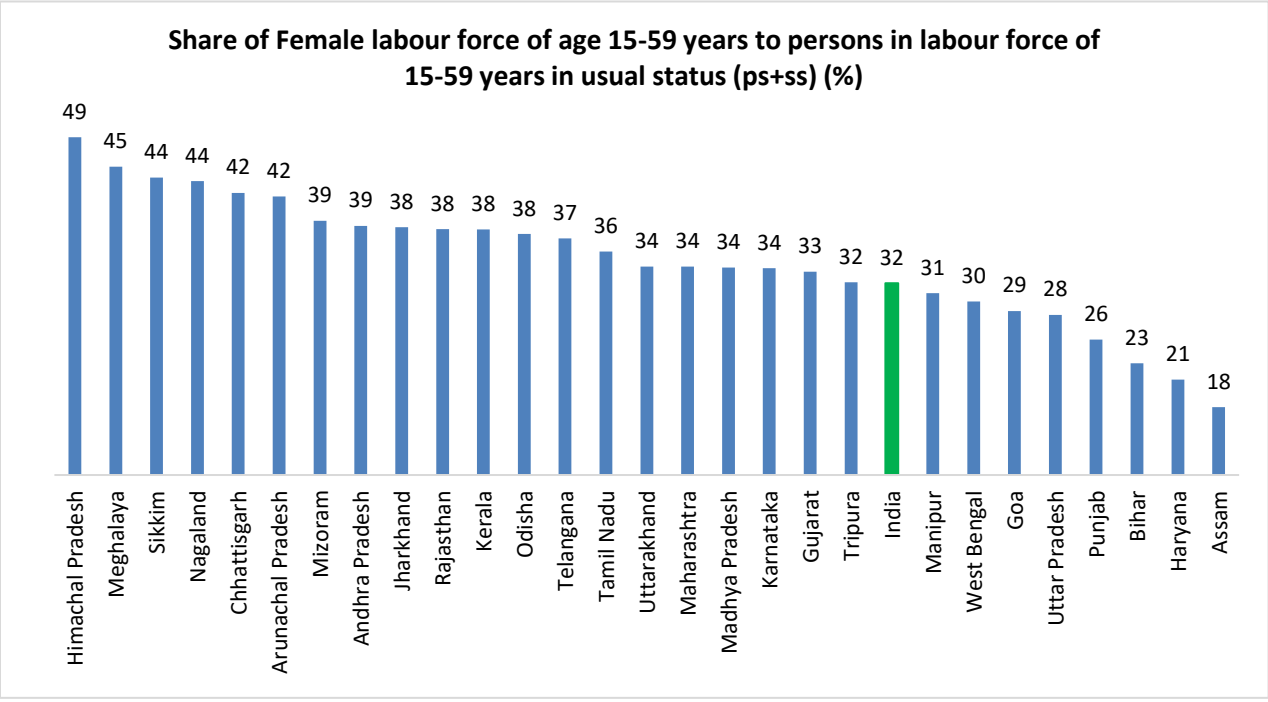
Female Labour Force Participation Rate increased across states

- Labour force participation rate among female 15-29 years of age has increased across the major States with exception of Tamil Nadu and Assam
- Maximum increase has been witnessed by Odisha, followed by Himachal Pradesh and Uttarakhand



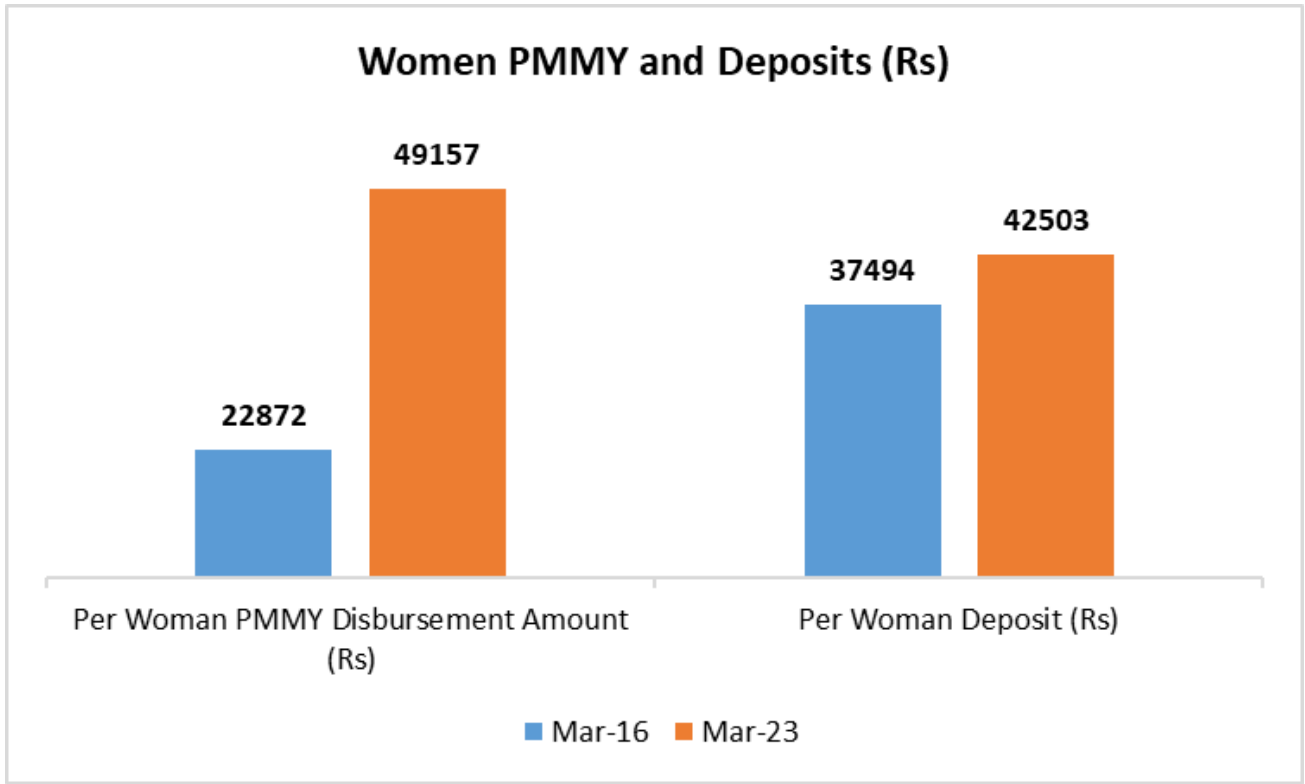
Female Labour Force (15-59 years) form 32% of total persons labour force (15-59 years) in usual status

- Ratio of female of age 15-59 years in labour force in usual status (ps+ss) to persons of age 15-59 years in labour force in usual status (ps+ss) stands at 32%, improved from 28% in 2019-2020
- Himachal Pradesh has the best ratio of 49% followed by Meghalaya at 45%, Sikkim and Nagaland at 44% and Chhattisgarh at 42%. States in North-east have performed much better in this indicator



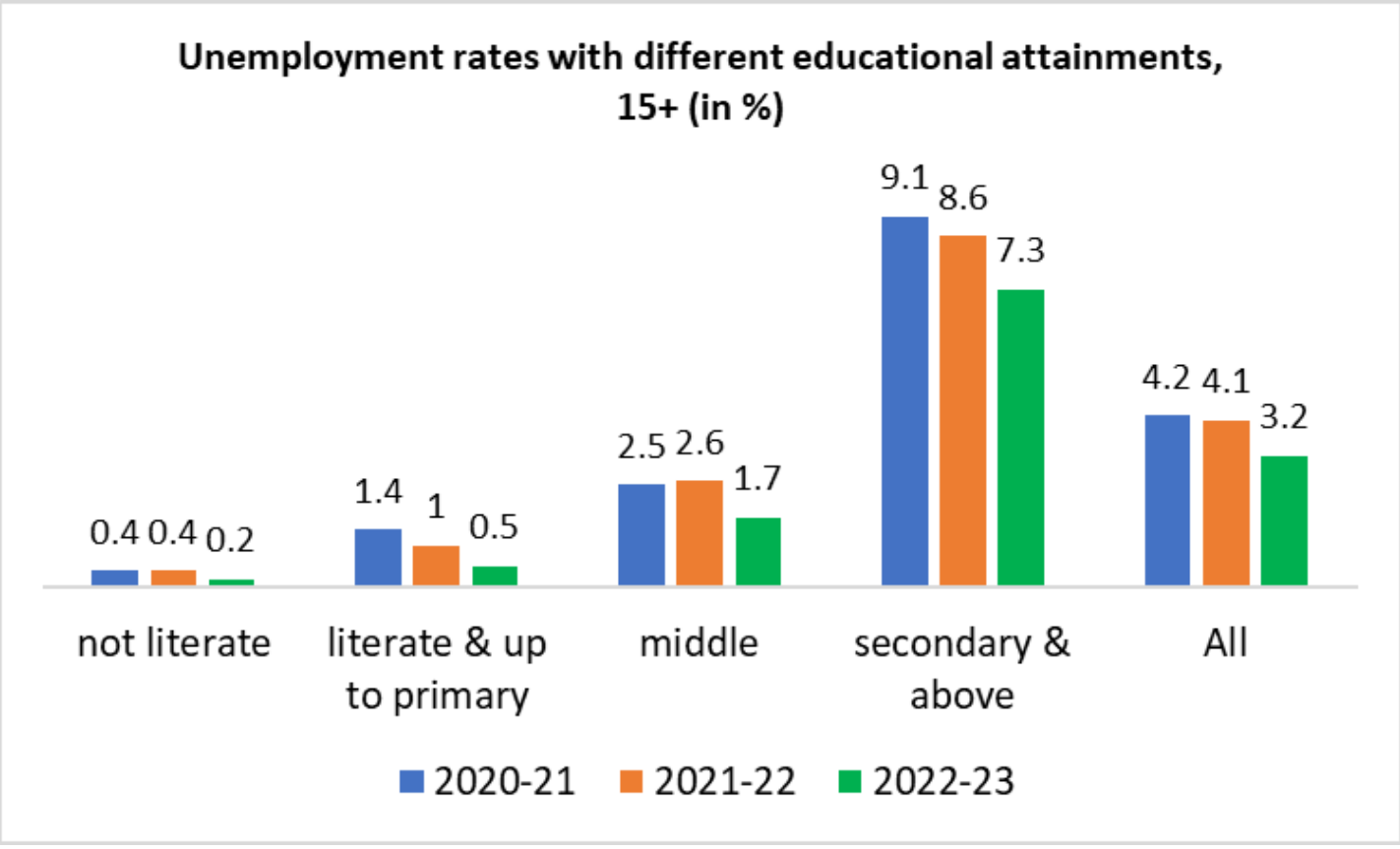
How Women are getting empowered due to PMMY..resulting in increase in LFPR for female..

- Increasing women participation in PMMY resulting in better financial situation of women borrowers
- In the last six years (FY23 over FY16) while per woman PMMY disbursement amount increased to Rs 49,157and the per woman deposits increased to Rs 42,500
- **Thus, PMMY is an effective power tool for women empowerment at grass root level**



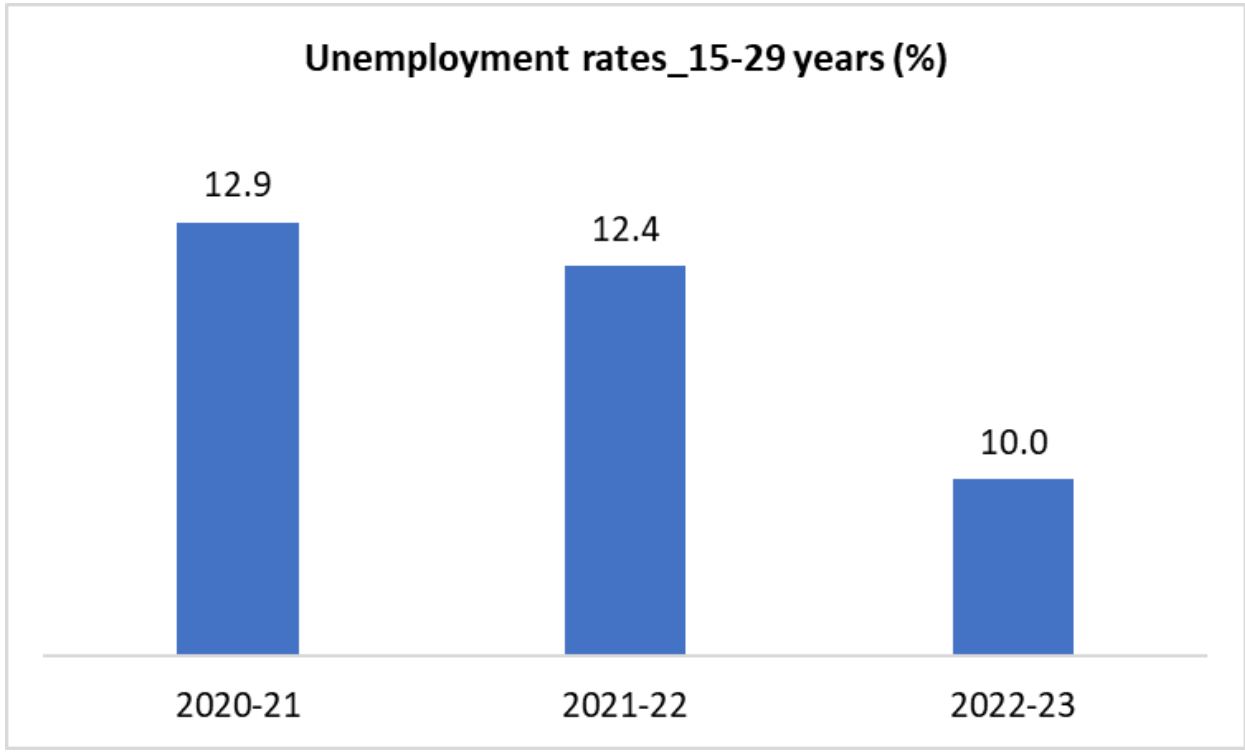
In PLFS, unemployment rate with different educational attainments show a steady decline

- Education is the most important factor affecting the unemployment rate in PLFS
- In the last three years, maximum deceleration in unemployment rate (though it is highest among all categories) is visible in the persons having education of secondary and above



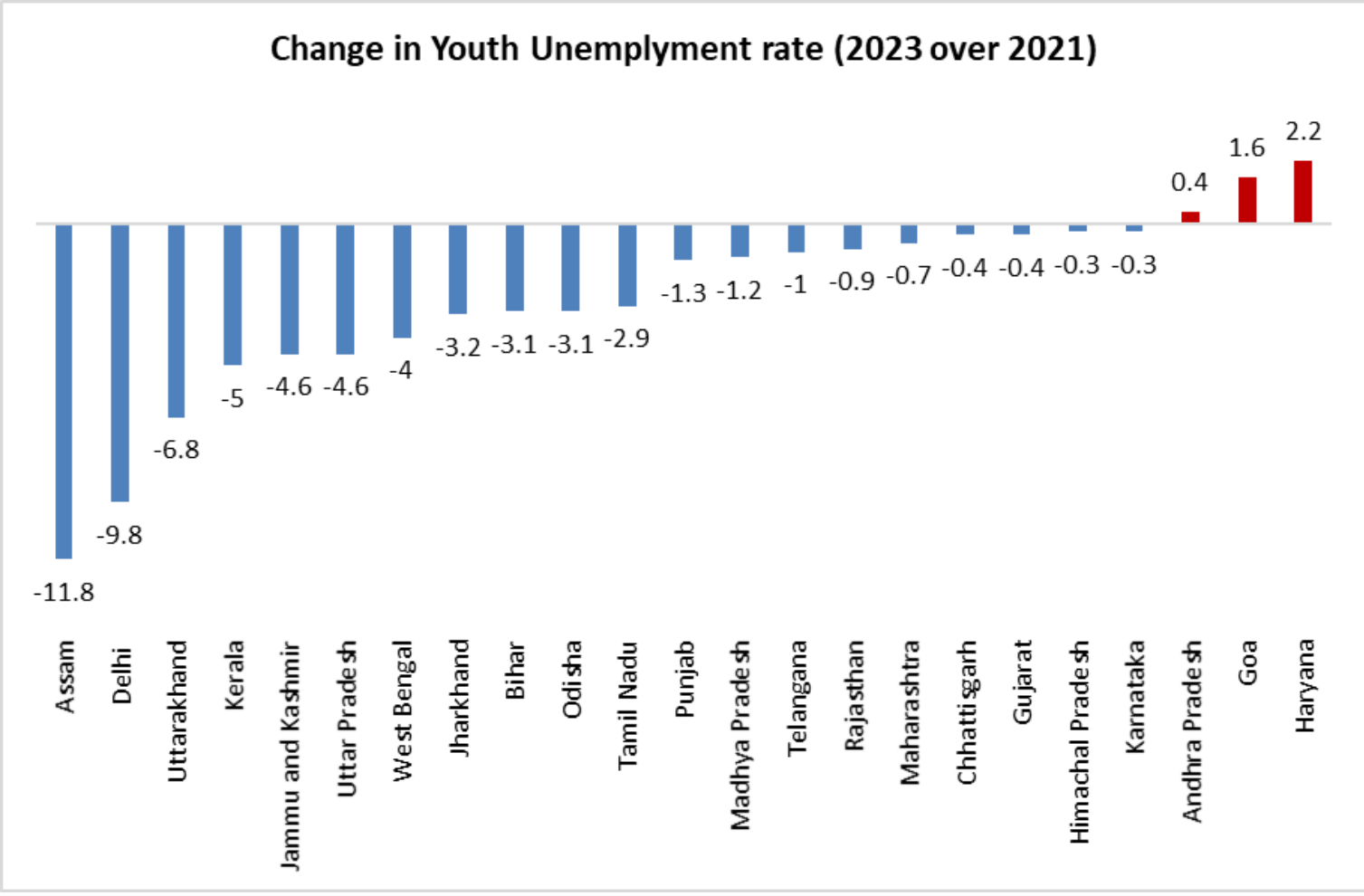
Unemployment Rate of 15-29 years are elevated and that is a pure statistical artefact… because of innate issues……

- The most quoted results in PLFS survey is the youth unemployment rate which is the unemployment rate of persons belonging in the age group of 15-29 years
- The trend is encouraging as in the last three years the youth unemployment rate declined by 2.9 percentage points to 10% in 2022-23
- **However, we believe that there is a better way to represent the youth unemployment rate, which we explain in the next section**



Unemployment Rate (15-29 years): State-wise Trend

- State-wise trend indicates that barring three states (Andhra Pradesh, Goa, and Haryana), all other major states exhibited deceleration in youth unemployment rate in 2022-23 over 2020-21, with maximum deceleration visible in Assam, Delhi and Uttarakhand



Why employment surveys (including PLFS) need to be tweaked

Estimates of youth unemployment is having an upward bias

- As per the latest PLFS survey, the unemployment in the age-group 15-29 years is 10%. The same gets reduced to 3.4% in the 15-59 age group (overall at 3.2%). Though the gap (17.8% in 15-29 and overall, 6.1%) has reduced since the first PLFS survey, it is still huge
- **Critiques argue that this shows that India has a serious case of youth unemployment but it's a reflection of changing employment-education pattern, with the men/women remaining in the education system until the age of 23-24 years which used to be only up to 17 years earlier**
- **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 bracket as a pure statistical artefact (as unemployment rate is explained as a percentage of labour force)**
- **Interestingly, as per the MHRD data, the total estimated enrolment in higher education institutions is more than 41 million in 2020-21, with 11 million from the north alone! How does one account for such rapid shifts in education/employment pattern?**

Total Enrolment in Higher Education				
Region	(in Mn)			Major States/Uts
	FY21	FY20	% YoY	
Central	3.3	2.8	17.5	MP, Chhattisgarh
East	6.4	5.7	11.5	Bihar, Odisha, WB, Jharkhand
N-E	1.2	1.1	5.7	Assam
North	11.0	10.6	4.1	UP, Delhi, Haryana, HP, Punjab
South	10.8	10.2	5.7	AP, Karnataka, Kerala, TN, Telangana
West	8.7	8.1	7.7	Maharashtra, Gujarat, Rajasthan
All-India	**41.4**	**38.5**	**7.4**	-
Source: MHRD; SBI Research				

Changing employment pattern- Time to look for higher age brackets unemployment?

- **We believe such shift in the employment pattern post education will result in very different unemployment rates for higher age brackets. The PLFS report does not report unemployment rates for the 30-plus age group**
- 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
- Using the population shares of different age groups from the Census 2011 and the National Health Profile 2022 we have estimated the current population as well as the working age population in 15+, 15-29 years, 30+ age groups. Thereafter, using these estimates unemployment rate for 30+ age group has been obtained using the weighted average with working population as the weights as given by the formula below

$$UR\ (30+) = \frac{\{(UR, 15+) * (WP, 15+)\} - \{(UR, 15-29) * (WP, 15-29)\}}{(WP, 30+)}$$

where UR: Unemployment rate; WP: Working population

Estimated unemployment rate for 30+ age is much lower than that in the 15-29 age group

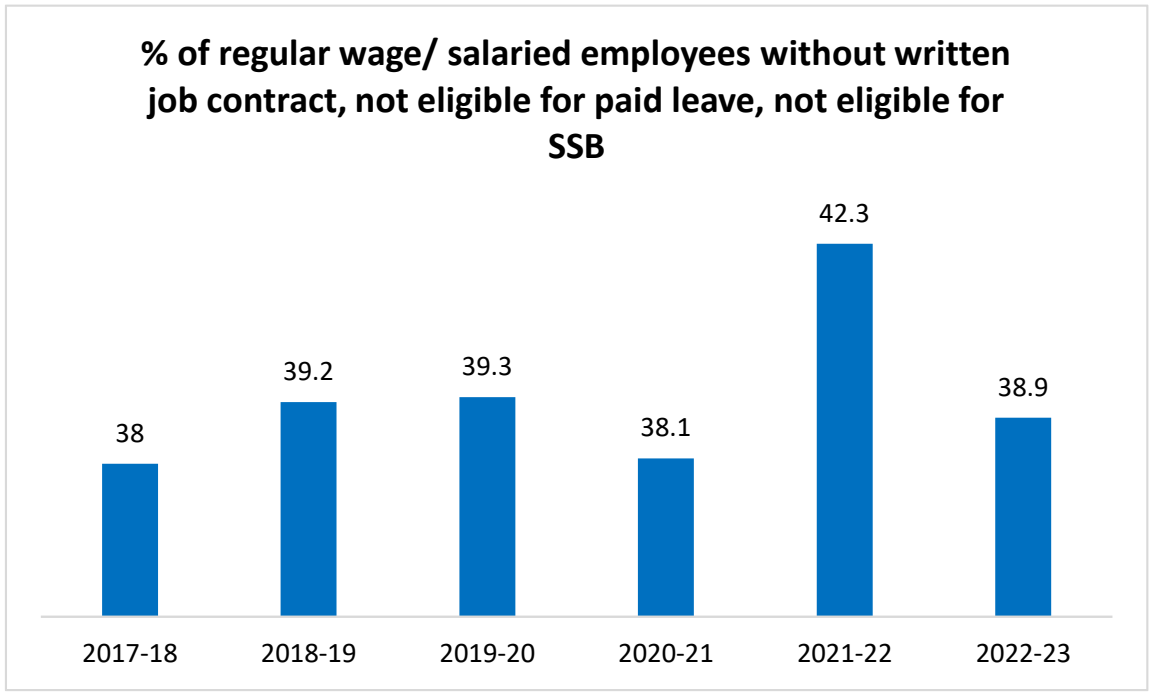
- Our estimates show that the estimated unemployment rates for the 30+ age group are much lower than the 15-29 age group. **For example, in 15-29 age group, the PLFS reported unemployment rate for Urban Male was 13.8% whereas the estimated Unemployment rate for 30+ age group for Urban Male comes down significantly to 2.9%.** The same discrepancy is also observed among all sub-categories
- In fact, there are instances where the unemployment rate may turn out to be negative. Such negative values may reflect 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!

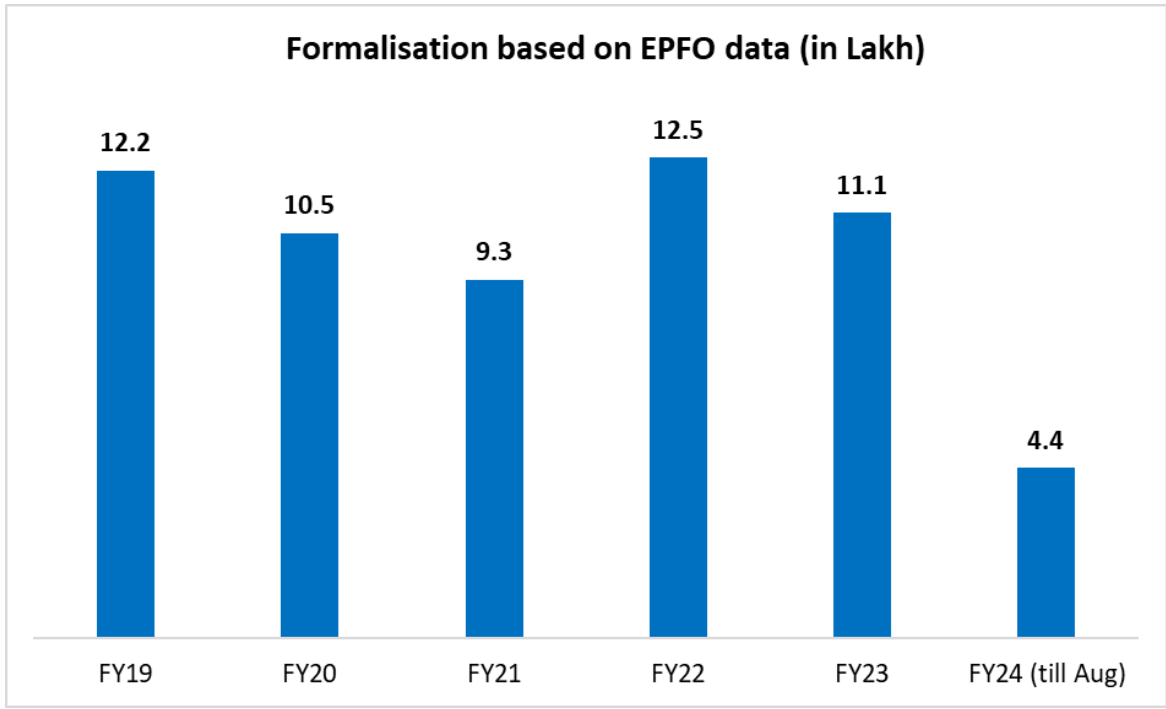
Estimated Unemployment Rates (UR) in Usual Status for 30+ Age Group (%)					
	Population Share (15-29, %)	Working Age Share (15-29,%)	UR 15+ (%)	UR 15-29 (%)	UR30+ estimated
Rural Male	27.1	44.5	2.7	8.3	0.7
Rural Female	26.5	43.2	1.8	7.4	Minimal
Urban Male	29.1	42.6	4.7	13.8	2.9
Urban Female	29.0	42.5	7.5	21.7	4.8
Source: National Health profile, 2022,PLFS Jun'23, SBI research					

The negative unemployment rate for 30+ age for Rural Female (negligible as reported in table) means that the product of unemployment rate of 15-29 and its workforce is higher than the product of unemployment rate of 15+ and its respective workforce, or in other words number of unemployed in 15-29 years bracket are more than 15+ unemployed, which is not possible. Thus, there seems to be some upward bias in the reported unemployment rate of 15-29 bracket or 15+

Informal sector share in Employment is at 38.9%, but may be overstated…..

- The PLFS survey also shows that the informal sector share in employment has remained nearly the same over the years, as given by the % of regular wage/salaried employees without written job contract, not eligible for paid leave or any Social Security benefit (SSB)
- However, the formalization of the economy has improved significantly owing to various efforts of the Government. The monthly EPFO payroll report provides data on establishments remitting first ECR (Electronic Challan-cum-Return) in a particular month. Based on this data we estimate that that almost 60 lakh jobs have been formalized since FY19



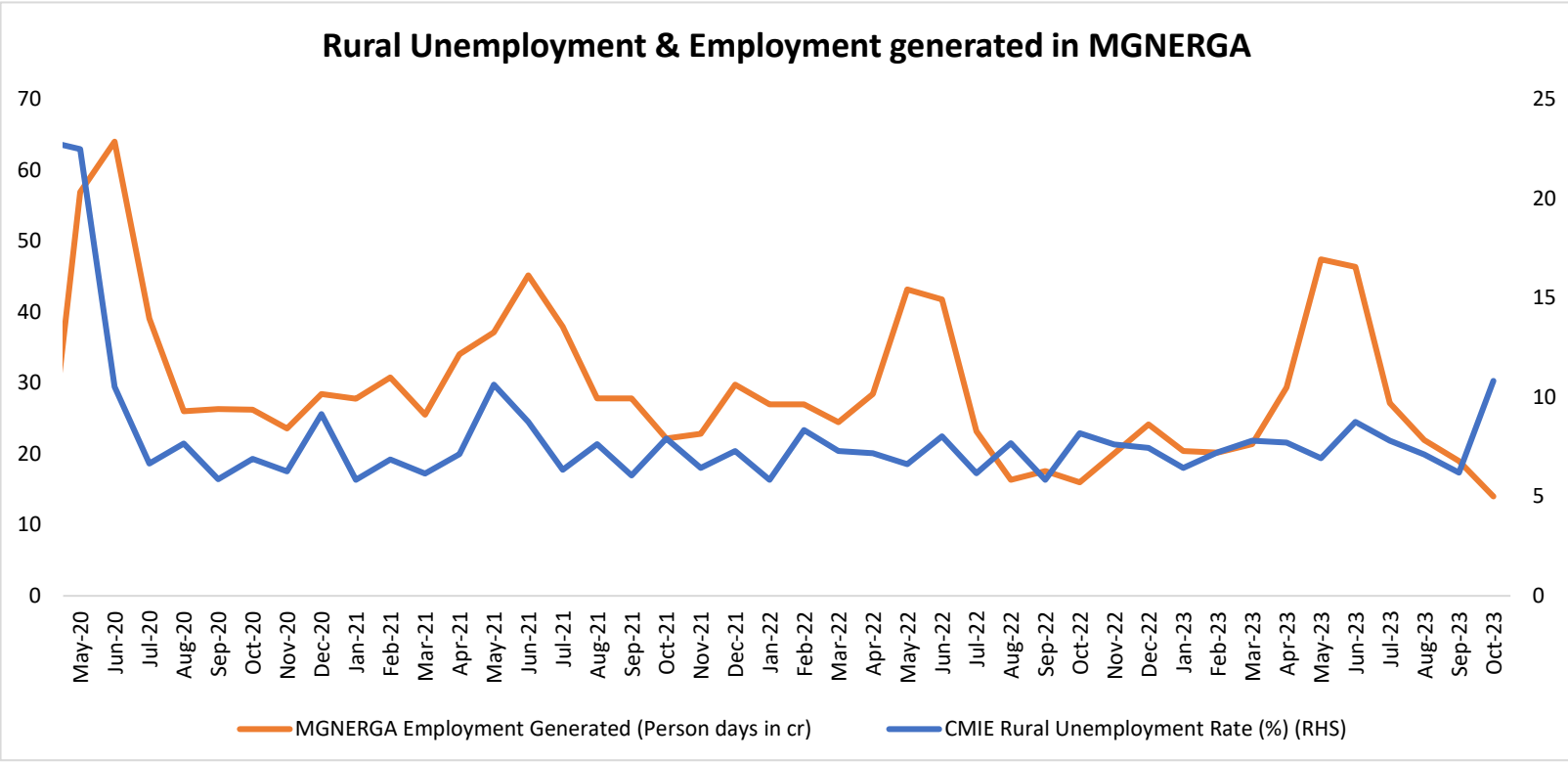


Issues in Consumer Pyramids Household Survey

- Centre for Monitoring Indian Economy (CMIE) conducts the periodic Consumer Pyramids Household Survey (CPHS), a panel survey of over 170,000 households periodic survey, thrice a year in successive four-month wave since 2014, however it is also not free from biases
- Though the same set of households are surveyed every time of the survey but as the response rate varies new households are added to compensate for those leaving the survey
- CPHS draws a simple random sample of villages and towns from their homogenous regions of districts. However, this does not solve the problem of covering all income groups as in a simple random sample, every seventh or the eighth house, for instance, is selected
- Furthermore, in the absence of any household listing, CMIE essentially relies on in-field randomization to sample households. This leads to a biased sample since they begin sampling from the main street or village centre and moves to inner streets only to the extent that the sample size demands
- CPHS under-represents women and young children, overrepresents well-educated households and under-represents the poor, Somanchi (2021)

Rural Unemployment & MGNREGA employment generated

- Rural unemployment and employment generated under MGNREGA should be negatively related, however the CMIE rural unemployment and MGNREGA employment generated have been moving together and have become positively correlated post May 2020 onwards. The correlation between the two since May 2020 is 0.48



CMIE vs. PLFS urban unemployment

- Both PLFS and CMIE give urban unemployment rate and their mean are nearly same for quarterly data of June 2018 to June 2023
- But CMIE urban unemployment is more skewed, i.e. concentration is more towards higher values, signifying that unemployment measured through CMIE urban employment is more on upside in comparison to PLFS. Further, Kurtosis of CMIE is nearly double the kurtosis of PLFS signifying that there is too much concentration near high peak of central value, again signifying that CMIE urban employment is more on upside in comparison to PLFS
- Urban Kurtosis might be high, because the respondents might be changing. People in the lower part moves a lot and thus household addresses changes. So CMIE might be concentrating more on the stable households, thereby on stable income resulting in average higher echelon / sample coverage of mostly people with stable income. This could also be because of the issue of problem of coverage due to the beginning of the sampling from the main street or village centre and then moving to inner streets as highlighted before
- **PLFS might be more distributed as they do more granular stratified sampling**

Distribution properties		
Quarterly data	**PLFS urban Unemployment**	**CMIE urban**
Mean	9.6	9.0
Skewness	2.7	3.7
Kurtosis	8.9	15.1
Source: SBI Research		

Many pitfalls of private employment surveys

- Though data used in employment surveys (like CMIE, etc.) have opened up avenues of research that simply could not have been pursued otherwise, their power depends on the extent and reliability of the data as well as on the validity of the restrictions upon which the statistical methods have been built
- Limitations of such datasets include, but are not limited to problems in the design, collection, and management of date for panel surveys. These include:
  - the problems of coverage (incomplete account of the population of interest),
  - nonresponse (due to lack of cooperation of the respondent or because of interviewer's error),
  - recall (respondent not remembering correctly),
  - frequency of interviewing, interview spacing, reference period, the use of bounding to prevent the shifting of events from outside the recall period into the recall period, time-in-sample bias etc.
  - issue of attrition (i.e., respondents dropping out of the study)
  - distortion due to measurement errors, which may arise because of faulty response due to unclear questions, memory errors, deliberate distortion of responses (e.g., prestige bias), inappropriate informants, wrong recording of responses, and interviewer effects
- The University of Michigan, in their Consumer Surveys, always asks consumers about their anticipation of unemployment rate changes, and that is subsequently validated. We are not sure whether the CMIE Survey, which is modelled along the lines of the University of Michigan Consumer Survey addresses such an issue

Way Forward….

- **The PLFS Survey is an apt representation of employment/ unemployment estimates in India, is granular and does stratified sampling in an optimal manner…should be the go to Survey for** researchers…however, with a large part of India's youth in the age group of 15-29 now enrolled in colleges, the time may have come to estimate 30+ unemployment rates also or tweak the youth unemployment rates….ad also to integrate the formalization of labour force into the survey estimates in a more meaningful manner

- **A concerted effort must be in place to further increase the women's LFPR, that is already increasing as released by PLFS survey…As a policy measure, women agents consist of less than 10% of the total Banking Correspondent work force today… A better representation of women agents through reservation of women in BCs by say 33% can alter the socio-economic fabric meaningfully**..Women BC agents will bring more transparency into the system as (a) they have more patience and are more willing to address queries or explain product features, (b) more likely to serve customers in remote areas, elderly customers, and other underserved customers and (c) women agent networks could offer a mix of advantages, such as encouraging savings among women, onboarding more first-time female users, low-value but high-frequency transactions, and doorstep delivery of financial services

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