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SERVICE SECTOR STATISTICS IN INDIA: PROBLEMS AND WAY FORWARD

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ABSTRACT

Purpose: It has been observed in various studies that the 'servicisation' of the structures of production and employment has taken place in India. However, a problem peculiar to this sector or several types of services is that the output of some components of this sector is difficult to measure as well as to value it in monetary terms. The problems encountered in the measurement of service sector output motivated the author to undertake this study.

Design/methodology/approach: This paper makes use of secondary sources of data including various reports, books and journals, etc. An attempt has been made in this paper to review those studies which deal with measurement problems in services sector output.

Findings and implications: In the Indian context, it has been found that the database on the service sector is highly disorganised. It has been recognised in studies that the limitation of the existing system is marred by the absence of a well-organised mechanism for maintaining a regular and proper database for this sector. A large number of the unorganised units are located in the service sector and the composition of units in the domain undergoes changes at a rapid pace because new units or newer service areas come into existence and others disappear with alarming frequency. Therefore, the need for 'devising a proper classification of services' by identifying all new services and adopting a suitable methodology so as to maintain international comparability of data has been highlighted in various studies.

Originality/value: Although there are studies which try to point out measurability problems of services in developed European Economies, however, studies related to service sector statistics problems in India are far less in number. This paper will therefore mainly focus on the service sector statistics problems in India and point out the way forward.

Keywords: service sector statistics; quantification; measurement.

INTRODUCTION

It has been observed in various studies that as the process of development gets underway in developing countries, the tertiary sector output and employment grow faster than that of the material production sectors. However, a problem peculiar to this sector or several types of services is that the output of some components of this sector is difficult to measure as well as to value it in monetary terms. The question arises as to why the problem of quantification of output in tertiary sector is so complex and peculiar compared to the quantification of output in the commodity producing sectors. One obvious explanation lies in the fact the problem arises because of intangibility and heterogeneity of services. Unlike commodities, services are intangible so that these cannot be counted or measured as objects. Besides this, the services are heterogeneous in the sense that each unit of a particular service may differ from the other units in respect of quality of delivery of service. The problem inherently lies in the rendering or delivery of services. Standardisation of production of commodities is a common feature of modern day production processes. This cannot be ensured in the case of most services. This renders that measurement of output of services difficult if not impossible. In developing economies, these peculiarities additionally arise because of part production of services in the unorganised sector, and absence of market prices of several services (Public Administration and Defence (PA & D) being a primary example of such services). It is true that so far as quality change are concerned, these do constitute an obstacle to the measurement of output and productivity "... for some purposes an exact measure of quality change is available certainly in theory, and to some degree in principle." But in the present study we are not merely concerned with theory or principle. It is in fact more a question of what obtains in practice. In this background, an attempt will be made in this paper to identify the problems/difficulties associated with services sector output measurement in general and India in particular. This paper has been divided into four sections. After introduction in Section 1, we will shift to discuss in brief the problems/difficulties associated with services sector output measurement in general in Section 2. Section 3 will discuss the service sector output measurement in India. The final section is the concluding observations.

DIFFICULTIES OF MEASURING TERTIARY SECTOR OUTPUT

The main difficulties of tertiary sector output measurement are as below:

1. The foremost problem of measurement of output of this sector arises out of the question of what Adam Smith called 'tangibility'. Unlike the commodity production sectors which produce tangible output and which can be measured as: kilograms of wheat, meters of cloth, quintals of steel and so on, tertiary sector produces intangible services, whose physical form cannot be exactly comprehended, measured and valued. So proxy variables, (which are imperfect because of lack of homogeneity and differences in quality, as we shall notice below) such as kilometers of distance covered by a railway, or number of deposit accounts operated by a bank, have to be used.
2. It is obvious that it is difficult to measure the value and output in the service sector because of the lack of development of standardised concepts, comparable data and statistical series over time and across countries.
3. While dealing with tertiary sector employment, statistical data on average hours worked by supervisory workers and non-production workers is not directly available. Moreover, employee hours relate to hours paid rather than hours spent at work. The hours paid for but not worked have been observed to have risen considerably since World War II in the developed countries (Kendrick, 1985).

4. The unpaid household work as also substantial amount of remunerated time of part-time workers engaged in sales, education, instruction, repair and other types of personal services is not taken into account in the employment and hour's data (Kendrick, 1985).
5. A difficulty sometimes arises in connection with the concept and definition of output. The question arises that out of the two approaches viz. 'market transacted' and 'desired effect' approaches, which one should be adopted to define services. For example, medical care could be defined either by taking into account the package of products for which an individual has been billed or by considering the degree to which the treatment brings out the better health of patient (Norwood, 1985). Similarly, a teacher's output maybe defined either by considering the number of pupil hours of teaching done in a day or by the achievements of his/her students on standardised test¹. Though it is the market transacted characteristics approach that is more desirable keeping in view the practical problem of measurement of the alternative approach, yet some authors like Norwood argue for desired effect approach.
6. It is seen that difficulties arise in putting a monetary value to the output of some components of the service sector. Some output of services sector just as that of the transportation sub-sector is placed in the market for sale and, therefore, presents no problem of valuation. But some services are not traded in the market for example, PA & D whose value has to be arbitrarily determined.
7. Many services in the Less Developed Countries (LDCs), such as transportation, electricity, banking, education, public health are supplied by the government and their prices are fixed through administration fiat rather than in the market place. Such prices do not reflect the real value of these services. These prices carry a large measure of subsidies.
8. Many services in LDCs are produced and supplied in the informal sector. Data usually do not exist about the nature and extent of services produced in this sector. In national income accounts value of such services may have to be inferred and estimated.
9. It is seen that services are relatively overpriced in rich countries and underpriced in poor countries. For example, though the actual usefulness of the barber's haircut and teacher's teaching may be almost the same in the two sets of the countries yet their value is relatively higher in rich countries having high per capita incomes and relatively lower in poor countries having low per capita incomes (Patel, 1991). Thus the two may be producing nearly the same output, yet due to relative scarcity or abundance of service, the values differ widely.
10. Lastly, the services are not only intangible but heterogeneous also that is, each unit of the same service may differ from the other unit in quality. Due to the latter reason it is difficult to achieve the same level of output in terms of quality (Cowell, 1980). The quality differences get reflected in price differences but it becomes difficult to know how much of an observe price increase is due to improvement in the quality and how much is due to inflation (Hulten, 1985). Further, on the one hand, it is difficult to identify the quality change and, on the other hand, measurement of quality change in quantitative terms is equally difficult (Norwood, 1985).

SERVICE OUTPUT MEASUREMENT IN INDIA AND ITS DIFFICULTIES

In this section, we shall discuss in brief the methods which are followed to measure service sector output, the sources of data and their quality and limitations of data in case of each of the sub-sectors, of services sector in India separately. India is one of the leading developing countries, in terms of its area, population, as well as the absolute size of its economy. Its experience in respect of the problem being discussed in this paper may be useful in the context of the developing economies (Table 1).

¹Frank Ackerman's words in J.O. Connor (1973), The Fiscal Crisis of the State.

Table 1 Service output measurement in India: sources of data and quality and limitation of data

The sub-sectors of services sector	Sources of data	Quality and limitations of data
1. Trade, Hotels and Restaurants (THR)	i) The Follow up Enterprise Survey (FUS) of Economic Census (EC) concerned with THR ii) Annual Reports of Public Sector Enterprises (PSEs) dealing in THR iii) Reserve Bank of India (RBI) analysis of companies in private corporate sector and co-operative societies	The estimates are based on current data. Reliable Time-lag in availability of data
2. Transport, Storage and Communication	For railways and communication: i) Annual Reports, accounts and Annual Statistical Statements by Ministry of Railways ii) Budget documents of the Central Government iii) Annual Reports, accounts of the Indian Posts and telecommunication Departments For transport by other means and storage: i) Population Census ii) FUS of EC iii) Annual Reports, accounts of the PSEs and Budget Docs for departmental enterprises	Data availability in railways and Communication satisfactory. The estimates of Value Added (VA) are based on up-to date and reliable information For mechanised road transport though data with full coverage is made available by the Ministry of Surface Transport yet time lag of 1–2 years Estimated of VA per worker in respect of private sector undertakings are built on the periodical FUS of EC
3. Banking and Insurance and Real Estate and Business Services	i) The statistical tables relating to Banks in India ii) RBI's Annual Reports and accounts of Companies and Financial Institutions like LIC, state Financial Corporations iii) Budget docs of Department of Posts etc. iv) The annual reports of real estate companies	i) For Banking and insurance, the over-all data availability position satisfactory. ii) NBFs and own account money lenders data not available iii) for some sub-sectors like private Non-Bank Finance Companies (NBFCs), Co-operative societies, and post office saving banks, sufficient details not available on the distribution of management to enable direct measurement of the factor incomes The coverage is not adequate In case of all other years, estimates for benchmark year are based on current data. Even for the benchmark year complete data not available. Rural rental is assumed to be the same as rental for kutcha houses in urban areas

Source: Based on Central Statistical Organisation (1989).

In the national income accounting in India, service sector included the following.

1. Trade, Hotels and Restaurants (THR);
2. transport, storage and communication;
3. banking, insurance, real estate and business services;
4. community, social and personal services and
5. other services.

Let us examine the sources of data and quality and limitation of data of each of these sub-sectors one by one.

The services can be grouped into two segments organised (comprising of public and private sectors) and unorganised comprising of the household sector². The sources of data for the organised sector are the budget documents, reports and accounts. The annual reports of the companies provide data on Gross Value Added (GVA) and number of workers in case of private corporate sector. In case of the unorganised sector the follow up surveys of EC are the major source of information on the number of enterprises, workers and GVA. The joint stock companies under the Companies Act are required to submit annual reports to the Department of Company Affairs. However, taking a small size of sample the estimates are prepared by RBI. No scientific sampling technique is followed by RBI. It is argued that so far as estimates of GVA per workers based on FUS of EC (in case of unorganised sector) are too low. The estimates of the number of workers in different sub-sectors as per these surveys differ widely with those available from other sources like Employment-Unemployment Surveys of National Sample Survey Organisation and decennial Population Census. The problem of measurement of service sector output is getting compounded because of the fact that the domain of service sector is getting bigger day by day due to the entry of new services like Information Technology and Information Technology Enabled Services (IT and ITES). There are certain new emerging service like e-commerce, eco-system services whose coverage falls beyond the present system of data generation. As it has been pointed out in certain studies that there is need for deliberation for improving the database of the service sector on the following issues:

1. devising a proper classification of services;
2. assessing the quality of the survey estimates;
3. finding out ways and means to collect data for emerging areas;
4. introducing a survey of non-manufacturing industries (bigger units) and
5. working out a proper time frame for follow-up enterprise surveys of EC.

What needs to be done?

- For the purpose of developing the suggested Classification, it is necessary to identify first the variety of services already in existence in India by considering all available sources. The task would involve identification of new activities by:
 - looking at the international documents, websites and list of service providers that have made their appearance in the plethora of Yellow Pages of numerous cities and towns across India or in telephone directories;
 - interacting with various agencies or associations that will be in a position to throw light on emerging areas or new activities and

²This and the following paragraph are solely based on the website http://mospi.nic.in/mospi_new/upload/sss.htm.

- examining alternative datasets like those of Follow-up Enterprise Surveys, Annual Survey of Industries (ASI) as well as production data available from other sources.
 - The work of identification and the preparation of a list of new activities in the Services Sector that are coming into existence should be carried out on a regular basis.
 - All such activities should be assigned proper codes within the framework of NIC and International Classification, periodically by the Central Statistical Organisation (CSO) for the benefit of user organisations with a view to maintaining international comparability.
 - The suggested list of new activities with their codes should be released through the website as well as other media.
 - Of these new activities, those, which are important at the international level, should be taken up with the organisations like World Trade Organization (WTO), International Monetary Fund (IMF), etc. for their proper representation in the international classification.
 - Periodic revision of NIC should be attempted within a reasonable time frame after revision of the classification takes place in the international scenario.
 - The CSO should monitor the work stated above.
- A suitable methodology should be developed to estimate the contribution of emerging areas like software exports, e-commerce, entertainment sector, eco-system services and related fields in employment, GVA, etc.
- An appropriate mechanism to compile data related to the NPISHs including Non-Government Organizations (NGOs) at the national and State level should be evolved.
- An integrated system to improve the database on scientific and technical manpower (knowledge workers) should also be evolved.

The Ministry of Statistics and Programme Implementation (MoS&PI) should be entrusted with the responsibility to operationalise these recommendations.

CONCLUSIONS

This paper concludes that the database on the service sector is highly disorganised as is validated by studies. The limitation of the existing system is the absence of a well-organised mechanism for maintaining a regular and proper database for this Sector. Like the ASI that is devoted to collection of data from manufacturing and few other categories of units included in the lists maintained by the Chief Inspectors of Factories, there is no such scheme in the Services Sector for annual collection of data from the units either having a large number of workers or contributing significantly in terms of annual turnover. The Sector is dominated by a large number of *unorganised* units. The composition of units in the domain undergoes changes at a rapid pace because new units or newer service areas come into existence and others disappear with alarming frequency. Therefore, there is a need for Devising a Proper Classification of Services by identifying all new services and a adopting a suitable methodology so as to maintain international comparability of data has been highlighted in various studies. There is a need for finding out how the data can be collected for emerging area in service sector and also for assessing the quality of survey estimates.

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WEBSITE

Available at: http://mospi.nic.in/mospi_new/upload/sss.htm. Accessed on 22 August 2016.

BIOGRAPHICAL NOTES

Seema Joshi is an Associate Professor of Economics in the Department of Commerce, Kirori Mal College, University of Delhi, Delhi. She is having 20 years of teaching experience and was nominated for Outstanding Reviewers Awards 2013 for *World Journal of Entrepreneurship, Management and Sustainable Development*. She was selected as Indian Council for Cultural Relations Tagore Chair Professor (first-ever to Vietnam) to University of Social Sciences and Humanities in Ho Chi Minh City, Vietnam, 2011–2012. She was selected for the 2010 and 2013 Edition of Marquis *Who's Who in the World*. She was the first recipient of Sir Ratan Tata Fellowship at Senior Fellow level at Institute of Economic Growth, New Delhi, 2007–2008. She was Nominated as one of members of the review committee constituted by The Kerala State Higher Education Council for formulating a Higher education policy of the state in the light of fresh developments in the year 2012. She was also selected as an Expert Panellist of the PHD Research Bureau (2012–2013, 2015) of PHD Chamber of Commerce and Industry, New Delhi. She has published 2 Books, 30 articles, 4 Working Papers and 1 monograph. She has presented several research papers in national and international Conferences. Her research interests include tertiary sector, social sector and urban management.