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GAPS IN SERVICE STATISTICS

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Abstract: Official statistics relating to the production of, and trade in, services (output, employment, prices, exports, imports etc.) are available in much sparser sectorial breakdown than statistics relating to the production of goods in the commonly available statistical sources. The use of establishment data as a primary source is also a handicap as several service sub-sectors are characterised by smaller establishment sizes than the minimum cut-off. This is an increasingly serious problem for users as the service sector is more important economically than the goods sector, is growing the fastest, and is diversifying. It is also a sector where competition is arguably weaker than desirable, but data problems make analysis difficult. A solution would be to move official resources from compiling goods statistics to compiling service statistics.

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Gaps in Service Statistics -- a user perspective

The author of this note is a professional economist, working in the Economics Department of the Organisation for Economic Co-operation and Development (OECD). During his career there, he has worked on the economies of a number of individual OECD countries, on trade and current account balances for major OECD countries, and groups of non-OECD countries, on the interaction between trade, foreign direct investment, and employment, and more recently on structural (microeconomic) problems and policies facing OECD countries in markets for labour and products. Virtually all of this work has involved intensive use of economic statistics produced by OECD and non-OECD countries for both analytic and forecasting purposes. The author thanks colleagues in the Economics Department and elsewhere in the OECD for their advice and ideas when preparing this paper. The views expressed are, however, his own and should not be interpreted as being those of the Economics Department of the OECD, nor of the OECD as an organisation.

Contrasts between statistics for goods and statistics for services

1. Table 12 of the standard OECD/UN presentation of national accounts data is entitled "Gross Domestic Product by Kind of Activity". If we turn to table 12 for our host country, Denmark, we see that there are, as usual, 54 entries for individual sectors, sub-totals, and totals. There are three sectorial entries under "agriculture, hunting, forestry and fishing", there are four entries under "mining and quarrying", nine under "manufacturing", two under "electricity gas and water", one for "construction", three under "wholesale and retail trade, restaurants and hotels", two under "transport, storage and communication, four under "finance, insurance real estate and business services", five under "community, social and personal services" and one for "producers of government services", the activity that all of us here contribute to. Thus in total, there are 19 separate entries for the production of goods (including structures, electricity, gas and water), and 15 for the production of services. Production of goods accounts for about 30 per cent of Denmark's GDP at current prices, and services account for 70 per cent. Private sector services alone account for about half of GDP.

2. If we turn to table 15, we find there data on employment by kind of activity in the same sectors as before. Production of goods employs about 30 per cent of the working population and production of services the remaining 70 per cent. In Denmark, there are as many producers of government services as there are producers of goods. Yet only one figure is given for producers of government services, whereas employment in goods production is broken down into 19 sub-sectors.

3. If we consult more detailed, but still easily accessible statistical sources, the same pattern remains. My colleagues in the Science, Technology and Industry Directorate of the OECD regularly publish their "Industrial Structure Statistics", in which there are data for production, value-added, total and dependent employment, investment, wages and salaries, number of

establishments and hours worked for 57 individual manufacturing sub-sectors. There is nothing remotely as detailed for service sector activities. The 1996 edition of the OECD "Services - statistics on value-added and employment" is the best source I know of, and it has room in its tabulations for as many as 84 sub-sectors. But on examination, it is evident that for most countries, the actual availability of data is much more limited. Astonishingly enough, only Canada and to some extent Finland have detailed statistics on the breakdown within the public sector itself. Of the 106 totals, sub-totals and individual sub-sectorial entries, Japan, the second largest economy in the world, gives data for only ten. Even for the USA, data for less than half of the entries are available. Only eight countries have separate data for employment in wholesale and resale trade, even though these two sub-sectors are among the largest employers in the economy. If I am to believe the OECD publication, the UK, that "nation of shopkeepers", does not know how many shopkeepers it has, and lumps together employment in retail and wholesale trade with that in hotels and restaurants (4.7 million persons in total). On the other hand, it is easy enough to find out how many persons are employed in the UK making watches and clocks (two thousand).

4. The contrast is even greater in the case of trade statistics. I do not know offhand how many separate entries there are in the latest revision of the SITC codes, but they must run into hundreds or even thousands at the finest level of detail. By contrast, the latest IMF Balance of Payments Manual, which caters for a far more detailed breakdown of service trade statistics than previously, nevertheless has fewer than 60 entries in this category[1]. Furthermore, one is far more likely to encounter missing data in service statistics than in statistics for goods, despite the great improvements in the past ten years carried out in national statistical offices and with the help of international organisations such as the OECD.

5. In summary, then, one can safely say that services are far less well covered by official statistics than are goods. As the OECD Services statistics publication referred to earlier notes " .... availability of [service sector] data varies considerably from one country to another and [..] comparability between countries is poor. No OECD totals can be calculated even at the ISIC major division level because of differences in classifications between countries." And this state of affairs obtains even though production of services is far more important to the economy than is the production of goods: services employ more people, their contribution to GDP is higher and it is the service sector that expands the fastest.

Problems for users

6. The great discrepancy in level of detail as between goods and services statistics would not matter if there was much greater homogeneity in services than in goods. If all shops were basically similar, and all purveyors of professional services could slip easily from one profession to another as demand conditions changed, then collecting details of individual services and their providers would be something of a luxury. But this is not the case. From an economist's point of view, supermarkets differ as much from antique shops as do factories producing textiles from those producing chemicals. Ear, nose and throat specialists can no more become heart surgeons than

1. More detail on trade in services is available in the OECD publication "Services: statistics on international transactions". However, the level of detail remains far lower than for trade in goods.

textile factories can become automobile plants. The economic history of most OECD countries in the post-war period has been increasing specialisation in services, with big firms offering a wider and wider variety of services, for example in the banking sector, or with small firms coming into existence to offer increasingly specialised services, for example in the computer sector. Collection and dissemination of detailed official statistics on services has failed to keep up with developments in this sector. As a result, analysts do not know in enough detail what is happening in the largest sector of their economies. They have to rely on occasional surveys that are often not internationally comparable.

7. Another major reason for collecting more detailed service sector statistics relates to competition and regulation. There has been a general acceptance in OECD countries, and in many non-OECD countries as well, that the important economic goals of higher living standards and economic stability can be better achieved by relying on market forces, rather than on public-sector rules and regulations. Market forces means competition: the possibility for producers of the same or similar product to compete openly and transparently with each other on the basis of price and quality. In the case of goods, stronger competition has been achieved by reducing tariff and non-tariff barriers to international trade[2], as well as by stronger application of competition policies. Most manufacturing sub-sectors in most OECD countries are now fully exposed to international competition, and this encourages higher productivity and greater innovation. Service sectors are much less exposed to competition. Although services account for about two-thirds of GDP in most OECD countries, international trade in services lags behind trade in goods. This is partly because many services have to be delivered on the spot: it is hard to see how a hairdresser in New York could meaningfully compete with one in Tokyo. But it is also because national regulations often discriminate against foreign suppliers via rules on ownership, professional qualifications, and standards. Furthermore, service producers are typically subject to more economic official regulation and self-regulation than are goods producers.

8. As a result, there has been increasing interest by governments in recent times in analysing the level of competition in services, the effects on competition of various regulations and laws, and the effects of competition on productivity, innovation and job-creation. This sort of analysis is very data-intensive, and it is extremely frustrating for the analyst to find that the data either do not exist, or are too patchy for firm conclusions to be drawn. Policy decisions have to be taken nevertheless, but they might be taken on the basis on insufficient data, and therefore be flawed. In our own work at the OECD, we have tried to overcome the various problems associated with deficiencies in service statistics, but the results always leave something to be desired. Either they are not truly comparable across countries, or they are at a level of sectorial aggregation that reduces their utility to the policy-makers.

9. Another problem relates to measures of output in the service sector. This is such a well-known problem that I do not want to dwell on it. But all professional economists who have to analyse and predict movements in productivity, which are at the heart of rising standards of living, are uneasily aware that the theoretical and practical difficulties involved in measuring productivity

2. Until recently (and still to some extent), this has been much more true of trade in manufactured goods than of agricultural goods, or of trade in "utilities" (electricity and water especially), which remain subject to administrative controls and inter-governmental agreements.

in service sectors mean that their basic data are suspect. Again, this would not be a major problem if the sector were small, but it is not. As I noted earlier, Denmark employs as many people producing government services alone as it does in manufacturing, and productivity in the government sector is notoriously poorly measured.

What are the biggest gaps?

10. It is in fact very difficult to be precise about which are the most important gaps. As a colleague of mine said, "service sector statistics are a huge gap!" Apart from the inadequate level of sectorial detail, one important lacuna is undoubtedly the poor coverage of employment. The most frequent (and most frequently quoted) statistics on employment typically come from establishment data. There is usually a minimum cut-off size for inclusion in samples, which may be as high as 100 employees, and is often as low as 25 employees. This made good sense in the days when most employees worked in manufacturing, where establishment sizes are usually quite large, but very many service firms are smaller than the minimum size for inclusion. Hence employment in such small firms is overlooked, and picked up only in the more accurate (but less frequent) labour force surveys. The birth and death of these small firms is also consequently measured inaccurately. It is widely believed that employment creation is most dynamic in such small firms, and there is a very great interest on the part of governments, their advisers and academics on the process of job and enterprise creation and destruction in these firms. This problem is most perhaps most acute in the transition countries of eastern and central Europe. Their economies are rapidly developing away from goods production and public sector employment and towards the provision of services, often by small private companies. Employment there is not adequately picked up by the statisticians, resulting in misleading data on total employment trends, and consequently on productivity as well.

Possible solutions

11. From one user's viewpoint, therefore, the main priorities for reforms to service statistics are i), a finer breakdown of the sectors routinely covered, and ii), better coverage of employment and other variables, by sampling smaller firms. Given the nature of work arrangement in the much of the service sector, it is clear that employment would best be measured by hours worked, rather than number of persons employed. For forecasters, timeliness is always a desideratum, of course. Setting up a finer sub-sectorial breakdown would require some international agreements on definitions, but the problems do not appear to be insuperable. In the hands of experienced analysts, even imperfect statistics are better than the absence of statistics: "numbers beat no numbers", as another of my colleagues says. A forecaster would go further: "any number beats no number".

12. The question arises as to what could or should be done about the fact that service statistics are in many ways unsatisfactory, at least as viewed by one type of user. In an ideal world, governments would increase resources to improve collection of service statistics, and perhaps also statistics on goods. But in the current budgetary climate, this is unrealistic. This raises the question of whether existing public sector resources should be shifted around, putting more emphasis on services and less on goods.

13. This takes us into the issue of why governments collect statistics in the first place. There are some obvious reasons. Governments need to govern, and they can govern better if they have good information. At the macroeconomic level, they need to know whether the economy is expanding or contracting, whether inflation is rising or falling, whether productivity is behaving satisfactorily and so on. They therefore need information from all parts of the economy, but not necessarily extremely detailed information on every part of it. Much of the information that governments need can be obtained only by governments, which have the necessary legal powers. The private sector also has a demand for statistics to enable it to function well. Some parts of the private sector, for example the financial sector, need information about the behaviour of the macro economy. Many sectors, though, need very detailed information about their own particular sector. One of the functions of industrial and agricultural associations is to collect and disseminate these very detailed data. Arguably, more of the burden of collecting detailed statistics on output, employment and prices of goods could be passed on to the sectors concerned, so that resources in the public statistical agencies could be diverted to collecting more, and more detailed, statistics on services, which governments need in order to do their job properly.

14. Of course, there is the question of cost. It is certainly easier to count goods than to count services. Information on the production of individual manufactured or agricultural goods can be obtained at very low cost, and data on prices, employment, investment etc. are not too difficult to obtain either, in part because the reporting procedures set up to obtain this sort of data were set up many decades ago. Services are trickier because of the well-known problems of measuring output and productivity, and the great heterogeneity of services. But services are more important than goods, so that if statistical collection resources cannot be expanded *in toto,* then there may need to be a rather large reduction in official efforts to collect detailed statistics related to the production of goods. This need not imply that such statistics would no longer be collected, but rather that the responsibility for doing so be gradually passed to the private sector, which is the main beneficiary of them.

Questions for discussion

1. Does the group agree that the level of sectorial detail for services available in easily-available official statistical publications (including electronic) leaves a good deal to be desired?
2. If so, does the group feel that the main problems of improving sectorial coverage on a routine basis relate mainly to agreeing on definitions; to availability of resources; or to legal barriers?
3. Does the group think that sampling (much) smaller firms on a routine basis would be a cost-effective way of improving the accuracy and timeliness of service sector statistics?
4. If the availability of resources is a binding constraint, would the group agree that there is a case for a large reduction in efforts to compile official statistics relating to goods production, in order to release resources for the compilation of better service statistics?
5. To what extent are statisticians already working on the problems raised in this note?