

International Association for Research in Income and Wealth

Twentieth General Conference

Rocca di Papa, Italy, 23-29 August 1987

Session 7

The Development of Service Statistics

THE ECONOMIC SIGNIFICANCE OF THE DISTINCTION

BETWEEN GOODS AND SERVICES

T.P. Hill, OECD, Paris 1987*

*The views expressed in this paper are those of the author and do not necessarily reflect those of the OECD or its Member Governments.

I. Introduction

1. Economic thinking and analysis is dominated by the stereotype of goods production. By this is meant the notion that producers engage in production in order to produce commodities which are subsequently traded on some market. This stereotype fits agriculture and manufacturing industry rather well. The crucial feature of this stereotype in the present context is that the processes of production and exchange are quite separate from each other and can be studied separately. Production is analysed by means of production functions in which inputs are systematically related to outputs on the basis of existing technology. The workings of markets in which goods already produced are traded between economic units are also studied intensively. For example, a Walrasian pure exchange economy is used to demonstrate the gains from trade or the optimal allocation of a set of goods between different economic units. Unfortunately, this stereotype does not fit service production, indeed a large part of the production carried out in a modern economy, very well.

2. The purpose of drawing a distinction between goods and services is to draw attention to important differences in the way in which economic activities are organised in the real world. The question of whether or not such differences really exist, and if so whether they are economically significant, are matters of fact. In order to be able to answer these questions it is necessary to be able to distinguish between goods and services and for this purpose definitions, or at least descriptions, of goods and services are needed. In practice, most people (except perhaps some economists) seem to have no difficulty in distinguishing services from goods, but even so it is not easy to come up with watertight definitions which encapsulate all the essential elements of both. However, the significance of the distinction between goods and services cannot be settled merely by delineating the boundary between them with more and more precision. For this reason, it is not the purpose of this paper to refine the definitions of goods and services as the paper is meant to be about economics and not semantics.

3. In the real world, most people seem to be agreed that automobile manufacturers produce goods and that garages provide services. It is also clear that the production processes employed by garages and automobile manufacturers have a lot in common: they use the same kind of materials and processes, and they are obviously both engaged in transforming goods. It is tempting to argue, therefore, that there is no real difference between the activities of garages and automobile manufacturers, and that to call the output of one a service and the other a good is to introduce a completely gratuitous distinction which is economically irrelevant. However, if this is so there remains the interesting question of why in most countries there are thousands of garages but only one or two motor manufacturers: indeed, in some countries there are no motor manufacturers but plenty of garages. The model of perfect competition does not seem to fit the thousands of garages very well: they are not all price takers offering homogeneous products on the same market at the same time. Moreover, in contrast to commodity markets, it is impossible for a single purchaser to make block purchases, i.e. to acquire simultaneously multiple units of the outputs produced.

4. On the other hand, it is confusing to go to the other extreme by exaggerating the distinction between goods and services. Unfortunately, the classical economists seem to have made just this mistake. While the distinction between goods and services is a useful, indeed an important, one to make, it does not have the deep philosophical and political significance that some classical economists tried to read into it. The distinction is similar to many others drawn in economics and statistics which are intended to take account of differences in production methods or marketing arrangements which occur in the real world. However, it is absurd to suggest that in making such a distinction that one is somehow suggesting that one kind of economic activity is less important, even less productive, than another. The notion that service production is less productive than goods production is self-contradictory nonsense.

5. Because ideas, even bad ones, die hard, it is difficult to get some economists to take services seriously because it seems to be assumed that merely to attempt to draw a distinction between goods and services means that one must subscribe to a set of outdated economic principles in which service production is put on a lower plane than goods production. It is time, however, that the study and analysis of services and services industries were approached in the same scientific, critical and unemotive way that most issues are addressed in economics.

II. Activities and commodities

7. A clear distinction is drawn in economic statistics between an activity classification and a commodity classification: between, for example, the International Standard Industrial Classification, or ISIC, and the Central Product Classification, or CPC. In the present context, it is necessary to bear this distinction in mind and to be quite clear whether service producing activities or the outputs produced by those activities are under consideration.

8. It is convenient to begin by focussing on activities rather than commodities and to start by highlighting certain aspects of goods production. One essential feature of goods production is that the outputs which are produced are capable of being subsequently traded; that is, the outputs consist of objects whose ownership may subsequently be exchanged with other economic units. Thus, in the case of goods production there is a clear distinction between the process of production as such and the ultimate destination, or use, of the output produced by that process. Production may take place in one period of time, while the subsequent disposal of the output may take place much later when the output has been acquired by another economic unit, perhaps situated in quite a different location. In fact, most goods producers, whether farmers or manufacturers, have no idea at the time production actually takes place which economic units will eventually acquire the various outputs they produce.

9. Because the outputs produced by goods producers are clearly separable from the production processes by which they are produced, it follows that they can also be classified and enumerated independently. Thus, goods can be classified and counted on the basis of their physical characteristics irrespectively of when, how, where and by whom they were produced. Such a classification may be needed for purposes which have nothing to do with production, such as a customs classification of imports and exports.

10. A service producing activity, on the other hand, is one in which the activity of the producer brings about an improvement in the condition of some other economic unit. The improvement may take the form of a physical transformation of some good or goods owned by the consumer unit. Alternatively, the improvement may relate to the physical or mental condition of some individual person, or group of persons. In either case, the distinguishing feature of service production is that the producer adds value, not to his own goods, but to the goods or person of some other economic unit. It should be noted that it is inherent in the idea of a service that it should be provided to some economic unit. In this context the verb "provide" always carries on indirect object as well as a direct object, explicitly or implicitly. This is a marked contrast to goods production where, as already stated, the producer may have no idea who will acquire the goods on which he is working. A farmer may grow crops in complete isolation from his eventual customers, but a teacher cannot teach without pupils.

11. Thus, in the case of services, the actual process of production must directly impinge on some consuming economic unit in order for a service to be provided. This makes it difficult both to devise a satisfactory classification of the outputs of service industries and to quantify the amounts of services produced on the basis of such a classification. Take the simple example of a vehicle repair. The nature of the activity is clear enough, but not the output produced. The repair process consists of a physical transformation to an existing good which enhances its value.

However, the vehicle itself is counted neither as an intermediate input into the production process nor as an output from the process. The vehicle is not treated as being transformed into a different good and the repair constitutes merely an improvement in the condition of an existing good. The problem is to classify and quantify the improvement as distinct from the vehicle in which it is incorporated. Observing the vehicle itself after the repair has been completed throws no light on the service provided. Two repaired vehicles may be identical after repair, but the kinds and amounts of services provided could vary enormously between them depending upon the conditions of the vehicles prior to repair.

12. Similarly, the health of a patient after treatment provides no clue to the health service provided; in order to evaluate the service provided it is necessary to know the condition of the patient before treatment commenced as well as after. Observing the examination results for a group of students gives very little indication about the amount of education services they have consumed without knowing how much, or how little, the students knew to start with.

13. The problem with service outputs, that is services as commodities, is essentially the problem of how to classify, and quantify, changes. Certain changes may be relatively easy to define and measure, such as ton or passenger miles travelled, but in general there are serious practical problems. As a result, whereas goods producing activities tend to be classified on the basis of their principal outputs - i.e. on the basis of a prior commodity classification - the reverse tends to apply for services. The classification of services tends to focus on the nature of the activities by which they are produced rather than the outputs themselves. In other words, the primary classification in the case of services tends to be the activity classification, so that a service considered as a commodity tends to be defined as the output of a specific kind of activity instead of the activity being defined as one which produces a specific kind of service. Thus, whereas the automobile industry is clearly the industry which produces automobiles, the finance industry cannot be defined as the industry which produces "finances". In practice, it is not at all obvious exactly what financial institutions produce, but there is no great

difficulty about classifying financial institutions themselves, or their various activities. Thus, a financial service tends to be defined implicitly as the output of a financial institution, a definition which is not very operational for statistical purposes.

14. There remain a considerable number of conceptual and classification problems to be resolved in the services field if measurement is to be improved, especially the measurement of price and volume changes for the outputs of service industries.

III. The economic significance of the difference between the production of goods and services

15. Whatever the nature of the services provided, a common element running through all kinds of service production is that services have to be delivered as they are produced. This constitutes the fundamental difference from goods production where there is no such constraint on production.

16. Whether one wishes to describe them as goods and services industries, or whether one prefers to dispense with this terminology, there are in fact two basically different kinds of industry to be distinguished in any economy. First, there are those industries which can and do produce outputs in complete isolation from the eventual users of these outputs. The distribution or allocation of these outputs among users is realised at a second stage by means of exchange transactions which are completely unconnected with the processes by which the outputs are produced. These industries are mostly to be found under ISIC Sections 0 to 4 in practice.

17. In the second group of industries producers must deliver their outputs as they are produced: for example, transportation, distribution, finance, health, education, hotels, restaurants, entertainment, security, etc. In most cases, delivery requires some kind of physical contact between consumers and producer. Frequently, the consumer actually has to travel to the place of production of the producer: for example, consumers

visit retail outlets, garages, stations, airports, schools, clinics, lawyers' offices or consulting rooms, and so on. In other cases, the producer travels to the consumer: for example, cleaners, decorators, plumbers, taxis, piano tuners, doctors on house visits, and so on. In exceptional cases, the services may be delivered by using telecommunication links thereby making direct physical contacts unnecessary, and the provision of information or advice is increasingly handled this way.

18. It is convenient to continue to call this second group of industries service industries precisely because the consumer typically views the producer as serving him - i.e. carrying out some productive activity specifically for his own benefit. However, terminology is not so important as the economic implications of the close links between producers and consumers. Given not merely that the producer delivers the output to the consumer but also that production and delivery are essentially one and the same process, the following conclusions may be drawn.

- 1) The location of production is constrained by the distribution of consumers and their willingness and ability to travel. The producer usually carries out his production on his own premises, but the precise location of those premises is constrained to some extent by the number and distribution of consumers in the locality.
- 2) The local constraint also tends to put an upper limit on the size of any individual establishment. This does not prevent the emergence of large, or even very large, enterprises in the services field, but it does usually require them to maintain a large number of local branches or offices. There are many examples of large, even multinational enterprises, in fields such as distribution, finance, business services, etc., but they are characterised by a multiplicity of different locations in which production is carried out, sometimes dispersed throughout the world.

- 3) There are also constraints upon the time at which production can take place because of the involvement of consumers. This means that certain kinds of service producers have to be prepared to supply services over much longer periods of time per week or per month than a factory producing goods is normally in operation. Some service producers operate around the clock: for example, hotels, hospitals and transportation services.
- 4) Certain specialised services which are consumed by only a very small number of economic units, or small proportion of the population, tend for that reason to be provided by only a small number of producers. For example, specialised health, education, consultancy or entertainment services may be available only in a few central locations, whereas, general services of the same kind which are consumed on a mass basis tend to be provided in a large number of establishments. It should be noted that when specialised services are available only in a few locations, the consumer is liable to incur very heavy transaction (mainly transportation) costs in utilising the services in question.

19. The above highlight only a few of the more immediate and obvious ways in which the structure and organisation of service industries tend to differ from goods. The following two sections pursue the implications of these differences in more depth in two fields, namely, international trade and price determination.

IV. International trade in services: a mirage?

20. At the present time there is considerable interest in "international trade in services" and the possibility of introducing measures to liberalise trade in services are under discussion at an international level, in GATT for example. There has not been so much discussion, however, of the extent to which the traditional arguments in favour of free trade can be taken as automatically applying to services as well as goods. Of course, if services are regarded as special kinds of goods, the question is not even asked.

21. However, services cannot be traded between economic units even within a single economy, let alone between units resident in different countries. A service once produced is not transferable from one economic unit to another. Suppose A has his automobile repaired while B has his tooth filled: once the services have been produced A cannot exchange his repair (which is not to be confused with automobile in which it is incorporated) for B's filling (which is not to be confused with the tooth or person in which the filling is incorporated). The idea of exchanging services, once produced, is nonsensical. The fact that goods, once produced, can be traded, whereas services cannot, is indeed the main thrust of this paper.

22. It may be noted in passing that the traditional argument for the gains from trading appear to have little relevance to services. Gains from trading arise whenever the allocation of a set of tradable goods among a group of economic units is such that the marginal rates of substitution are not equal for all units. In that case, a simple redistribution of goods by means of exchanges between the economic units can make some, or all, of the economic units better off without making any worse off. But this theorem, elegant and important as it may be for tradable goods, is irrelevant for services as these cannot be traded, or redistributed, once produced.

23. However, international trade in services is not a complete mirage. There can clearly be an international dimension to service production when the producer and consumer of a service have different nationalities. It is perfectly possible for a resident producer to provide, i.e. deliver, a service to a non-resident consumer, or for a resident consumer to purchase a service from a non-resident producer. In this sense, international trade in services may be said to take place, but the activity in question is production rather than exchange. It would perhaps be more appropriate, therefore, to refer to the international production and consumption of services, rather than to trade in services.

24. In practice, so-called international trade in services may take several forms. However, the fact that the producer must deliver the service to the consumer implies for example that, in order to export services, either a resident producer must travel abroad to provide services to residents of other countries or a non-resident consumer must travel to the country in which the producer is resident. There are many instances of the latter in the fields of health and education, for example or, more obviously, tourism. There are also many instances of resident producers operating abroad, for example in the field of business services. Of course, if resident producers work abroad for too long they may become treated as residents of the country in which they work, at least for balance of payments purposes, but the exact criteria used to determine residence lie outside the scope of this paper and are not particularly relevant here.

25. It should be noted that when the import or export of a service brings resident and non-resident economic units together in the same country no transborder commodity flow occurs because the services are produced and consumed inside one country, namely the country in which the production occurs. As already indicated, this is typical of services provided to persons, such as health, education, entertainment, hotels, restaurants or tourism generally. On the other hand, the import and export of transport services may involve transborder flows while the provision of information by means of telecommunication links between economic units located in different countries may also involve transborder information and data flows.

26. In general, however, the import or export of services does not usually involve transborder flows. This is in marked contrast to merchandise trade which physically passes through frontier points and customs posts. Thus, the whole administrative apparatus for recording merchandise trade is inapplicable to services. For this reason, statistics of trade in services are generally fragmentary and of poor quality.

27. It also follows from the fact that the mechanisms by which services are imported and exported are generally quite different from the way in which goods are traded that measures to liberalise trade in services are concerned with quite different issues from the free movement of goods. In fact, the two central policy issues in international trade in services are the right of non-resident producers to operate on equal terms with resident producers and the right of resident consumers to choose to purchase services from non-resident producers. The right of non-resident producers to operate on equal terms with resident producers raises issues such as the right of establishment - i.e. the right to open up a new business in a foreign country - the international mobility of capital, the elimination of discrimination in the award of production licences, the elimination of preferential treatment for resident producers in government procurement, and so on. The right of consumers to acquire services from non-resident producers is mainly concerned with the free movement of persons; that is with issues such as immigration and emigration controls, passports, visas, currency restrictions, and so on.

28. Herbert Grubel has remarked that there is no such thing as international trade in services, only international mobility of labour and capital. This is only a slight exaggeration.

29. Finally, it is worth considering briefly the relevance of the theory of comparative advantage to trade in services. The theory of comparative advantage requires a country with a comparative advantage in some product to reallocate resources in order to increase the domestic production and exports of that product. However, increasing the domestic production of some service in which a country has a comparative advantage is useless if the extra production cannot be exported. The extent to which most service production can be concentrated is severely limited by the kind of constraints referred to in the previous section. It would be interesting, therefore, to see some serious work done on the theory of international production and consumption of services, especially bearing in mind that traditional international trade theory rests on the assumption that factors of production are not mobile between countries.

V. The pricing of services

30. The fact that a service, once produced, cannot be subsequently exchanged rules out the possibility of retrading of services. This means that it becomes possible for producers of services to practise price discrimination. In the case of goods, on the other hand, price discrimination is severely limited by the possibility that goods sold at lower prices may subsequently be resold to other economic units to whom the producer would like to charge higher prices. It follows logically that a producer who is in a position to practise price discrimination must be at least as well off (and in practice will tend to be much better off) than one who is obliged to sell his whole output at a single price because selling at a single price is plainly one of the options open to a producer who is able to discriminate. Economic theory easily demonstrates that a producer able to practise price discrimination is in a position to increase his profits when confronted with consumers with different demand functions.

31. Because economic theory is dominated by the goods paradigm, price discrimination tends to be treated as a special case which, although interesting, is not of any great importance. In the case of services, however, price discrimination is extremely prevalent. Indeed, price discrimination appears to be the rule, rather than the exception, in markets for services. A few illustrations are given in the following paragraphs.

- a) In the major fields of health and education it is common to charge fees which vary according to the income or some other attribute of the consumer, such as age or family size. Of course, the provision of so-called non-market services alongside market services is an extremely important manifestation of price discrimination in which selected consumers are charged prices of zero. In some countries, many health and education services may be provided free to the majority of consumers, but this does not

prevent governments from also charging substantial fees to other consumers, for example in higher education. It is also not unknown to discriminate between resident and non-resident economic units for the explicit purpose of charging higher fees to non-residents.

- b) The pricing policies adopted by transportation enterprises, whether public or private, are generally highly discriminatory. Sometimes different prices are charged because different conditions may be attached to different tickets: in such cases, it can be argued that the price differences are more apparent than real because they reflect differences in quality. However, in many cases it is extremely difficult to believe that the differences in quality are commensurate with the differences in prices observed (in air travel, in particular) and the existence of qualitative differences may be used as a pretext by transport operators to disguise the extent of genuine price discrimination.
- c) In hotels and restaurants, especially the former, price discrimination is extensively practised: for example, between business and private clients. Once again it may be argued that the price differences reflect differences in conditions of sale of one kind or another, but, as just suggested for transportation, the existence of small differences in quality may often be used simply as a cover to obscure the extent of genuine price discrimination.
- d) In so-called business services - lawyers, accountants, consultants, etc. - it is also common to discriminate between business and private clients as well as between different categories within each of these two groups. Sometimes charging poorer clients lower fees may appear to be motivated by a strong social conscience, but it must be remembered that charging poorer clients lower fees also happens to be what economic theory recommends for the profit maximising producer.

- e) Financial institutions also tend to vary their charges, and interest rates, according to the type of customer or client. Here again, it may be argued that the different charges or rates reflect different degrees of credit worthiness or other attributes, but it must also be questioned to what extent such qualitative differences justify the differential scales of charges or are merely advanced as pretext to disguise price discrimination.

32. There are doubtless other examples of price discrimination which may be put forward, but the above are sufficient to show how extensive it is in practice. From an economic point of view the question to be asked is whether pricing mechanisms can be relied upon to secure an efficient allocation of resources in the presence of such extensive discriminatory pricing.

V. Conclusion

33. The purpose of this paper has been to try to show that there are important generic differences between the group of industries commonly called service industries and the rest of the economy. For example, the relationships between producer and consumer, or between production and consumption, are very direct in service industries in a way in which they are not goods for production. In effect, service producers must deliver as they produce - indeed cannot produce without delivering - whereas there is no such constraint on the production of goods. The two types of production tend to be organised quite differently, therefore. Far from being trivial, obsolete or irrelevant, these differences seem to be rather fundamental. These are reflected, for example, in the fact that certain artificial conventions have to be adopted for the treatment of goods in input-output tables which are not necessary for services whose producers do in fact deliver directly to users.

34. One major problem at the present time is simply to get economists to treat services seriously and to recognise the possibility that the paradigms of production, distribution and exchange with which they work may not be very appropriate for increasingly large sectors of economic activity. Another big problem is to exorcise the ghosts of the classical economists, possibly to the extent of banning quotations from Adam Smith, especially on the subject of opera singers and the like who do not, after all, account for very many of the 70 per cent of the labour force of the United States employed in service production.