

Sixth Economic Census 2013

Intriguing Numbers

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The provisional results of the Sixth Economic Census (2013) of establishments in the non-agricultural sector suggest that this is not a census count. A comparison with the National Sample Survey numbers shows that the number of workers in the latest census may be only a little over half the actual number. There also appear to be some serious omissions in individual states.

The launch of the Economic Census (EC) on a quinquennium or periodic basis was one of the most thoughtful decisions of those administering India's statistical system. In a complex economic system as that of India with multitudes of self-employed own-account and micro-enterprises dominating the economic scene, it is extremely difficult to get any regular count of all economic units for their principal operational and economic characteristics. Apart from the counting of the number of establishments and their worker size, the EC results are used for extraction of an "area frame" for undertaking sample studies (called follow-up surveys) for different cohesive segments of the organised and unorganised sectors or of manufacturing and services sectors. The "area frame" provides information on the number of establishments and number of workers by industry, ownership type of establishments, etc, at the village or block level (Sixth EC 2013: 2).

The follow-up surveys themselves have a deeper statistical purpose, that is, to provide inputs for estimating the gross domestic product (GDP) originating in different unorganised sectors for which indirect methods are the only way out for such estimations. The innovative method devised by the National Accounts Division of the Central Statistics Office (CSO) is to look for an estimate of gross value added (GVA) per worker for a given segment of an unorganised manufacturing or infrastructure or services sector for a benchmark year and multiply the estimated GVA per worker so arrived at for a year by the estimated number of workers, which produces the GVA originating in the sector. With this labour input method, GVA estimates are initially prepared at a detailed active level for the base year of a national accounts series using the estimated labour

input engaged and the value added per worker (VAPW) in the activity concerned (CSO 2012). Such VAPW estimates for the required activity level are provided by the follow-up surveys referred to above.

Using the census frames thrown up by the five ECs that have been conducted so far, a large number – as many as 20 – of follow-up surveys have been undertaken from time to time for successive base periods of National Accounts Statistics (NAS). With a view to filling their data gaps, these follow-up surveys have focused on unorganised enterprises in diverse sectors – manufacturing, mining and quarrying, trade and transport, storage and warehousing, hotels and restaurants, and services sectors. Many of them have been repeated over time.

The *Provisional Results of the Sixth EC* (All-India Report) places, to begin with understandably, very limited information in the public domain. This information is as tabulated from one schedule of the survey – Schedule 6B: Establishment Abstract. The CSO will release the results in two stages: first, data relating to the Directory of Establishments with 10 or more workers covering all the states and union territories (UTs) by December 2014; and second, an all-India report based on data collected through the main schedule, namely, the House and Establishment Listing Schedule by March 2016.

Partial Coverage of the Economy

By its very conception, the EC makes a partial coverage of the country's economic activities. Its focus is essentially on non-agricultural establishments; establishments with fixed structures are enumerated at the place of their operation and those without any fixed structures are enumerated at the place of the residence of the owner. In the latter category of establishments, there are two subsets, first, establishments outside households without fixed structures and second, establishments inside households. As shown in Table 1 (p 79), these different types of establishments are spread across rural and urban areas, though units inside households dominate in rural areas and

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Table 1: Percentage Distribution of Establishments by Rural-Urban

Categories of Establishments	Rural	Urban	All-India
1 Outside HHs with fixed structures	31.91	54.40	41.13
2 Outside HHs without fixed structures	20.94	19.81	20.49
3 Inside HHS	47.15	25.29	38.39
	100.00	100.00	100.00
4 No of establishments (%)	59.90	40.10	100.00
		(5,84,70,096)	
5 No of persons employed (%)	51.91	48.09	100.00
		(12,77,08,076)	

Source: Sixth EC 2013 (Figures within brackets are absolute numbers).

those with fixed structures outside households dominate in urban areas.

Thus, only persons associated with the conduct of some business activity or the other, or those managing establishments, are counted in the ECs. On the other hand, “only wage earners or salaried residing in each household” – a category in the main schedule – are not interviewed for the survey, though technically they would be covered as workers of their parent establishments, but amongst them there could be workers who may not have been counted because their parent establishments may not be identifiable as constituting any part of the sample frame (more on this later). In the same vein, the following categories of workers also stand excluded by the survey (Sixth EC 2013: 2):

(i) Domestic servants, whether they work in one household or in a number of households, drivers, etc, who undertake jobs for others on wages; (ii) all wage-paid employees of a casual nature; (iii) persons doing different types of jobs depending on the availability of work, e.g, loading, unloading, helping a mason or a carpenter, doing earthwork for a contractor; and (iv) household members working for other households and earning some money which is insignificant.

The following categories of persons not counted as workers even in the National Sample Survey Office’s (NSSO) employment and unemployment surveys do not get covered in ECs in any case:

(i) Household members engaged in household chores; (ii) households in which none of the members are engaged in any gainful activity, i.e, households depending on remittances, rent, interest, pension, etc, (iii) establishments engaged in some illegal activities like smuggling, gambling, beggary, prostitution, etc, and (iv) establishments of shelterless and nomadic

populations, which keep moving from place to place and camp either without shelter or with makeshift shelter (Sixth EC 2013: 2).

Finally, the Sixth EC had yet another special feature, which is that, apart from crop production and plantation which have been excluded in all ECs since the Second Census (1980), it excluded for the first time public administration, and defence and compulsory social security “due to the difficulties faced in collecting information from such establishments during the Fifth EC” (p 4).

Thus, what the ECs provide are the complete count of the number of “establishments” and the number of persons employed therein, of the sectors covered – agriculture, manufacturing, energy and other basic industries, and services (except public administration, etc, in the Sixth EC). Agricultural establishments cover such activities as livestock production, agricultural services, hunting and tapping, etc, forestry and logging and fishing.

Relative Size of Workers in Sectors

After taking into account the various exclusions and inclusions cited above, a brief, first-shot attempt is made to work out the relative size of workers, taking the results of NSSO’s employment and unemployment survey as the benchmark for comparison.

The NSSO has reported a total workforce of 252.3 million in respect of the four sectors covered in the Sixth EC:

agriculture, energy and other basic industries (mining and quarrying, electricity, gas and water supply, and construction), and all services sectors (except public administration and defence and compulsory social security). The EC covering these sectors has counted a total number of workers of 127.71 million, that is, roughly 50% (Table 2). At the same time, the report (p 2) has claimed that activities covered in it have a share of about 86% in total GDP of the economy.

We are conscious of the fact that the above comparison of the workforce numbers as derived from the NSSO employment and unemployment surveys with those reported in the ECs has a serious flaw in that the EC employment numbers exclude a number of categories as listed earlier. More importantly, they do not cover “workers” who do not work for identifiable establishments that are difficult to be covered in the population frame. We revert to the wider implication of this in a later paragraph.

An Inverted Source of Evidence: NSSO Survey

Undoubtedly, the latest EC is said to be one of the most complex and massive administrative exercises gathering information from over 58 million establishments employing nearly 128 million people counting every one of the chosen categories. But what is more complicated is the objective of gathering accurate census frames for diverse categories of informal sectors. In order to gauge as to what extent this objective is being achieved, we have looked for some sources of information on the nationwide

Table 2: Total Workforce as Estimated by the NSSO Surveys Juxtaposed against Economic Census Numbers (Numbers of Workers in Millions)

Round No	Year	Workforce@ (Total)	NSSO Rounds on Employment and Unemployment			Workforce in the Balance of Mfg, Non-Mfg and Services Sectors Covered by Economic Censuses (3)-(6)	Economic Censuses No of Workers as Reported in Economic Censuses
			Workforce in Sectors Excluded by Economic Censuses		Total (4) + (5)		
			Crop Production and Plantation	Public Administration and Defence			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
55th	1999-2000	399.5	212.6	–	212.6	186.9	83.30 (4th EC 1998)
61st	2004-05	459.1	240.6	–	240.6	218.5	100.90 (5th EC 2005)
66th	2009-10	460.2	226.0	–	226.0	234.2	–
68th	2011-12	474.2	214.0	7.9	221.9	252.3	127.71 (6th EC 2013)

@Workforce numbers are given here and not labour force as the Economic Censuses report actual numbers of persons employed (-) Not excluded in comparable Economic Censuses.

Source: NSSO Employment and Unemployment Rounds and Economic Census Reports.

estimates of establishments and the number of persons employed in them.

In the above respect, the CSO themselves have sought to cross-validate their EC results with the estimated results of the NSSO's 67th round on Economic Characteristics of Unincorporated Non-Agricultural Enterprises (Excluding Construction) in India (July 2010-June 2011), amongst a couple of other sources. Though details are not known, it is presumed that the cross-validation was a success, in that presumably the EC results were found to be reasonably close to those of the NSSO 67th round. However, our examination of the data does not vouchsafe for this presumption that the NSSO's 67th round validates the Sixth EC results.

It is to be noted that the NSSO 67th round estimates are blown-up figures based on relative sample sizes and to the extent samples are representative of follow-up survey segment, the totals given in the NSSO estimates for any such segment should be comparable with the EC results of a closer period for the corresponding segment except to the extent of sampling and non-sampling errors that may have crept into the NSSO's sample study results. It is also true that this process of comparison of one set of census results with another set of global estimates based on a sample study involves an inverted method, that is, going from sample results to census-like results. Statisticians, amongst them sampling theory puritans, may have some misgivings against such a comparison because when sample results are inverted to arrive at the census results, they can never reach such mirror image population level results as sampling and non-sampling errors are not measurable with such an exactitude.

Notwithstanding the above objection, there is merit in examining as to how close and comparable are the EC estimates of 2013 with the inverted results from the central sample to all-India and state-level estimates of unincorporated non-agricultural enterprises (excluding construction) for 2011-12, keeping of course in view the coverage differences in the two studies. The Sixth EC is a census study covering all size groups and all types of establishments in the sectors covered in the study. As for the coverage

of sectors and activities is concerned, the EC has a number of exclusions as explained earlier. On the other hand, the 67th round of NSSO covers only non-agricultural unincorporated enterprises, that is, enterprises not incorporated under the Companies Act. Thus, the coverage has been restricted to proprietary and partnership enterprises, in addition to self-help groups (SHGs), private non-profit institutions (NPIs) including non-profit institutions serving households (NPISHs) and trusts. Apart from excluding agriculture entirely, unlike EC which excludes

only crop production and plantation but includes agricultural services and allied activities, the 67th round excludes construction. Thus, the 67th round covers all other non-agricultural enterprises, namely, manufacturing, trade and other services.

As a result of this differing coverage, it is not possible to make a straightforward comparison of the two sets of results under consideration. Also, for the present, the Sixth EC is understandably providing only limited information. Even so, it is possible for us to attempt a

Table 3: Differences in Establishment/Enterprises and Employment between Sixth EC and NSSO 67th Round

	No of Establishments			No of Persons Employed		
	EC - 6 2013	NSSO-67 2010-11	Differences	EC - 6 2013	NSSO-67 2010-11	Differences
All-India	5,84,70,096	5,76,73,305	7,96,791	12,77,08,076	10,79,78,875	1,97,29,201
States with EC Establishments Exceeding NSSO Enterprises						
Kerala	33,75,567	18,62,286	15,13,281	69,19,658	38,03,841	31,15,817
Maharashtra	61,25,902	51,56,479	9,69,423	1,43,74,619	1,01,37,220	42,37,399
Assam	19,53,743	11,51,065	8,02,678	37,34,759	18,44,566	18,90,193
Rajasthan	29,07,388	21,42,435	7,64,953	61,54,670	37,81,755	23,72,915
Andhra Pradesh*	63,33,890	56,00,211	7,33,679	14,05,8563	1,22,12,121	18,46,442
Tamil Nadu	50,52,444	44,67,024	5,85,420	108,09,878	90,64,719	17,45,159
Gujarat	39,90,768	36,35,091	3,55,677	90,63,569	69,70,157	20,93,412
Haryana	11,71,475	10,56,732	1,14,743	32,31,311	19,02,336	13,28,975
Chhattisgarh	7,73,768	6,76,364	97,404	18,83,785	13,61,272	5,22,513
Manipur	2,17,673	1,23,829	93,844	3,87,880	1,87,846	2,00,034
Punjab	15,12,208	14,43,030	69,178	35,61,950	25,47,515	10,14,435
Karnataka	28,79,492	28,11,247	68,245	68,69,976	53,89,570	14,80,406
Himachal Pradesh	4,14,864	3,49,745	65,119	9,61,646	5,97,503	3,64,143
Goa	97,326	54,276	43,050	2,94,060	1,05,397	1,88,663
Mizoram	54,230	20,640	33,590	1,14,484	45,439	69,045
Nagaland	60,966	27,769	33,197	1,55,174	47,052	1,08,122
Chandigarh	83,964	55,446	28,518	2,38,974	91,834	1,47,140
Arunachal Pradesh	36,602	21,538	15,064	97,115	38,904	58,211
Sikkim	37,749	27,105	10,644	93,132	53,531	39,601
Meghalaya	1,06,758	97,541	9,217	2,82,678	1,71,185	1,11,493
Andaman and Nicobar Islands	23,450	14,626	8,824	69,034	32,260	36,774
Daman and Diu	10,547	8,513	2,034	81,407	18,241	63,166
Lakshadweep	3,341	1,865	1,476	10,124	3,501	6,623
D and N Haveli	10,609	9,319	1,290	95,948	22,911	73,037
States with EC Establishments Less Than NSSO Enterprises						
Uttar Pradesh	67,00,736	83,83,469	-16,82,733	1,37,50,866	1,57,78,550	-20,27,684
West Bengal	59,01,521	72,88,001	-13,86,480	1,15,44,664	1,18,59,658	-3,14,994
Bihar	17,15,458	23,08,608	-5,93,150	29,94,239	34,36,609	-4,42,370
Jharkhand	6,39,141	11,94,408	-5,55,267	14,23,433	18,28,751	-4,05,318
Madhya Pradesh	20,94,869	25,94,400	-4,99,531	43,22,399	44,41,244	-1,18,845
Odisha	20,83,552	24,44,818	-3,61,266	43,80,006	49,32,346	-5,52,340
Delhi	8,93,177	11,24,091	-2,30,914	29,84,850	28,19,430	1,65,420
Tripura	2,37,902	3,98,263	-1,60,361	4,04,216	5,07,521	-1,03,305
Jammu and Kashmir	5,07,372	5,97,830	-90,458	10,84,295	10,07,272	77,023
Uttarakhand	4,02,335	4,65,075	-62,740	10,57,021	8,02,389	2,54,632
Puducherry	59,309	60,161	-852	2,17,694	1,34,427	83,267

*: Includes Telangana.

Sorted as per difference in establishment.

Sources: (i) Sixth EC 2013 and (ii) NSSO (2013).

comparison and draw some valid inferences based on the available information. For doing so we adopt a staggered approach. First, we compare the results as they are. Second, see how best and to what extent the EC results get cross-validated from the 67th NSSO round results after making adjustments for the known exclusions and inclusions.

It is here necessary to steer clear of the definitions of “establishments” and “enterprises” used in the two surveys. The Sixth EC is said to cover “establishments”, whereas the NSSO round under reference is a survey on unincorporated “enterprises”. In the Indian statistical parlance, these institutional categories have been clearly defined. To be brief, an “enterprise” is an economic unit engaged in one or more economic activities located in one or more locations, whereas an “establishment” is by definition located in a single location and it can be part of an enterprise. As the institutional units covered in the 67th NSSO round are “unincorporated enterprises”, that is, essentially small enterprises – own account, proprietary or partnership household enterprises – their activities located in more than one location could be rare or limited.

Initial Preliminary Comparison

Against this background, a simple preliminary comparison at the aggregate level of the numbers of establishments/enterprises and their respective employment sizes, is attempted in Table 3 (p 80). In terms of coverage, the Sixth EC data should be more comprehensive than the estimates derived for the unincorporated enterprises as the latter do not cover organised enterprises with higher employment size. To repeat, the EC has a number of special characteristics: (i) in the first place, it is a census which is expected to count every establishment; (ii) secondly, it covers all – big or small, organised and unorganised establishments; and (iii) it covers agricultural establishments (excluding crop production and plantation) unlike in the NSSO survey on non-agricultural enterprises. Besides, the 67th round excludes construction activities, unlike in the EC. Moreover, the EC results belong to the latter year 2013-14

(January 2013-April 2014),¹ whereas the NSSO survey results of unincorporated non-agricultural enterprises pertain to the period 2010-11 (July-June) that is, two years earlier. Because of these special characteristics, the number of establishments and the persons employed in them as per the Sixth EC should definitely be much higher than the number of unincorporated enterprises and their employment as reported in the NSSO survey of unincorporated non-agricultural enterprises.

The comparative figures presented in Table 3 appear startling. First, let us look at the state-wise information. In respect of as many as 11 states and UTs, six of them major ones (Uttar Pradesh, West Bengal, Bihar, Jharkhand, Madhya Pradesh, Odisha), the numbers of establishments as per the Sixth EC of 2013 appear far fewer than the numbers of enterprises in the 67th round of the NSSO survey for 2010-11. And in respect of almost all of them, the numbers for employment too appear lower. These six states alone have shown about 50.78 lakh lower order of establishments/enterprises in the Sixth EC and 38.62 lakh of employment than those estimated by the NSSO 67th round on unincorporated enterprises. In a majority of the states the difference in the number of establishments/enterprises works out to over 25%; in respect of one state it is as high as 87%.

Simultaneously, no doubt there are a few states such as Assam, Kerala, Manipur, Mizoram and Nagaland for which the numbers of establishments in the Sixth EC have been higher than those of enterprises in the 67th round, but

such excesses appear to be unrealistically high essentially in respect of these small states. In their cases, the two sets of data give the impression that the number of organised sector establishments far outweighs the number of unincorporated enterprises in these small-size states; the excesses as high as 81% in the case of Kerala, 70% for Assam, 76% for Manipur, 118% for Nagaland and 157% for Mizoram. We concede that we should not be stressing this too far, for small-size states may face various sources of statistical aberrations. What is significant is that the excess numbers of these small states put together are helping to wipe out the deficit in the big-size states (Table 3).

At the aggregate level, the difference in the number of establishments is placed only at 7.97 lakh. However, the NSSO survey does not cover the “construction” sector and if allowance is made for it, the difference gets reduced. Based on the results of the Fifth EC in this respect, the difference in establishments gets reduced from 7.97 lakhs to 2.78 lakhs. Furthermore, if allowance is made for possible increase between 2010-11 and 2013-14, the difference gets almost wiped out.

Thus, if the above inference is valid, there arises a serious question about the validity of the census frames that an EC can provide for different follow-up surveys.

Total Workforce

The above review has concentrated essentially on the EC coverage of “establishments” which form the basis for follow-up surveys. Yet another relevant question that arises is as to what

Table 4: An Estimate of the Numbers of Workers Excluded in Economic Censuses as Compared with NSSO Rounds of Employment and Unemployment (in million)

	1999-2000	2004-05	2009-10	2011-12
I Total workforce as reported in NSSO rounds	399.5 (55th Round)	459.1 (61st Round)	460.2 (66th Round)	474.2 (68th Round)
II Excluded categories in economic censuses	246.2	280.3	288.0	280.9
(i) Crop production and plantations	212.6	240.6	226.0	214.0
(ii) Estimated numbers of casual labour*	32.0	39.2	58.3	63.0
(iii) Employment as maids, waiters, valet, butlers, laundresses, gardeners, gatekeepers, etc	1.6	0.5	3.7	3.9
III Expected to be covered in economic census (I-II)	153.3	178.8	172.2	185.4 [@]
IV Actual number of workers reported in economic censuses	83.3 (4th EC) (1998)	100.9 (5th EC) (2005)	-	127.7 (6th EC) (2013)

* Excluded agricultural casual labour which is included in crop and plantations.

@ Excluding public administration and defence, etc.

Source: Respective NSSO rounds and Economic Census.

proportion of the economy's total workforce do ECs capture.

We had earlier alluded to the fact that it is difficult for us to gauge as to what proportion of the country's workforce the EC captures. This is because the EC's employment numbers exclude a number of categories of workers such as casual labour, domestic servants, etc, apart from crop production and plantation and public administration and defence and compulsory social security (last in the Sixth EC).

Nevertheless, an attempt is made in Table 4 (p 81) to juxtapose the EC numbers against an estimate of the possible coverage of sectors in the ECs and their estimated workforce numbers derived from the NSSO's estimates.

The results presented in Table 4 have a problem of comparability as NSSO surveys and the EC pertain to different time periods. Even so, some tentative comparison is possible. It brings out that roughly 65 to 80 million of workers are not getting counted in the ECs. The 61st round of NSSO for 2004-05 gave an estimate of 178.8 million as the number of workers expected to be covered in the Fifth EC of 2005, but the EC reported a total workforce of only about 100.9 million, thus leaving a gap of nearly 78 million.

Closer to the Sixth EC, the expected number of workers to be covered in it as per the 2011-12 survey of employment and unemployment was 185.4 million but the EC reported only about 127.7 million thus leaving a gap of 57.7 million. Besides, between these two estimates, there is a gap of about two years. If we take a normal 4% growth in employment between the two periods, a rough estimate suggests that the gap would get widened to about 75 million.

Exclusion by Default

As hinted at earlier, there is one category of workers who may get excluded in counting in the EC; these are workers who are pure wage earners or salaried categories. Though they reside in households (HHs), they are not the focus of the survey and they are not interviewed. Informants are the heads of HHs or owners of establishments. For collecting information on the number of workers

employed, persons working for the establishment are counted; they may be working as owners, co-owners, or partners or family members helping the owner in running the establishment or other persons engaged by the establishment, whether hired or not, besides regular and salaried employees, or casual or on daily wage labourers. The information blocks are designed in such a way that only persons working for the establishment on the last working day prior to the date of fieldwork are considered as workers for the establishment. But those residents within a household who are only wage earners or salaried but work outside the establishment cannot be counted as workers for the establishment. In their case too, by virtue of the study being a census study, such workers by definition have to be counted as workers of some other establishments. However, it is conceivable that there are possibilities of work arrangements whereby not all such arrangements have identifiable establishments for the census survey to capture them.

One such possibility is the employment of persons through public works undertaken through the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA). Chances are that such public works are not counted as establishments for measuring their number and the number of workers employed through them. The second category is the category of domestic workers, which the Sixth EC has not covered. We have not been able to discern the possible estimate of MGNREGA workers who may have been included in the NSSO surveys of employment and unemployment but excluded from ECs, but their number cannot be so large as to disprove the extent of inadequate coverage in the ECs estimated above. In our view, these results thus pose a possible question on the reliability of the EC estimates and on whether they serve the broader objectives set before them.

Conclusions

In conclusion, for the present, we wish to emphasise that the impression that an EC covers a preponderant part of the national economy is not borne out of facts. In terms of the number of workers

covered, they cover only about a little over one-half. Even within the non-agricultural sectors, there is a large segment of casual and domestic workers who are outside their purview. In a recent study, Mehrotra et al (2014) have shown how about 63 million out of a total of 242 million workforce in the non-agricultural sectors, or nearly 26% are casual labour.² The ECs have a specific objective which is to count the establishments and their worker size, and help use them as a census frame for undertaking follow-up surveys for different categories of informal sectors. If we accept that ECs have this as their primary objective, attempts to confer on them the status of an economy-wide census count of the national economy, would not be correct. The more pertinent question before us is whether in fact the ECs are serving their primary purpose of providing such a census frame and if so at what disaggregated level. In a situation where informal sectors dominate, the known large omissions of own account and other small units is sure to distort the sampling frame. On a closer examination, we do see some misgivings in this respect as well, particularly, when we observe such vast undercoverage in the Sixth EC at major states level.

NOTES

- 1 The Sixth EC was conducted in the entire country during January 2013 to April 2014. As specified in the report, information on the number of workers employed was collected on the last working day during visits by enumerators. For this note, Sixth EC 2013 means EC surveyed as above.
- 2 We have no way of knowing if this entire segment of non-agricultural workforce constituting "casual labour" is equivalent to the "wage-paid employees of casual nature" described in the EC reports.

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