

TECHNOLOGICAL CHANGE IN SERVICES AND IMPLICATIONS FOR STATISTICS

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I. The Role of the Service Sector in the Economy

Over the past 10 years, significant progress has been achieved in understanding the factors driving the rapid growth of the service sector in the post war period.

Most of the concerns and worries over the growth of the service industries and their role in the advanced economies have been shown to have been misconceived.

Much of the early progress in better understanding the service sector has been on the conceptual side, buttressed by a rather imaginative use of statistics since the statistics needed to directly test propositions about the services sector are in many cases lacking. In other cases, special efforts were made to collect targeted data to address issues or anecdotal information and case studies were relied on. However, more recently progress is being made on developing the statistics needed to confirm and better understand the factors influencing the growth of the service sector. The work at the Voorburg group has been key in this respect.

The very broad factors impacting the service sector are Technological Advance, Globalization; Shifts in Final and Intermediate Demands Toward Services; and Deregulation of Services. Technological advance is so inter-linked with the other three factors it is very difficult to sort out cause and effect relationships but clearly the three other factors have interacted with technological advances in spurring the growth and development of the service sector.

At a more concrete level, in terms of our improved understanding of the factors influencing the move toward a services dominated economy, the following findings are of particular relevance to the issues of technological advance and service industries.

The most fundamental advance in our understanding of the growth of the service sector has been the finding that producer services, not consumer or government services, have been the engine of growth in the sector. This proposition is now widely accepted and supported by data on the service industries. Although a fundamentally important finding, it begs the question of why demand for the producer services industries' products were expanding so rapidly and consistently over the post-war period.

This latter question raises a second issue on which considerable progress has been made. It is now accepted that the growth of the service industries is not a statistical illusion arising from households, and particularly firms, purchasing services in the market which they had previously been producing in-house. The statistics necessary to test directly the extent of contracting out do not exist but a series of studies using industry and occupational data have concluded that contracting out plays a minor but not inconsequential role in explaining the growth of the service

sector. Nevertheless, it is in any case a mistake to treat contracting out as just an accounting issue. To the extent it is happening, it is part of the capital deepening and specialization process discussed below, and if we had the data to test the issue, we would likely find the process gives rise to significant efficiencies, productivity improvements, and innovations.

A more fundamental and compelling explanation of the growth of the producer services sector has come to be broadly accepted. Technological advance has caused design, development, production and distribution processes for both goods and services to become increasingly services input and activity intensive, as these processes become more complex, automated, integrated and globalized. The growth in producer services is part of an ongoing process of capital deepening (especially human and information capital) accompanied by increased specialization on the part of producer services providers. Although it is now generally accepted that growth in services is being fuelled by the demand for new and improved services on the part of firms in both the goods and services industries, the services statistics required to identify the new services, and to track and understand their utilization in the economy, do not exist despite their obvious fundamental importance to understanding modern microeconomic growth processes.

It is important to distinguish two separate, though related issues in this regard, which are at times mixed together. As production systems become increasingly service activity intensive one is presented with some very dramatic anecdotal or firm specific numbers which purport to show that well over half or three quarters of the costs of producing goods can be traced to service type activities undertaken by the firm (as opposed to direct production activities). It is this focus, together with the growth of service industries, which produces the very large measures of the information economy and information workers, since most of these service activities are information based. Understanding this phenomenon is important for understanding how our production systems are changing and the changing skills requirements of firms.

The second distinct but related issue relates to the fact that firms in the economy are increasingly purchasing services from the marketplace in support of the development, production and distribution of their products (goods and services). It is this latter focus which is the prime explanation for the rapid growth of the service industries. For example, for Canada it is estimated that every \$1 of manufacturing exports contains about 38¢ of service industries outputs.

One final issue in understanding the growth of the service sector is the fact that services are becoming increasingly tradeable due to advances in computer and telecommunications technologies. Increasingly services can be delivered electronically or they can be stored and embodied in goods and thus traded. In addition, trade liberalization initiatives are facilitating trade in services via liberalization of investment and arrangements to allow service providers easier temporary access to foreign markets. Globalization itself is spurring both intra and inter corporate international services trade. As technological advance facilitates the globalization of both goods and services firms, it also promotes and makes more feasible, international trade in services. In addition, as the processes discussed above give rise to the creation of highly specialized, niche, services providers, the high degrees of specialization incite firms to seek out broader markets.

Our inability to measure services trade the way goods trade is measured, because of the nature of services and the way they are traded, will become an increasingly serious problem as more services are traded via the new information highways and because services trade will continue to increase as a proportion of total trade.

Progress being made in better understanding the growth and development of the service sector allows for some general conclusions and raises some basic questions related to the issue of technological change and its implication for services statistics.

1. Technological advance in both the goods and the services producing industries are having profound impacts on the growth and development of the service sector
2. What is the nature of these technological advances and how are they impacting the growth and performance of service industries?
3. The move toward a services/information/knowledge based economy is not explained as much by changes in the structure of final demand (away from commodities and toward services and information) as by changes in the demand for intermediate inputs in favour of the services and information necessary to manage increasingly complex production and distribution systems in the economy.
4. What are the implications of these changes for services statistics and our ability to better understand and track the dramatic changes taking place in the economy?

II Technological Advance and Implications for Service Industries

The technological advances impacting the service industries appear to be almost solely related to computer and communications technologies and more particularly to the merging of these technologies into what is most often characterized as information technologies - the information revolution.

The technological advances in the domain of information technologies have had profound effects on the service industries, particularly given the information intensive nature of the service industries. The application of information technologies, in areas such as banking, communication and transportation, the trades, health and environmental services, and a very broad range of business services is manifest. Information plays a particularly critical role in services firms as both inputs and outputs.

Advances in information technology have made it more feasible and efficient for firms to access information, to process it, and to distribute it widely. The general view is that the initial impacts of information technologies on services industries manifested themselves in terms of

process innovations - banking and telecom services being the classic examples. It is only recently that studies of innovation in the services industries have begun to provide us with useful information on the nature of these process innovations in specific service industries. The productivity performance of industries such as transportation, communication, utilities, and parts of the financial services industries appears to confirm the existence of beneficial process innovations in these industries, as do case studies.

Advances in information technologies have also led to the development of new and improved services, particularly producer services. The ability to more efficiently access, process, package and deliver information has led to the generation of new highly specialized, highly customized services product innovations. Again, there is considerable anecdotal evidence of this in industries such as telecommunications, computer services - especially software, distribution and logistics services, geomatics, commercial education and training, consulting, security services, S&T services, etc. Most of these service products are information and communication related products. However, progress towards identifying and measuring the products being produced in the service industries has been slow, so for most service industries it is very difficult to understand their development and performance in the way we understand manufacturing industries, for example.

Information technologies are also increasingly being used to link offices and factories and stores, disparate parts of MNEs, suppliers and manufacturer (of goods and services), and manufacturers and customers. These technologies facilitate organizational innovations and give rise to demands for a broadening range of sophisticated computer, communications, information and support services in areas such as EDI, electronic commerce, just-in-time manufacturing, logistics functions, etc. The further development of the electronic highway will further encourage these activities and the demand for sophisticated services to support them.

The approach taken to innovation in this paper implicitly uses the classical approach of distinguishing process, product and organizational innovations because these distinctions are so obviously useful and important. In many service industries this approach should be workable, but in other industries we may find that the nature of the innovation process makes it very difficult, because service product innovations are so embedded in the process of developing, producing and delivering the service. There is clearly a need to undertake surveys of innovation in the service industries which parallel the surveys of innovation in manufacturing.

Information technologies and the electronic highway have also made services more tradeable and strengthened the capability of service firms to deliver their products to wider markets. These technologies have also given rise to economies of scope as the new more targeted information products can be delivered through the same network more efficiently and in a more timely fashion. Innovation in the delivery of services, owing to technological advances in communications, may be the single most important technological trend impacting services. Advances in communications are to the service industries today similar to what advances in transportation have been to the manufacturing industries in the past. As communication costs

continue to decline, and services become increasingly tradeable, it is likely that services will come to dominate international trade, much as it now dominates domestic economic activities.

Technological advances in the service sector appear to be reducing labour requirements of a low-skill, repetitive, clerical nature when applied to overhead and production processes (in industries such as telecommunications and financial services, for example), but increasing labour requirements of a highly skilled nature when applied to the expansion of service sector outputs, the development of new services, and the expansion of markets being served.

Despite heavy investments in information technologies, the overall productivity performance of the sector appears disappointing, though as one disaggregates, extremely wide variations in service industries productivity performance is found. It remains a puzzle why the heavy investments of service firms are not showing up more strongly in productivity advances for the sector as a whole. On the other hand, there is good reason to believe that the measured productivity performance of the service sector is seriously understating real productivity gains due to a lack of statistics to measure services outputs, products, prices and quality.

The productivity performance of service industries cannot be judged solely with reference to their own measured productivity record. Producer services are becoming increasingly important cost factors in goods production and the cost and quality of these service inputs are increasingly critical to the competitiveness of goods. Moreover, it is believed that producer services introduce scientific, organizational, and engineering innovations into the overall production system which raise the productivity of user firms and industries. The data to identify the nature of the services being bought by different user industries and to measure productivity linkages among industries is lacking.

The application of information technology is also having profound impacts on goods producing firms, as stressed above. On the one hand, it has incited firms to purchase more sophisticated information and support services from specialized service providers. On the other hand, as goods producers gain expertise in utilizing information, in managing geographically dispersed operations, in training employees, in financing sales, and in delivering support services to production units, strong incentives arise to organize the firm to use this expertise to make profits by selling services to others.

Again, anecdotal evidence of the tendency of manufacturing firms to get into services businesses abounds but statistics documenting the changing outputs of manufacturing firms in the direction of information and service products are lacking. There is no reason to think this trend is not going to continue as firms tend to deploy their assets (physical, human and information) to service those markets which are growing. I suppose one could equally argue that service firms, in their efforts to make their products more tradeable, are beginning increasingly to produce products that look a lot like goods.

There is also a view that markets are increasingly demanding solutions rather than products - that is, they are seeking packages of goods and services to meet their needs. Again examples of their type of "solutions selling" abound as the sale of goods are increasingly tied to related support services. This, along with the issues discussed above, may account for the proliferation of mergers, strategic alliances, coalitions, etc. between and among services and manufacturing firms, particularly in industries being highly impacted by the new information technologies. It is not only marketing considerations driving these alliances however, because innovation in services also demand unusually close linkages between services producers and customers in many cases and between services firms and suppliers in other cases.

All of these trends have led to the view that traditional industry boundaries are breaking down and that new approaches to defining and measuring industrial landscapes need to be found. More pointedly, the question is being asked whether it is any longer feasible or useful to use the distinction between goods and services as the basis for grouping firms into industries in meaningful ways.

III Implications for Services Statistics

The movement toward a services economy in advanced industrial nations, which to a large extent parallels and reflects a movement toward an information or knowledge economy, raises significant concerns as to whether our systems of economic statistics have become obsolete. In the context of this paper, the focus is on whether the system is producing the micro-economic statistics required to describe, measure and understand the growth and performance of service industries and the factors, influencing that performance, as discussed above. There are good grounds for believing there is a problem. Statistics on services today are not nearly so detailed or reliable as is the case for goods, despite the fact that in the post war period the service sector has grown to the point where services now dominate economic activity in the economy.

In addition, rather than offering evidence of the "deindustrialization" of advanced economies, it turns out the growth of the service sector, driven by producer services growth, is a vital part of the industrial development process. Advanced economies consist of highly interdependent productive systems - services, agriculture, resources and manufacturing. Each of the sectors depend critically on the others and on the international sector for its productivity and competitiveness. Therefore, we need to have the statistics necessary to understand the linkages between the services and goods sectors, a task again made difficult by the lack of detailed statistics on services.

Given the manifest weaknesses in our current system of service statistics in the light of the information revolution, it does not really take a crystal ball to conclude we need to devote significant new resources to the development of improved services statistics. What the technological trends tell us is that the problems identified above are only going to get worse as the structure of demand continues to shift toward services, as new services develop, as services become increasingly tradeable and difficult to track, as goods firms increasingly move into services

markets, and as linkages among goods and services firms continue to grow. The question is, where should new resources for services statistics development be deployed to greatest advantage to sort out these complex issues and gain a better understanding of the factors influencing services performance.

I would argue that although there is no easy answer, there is a reasonably clear one. The most fundamental and necessary statistical program would be to develop a more complete product classification system for services and begin to produce statistics on these service products. Statistical agencies in different countries are very slowly moving in this direction, encouraged by the Voorburg group.

It is often said that industry productivity measures (usually labour productivity) are not very useful because though they tell us that productivity has been growing relatively slowly or rapidly, they don't tell us why. More detailed information is required. It seems to me the situation with respect to service industries statistics is somewhat similar (though for some service industries even the output measures are suspect). Knowing which services industries are growing relatively rapidly is helpful but it doesn't tell us much about why they are growing - for that we need more detailed data on their products and the markets those products are being sold into.

Recent intensive research in Canada on the manufacturing industries has shown that dynamic change characterized by intrasectoral exit and entry of firms and job turnover is much more significant than intersectoral change. It is likely that the same situation, but to an even greater degree, characterizes the service sector. If all this firm and labour turnover is taking place within industries rather than between industries, it means that we have to have more detailed sub-industry statistics to understand what is happening in terms of innovation and specialization processes at the microeconomic level.

The benefits of having more detailed product data for service industries (or any, in some cases) is obvious. Its sort of like the Field of Dreams - if you build them, we will use them. So I will just give a few examples.

Many people, myself included, believe the phenomenally rapid growth of the service sector was not only driven by producer services but also by innovation in producer services. But how do we confirm this? If we don't even have good information on current services products, how do we track product innovation in services? If we don't have good information on services products, how do we construct price indexes for services and track quality improvements? Better, more detailed data on services products would clearly help to significantly improve our ability to measure services outputs. In some cases, such product data might even allow for some physical output measures. The computer services survey is most certainly a move in the right direction, but is it detailed enough? Are we moving (or can we move) to collect the related price data? Clearly such statistics for a range of service industries would help answer some of the big issues - e.g. are we seriously understating productivity in the service sector?

Another area where services product statistics would be a big help is in the trade in services field, where there are also large concerns over possible underestimation. Better, more detailed data on the services being traded is badly needed. Better services product statistics would allow for the collection of better statistics on service exports either in the balance of payments survey but, perhaps better, in the industry surveys. Countries could then trade their improved export statistics for import statistics. It may even become less difficult to measure services trade if there continues to be an expansion of services electronic trade, services embodied in goods, and market based trade relative to intracorporate trade and trade delivered by service providers operating abroad.

Lack of detailed statistics on service industries' outputs, lines of business, products and prices also make it difficult to address issues relating to the role of economies of scale and scope, specialization and productivity. Research has suggested that the two corporate strategies of standardization and scale on the one hand and customization and niche-filling on the other, are leading to the two extremes of the size distribution of service firms. Specialization is, in any event, believed to have been an important factor in the development of the service industries, as stressed further above. It is also believed it is these specialized services that are being exported. Detailed services product statistics are required to confirm the importance of specialization in the development of the service industries.

The emphasis to this point has been on service industries' outputs expressed in service products terms. A better system of services product classification and measurements would also be valuable for collecting information on the production and sale of services by goods producing firms. Statistics on services outputs could be collected from goods producing firms in selected industries where it is known firms are becoming active service providers to the market. Such data would help determine whether the issue of the production and sale of services by goods producing firms is as serious as some believe. The collection of the data necessary to calculate services GDP in relation to services being produced by goods firms will be particularly challenging. It will be necessary to try and determine how goods producing firms are organizing themselves to produce and market these services, an issue relevant to the potential for measuring these services as well as an issue of interest in itself.

A further use of services product classification would be to obtain more detailed data on the acquisition of services (inputs) by goods and services firms. A better characterization of the services being purchased would help identify the nature of the services products being purchased by different industries and the uses to which they are put - e.g. to help in the development of new products, to inform and train managers and workers, as inputs into production processes, to manage logistics processes, to integrate disparate operations, to more effectively market products etc. Such data would be invaluable in better understanding the services firms and the linkages between and among goods and services firms. Such data would better be drawn from the user, as opposed to the supplier firms.

I should stress that I was asked to identify the services statistics which I believed would be most useful in tracking the changing nature of the service sector in the face of rapid technological advance from a user perspective, as opposed to a supplier perspective. I recognize that developing and applying successfully a significantly more detailed services product classification system will be a complex, human resource intensive, and costly process. I would suggest that statistical agencies should work with the departments of industry as well as service firms and associations in developing the product classification and testing out the feasibility of obtaining the data and the robustness of the data. The process itself could be designed to help us to better understand the service industries the nature of their products, the markets they serve, the way they innovate and the way they deliver their products.

Though I have focussed primarily on producer services, the information revolution is clearly impacting both government and consumer services. Significant pressures to reduce government spending have caused governments to rely increasingly on information technologies and innovation in developing and delivering their products - certainly that trend is evident in Statistics Canada and in my department, Industry Canada. The issues discussed above are pretty much directly applicable to government services, since governments are in the information business in a big way and there is little doubt the application of information technologies is having significant effects on services delivery and productivity in the government sector and will continue to do so. One hopeful sign is that government restraint is acting as a proxy for the bottom line in business and causing government departments and publicly supported institutions to pay more attention to identifying their outputs and related costs in product specific terms. Governments are also privatizing many of their service activities. It may be easier in future to collect data on the services currently being produced by governments.

The issues related to the potential impact of information technologies on consumer services are in some ways more problematic. Up until recently little attention has been paid to the sector. The sector's relatively stable share of real output reflected a relatively weak measured productivity performance due to the nature of the services (highly customized, contact services). The information revolution, particularly the information highway, is making these views obsolete for a growing number of consumer services. The prospects for a significant expansion of services direct to the home is enormous. These trends have significant implications for the traditional consumer service industries and will also generate new consumer services from both the producer and consumer services sectors. I suppose this is just another industrial boundary which is starting to blur.

How does one go about tracking this activity? Again more detailed services product data would help particularly if accompanied by information on the markets being served. There is a need in any event to better distinguish producer and consumer services in the statistics since our industrial classification system is becoming less able to distinguish the two. Alternatively, one could consider an expansion of consumer surveys to draw more detailed data on service product purchases by households. Doubtless these new services to households will give rise to significant resource savings but I do not know how they could be reflected in national productivity numbers,

since most of the savings would accrue to individuals and households. Of course, the related issue of tele-working, were tele-working to grow in importance, would give rise to even more serious problems.

Finally, returning just briefly to the issue of the knowledge or information economy, there has been considerable interest shown in measuring the impact of information on the economy, its productivity, and the competitiveness of its firms and industries. It is obvious that the information revolution has significantly increased the information and intelligence available to firms and that investments in such information is having significant effects on their efficiency and effectiveness in managing their operations, development and production processes, and in targeting their markets. Should we be doing more to track these investments?

We do survey R&D spending by industries but the measure is rather narrowly defined and certainly is not a proxy for the investments in knowledge and information being made by firms and individuals in the economy. The feeling is that, particularly in services, expenditures on R&D are not a good proxy for expenditures on knowledge because services are so information intensive - but it must only be a matter of degree because the information revolution is so horizontal in its impacts on the economy. The focus of R&D is on technological innovation and does not give us data on expenditures on information and its acquisition per se, on market and organizational research, and on formal and informal training. Research in Canada, measuring R&D capital stocks in industry, has shown that investments in R&D have very high rates of return and give rise to significant inter-industry productivity spillovers.

More recently, we have also begun occasionally to survey expenditures on information technologies (capital equipment) by goods and services firms. The service industries are the largest purchasers of such technologies by far and the capital intensity of service industries is increasing in relative terms as a result. The increase in R&D undertaken in service industries, relative to goods industries, partly must reflect these considerations as well as the capital deepening and vertical specialization processes discussed above as applied to R&D - software development being the best example. In the past, capital equipment was very industry specific and dedicated to unique uses, yet even so, applying the technologies usually required technical expertise, training, and R&D effort. The new information technologies, particularly when applied on the product innovation side, are more like platforms for innovation. The technology surveys, undertaken periodically, are helpful and could be made more helpful if more information was collected on the uses of the technologies - i.e. for different types of process, product and organizational innovations.

The other most obvious area is investment in human capital. The human resource intensity of the service sector is indicated by the fact that a relatively smaller proportion of less educated workers are found in the service sector than is the case for the goods producing industries. Better data on expenditures on training by industry would be a significant addition to the information base on investment in knowledge. However, it may be that other significant expenditures on

knowledge and information by firms are not being identified specifically and ought to be. This is an area where further conceptual work would be in order.

I have focussed on issues related to expenditures on knowledge and information above. There has always been considerable interest in the question of the measurement of innovation (the output of the investments in knowledge). In my view, the search for national statistics or national indicators which measure the output of innovations is akin to the search for the Holy Grail. There is considerable scope for collecting more and better data on the inputs to innovation along the lines discussed above, including better information on the uses to which R&D and information technologies are being put by service and goods producing firms as well as data on expenditures by firms on other information inputs, e.g. strategic and market information and training. I would leave calculations of the outputs of these investments and their productivity effects to special case studies, innovation surveys, and especially, to the econometricians.

Although one tends to speak of investments in R&D, information and knowledge, as above, we do not treat the creation of knowledge as investment in the National Accounts, something which is increasingly being discussed in the context of the new growth theories. Certainly the creation of knowledge requires the application of resources just as does the production of physical capital. Of course, the lapse in time between the production of knowledge and its realization in terms of outputs of goods and services is much greater than is the case for physical capital and the linkages between the outputs and the investments is much less clear in the case of knowledge investments. In addition, physical capital can be identified and valued at market prices but information capital is difficult to identify, is widely diffused in the economy, and is usually not subject to market transactions and thus is difficult to value. Whether or not it would be desirable to introduce a knowledge investment account into the National Accounts, it would not be feasible to do so. Again, at this point, the best approach would appear to be to begin identifying, collecting and analysing better data on expenditures on knowledge and information by industries.

Surveys of innovation in service industries will in any case be a necessary complement to the more fundamental statistical development activities being proposed above. Such surveys will be more challenging than goods industries' surveys. More information on the nature of the innovation will be required in order to distinguish process, product and organizational innovations, a broader definition of costs will have to be developed to capture more than just R&D costs, more information will be required on how the service is being delivered to the market, and more information may be required on the innovation linkages with suppliers and customers.

Finally, to return briefly to the question of the blurring of industrial boundaries and the question of whether our industrial classification systems are obsolete or no longer meaningful, it seems to me the question is premature. This paper has argued simply (and maybe simplistically) that greater detail on what is going on within our service industries may go along way towards answering or helping to address many of the concerns behind the worries over the issue of boundary blurring, information on the services/information economy, better measurement of

outputs, productivity and trade etc. In any event, without the information identified above, I am not sure how we could possibly construct a new industrial classification system to replace the existing one, because we surely need one if we are to understand the micro-economy. And last, but perhaps most important, the data discussed in the paper would give statistical agencies a greater flexibility in putting together more and more meaningful industrial groupings.

IV Conclusions

I was asked to try to identify from a user perspective, the kinds of services statistics which would be required in the future to better understand the service sector and its performance, particularly in the light of the significant impacts which technological advances were having on the sector and its role in the economy. I identified the following major priorities and tried to indicate the rationale behind the choices.

1. A significantly expanded, more detailed product classification system for services.
2. Statistics on prices for these services products.
3. Output measures for these products in current and constant dollars (and possibly physical output numbers).
4. Statistics on services exports by detailed service products.
5. Statistics on services outputs of goods producing industries by detailed service products.
6. Statistics on purchases of services by goods and services industries, by detailed service products.
7. Statistics on the information inputs to innovations in service industries which are broader and more meaningful than just R&D spending.
8. Surveys of the innovation process in service industries which identify broadly the information investments of service firms and their costs, as related to major innovations, the sources of technologies, information and ideas for these innovations, and link the innovations to outputs and sales of services in domestic and international markets.

This is a very tall order and attempting to produce such statistics would be resource intensive and costly. One argument is that if we don't continue down this road, and accelerate the pace, our ability to understand the micro-economy and our faith in our macro-statistics may continue to erode. I recognize that progress is being made in a number of the areas set out above, but progress is discouragingly slow.

A second related question is whether it is feasible to produce these statistics at all? In a sense, what the above wish list for services data represents is a demand that the kind of detailed statistics currently available for the goods industries be made available for service industries. If it can be done for the goods producing industries, why can't it be done for services industries? This is a very real question. I have tried in the paper to identify many of the problems which make describing the service sector so much more difficult and information demanding than is the case for the goods industries. It may well turn out that the nature of services in some industries may preclude the development of meaningful measures.

If it is deemed that such a fundamental program is unfeasible or too costly for governments to sanction, second best approaches combining elements of the above wish list would be feasible. One approach would be to take more of a "lines of business" rather than "services product" approach and try to draw enhanced, more meaningful data from existing manufacturing and services surveys based on these services lines of business, supplemented by enhanced information on the markets into which they are being sold, along with more data on services inputs drawn from goods industries surveys. In addition, the enhanced and new information identified in points seven and eight above would help to develop a better understanding of the service industries from a conceptual, even if not from a very satisfactory statistical systems viewpoint.

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