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**Measurement of Labour and Employment in India- Conceptual and Procedural Framework**

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The results of the 2017-18 Periodic Labour Force Survey (PLFS) of India showed a sharp drop from 2011-12 in the rates of women’s employment.  This survey, however, introduced changes in design and operations from earlier surveys.  To understand the impact of these changes on rates of women’s employment WIEGO commissioned Dr. Govindan Raveendran to prepare a history of the methods and operations of labour force surveys in India, with a focus on those methods that would be thought to affect the measurement of women’s employment.   In addition, Dr. Raveendran updated the statistical tables for 2017-18 with the 2018-19 PLFS data.

1. **Historical background**

‘Employment- Unemployment Surveys’ were in existence ever since the start of ‘National Sample Surveys’ in India in the year 1950. However, the concepts and definitions used for data collection were considered to have serious limitations for an economy in which self-employment was a dominant factor and bulk of India’s production was carried out within household enterprises. A Committee thus appointed by the Government of India under the chairmanship of Prof. Dantwalla to examine the issue, came out with a conceptual framework for the measurement of employment and unemployment in India in its report in 1970. The concepts and definitions contained in the report were first implemented in the 27th round survey conducted during October, 1972 to September, 1973. These were used with minor variations in all the subsequent employment-unemployment surveys conducted till 68th round in the year 2011-12. Periodic Labour Force Surveys (PLFS) being conducted since 2017-18 also adopted the same concepts in order to ensure comparability with the earlier surveys.

1. **Concepts and Definitions**

India has been using multiple concepts based on varying reference periods for the measurement of employment and un-employment since 1972-73. The concept most commonly used in development discussions is the “Usual Principal and Subsidiary Status (UPSS). It is a combination of “Usual Principal Status (UPS)” and “Subsidiary Status (SS)”. The status of each person is, however, decided on the basis of the activity in which s/he is engaged during the reference period. In general, activities of individuals are classified into two broad categories –(i) economic activities, and (ii) non-economic activities.

1. **Economic activity**

Any activity that results in production of goods and services that adds value to national product is considered as an economic activity. The economic activities have two parts - market activities and non-market activities. Market activities are those that involve remuneration to those who perform it, i.e., activity performed for pay or profit. Such activities include production of all goods and services for market including those of government services. Non-market activities are all those involving the production of commodities for own consumption as per UN System of National Accounts (SNA 2008). However, production of only primary goods for own consumption is considered as economic activity in the national sample surveys in India by the National Sample Survey Organisation (NSSO). Thus, processing of primary products for own consumption is not considered as economic activity in employment surveys. However, ‘production of agricultural goods for own consumption’ covering all activities up to and including stages of threshing and storing of produce for own consumption, comes under the coverage of the economic activities of NSSO.

* 1. **Activity Statuses**

This section is drawn from the NSSO training manual. Each person is classified into one of the following three broad activity statuses based on his/her participation in economic/non-economic activities during the reference period (NSSO: Instructions to Field Staff, Volume-I ):

(i) Working or being engaged in economic activity (work),

(ii) Being not engaged in economic activity (work) and either making tangible efforts to seek 'work' or being available for 'work' if the 'work' is available, and

(iii) Being not engaged in any economic activity (work) and also not available for 'work'.

Activity statuses (i) & (ii) above, are associated with 'being in labour force' and the last with 'not being in the labour force'. Within the labour force, activity status (i) above is associated with 'employment' and activity status (ii) with ‘unemployment’.

These three broad activity statuses are further sub-divided into several detailed activity categories as stated below:

*(i) working or being engaged in economic activity (employed):*

(a) worked in household enterprise (self-employed) as an own-account worker

(b) worked in household enterprise (self-employed) as an employer

(c) worked in household enterprise (self-employed) as 'helper'

(d) worked as regular wage/ salaried employee

(e) worked as casual wage labour in public works other than Mahatma Gandhi National

Rural Employment Guarantee (MGNREG) works

(f) worked as casual wage labour in MGNREG works

(g) worked as casual wage labour in other types of works

(h) did not work due to sickness though there was work in household enterprise (self-employed)

(i) did not work due to other reasons though there was work in household enterprise (self-employed)

(j) did not work due to sickness but had regular wage/ salaried employment

(k) did not work due to other reasons but had regular wage/ salaried employment.

*(ii) not working but seeking or available for work (unemployed):*

(a) sought work

(b) did not seek but was available for work

*(iii) not working and also not available for work (not in labour force):*

(a) attended educational institution

(b) attended domestic duties only

(c) attended domestic duties and was also engaged in free collection of goods, tailoring,

weaving, etc., for household use,

(d) recipients of rent, pension, remittance, etc.

(e) not able to work due to disability

(f) others

(g) did not work due to sickness (for casual workers only).

Workers are further classified as *self-employed, regular wage/ salaried employee and casual wage labour as defined below:*

**Self-employed:** Persons who operate their own farm or non-farm enterprises or are engaged independently in a profession or trade on own-account or with one or a few partners are deemed to be self-employed in household enterprises. The essential feature of the self-employed is that they have *autonomy* (i.e., how, where and when to produce) and *economic independence* (i.e., market, scale of operation and money) for carrying out their operation. The remuneration of the self-employed consists of a non-separable combination of two parts: a reward for their labour and profit of their enterprise. The combined remuneration is given by the revenue from sale of output produced by self-employed persons *minus* the cost of purchased inputs in production.

The self-employed persons may again be categorised into the following three groups:

(i) ***own-account workers*:** They are the self-employed who operate their enterprises on their own account or with one or a few partners and who during the reference period by and large, run their enterprise without hiring any labour. They may, however, have unpaid helpers to assist them in the activity of the enterprise.

(ii) ***employers*:** The self-employed persons who work on their own account or with one or a few partners and by and large run their enterprise by hiring labour are the employers,

(iii) ***helpers in household enterprise*:** The helpers are a category of self-employed persons mostly family members who keep themselves engaged in their household enterprises, working full or part time and do not receive any regular salary or wages in return for the work performed. They do not run the household enterprise on their own but assist the related person living in the same household in running the household enterprise.

**Regular wage/ salaried employee:** Persons working in other’s farm or non-farm enterprises (both household and non-household) and getting in return salary or wages on a regular basis (and not on the basis of daily or periodic renewal of work contract) are the regular wage/ salaried employees. This category not only includes persons getting time wage but also persons receiving piece wage or salary and paid apprentices, both full time and part-time.

 **Casual wage labour:** A person casually engaged in other’s farm or non-farm enterprises (both household and non-household) and getting in return wage according to the terms of the daily or periodic work contract is a casual wage labour. Usually, in the rural areas, one category of casual labourers can be seen who normally engage themselves in *'public works'* activities.

* 1. **Usual Principal Status (UPS)**

It indicates the long-term attachment of any person and is determined on the basis of major time criterion[[1]](#footnote-1) during the reference period of 365 days preceding the date of survey. If the person has been either working or seeking/available for work during major part of the reference period, the person is classified as ‘in labour force’. A person classified to be in labour force is further classified as worker or as unemployed again by using the major time criterion during the period in which the person has been in the labour force. All sub-classifications of statuses are also done on the basis of major time criterion by using the same reference period.

* 1. **Subsidiary Status (SS)**

A person may be pursuing an economic activity irrespective of her/his usual principal activity determined on the basis of major time criterion. If the economic activity thus pursued is for 30 days or more during the reference period of 365 days, it is recorded as the subsidiary activity.

* 1. **Usual Principal and Secondary Status (UPSS)**

All those having a subsidiary economic status but not classified as workers as per UPS major time criterion are also categorised as workers by using UPSS concept. Thus, UPSS workers include both the UPS workers and non-workers with subsidiary economic activity.

* 1. **Current Weekly Status (CWS)**

The reference period used for the determination of current weekly status of a person is seven days preceding the date of survey. A priority- cum-major time criterion is used for the purpose. The status of 'working' gets priority over the status of 'not working but seeking or available for work', which in turn gets priority over the status of 'neither working nor available for work'*.* A person is considered working (or employed)) if s/he worked for at least one hour on at least one day during the 7 days preceding the date of survey or if s/he had work for at least one hour on at least one day during the 7 days preceding the date of the survey but did not do the work*.* A person is considered 'seeking or available for work (or unemployed)' if during the reference week no economic activity was pursued by the person but s/he made efforts to get work or had been available for work for at least one hour on any day during the reference week. A person who had neither worked nor was available for work any time during the reference week, is considered to be engaged in non-economic activities (or not in labour force). Having decided the broad current weekly activity status of a person on the basis of 'priority' criterion, the detailed current weekly activity status is again decided on the basis of 'major time' criterion if a person is pursuing multiple economic activities.

* 1. **Current Daily Status (CDS)**

The current daily activity status of a person is determined on the basis of his/ her activity status on each day of the reference week by using the priority-cum-major time criterion. The 19th International Conference of Labour Statisticians standard on employment includes only work for pay or profit as employment. However, the NSSO surveys also include the production of goods for own consumption as employment.

* 1. Worker Participation Rate (WPR)-- is the proportion of persons age 15 and above who are employed, that is the ratio of employment to the working age population,
	2. Labour Force Participation Rate (LFPR)- refers to the proportion of the population aged 15 and older who are employed or seeking/available for work (unemployed), -

3.9. Unemployment Rate (UER)-- is the proportion of persons  in the labour force   aged 15 and above who are not employed and are seeking/available for work

1. **The Survey Procedure**

All household surveys, including labour force surveys, being carried out in India follow certain specific pattern and standards. These are:

1. Surveys are conducted by trained survey personnel through face-to-face interviews,
2. Survey instruments list specific items of information needed rather than questions with specific answers of choice. For example, the schedule does not contain questions such as (i) are you working? (ii) are you a student? etc. Instead, a specific column is provided for recording the activity status of each individual in the sample household, based on a conversation with the respondent. The column is blank, with a detailed list of descriptions of various activity status codes. The activity status information is collected after ascertaining the relationship, age and education of each individual. The interviewer is expected to engage in a discussion of the daily routine of each individual and the direction of discussion is based on these details. The discussion may involve asking: “What do you do? Who runs the household enterprise? Who else assists in the business? How do you spend your time? Are you looking for a job?” Interviewers have the freedom to formulate their own questions. However questions such as “Are you working? Are you unemployed?”,etc. are not used . Further, the interviewer is not allowed to ask the informant to choose from a list of alternative statuses.

1. Survey in each selected block/village is a two-stage operation, often involving multiple sittings. In the first-stage, all the households in the selected urban-block/hamlet-group are listed and the essential details for sub-stratification and sample selection are collected. The details collected at this stage for the PLFS include (a) household size (b) number of members in the household having level of general education as secondary (10th standard) or above. In the earlier Employment-Unemployment surveys, ‘means of livelihood’, was collected as a stratification variable instead of ‘number of members with secondary education’. It was recorded on the basis of major source of income of the household. A pre-determined number of households from each sub-stratum of listed households are then selected for the detailed survey. The survey interviewer thus has a fair amount of a-priori knowledge about the size and composition of the households being visited for the survey. It helps him to design his survey interview and obtain the right information. In general, the interview starts from the head of the household and then proceed to other members in the order of seniority by age. The Usual Principal Status and Subsidiary Status of members of the households are assessed through a sequence of probing questions on the activities performed by each member of the household during the last 365 days. Experience and probing skill of the survey personnel, thus, play a significant role in securing the right information from the informant.
2. By design, equal number of samples are surveyed in each month as moving reference period is used for the survey.
3. A system of concurrent and post survey inspection of field survey by senior officers and data scrutiny consisting of range, consistency and logical checks is an important aspect of the survey for ensuring data quality.
4. **Changes Introduced in the Design and Conduct of PLFS**

As compared to the earlier quinquennial Employment-Unemployment surveys, there were a number of changes in the design and conduct of PLFS. These changes were incorporated with the objective of measuring the dynamics in labour force participation and employment in an interval of three months in urban areas in addition to estimate the key parameters of employment and unemployment in urban and rural areas. The major changes introduced are:

* 1. **Survey Design**
1. A rotationalpanelsampling design has been adopted for urban areas. As per the design, each selected household in urban areas is visited four times-one each in each quarter. A detailed schedule is used for the first visit survey and an abridged schedule is used for the survey in the re-visit. For rural areas, in each quarter, only 25% of First-stage Sample Units (FSUs) of annual allocation (as is done in each sub-round of NSS rounds) were covered so that independent estimates can be generated for each quarter.[[2]](#footnote-2)
2. The stratification and sub-stratification systems for sample selection were also modified, specifically the use of the number of persons with secondary or above levels of education in the households instead of means of livelihood and level of affluence in the second stage stratification. It has been argued that this change has introduced design bias, resulting in the selection of more educated persons in the sample, leading to a higher unemployment rate. However, the data have not supported this view.
	1. **Data Collection Mechanism**
3. Computer Assisted Personal Interviewing (CAPI) method was adopted for PLFS instead of personal interviews with paper schedules in the quinquennial surveys.
4. Inbuilt data validation mechanism was also incorporated in the software of CAPI.
5. For those engaged in economic activity during the reference week, hours of work were recorded directly. In earlier surveys hours of work were not recorded. Instead intensity of work was assigned. If a person worked for less than four hours but higher than one hour intensity of 0.5 was assigned. Intensity of 1.0 was assigned if the person worked for four hours or more.
6. Field work was carried out by personnel employed on contract basis from private man- power supply agencies.
	1. **Data Collection Schedules**

The data collection schedule was simplified without affecting the basic definitions and classifications used in the PLFS., However, follow up questions to obtain the detailed activities of those who were classified as attending to domestic duties with or without engaging in collection of goods, tailoring, weaving, etc., for household use, were not included in the PLFS schedule. It has resulted in loss of information, particularly with regard to women who are mostly attending to domestic duties.

However this change would not contribute to the decline in women’s employment as measured in the PLFS. In the earlier surveys this additional information was a follow-up question that did not change the activity status of the respondent.

1. **Issues with the PLFS**

PLFS 2017-18 revealed an absolute decline of 6.20 million in employment as compared to 68th Round Employment-Unemployment Survey conducted during 2011-12. It was due to a significant decline of 21.82 million in the employment of women from 126.77 million in 2011-12 to 104.95 million in 2017-18. It was initially stated to be due to changes in sampling design and use of CAPI in data collection. However, a deeper analysis of the data revealed that sampling design and CAPI had little impact on employment estimates (K. P. Kannan & G. Raveendran, 2019). It was noted that a systematic decline was taking place since 2004-05 in specific categories of women workers, in agriculture, mining and quarrying and manufacturing and among less educated women .

PLFS 2018-19 revealed that employment of women increased by 7.92 million though it remained much lower than the employment in 2011-12. There are a number of economic and social reasons for the decrease in employment of women and in 2017-18 a particular reason was the demonetisation and introduction of ‘Goods and Services Tax (GST), and the consequent disruption of the unorganized sector.. Further, although it was not highlighted in the published documents relating to PLFS, a policy decision to conduct the survey through contract personnel taken from private agencies could have impacted the quality of field work adversely. The earlier survey in 2011-12 was conducted by well-trained regular staff of the NSSO. Over the years, the organisation did set up the necessary infrastructure for training of its staff. The training includes both class room and practical training in survey specific aspects, motivational techniques and survey interview methods including probing. However, the field staff for PLFS do not belong to NSSO and lacked the usual intensive training and the sense of importance of probing. This could have been one of the reasons, apart from others, for the substantial decline of women workers in 2017-18. NSSO made attempts to retain the same set of persons in 2018-19 for the survey so as to ensure that the experience gained by them in survey taking is not lost. They were also subjected to further training. Experience and training of field staff may have helped in identifying more women workers.

**References:**

1. **NSSO, “ Instructions to Field Staff, Volume-I”, December, 2016**
2. **K.P.Kannan & G. Raveendran, “From Jobless to Job-loss Growth- Gainers and Losers During 2012-18”, Economic & Political Weekly, Vol LIV No:44, November 9, 2019.**
1. The major time criterion is used as follows: Usual Principal Status and Usual Status are determined by the activity on which the person spends more than half their time.; and for determining the industry code of workers, the activity in which the maximum time is worked is used. [↑](#footnote-ref-1)
2. The India NSSO Sampling scheme is multi stage. In the first stage, urban blocks in urban areas and census village in rural areas are sampled. Then the households in the selected FSUs are listed and households are selected. [↑](#footnote-ref-2)