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Abstract

The absence of reliable data on employment was well known in India. For ensuring that the sample sizes for its estimates from its annual employment and unemployment survey (EUS) were adequate, the National Sample Survey Office (NSSO) had instituted since 1980s the so called `thick' rounds of EUS with large samples, while the annual so called `thin' rounds with small samples continued. In addition to the EUS surveys the NSSO also canvassed the so called enterprise surveys with ownership, rather than household, as the basic unit of record. There were other surveys which provided estimates of Employment and Unemployment. On 11 May 2017 the Ministry of Labour Employment set up a Task Force for Improving Employment data (DGE_-Z_-13011/08/2017-MP(G)). The Task Force submitted its report and invited comments from the public on it by July 23, 2017. This paper is a critical analysis of the report of the Task Force and also of sources of data on Employment and Unemployment in India.

Key words: *Employment, Jobs, Data*
JEL Codes:

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T.N. Srinivasan

INTRODUCTION

The Ministry of Labour & Employment, Government of India (ML&E, GOI) on 11th May, 2017 constituted task force chaired by Dr. Arvind Panagariya, former vice-chairman NITI Aayog and four other members to "address the issue of timely periodic reliable data on job creation. The terms of reference (TORS) are as under:

(a) To assess the existing data systems and sources that provide information on jobs and job creation.
(b) To identify alternate sources that could provide data on jobs and job creation.
(c) To recommend mechanism(s) for capturing information on jobs and job creation on a regular basis for both informal and formal sector. This could include making recommendations on changes to existing schemes, legislation and rules to facilitate exchange of information on jobs/employment across platforms and strengthening of the available infrastructure. ((DGE-Z-13011/08/2017 – MP(G)).”

The Task Force (hereinafter TFR) invited public comments on its report on July 13, 2017 to be sent to **feedback.dget@nic.in** latest by July 23, 2017 to be incorporated in its final report.

This paper is a revised version of the comments the author had sent on July 30.2017 to Dr. Arvind Panagariya. In his covering letter to him the author had expressed his being "not at all persuaded by the report". In what follows, the author explains the reasons for his disappointment with TFR.

THE TASK FORCE REPORT (TFR)

Centre, States and Federal India

At the outset of his critique, the author points out that public and private data collection in India is a vast enterprise covering several socio-

economic, cultural and political issues of which data on employment is only one, albeit a major one. In fact, official statistics, to use a familiarize term to denote all the data collected by official agencies, including the Central Statistical Office (CSO), National Sample Survey Office (NSSO) and many others. Indeed, the National Sample Survey (NSS) was founded by Professor P.C. Mahalanobis at the Indian Statistical Institute, and later transferred to the Central Government. It is now under the Union Ministry of Statistics and Programme Implementation (MOSPI). The states and Union Territories set up their own statistical agencies. Professor Mahalanobis envisaged that at each round of NSS two independent samples of equal size were canvassed in each state and Union territory was called the Central Sample and the other as the State sample respectively. His expectation was that each state would use its sample for undertaking studies of importance to itself in addition to those being undertaken by NSSO at the national level. To the best of the author's knowledge, although resources are being spent in collecting state samples, only a few states have undertaken studies based on state samples. In fact, the reports of most of the National Sample Survey Office (NSSO) based on Central samples only. Given this unedifying experience, it is arguable argue that the canvassing of state samples be given up and the resources saved be used for meeting more pressing statistical needs.

Interestingly, in the United States, the sixth edition of The Principles and Practices for a Federal Statistical Agency was just published by the National Academy of Sciences. Niti Ayog, like the Planning Commission it replaced, is an agency created by the Central Government and not a federal entity. So is the Ministry of Labour that set up the Task Force. Mr. Modi did not use the opportunity created by the Chairman of Niti Ayog, Professor Arvind Panagariya, returning to his academic position in Columbia University at the end of August 2017 to replace Niti Ayog by an entity that has a constitutional sanction behind it, namely, the Interstate Council, as Jessica Seddon and the author had

proposed (Seddon and Srinivasan (2016). The author hopes that Dr. Rajiv Kumar, who is replacing Dr.Panagariya would persuade the Prime Minister to do so.

DEBATE ON EMPLOYMENT AND JOB CREATION

Before presenting any evidence, in page 4 of its introduction TFR, states self-servingly that "Job creation, employment and unemployment have been important subjects of debate in India. However, recently, this debate has been taking place in a vacuum. The available estimates are either out-dated or based on surveys with design flaws that render them unsuitable for inferring nationwide employment level. It is submitted that if the recommendations of the Task Force are (TFR, page 4) implemented, we will acquire the capability of generating reliable estimates of a number of crucial variables for informed policy making."

In the author's view, far from taking place in a vacuum, the debate was comprehensive and clearly identified the problems and came up with solutions where feasible. In fact, in 2013, the National Statistical Commission, chaired by Dr. C. Rangarajan, reviewed the India's Statistical System. (See Srinivasan (2013) for a critique of its report). Moreover, the quality of the papers in India going back to the late 1950s comparing estimates from National Sample Survey (NSS) of the aggregate statistics such as consumption, Gross Capital Formation and its Financing, as well as outputs major commodities with those from National Accounts Statistics (NAS) and those specifically devoted to defining a poverty and measuring trends in poverty, persuaded the Nobel Laureate Angus Deaton and Valerie Kozel to reprint many of them in Deaton and Kozel (2005). Of course, it would be worthwhile analyzing the suitability and the social cost of exploiting the fast-changing field of data collection analysis, including some described in TFR (page 5) as "An entirely new emerging field of study attempts to measure variables such as the Gross Domestic Product (GDP), employment and inflation using

proxy data and real-time big data. The view taken here (in TFR) is that this approach is still in its infancy and at the research stage." While it is indeed appropriate for the TFR not to use the limited time at it had on fresh approaches just at the research state, it is unfortunate that TFR provides absolutely no clue as to the potential social costs and benefits of implementing its recommendations. In the author's view much of the 'capability' "for generating reliable estimates for critical variables for informed policy making" TFR talks about already exists.

THE PROBLEM OF MISSING SAMPLE FRAME

TFR rightly notes that "in most countries, of the available options, household surveys are the only one that can comprehensively cover the entire labour force, and, thus provide the most statistically valid estimates of employment and unemployment for an entire economy". In India also, the Employment and Unemployment Surveys (EUS) which are household surveys undertaken by NSSO, serve that purpose. However according to TFR, enterprise surveys, the alternative to household surveys for estimating employment, "in the Indian case, even establishment census fails to capture the entire non-agricultural workforce. Additionally, available sample frames for drawing samples for such surveys often do not cover small, unorganized enterprises and therefore leave out workers employed by them. While not as exhaustive as household surveys in their coverage of the labour force, enterprise surveys have the advantage of capturing more accurately the industry structure of employment, associated wages and other enterprise characteristics. Enterprises have a more accurate idea of their industry classification than households, which increases the accuracy of workers' industry classification in these surveys".

TFR does not note that Indian enterprise surveys (mostly economic censuses since 1997 and their follow up surveys) have used changing definitions of an enterprise, which by its very nature is a

concept of ownership. Moreover, as yet there is no well- defined **'universe'** of all enterprises in existence to serve as a sample frame to draw random samples of enterprises. The hope that through the Economic Censuses and their follow-up surveys, a well-defined sample frame would emerge did not materialize. The absence of a rigorously defined sample frame for non-household based enterprise surveys, the failure to maintain records of establishments (companies) under Factories (Companies) Acts and the failure of companies registered under the Companies Act to submit their annual return are well known problems. In large part unlike the clarity and case with which identifying and listing households in a village, hamlet and urban block in a household survey are missing for identifying an enterprise for an emprise survey. Indeed, the shift when the base year to 2014-15 of National Accounts Statistics, away from Factories Act based Survey of Industries which is a survey of establishments, to data from the tax returns submitted by a self-selected sample of (admittedly large number) companies is problematic as the author has argued in Sections 3 and 5 of Nagaraj and Srinivasan (2017).

JOBS VERSUS PERSONS

Had the TFR concentrated primarily on the definitions incorporated in the EUS and other employment surveys of NSSO, and the data generated using them, rather than Enterprise Surveys, the Task Force would have noted that the number of persons employed in a year estimated from EUS of NSSO and that of number of jobs or positions **created in enterprises in which a person could be employed in the same year estimated from enterprise surveys** are conceptually distinct. Put another way a position or job could in principle be held by one or more different persons in the year. Thus a vacancy in a position during part of a year is not the analogue of some person in the labour force being unemployed for that part of the year. For this reason, the total number of jobs or positions added or reduced in a year is not the equivalent of the number of persons added or subtracted from the labour

force in the same year. TFR does not seem to have understood this important conceptual distinction, which is clearly understood and recognized in the employment statistics of the US Bureau of Labour Statistics.

It is also very evident a household survey investigator once h/she enters a sample hamlet, village or urban bloc and given the "kitchen" definition of a household would have no problem in identifying households and listing them and choosing his sample households according to his sample design. On the other hand, an enterprise survey investigator would have several problems in identifying the enterprises and listing them.

SIZE DISTRIBUTION OF FIRMS

In chapter 9 of Hope *et. al.* (2013) entitled "the Missing Middle", Anne Kruger compared the distribution of firms according to size (their total employment). In the World Bank Data Krueger uses, to put her hypothesis of the missing middle in perspective, one could observe that the size distribution of Indian firms refer, strictly speaking, to establishments (and not firms) that employ 10 or more workers and use power, and 20 or more workers without using power. These data come from the Annual Survey of Industries and the Directory of Manufacturing Establishments, which provide data on those employing 6–9 workers. However, the Quinquennial Economic Survey and its annual follow-up surveys cover all establishments, subdivided into own- account manufacturing establishments (OAME) which do not regularly employ paid workers and others that do. The latter are subdivided into directory establishments that regularly hire six or more workers daily and non-directory establishments that hire one to five workers.

Mazumdar and Sarkar (2008, Table 9A.1) provide data on the number of workers in the entire spectrum of establishments, those covered by the Economic Census, Directory of Manufacturing establishments (DME) and the Annual Survey of Industries (ASI). These include own-account and other manufacturing establishments. According to these authors, in 1989–90, the year to which the data used by Krueger on the size distribution of establishments refer, the number of workers employed in all establishments was 39.8 million but only 17 million if we exclude the unpaid workers and owners in OAME. The World Bank data covered only 12.6 million (from ASI and DME) out of the 39.8 million. In effect, the World Bank data used by Krueger exclude 4.4 million establishments that hired and employed 1–5 workers and 17 million that hired no paid workers.3 Unfortunately, since she compares the size distribution of Korea and Malaysia, which exclude their smallest category (1–5), with India's, which excludes its smallest category (1–6), it is impossible to re-do her comparative analysis of the "missing middle."

In his presentation, Albert Bollard (2009) provided a comparative analysis of India in 1990 and the USA in 1992 of the distribution of paid employment that includes the size class 1–4. He finds that India has a substantially larger percentage, around 35 percent, of establishments in the size category 1–19, as compared to only around 5 percent in the US and a substantially smaller percentage, 30 percent as compared to 60 percent in the US, in the category 500 plus. Surprisingly, the "middle", if used in the sense of category 20–499, is not missing in that both India and the US have the same percentage, 35 percent, in this size category. Of course, Krueger compares India to considerably richer Korea and Malaysia among developing countries. Nonetheless, her comparison could be sensitive to the fact that their excluded employment category differs from India's (Hope *et. al.* 2013, Chapter 1). Referring at length to Anne Kruger's paper points the hazards that in using data from different sources unless one is careful to take into account the differences among

alternative sources in the concepts they use, their definition, and other details.

UNEMPLOYMENT RATES IN TFR AND TIME USE STUDIES.

The discussion in TFR of the rates of unemployment is confused --- **usual and current weekly status unemployment rates are percentages of persons in the labour force,** a ratio that is not comparable to the other two. In fact, the current daily status unemployment rate is a crude rate of time use, i**n the sense of the ratio of unemployed (person days as a ratio of total person days available, so that it represents the percentage of the total seven person- day working time available to a person, he or she does not work being unemployed while being available and searching for work**. TFR does mention starting time use studies but does not make any specific proposal.

ANNUAL AND QUINQUENNIAL ROUNDS

In the early seventies the aggregate sample sizes for annual rounds were deemed too small for estimates for India as a whole to be reasonably reliable and hence quinquennial rounds with large samples were introduced. Yet even after the number of households in annual rounds have increased so that reliable estimates for India as a whole and some larger states could be made annually, still only quinquennial estimates are being published. Thus while the capability to estimate and publish reliable annual employment, unemployment and sectoral labour allocation rates for India as a whole and major states exist, it is not being utilized. Some critics failed to recognize that **reliability of a random sample from a population depends on its absolute size and not the its size as a proportion of the size of the population**. However, and this may be the reason for the failure of critics, for estimating all characteristics in a population with the same reliability, those with lower

incidence would require larger sample sizes. By the same token given the size of the sample, characteristics with smaller incidence will be estimated less reliably.

QUARTERLY DATA

TFR does not note the fact that annual rounds of NSSO are usually canvassed in terms of independent quarterly sub-rounds from the population. There is no reason therefore why quarterly employment and unemployment rates could not be estimated. After all, CSO estimates quarterly GDP data! Readers of TFR would have benefited had it included references to publications of CSO and NSSO on the sample design of each round. Obviously the sizes of the annual sample will have to be increased for the quarterly estimates to be reasonably reliable.

SOCIAL COSTS AND BENEFITS OF DATA COLLECTION

TFR (page 4) submits "that if the recommendations of the Task Force are implemented, we will acquire the capability of generating reliable estimates of number critical variables for informed policy making. The following is a partial list of these variables." The author on the other hand submits that establishing such a capability is largely a quantum of resources devoted to data collection and analysis and it is not the absence of technology and knowledge. Unfortunately, TFR provides no estimates of how much it would cost and how long it would take and whether India would have to hire technical personnel from India and abroad for implementing its recommendations. The author is in no position to do so either. But he would claim, based on his experience (admittedly long ago) on the Governing Council of NSSO that the demands for estimates of this, that or some other characteristic of the Indian economy, people and society are insatiable and often made without the demander having no clue as to the cost of meeting it! If only in jest he would propose that anyone who demands the addition of a

variable to be estimated would be required to suggest a variable that is currently being estimated to be dropped!

The author's reading of TFR in full, and Sections II and III of TFR in particular, suggests that instead of evaluating all available data sources for estimating employment and unemployment as well as other desirable variables included on the partial list in the introduction, TFR would serve its objective of providing what it calls 'quality' data better if its focus is considerably narrowed, for the present only to a carefully chosen subset of variables in the partial list. It would seem hat for the choice of households to be canvassed in any round based on the decennial population census with appropriate adjustments for any round that is 'too' far in time from the nearest previous and future population census is adequate is adequate.

The 'kitchen' definition of a household is adequate. Thus using (NSS) definitions of identifying and listing the households and their characteristics in rural hamlets and villages and urban blocs is reasonably straight forward so that choosing samples of households given the sample design is straight forward. This also means that data on all household related variables can in in principle collected reliably (I am ignoring the issues arising from errors in the population census data). Thus in a household survey, in principle it would be possible to identify households that are or not engaged in production of goods and services for the market and its purchases of goods and services (including its hiring of workers) for home production. The EUS household surveys of NSSO carefully define and estimate the share of population that participates in the labour force, by gender, area of residence etc. Self-employment, particularly in cultivation is analyzed. The assertions relating to Self-employment in EUS of NSSO in TFR are ignorant exaggerations.

In contrast to the clarity and ease with which the status of labour force participation of an individual and households can be determined from a household survey, enterprise surveys (economic censuses and their follow -ups) are establishment (and not household) based surveys. Beside an enterprise is an ownership entity. Also changes in the definition of an enterprise across surveys have occurred and problems in making the distinction between an enterprise in the organized and unorganized sectors have also arisen.

Even though the so called 'own account manufacturing enterprises' (OAMEs) basically with very limited number of hired employees could be recognized from a household survey, so that the category OAME could be viewed as the universe of enterprises with essentially a single worker, namely its owner. Obviously they are many other enterprises besides OAME. It is no surprise a discussion on size distribution of enterprises in India has to live with the fact that it has to use several sources with attendant problems.

CONCLUSION

Briefly stated, for estimating from annual employment household surveys (EUS) of NSS are of adequate size for estimating employment at for the country as a whole at the level of the Nation as well as for Major states. However, the impression is that for the estimates from quarterly sub-_round to be reasonably reliable sample sizes for annual rounds of NSSO. Until the sample frame problem is resolved not using enterprise surveys is the appropriate course.

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