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Services Statistics: the key issues

A Reminder

for the Coalitions of Services Industries

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Dublin, IRELAND

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1 Introduction

I am very conscious that for most of us the subject of statistics causes eyes to glaze over, and we develop allergic responses to the jargon and the tables of figures. We would much prefer to leave the whole subject to the experts, whilst we get on with surviving in the real global markets. So this paper[1] attempts an unimaginable feat: it focuses on statistics without showing virtually any figures!

The road taken for the development of services statistics has been a long and winding one.[2] Naturally the shortage of time for researching this paper has enabled me only to dip a little, and almost at random, into the large literature, hoping I can give you some impression of the central challenges we face.

Our natural antipathy to statistics is letting this sector down. Insufficient political attention is being given to us because we cannot convince Ministers and officials with adequate and meaningful figures. Insufficient resources are being deployed by official statistical offices, by universities and institutes, as the subject is simply not glamorous enough. It appears that a large and increasing proportion of economic activity is being carried upward into the mists, and governments have to take decisions with faulty statistics, probably unaware of some important aspects.[3] The problems in our sector are part of a larger scene when it comes to assessing the macro-economic development of advanced economies.

I have long been concerned at the poor state of statistics on services in Europe, and how far we have been falling behind the US, yet even they face deficiencies in conceptual analysis, classification systems, and collection methodologies. In the EU some services exports are missed out, surveys are insufficient, and only France and Germany have figures for trade by firms' affiliates, and possibly The Netherlands now.

The search for the place where improvements have to be made starts and ends with the official statistical offices, and often the Central Banks, of each country. They are the sources on which the IMF, UN Statistical Office, OECD, GATT, Eurostat, and all other international compendiums depend. In the words of the GATT Secretariat: "Improving services statistics is a long term process that depends primarily on efforts by national statistical agencies to employ the appropriate methodologies and a willingness on the part of governments to meet the resource costs involved. Without such efforts at the national level, better and more detailed statistics on services will not become available, despite the development of improved classification systems such as the CPC, the revised ISIC, or the

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[1] I am grateful to Dr Thierry Coulet, Director of Research at the Institute of Business Research, Groupe ESC Lyon; Guy Karsenty, SSO, Statistics and Information Systems Division, WTO; Paul Luyten, Serenus Associés, Brussels (former Chief EC Trade Negotiator during the Tokyo Round); and Richard Mason, former Executive Director of British Invisibles, who each read the final draft (though not Annex I). Their comments helped me to avoid some pitfalls. Any errors that remain, together with the views expressed, are solely attributable to me.

[2] In the UK the Committee on Invisible Exports (CoIE) was founded in 1968 with the aim of persuading the government to improve the picture presented of the growing services portion of GDP and exports. This is an effort which has continued up to the present. My own first direct involvement was to draft the analysis of the IMF tapes in 1985 for a CoIE publication. The CoIE later became the British Invisible Exports Council, and then British Invisibles. I am not in a position to be able to describe the parallel organisations and work in the US, or elsewhere.

[3] When looking at what governments do not know about, and maynot control, I had a nightmare - see Annex I.

OECD/Eurostat proposal for international transactions."[4] This is the clue to much of the action the private sector can take.

I need hardly remind you that in developed countries, services account for a major part of employment and output. Globally, services trade expanded 56% faster than the rate for merchandise trade between 1980 and 1992, though it could have been more - we do not know the reality. Sales of foreign affiliates of multinational enterprises have grown at an even higher pace in response to radical changes of demand and supply in the global economy. Some of the fastest growing, and highest added value services are provided to producers and organisations rather than private individuals, and are known as intermediate, or producer services.

Part of the problem we face arises from a paradigm shift. This is expressed well by Professor Orio Giarini, who considers that technological developments have produced a crisis for the traditional methods of measuring economic reality, especially at the macro-economic level. He thinks we are still in thrall to an outdated economic theory (see Annex A). The value added content of goods, including high-tech exports, includes increasing proportions of services inputs (eg research, design, accounting, distribution), so that the material content by value may be a third or even less, despite manufacturing costs.

Harry Freeman also calls for recognition of the changes which he characterises as the service sector increasingly merging with manufacturing and agriculture, creating new linkages of companies and industries.[5] The organisation and description of service sectors, and sub-sectors, are becoming rapidly obsolete he feels. He calls for a new definition of productive work, to reflect the fact that many people in manufacturing are performing services. At present, however, no one can be certain that there is a non-traditional method of measurement waiting to be discovered.

I have been liberal in describing the many problems that need to be solved, so as to awaken us all to the major task we must undertake. Their range and number must not deter us.

2 What statistics exist now?

IMF

After World War II, when the IMF revised and internationalised the system for measuring trade flows, trade in services was quite limited, with the exception perhaps of shipping and other types of transport needed to carry merchandise, and so a comprehensive system for measuring services exports and imports was not established either by the IMF or its members.[6]

The IMF balance-of-payments statistics are the only source of information on trade in services available on a global basis, and are reported in the IMF Balance of Payments Yearbooks. Their Balance of Payments Manual (fifth edition, IMF, 1993) includes international services transactions and a classification that distinguishes between income

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[4] "Availability of Statistics on Services" MTN.GNS/W/94. A list of acronyms is in Annex D.

[5] The Service Economy Vol. 9, No 1, Jan. 95 / Harry Freeman, and personal correspondence.

[6] The Service Economy Vol. 6, No 2 Apl. 92 / Allen Sinai

from Merchandise, Invisibles (services, investment, unrequited transfers), and Capital Movements.

UN Statistical Office

The UN have for long attempted to co-ordinate the work being done around the world on statistics, and recommended a particular effort on services statistics in the mid-80s. However, government funds were not forthcoming, and the main initiative was left to the Voorburg Group as described below.

A large and continued effort has gone into understanding and charting the activities of trans-national corporations in a special unit. This has greatly improved knowledge about these exporters and their world-wide investments. The latest in a line of distinguished publications is "World Investment Report - Transnational Corporations, Employment and the Workplace 1994".[7]

Their close involvement with services statistical issues was also clearly seen in the UNCTAD joint publication with the World Bank of "Liberalising International Transactions in Services - A Handbook" in July 1994. This showed an awareness of the importance of investment for the local production of services by foreign firms. It is in this Handbook that we learn that "by the late 1980s, the share of services in world stock of foreign direct investment was close to 50 per cent, and services accounted for 55 to 60 per cent of annual flows" (on page 14). By now the services share must therefore be well over 50 per cent

Data on production and employment are "rarely available on a disaggregated basis" but are reported by UN Statistical Office and the International Labour Organisation according to the International Standard Industrial Classification (ISIC).

Sectoral data can be obtained in some cases from "international organisations and from national service industry associations." Examples include the ICAO for civil aviation, the UNCTAD annual Review of Maritime Transport, Engineering News Record for construction and engineering services, and sector organisations for insurance, and tourism.[8]

OECD

The OECD has made extensive efforts to persuade Member governments to improve their statistics on trade in services, and has done much to co-ordinate the resulting work. Their splendid publication "Services: Statistics on International Transactions 1970-1991" (by the Statistics Directorate, OECD, Paris 1993) reveals many problems lying just beneath the surface. They had to include serious 'health warnings', and more detail concerning the problems with OECD data are given in Annex B.

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[7] The team of Karl Sauvant, Zbigniew Zimny and Padma Mallampally deserve especial mention. They are now in the Geneva office of UNCTAD in the Transnational Corporations and Investment division.

[8] Quotations from "Availability of Statistics on Services" MTN.GNS/W/94

US

An OECD Report of 1993[9] says that "In recent years the coverage and accuracy of US data have been improved by:

i) instituting benchmark and annual surveys [in certain sectors]
ii) improving surveys covering royalties and licence fees [in certain sectors]
iii) developing or improving estimates [in certain sectors]
iv) adding questions on sales of services by affiliates."

Even in the US, where more resources have been expended by the authorities responsible for statistics than in any other country, data on bilateral services trade balances were unreliable prior to 1986 due to incomplete measurement. Then a new category for private services imports and exports was identified, which excluded government transactions, and income and payments on foreign direct investment and portfolio investment.

Since then the US have made much headway to collect separate information on services transactions with entities classified by ownership or control (above a 10% holding threshold) of US affiliates abroad, and foreign affiliates within the US, and with greater disaggregation within broad groups, such as professional and business services.[10]

The Americans want to test further whether the data adequately reveals the levels of cross-border trade in particular services, whether the trends and patterns of international business can be relied on, and to see how official and other private sector data can be reliably compared or used in conjunction.[11]

They also want to work on the measurement of inflation, because adjusted output per hour is a problem when reporting services growth. It is not clear whether actual output is being measured, whether prices adjust for quality, and whether hours counted are comparable over time. The use of proxies such as labour input, or air miles travelled, is limited. There is even the further problem that some productivity and efficiency improvements resulting in lower costs and proxies may show lower output, or quicker operations.[12]

Eurostat

Eurostat, working with the national agencies of the EU Member States, and OECD are developing a "more disaggregated classification of trade in services that would be consistent with both current and possible future IMF balance of payments categories", with many sub-categories for communication, computer-related and business services.[13]

Eurostat publish many statistical series, amongst which is their "International Trade in Services: the EU-12, 1983-1992" (Ref. 6D, Luxembourg, 1994). The introduction to this excellent compendium of statistics on the external services trade of the EU has a long and

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[9] "Services: Statistics on International Transactions 1970-1991", Statistics Directorate, OECD, Paris 1993

[10] See also Ascher/Whichard in "The Emerging Service Economy", Ed. Orio Giarini for SWF, Pergamon, 1987

[11] The Service Economy Vol. 7, No 1 Jan. 93 / Bernard Ascher

[12] The Service Economy Vol. 6, No 1 Jan. 92 / Allen Sinai

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[13] "Availability of Statistics on Services" MTN.GNS/W/94

other agencies (including the IMF, OECD, and Eurostat). It has no capability for analysing the services figures, that are known to have serious shortcomings.

3 What are the shortcomings of the existing statistics?

Definitions and classifications

There is no academically rigorous definition of services, or the criteria to distinguish services from goods. The CPC general purpose classification system covers goods and services and does not attempt a distinction between them. Problems arise because of the intangible nature of services, some cannot be stored, others cannot be transported, and not all services comprise the same set of characteristics leaving some as exceptions or borderline cases not capable of simple classification. At the borderline lie construction and utilities included in some definitions, but excluded from others. The relationship between various classification systems are shown in the table in Annex D.

The GATS does not attempt a definition of services. The four defined modes of supply of services are designated as trade in services for the purposes of GATS, which is to discipline government regulations affecting this trade.

Comparability

Some IMF Member countries send in more detail than appears in the Yearbook, and the GATT made use of this in its report on international trade in services in Section III of "International Trade 1988-89" (Geneva, 1989). However, as the GATT Secretariat stated "the coverage, comparability and reliability of services trade data is limited at present", and does not include all countries, as for instance Russia, the CIS states, Hong Kong and Taiwan do not report to the IMF. When looking at the category "Other Services" it is probable that the IMF figures "understate the true value of trade unless an adjustment is made for missing countries."[16] Further problems with the "Other Services" category are shown in Annex E.

At the international level, there is no agreement on what services statistics to record, and there is no mechanism for their collection to a central point. In general, figures still lack accuracy, reliability and detail as well as comparability, and it will take time to improve matters. The problems most frequently encountered when collecting data that affect comparability, include measures of output, handling heterogeneity, quality changes in price statistics, and collecting employment data from small employers.[17]

International Trade

Statistics on international trade in services are drawn from Balance of Payments current account data using definitions in the IMF Manual. Quite recently OECD member countries have implemented a new more detailed joint OECD/Eurostat classification for services,

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[16] "Availability of Statistics on Services" MTN.GNS/W/94

[17] This paragraph drew on "Difficulties in the Measurement of Service Outputs" by Mark Sherwood of the US Bureau of Labor Statistics, a paper he presented to the Voorburg Group in October 1993.

which is comparable with the IMF systems. However, for the needs of the GATS the data for most sectors are still too aggregated, compared with the GATT/CPC classification

In a paper given to the fourth meeting of the Voorburg Group, a GATT economist divided the statistical inadequacies into four categories: classification, consistency and coverage, trade by origin and destination, and disaggregation.[18]

Production and Employment

The situation for services production and employment is worse, and they are compiled within the National Accounts System framework. Here industries are classified by activity according to the International Standard Classification (ISIC) and the data are more highly aggregated than the Balance of Payments product data, resulting in lower comparability between countries. Gross output data are often not reported at all. Figures published by UN Statistical Office increase the aggregation so as to improve comparability, but this precludes analysis of the role of services in the economy.[19]

The ways in which statistics on employment are collected and aggregated within the EU make it impossible to separate out the proportion of employment in services to enterprises from those in service firms supplying consumers, and thus it is not possible to test whether intensity of industrial production is a major volume factor in demand for services.

Some observers wonder whether statistics on trade in services will ever improve as long as their is so little data on production and employment in services. One advocates making a start by obtaining detailed employment statistics, at little extra cost, to give an idea of the evolution of the various service activities, ahead of addressing other information gaps, some of which he presumes may take a lifetime to fill.[20]

Foreign Direct Investment

Foreign direct investment (FDI) statistics are collected for Balance of Payments purposes with the current account data, but country comparability is low, and the concepts used do not entirely correspond with those of the GATS.

The figures do not cover the sales of foreign affiliates ('establishment trade'). "Only one Member - the United States - compiles data on sales of services abroad by foreign affiliates of resident companies and sales of services in the reporting country by resident affiliates of foreign companies, which are collected in direct investment surveys." The OECD figures "do not represent the balance of the OECD area with the outside world" as they include intra-OECD transactions, and some Members do not provide data to enable the necessary calculations to be made.[21] However, it is doubtful that there is any need for a consolidated OECD balance.

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[18] "Statistics on Services: User needs emerging from the Uruguay Round Negotiations on Services", Bernard Hockman, 1989.

[19] An article on "Employment and Production-based Proxies for Trade Specialisation in Services" by Bernard Hockman and Guy Karsenty appears in Vol 14, No 3 of The Service Industries Journal, July 1994. "New Statistical Dimensions of Services in Britain" by Alan Townsend and David Kirby, (Vol 14, No 1, Jan 94) digs deeper into unpublished material to reveal the heterogeneity of service sector units, and urban-rural, north-south divides.

[20] Paul Luyten in correspondence.

[21] "Services: Statistics on International Transactions 1970-1991", Statistics Directorate, OECD, Paris, 1993

There are no figures collected for the EU as a whole on transactions of foreign affiliates in the EU, and Eurostat is starting with a methodological study on how to co-ordinate collection of information on turnover by activity of enterprises in the EU, and balance of payments figures for earnings of EU owned affiliates abroad (see the end of Annex C).

Technological and quality improvements

It is interesting to note from the Australian publication "Services Trade and the Australian Economy" (Discussion Paper No 1, IAC, Oct. 1988) that "current statistical techniques do not pick up technological improvements in the financial sector or improvements in the quality of retailing or recreational and personal services. The extent of specialisation and trade in these areas may in fact have grown just as rapidly as with transport and communications, but this is not reflected in current statistics. The need to improve the measurement of output in the services area poses an important challenge to statisticians world-wide, especially since the services sector, however imperfectly measured, now comprises a large proportion of GDP in industrial market economies." They might have said "servicised economies", though perhaps they rightly recoiled from the ugliness of the term!

More details on problems with the basic concepts and methodologies are given in the examples dealt with in Annex G. CSI members should be warned that this makes solid and depressing reading, and is attached only for services statistics enthusiasts, and I trust the tract does not cause statisticians to find other work, and the private sector to turn away!

4 What statistics will be needed by the GATS?

Article XIX of the GATS states that for each negotiating round the Council for Trade in Services has to carry out an assessment of trade in services in overall terms and on a sectoral basis. In addition the WTO will do work specifically on services as part of the country studies on Member countries under the Trade Policy Review Mechanism.

The GATS concept of trade in services includes operations of suppliers in foreign markets, and of course services trade cannot be considered in isolation from all major economic domains. The statistics needed will be used to assess the importance of services in the world economy, look at country groupings such as the EU, and individual economies, both nationally and at the sector level. The evolution of sectors over time will have to monitored., particularly in relation to their impact on the GATS. No doubt also the relationship betweem goods and services and their trade, production, investment and employment will all have to be measured and assessed. Figures on foreign penetration will be needed to adjudge levels of market openness, along with market size indicators.

The WTO Statistics Division will need to be given reliable data from the Member countries. The long term objective for such an international system of services statistics must be the creation of a manual clarifying the concepts, methodologies and classifications to be followed in practice by WTO Members when reporting this data. The WTO could also be an agency to collect the data directly from Members, whilst working closely with other international agencies, such as Eurostat, IMF, OECD, and UN Statistical Office.

The following aspects would be included in my own 'wish list' of what the system should eventually be able to cope with. This must be seen as a yardstick against which to measure future progress, rather than as a blueprint for an immediate action programme

- Coverage of all traded services
- Sufficiently detailed definitions and classifications to distinguish between sectors and sub-sectors with distinct specificities
- Bilateral country balance of payments figures
- Short delays between the periods being reported on and publication dates
- Distinction between cross-border trade and provision through commercial presence (i.e. Modes of Supply in line with GATS definitions)
- Adequate physical, or other, proxies to reflect real provision of services
- Meaningful designation of the origin of services supplied
- Distinction between supply of producer services and consumer services
- Identification of investment flows and stocks of investment by services suppliers
- Separate recording of statistics on affiliates operating abroad, and foreign affiliates operating in the home market (with standardised ownership thresholds).
- Distinction between transfers for services rendered and royalties/fees/franchise payments
- Clarification of transfer pricing and price manipulation issues
- Assessment of global activities of enterprises
- Distinction between intra-firm trade and provision to unaffiliated customers
- Identification of concentration and dominance of trans-national corporations

5 What can the Services Coalitions do now?

The entry into force of the General Agreement on Trade in Services, as part of the new World Trade Organisation should be our cue to urge governments to re-assess and reinforce the effort devoted to statistics on services production and trade. At present the statistical requirements of the General Agreement on Trade in Services cannot be met. Advances in the art are slowly being made, but the private sector should push for the process to be speeded up, and greater resources allocated by governments. In return services firms should be prepared to contribute directly to surveys and by letting their representative organisations have the necessary information to press their case.

Political determination, and money, will be needed to start collecting serious data, which sets the turn of the century as the earliest point for results. Hard work is needed to develop such measurement, and may not advance very far or fast in present economic and political conditions, due to budgetary constraints, and unwillingness to impose unasked for added burdens on the private sector, unless we are prepared to press for it. In the UK, for instance, the government is reluctant to impose any extra burden on firms, and in some other EC Member States (eg Belgium and Italy) there seems to be a sheer incapacity to produce some basic statistics at all. On top of this, many of the most dynamic multinational services firms want to keep their cross-border data private. In some sectors, and electronic information services are a good example, one despairs even conceptually of disentangling different sources of origin!

What can we in the Services Coalitions do to spur on the effort by governments and industry?

A look at how our friends in Hong Kong have approached this challenge is instructive for CSIs wishing to develop their own programmes. Present progress in Hong Kong includes a harmonised classification of services, consumer services price indices, sector figures, and a datacard.[22] Annex H gives more detail.

The Hong Kong report points out that their suggestions involve complex matters requiring careful consideration, and the CSI offers close collaboration between their Statistics Committee, and the HK Statistical Society, with the government for an ongoing dialogue.

US experience shows that questionnaires must be legally enforceable, and when they were introduced many corrections had to be made that mostly showed large increases over previously estimated services flows.

A strong contribution from the private sector is needed. Only an intimate knowledge of sector specifics can ensure meaningful improvements in collection techniques, and the correct analysis of data obtained from respondent firms. This points to the need for setting up sector observatories of sector experts. In sectors with a high concentration the lower number of firms make it easier to get good coverage.

We could also support our national statistics user groups, and perhaps also the International Trade Statistics Users' Group, and the International Statistics Institute in The Hague, though I have not checked out either.

Minimum targets for the production of usable statistics must be set in each main sector for the measurement of:

- employment in services
- the value added of services in production
- services trade flows
- investment in services (both national and foreign)
- sales by established foreign affiliates

All of us must contribute a great deal of effort over the coming years to achieve our aims for improved services statistics.

Good Luck !

[22] "Second HKCSI Position Paper on Service Industries Statistics", October 1994 - from Dr W K Chan.

ANNEX A: the new economic paradigm of Professor Orio Giarini

Professor Giarini gives an example from the national accounting systems which calculate the value of insurance as the amount of salaries paid to insurance employees.[23] The funds paid out for a crashed car constitute value added only if used to buy a new car, which is treated as the output of the manufacturing, not the insurance, sector. This obscures the fact that if insurance did not exist, many new cars would not be bought.

The traditional view of goods is that they can either be exported or produced in the market abroad. In the service economy, most goods production costs arise from research and development, distribution, utilisation and recycling, and thus any export is inevitably linked to a local infrastructure where the consumer is. Here, investment is not the alternative to trade, but the key condition for it. Services have in effect absorbed the manufacturing process.

Professor Giarini recalls that Alvin Toffler coined the word 'prosumer' to describe how consumers of services have become part of the production process. Production for money is increasingly dependent on activities which have no explicit monetary value, and therefore are not accounted for. Further, the value has to be recognised of the management of risk and uncertainty, which have been excluded from economic equilibrium models. Services, performed over time, involve the identification of value with reference to probabilities, the cost of events distributed over time. The personal computer shows how material goods have increasingly less value in themselves because they have to be adequately utilised, through self-production. This should be accounted for in economic terms.

In my own experience the latest software for word-processing, calculations, accounting, information management, and electronic communications, including interrogating distant data bases, is priced far lower than its value in use to me. These strides have been made in under five years, transforming what a single consultant can produce on his own. Of course the software is dependent on rapid advances in the technology of computers, printers and modems, and their lower prices

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[23] The first three paragraphs draw on two papers by Professor Orio Giarini. "Insurability: A Key Economic Issue in the Service Economy". (Keynote speech to the International Insurance Conference, Zurich, Switzerland, Nov. 94), and "Some considerations on the future of work - redefining productive work", (Text for the UNU-WIDER Conference, Helsinki, Finland, June 1994).

ANNEX B: OECD data problems

The detailed problems with the main categories of trade are:[24]

> Travel: this should include only goods and services bought by 'travellers', that is persons staying for less than one year, and should not include international carriage (which should be in passenger services under 'Other transportation'). However 7 Members include all or part of the carriage, and 20 include stays of over one year.
>
> Transportation: "The reliability of the data on international transportation services is limited", because in 1987 total credits were only 83% of total debits (instead of 100%) reflecting "mainly the omission .. of the revenues of a large portion of the world shipping fleet - principally the earnings of fleets operated by Hong Kong, Eastern European, and Greek enterprises."
>
> Other private services: these "are negatively defined as all services transactions that have not been classified under Travel, Transportation and Government Services." Data for sectors within this broad category varies because "national .. experts [devised] breakdowns in the light of national aspects in an uncoordinated way." "No OECD totals for [these sectors] can be calculated, because no sub-item is reported by all OECD countries." For instance in "Construction/engineering .. definitions are heterogeneous, and there is overlapping with other items (such as consultancy and repairs)." For "Insurance .. the divergences of coverage are substantial", whilst "financial services .. are identified by 11 countries" out of the then 24 Members. The French data on "professional and technical services .. include the assembly of machines .. and the Dutch data .. trade agencies." Legal services are collected by three countries, management services by 9, advertising by 11, films and TV by 14, computer-related by 4, rentals by 6.

An OECD paper on "Output and Employment in Service Industries" produced in 1991 stated that "classification differences make it impossible to calculate total value added or total employment for the whole OECD area, for any single services activity". This is compounded by the level of detail being insufficient, and the ISIC activity-based classification making it difficult to analyse the links between production and trade.

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[24] Quotations from "Services: Statistics on International Transactions 1970-1991". OECD. Paris, 1993)

ANNEX C: Eurostat data problems

Some of the difficulties encountered when assessing the international services market:[25]

- Recording services poses three types of problem, all of which lead to underestimation:
  - Conceptual - how to define each service
  - Mixed transactions - invoices aggregate various transactions, especially where services relate to merchandise trade, and in financial services where interest charged is included with investment income.
  - Identifying gross flows - there are international mechanisms for offsetting charges (eg postal services, telecommunications, and rail transport) and similarly within multinational companies and their affiliates, so that only a net difference is recorded unrelated to the underlying type and number of transactions.

- Problems when analysing the value of flows:
  - Values depend on volumes, prices and exchange rates, and large variations in the last two mask the underlying values.
    - Some services are priced world-wide in US dollars, which have fluctuated against the ECU
    - There have been substantial fluctuations in the relative prices of services, making it difficult to compare trends between types of services
    - The large volume increases of some services trade, such as in telecommunications do not show up in value terms due to the large price reductions
    - Price changes in intermediate inputs, to enterprises, such as business services, affect the value of the final output.

- Problems of consistency:
  - Balance of payments figures from different countries are not fully compatible or comparable, due to many causes:
    - varying resources for data collection lead to departures from internationally accepted methodologies
    - certain long-term activities, eg construction services, are treated differently
    - the speeding up of global economic integration, and proliferation of transactions between related companies makes it difficult to allocate flows between services and investment.
    - the absence of a detailed international classification of trade in services, leads to differences in the coverage of designations.

[25] "International Trade in Services: the EU-12, 1983-1992" (Ref. 6D. Luxembourg, 1994).

These variations lead not only to asymmetries within each sector, which only partially offset each other, but also to a difference at the global level between aggregate current debits and credits, which in theory should be equal.

- Problems specific to the EU

  The overall EU current account balance is the sum of the Member States' figures. From these, intra-EU flows have to be taken out so as to arrive at the EU's balance of transactions with the rest of the world. Due to geographic misallocations the intra-EU credits and debits are not identical, and this asymmetry is a measure of the reliability of the data. Eurostat appears satisfied that the overall level the data is satisfactory, but the asymmetries grow with the greater degree of detail, and the figures should be treated with caution, with trends rather than absolute figures being significant.

- Definition of service sector items

  The definition of items used by Member States vary, with some collection systems unable to reveal the detailed levels. Furthermore Eurostat has to make estimates where data are lacking entirely. Taking business services as an example of a high growth sector, the "wide range of services restricts the scope for analysing the sector as a whole," whilst in the telecommunications sector "the balance of payments statistics (in terms of value) do not take account of developments in the volume of communication services rendered." In the investment income category, reinvested profits appear to reduce investment income yields, and the income from patents "is a mixed bag." Their look at flows between pairs of EU Member States ("partners' data") revealed some substantial asymmetries and "for this reason partners' data should only be used when no information whatsoever is available."

Commission papers point to the need for data to be collected on the structure of services sectors, such as size of firms (by employment and turnover), in order to understand their relative concentration in the EU, the evolution of their role in EU growth, and intra-EU trade, the proportion of output to consumer and intermediate producers, export intensity, hierarchy of principal firms, and the effect of mergers and acquisitions on structures, and so on.[26]

When considering data on the activities of foreign establishments, particular problems to address will include what ownership thresholds to set and use, how to treat affiliates owned by a foreign firm which itself is owned by a third country, or a foreign owned affiliate in the EU, where the third party ownership is again an EU entity. Different service sectors need sorting out from each other and from goods, where single ownership covers mixed activities, and how to treat exports back to parent companies. Boundaries between this data and that for co-operative networks of firms, will have to be dealt with, as well as from investment, franchising, licensing, royalties and so on .[27]

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[26] Report to Eurostat by Dr Thierry Coulet, 1991

[27] Paper for Voorburg Group by Dr Thierry Coulet, Groupe ESC Lyon, and Marco Lancetti, Eurostat, 1991

There must be a wealth of material from the statistical offices of Member States, and other sources, describing the problems faced nationally.[28]

The Definition of Establishment Trade Statistics: a possible approach by the EU

The WTO and GATS documents do not define precisely what information will be needed to implement the GATS, so the statisticians have begun to make proposals. Establishment trade (ET) is delivery through a commercial presence of a foreign supplier in another country. An enterprise is deemed to be foreign when it is controlled from another country, which poses the question of how to define control, and who controls whom, with geographical location clearly denoted. There is also the need to provide consistency between ET figures and those for FDI.

One GATS test of control is ownership of 50% or more of a firm, and these percentages can be used to weight sales in line with control. However, in real life there can be a web of ownerships, some in complicated networks, so the GATS has settled for the 'first' control test, in the case of control by a natural person. In the case of a juridical person there is also a test for 'substantive business operations' in the territory from which a control is exercised, rather than tracing the link back to the 'ultimate beneficial owner', and this cuts out 'fronts' of the letter box variety.

It is easier to collect information on turnover, value added and employment from enterprises classified by economic activity (such as NACE), rather than by sales of product, which is not available is most countries. It looks as if the EU will give priority to turnover, then value added, followed by employment and turnover, broken down by products. In some sectors other figures may be substituted for turnover, such as balance sheets items for banks, and gross margin for trading, advertising and professional services.

Eurostat will have to ensure within the EU that the OECD-Eurostat geographical classification already used for FDI will be used for ET figures too, even if the classification has to be updated. The investor is the focus for FDI, whereas for an economic activity it is the controlled enterprise, so the IMF 10% threshold for investments will remain, and the 50% or more for ET will be added alongside. Both ET and FDI figures should be collected for inward and outward investment. A study will be needed on the distinction between branches and subsidiaries.

Eurostat will also have to make proposals on what information for ET and FDI should be collected for the intra-EU position, as well as for trade in services and other balance of payments information. Eurostat will need decisions from the politicians soon if the regime producing figures for GATS reviews and negotiations is not to be delayed.

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[28] Examples include:

"Britain's Invisible Earnings - Report of the Committee of Invisible Exports", William M Clarke, 1967. (See especially Chapter XIV Statistical Conclusions, that described deficiencies of coverage, sampling, valuation and classification).

"Developments in Statistics on Invisible Trade", Jack Wells (former Assistant Director, UK Central Statistical Office), Chapter 29, BIEC Yearbook, 1989-90, Macmillan, 1989.

"Statistics and The Service Economy: the Irish Experience", Seamus Bannon, Irish Trade Board. Paper presented to the Tenth Seminar on the Service Economy, Prague, September 1994.

The US CSI publication The Service Economy has for years charted advances in the US that appear to be out ahead.

ANNEX D:
Chart showing roughly the relationship between various classification systems

Adapted from a chart by Marco Lancetti in his paper to the Voorburg Group, October 1991

Activities	**Products**	**Consumption functions**	**Transactions**
Eurostat	Eurostat		**BoP**
NACE Rev 1	CPC-COM		Eurostat
			OECD/Eurostat
	Eurostat		OECD
	CPA	**intermediate**	IMF
		UN	UN
		COIP	SITC Rev 3
UN	UN		
ISIC Rev 3	CPC	**final**	
		Eurostat	
		PROCOME	
		UN	
		CHGS	
		WECC	
		government	
		UN	
		COFOG	

Key to the initials in the box

BoP	Balance of Payments
CHGS	Classification of Household Goods and Services
COFOG	Classifications of the Functions of Government
COIP	Classification of Outlays of Industries by Purpose
CPA	Classification of Products by Activities
CPC	Central Product Classification
CPC-COM	Central Product Classification for Use in the EU
Eurostat	The Statistical Office of the EU, Luxembourg
IMF	International Monetary Fund, Washington
ISIC	International Standard Industrial Classification
NACE	General Industrial Classification of Economic Activities
OECD	Organisation for Economic Co-operation and Development, Paris
PROCOME	Nomenclature of household consumption and other expenditure to be used for harmonised national family budget surveys
SITC	Standard International Trade Classification
UN	United Nations
WECC	World Expenditure Category Classification

In a further Voorburg paper[29] Professor Marco Martini, of Milan University, described how Eurostat reported five main approaches to classify services in practice:

- by services products - the type of output (eg CPC, CPA)

- by activities - homogenous business units, with comparable products (eg ISIC, NACE)

- by function - for:

  a) intermediate consumption
  b) for final, or household, consumption (eg Procome, CHGS)

- by industrial outlay, or purpose of expenditure (eg COIP)

- by transactions - for invisible trade (IMF, Eurostat, OECD)

Eurostat is working to improve the comprehensiveness and consistency of classifications (including devising linguistic comparisons), and to link many nomenclatures to the detailed CPC classification, which will form a core reference position, as recommended by the UN. These linkages will always provide results in the "detailed towards aggregate" direction, but not usually in the other direction i.e. "aggregate to detailed" or "detailed towards more detailed".

ISIC is a central classification, and because NACE, CPC, SICTA (the draft Standard International Classification of Tourism Activities) are officially connected to ISIC, these links can be systematised.

In 1990 Eurostat began to pick up again the COIP draft classification on Outlays of Industries by Purpose, UN 1975, to develop in the EU context.

[29] "Statistical Implications of the Business Services Market Analysis", Helsinki, Oct. 91

ANNEX E: IMF data problems

"One reflection of the paucity of detailed data on components of "Other Services" is that the sum of the categories that are reported is usually only a fraction of the total figure reported for "Other Services", because "most countries estimate total imports and exports of "Other Services" based on foreign exchange flows but are often unable to determine the specific transactions that underlie these flows."[30] Furthermore, "it is apparent that the average coverage ratio has been declining over time" due to the fact that there has been "an increase in the relative importance of services for which no data are reported separately .. examples include information and computer services, education, medical services etc."

As to bilateral trade flows "details concerning geographical breakdown of trade in services flows (i.e. according to source and destination) is not reported by the IMF. However, most national statistics agencies do compile information by broad groupings such as with OECD, the EU, or major partner countries. The problem here is that "comparability of such origin and destination information across countries is limited, as the data are reported at varying levels of aggregation, and according to different geographical criteria .. [and] definitions of the components of "Other Services" are often not similar."

ANNEX F: the Inter-Agency Task Force on Services Statistics (Eurostat, IMF, OECD, UN, UNCTAD, WTO) the general objectives, taken from the terms of reference

a) to strengthen co-operation between international organisations in the area of service statistics; to liaise with other agencies or groups involved with service statistics.

b) to promote the development of international standards, systems and classifications for service statistics

c) to improve the availability, quality and international comparability of service statistics collected at an international level

d) to facilitate the provision of technical assistance in service statistics to developing countries.

In the first instance, the work of the Task Force will focus on the statistical requirements of the General Agreement on Trade in Services.

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[30] Quotations from "Availability of Statistics on Services" MTN.GNS/W/94.

ANNEX G: Examples of problems with the basic concepts and methodologies

Concepts[31]

- theoretical and conceptual ground work by academics is lacking, e.g. on comparative advantage, structural advantage, growth rates[32], the Heckscher-Ohlin theorem, and so on.

- measures of inflation are dubious, because adjusted output per hour may not allow for quality changes, quicker operations, and lower costs, and because counted hours may not be comparable over time, and the use of proxies for labour input is limited, and there is a lack of physical indicators to measure underlying services transactions.

- a distinction has to be made between flows and investment due to world-wide economic integration.

- There are difficulties in relating royalties and franchise fees to services activities, and assessing the length of profit repatriation delays, so as to make comparisons in a given period with cross-border payments.

- Merchandise figures used for comparisons may double-count flows due to intra-industry trade, and this has to be equally avoided for services flows.

- Rapidly varying multi-sourcing of supplies for services deliveries pose problems for identifying the origin of a service.

- Complex financial arrangements, not related to services transactions affect invoicing.

- Varying exchange rates and prices affect Balance of Payments flows in value terms, not reflecting volume changes.

Research is needed into basic theories on the:

- origins of comparative advantage
- application of factor endowments
- economies of scale and scope
- specialist theories of production and delivery
- growth rates - requiring better proxies for volume and productivity measures

Further fundamental conceptual work is necessary on international services delivery to develop economic theory so as to take account of:

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[31] "International Trade: An Introduction to Theory and Policy", Richard Pomfret, Blackwell, 1991, provides an excellent exposition of trade concepts and theories.

[32] Growth Rates: Work is necessary to explore further the new theory of growth (as expounded by eg Paul Romer (Berkeley), Richard Baldwin (Columbia), Robert Barro (Harvard), and Daniel Cohen (CEPREMAP) - see Economist 4 Jan 92 pp 17-20), which places knowledge as the fourth factor of production to explain differences in rates of growth between countries. It is postulated that expenditure on knowledge, in terms of education and innovation, can raise returns on investment for production, so that outputs grow more than proportionately to inputs, and firms can become price-setters. Business services are highly knowledge intensive and work at the heart of increasing competitiveness.

- networked international production
- value during utilisation, rather than using price as the value
- co-production with clients/consumers

and to develop the concept of productivity in the absence of a unit of services product.

The role of the market for specialised producer services in providing more cost-effective and a wider range of services, and greater innovation, has to be studied, in comparison with the equivalent services provided within industrial and commercial firms. Have the countries with high relative internalisation of producer services (principally Germany and Japan) begun to suffer due to the lack of a sophisticated home market offering such services? Or is the explanation of the difference, merely due to other structural factors, such as the high proportion of capital goods production in Germany, for instance?

Description and identification

Many goods rely on a service component (eg computers need software to function, cars need drivers, TV sets need broadcasts) and many products are merely used to perform a service (ships, planes, trains, blow driers, automatic tellers, supermarket trolleys). The value added content of goods, including high-tech exports, includes increasing proportions of services inputs (eg research, design, accounting, distribution), so that the material content by value may be a third or even less, despite manufacturing costs. Insurance and freight charges are often not recorded separately, from the relevant goods, and country estimation methods vary widely in reliability, rendering comparability uncertain.

The reverse is also true, as many services can be embodied in goods products (eg software on diskettes), but if the products are captured statistically at the border, the software content may not be. Other services can be delivered across borders electronically without the authorities being aware of the activity. Services can also be overstated since they include goods elements, for example in construction where contract values include the building materials and intermediate components.

There is also the problem of defining the boundary between goods and services, since many goods have services bundled with them. Furthermore, the definition of manufacturing may include the large inputs of research, engineering design, marketing and consulting, all bundled in the goods, so the boundary depends on the purposes for which data is required

Definition, classification disaggregation

There is no internationally agreed official definition of services, and countries have developed their own classification systems for services sectors, usually based on grouping by similarity of production processes, akin to activities, or by demand or similarity of use of the services.[33] Thus there is no comparability between countries because the groupings vary. Existing classification groups can be too large, with too diverse contents, to produce meaningful statistics.[34] Some economists argue that sectors which act as distribution

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[33] This section draws on Triplett in The Service Economy Vol. 7, No 4 Oct. 93.

[34] "International Trade in Services: An Overview and Blueprint for Negotiations", Geza Feketekuty, AEI/Ballinger, 1988, described the problems on statistics facing negotiators.

networks (that is transport, telecommunications, public utilities, wholesale and retail, and manufacturers' sales branches) should be in a different category from those supplying producer, consumer or social services, and public administration.

The nature of the output in some service sectors is not clear or defined: for instance in one very important sector, financial services, economists do not fully understand how to measure output, and if there are no adequate output measures, then it is difficult to group financial activities into distinct sub-sectors.

Some services can be physically seen and thus easily recorded, such as transport of goods and people, the rental of equipment, installation and repair work, construction. Other services benefiting from developments in informatics can be delivered from a distance electronically, easily escaping statistical identification, especially when proprietary or in-house networks are used (such as CRS, SWIFT, SITA). This vast flow of services is untraceable as packet switching techniques inter-twine information going to different destinations and vary the routes for individual packages automatically so no complete message arrives continuously along one physical route. Trading visibility is declining.

Residual headings tend to include multi-function activities, a classification which is erroneous, especially on newer services such as business and management consultancy. Product classification aims at using criteria of physical properties or intrinsic nature whilst maintaining a close relationship with ISIC (i.e. by activity classification). Conceptually this casts services negatively, what they are not - intangible, non-transportable, non-storable, and so on, as compared with goods, but in doing so does not clarify what services are. The result has been that the CPC services product classification is in many cases less detailed than the NACE, and there are arbitrary areas of aggregation or detail. Groups of activities are not derived uniformly from criteria for the user (i.e. demand) or supplier, and can thus include some services exclusively supplied to firms, and others (such as distribution and other networks) supplied both to organisations and individuals.

Can data be obtained on the structure of service sectors (eg size of firms - employment and turnover), in order to assess the relative concentration and supply hierarchy, the effect of mergers and acquisitions, the proportion of output to private consumers and to intermediate production, and export intensity?

Productivity

There is a lack of measures for productivity, quality, and change in value independent of price, especially where service suppliers are networked, using multi-sourcing, and much of the added value is contained in the information flows, with the result that an increasing portion of economic activity is going unrecorded. This could be accentuated by the likelihood that an ever higher proportion of goods value is due to the incorporation of business services, and that thus the information content of all goods and services is also increasing, so that the share of services in total output is under-estimated.

For many years the service sector has borne the stigma of apparently lower productivity growth than manufacturing, which is worrying because their trend towards every higher shares in employment and GDP might herald general economic decline. A look at the way

the figures are derived, however, proves them to be suspect, and underestimating economic activity.[35]

Quite apart from those services which are not directly measured at all, the production of indices of output and productivity use sales, adjusted for price increases (i.e. the sales figures are deflated), and make extrapolations from a base year.

The prices do not reflect increased benefits like higher quality, better customisation to individual needs, greater choice, and so on, which tend to be interpreted merely as inflation. Also the prices used may be drawn from only a part of the output range, or even from different, if related, industries.

In turn, estimates for some years are based on extrapolating from base years when labour numbers were counted, but not any direct measures of consumers' benefits (for instance the number of doctors' visits, or hospital beds occupied, not the patients' improved health or quality of life).

With inputs and outputs in many sectors both relating to labour input, it is clear that by definition productivity growth will be zero. Obtaining more similar data is obviously not the solution: the real problem is that economists simply do not know what to measure, even if they know how to.

Some economists suggest that in fact in the US the services sector has outperformed the economy as a whole over a long period, by reference indirectly to capital market measures.

Ownership and control

Definitions of ownership and control vary widely, and there is often deficient recording of trade within integrated groups and networks of firms established in different countries. Invoicing may be sent from subsidiaries in offshore financial centres, being in a different location from where services were performed, making figures for bilateral trade flows useless.

Origin

For the 'commercial presence mode' the GATS needs coherent statistics on trade flows, stocks of investment and income from foreign direct investment, as well as for turnover (or gross output), value added and compensation of employees based on the concept of control,, that can be exercised at one remove, or more from the ultimate beneficial owner.

There will be a need for information on control of services suppliers, and chains of control (and to decide on participation thresholds eg: 10%, 20%, 50% and so on)

Balance of Payments , FDI and National Accounts

FDI data are reported using the ISIC classification, and yet the concordance between Balance of Payments and National Accounts series are poor. In addition there are conceptual and practical differences which impede country comparability. These include

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[35] This section draws on Faulhaber in The Service Economy Vol. 3, No 3 July 89

definitions of ownership, the inclusion of reinvested earnings in FDI flows, and sectoral allocation on the basis of the activity of the investor or the activity of the enterprise being invested in.

A joint Eurostat and OECD questionnaire was issued in 1994 requesting more detail on sectors, but the information may not be available for some time. Reporting will cover flows, stocks and investment income, but not the output (sales) of FDI firms, which will also be needed.

Income from the borrowing and lending of money by banks is included in the Interest, Profits, and Dividends (IPD) account. Bank interest is recorded in the Interest category, but income on securitised loans is recorded as portfolio investment under Dividends.

Inter-bank transactions are wholesale movements, and so there are no bilateral flows. The only way to obtain correct statistics will be if computing advances enable real time settlement of gross amounts.

Services are often packaged together, for instance, in the financial sector where fees, interest, exchange spreads, margins on trading in financial instruments are merged, and conceptually which products are supplied cross-border, and which domestic resales of foreign origin.

People travelling abroad to supply services for short periods usually do not get involved with work permit procedures, and in theory, according to the IMF Manual (§ 246, 5th edition) their spending for all stays of under a year are recorded under 'travel', whilst their earnings should be recorded under 'labour income', if employed by a domestic company, and under 'other services', or the relevant sub-category if they are independent. In practice the actual entries made may be different.

Collection

Ongoing research for Eurostat shows that invoicing for services supplied within groups can be based on full arms-length charging rates, cost plus rates, discounted fees, or offsetting calculations over certain periods resulting in smaller net payments. Charges for intra-firm services might also be subsumed into royalty or licence fee payments, transfers of profits, or repatriation of investments. Moreover, billing methods can vary within the same group from firm to firm, and department to department, and these transactions can provide a constant source of haggling in multi-unit businesses. Sometimes the fee is charged to clients where the work was done, sometimes where the bill is paid, which might not be either the location of the client or providing unit. Since services are invisible, the opportunities for creative accounting are greater than with the production and transfer of goods, and it appears most likely that the reported cross-border flows of money are even less representative of the underlying transactions than is the case with merchandise trade. This should be borne in mind when looking at both absolute figures and trends.[36]

Deregulation often leads to fewer statistics being collected, and then improvements can only be gained from expensive surveys, or legally enforced returns, which is not a popular solution for firms or the politicians

[36] This paragraph draws on work by Paul Luyten, in correspondence

There is no international centre for collection of data on services.

Consistent and insightful interpretation of figures collected in each sector could be improvedl by the involvement of private sector specialist observatories.

Government Services

Those services which are produced by governments in some countries, may be produced by the private sector in others, which should be remembered when making inter-country comparisons. The BoP figures relate to embassy and military costs, not private activities.

Accounting for services

Accounting principles are under strain generally, and this applies in the conventional field of goods production, as is evident from widely varying value put on the same company when listed on the different stock exchanges, such as that experienced by Daimler Benz, where a four billion D-Mark downward adjustment in net value had to be made to comply with the US SEC standards, and Elf Aquitaine which had to record a provision of 5.4 billion French francs for the new US accounting standard for oil assets. The rules of the Frankfurt, Paris and New York stock exchanges follow different aims and legal requirements. Despite harmonisation of accounting standards in Europe wide differences in practice still exist, causing serious difficulties for MNEs.

There are added problems for service companies due to conceptual difficulties. They have intangible assets, such as R&D, where realistic amortisation rates may frustrate the matching principle, and the value of work in progress may not be finally known for a number of accounting periods due to long production cycles. The value of a data base, or software designed, are simply unknowable since they can be re-used many times, or not at all, making it difficult to apply the realisation principle. Human knowledge and skill, is usually the main asset of a services firm, yet it goes unrecorded in the accounts, and these people walk out of the door every evening, frustrating the use of the prudence principle.

Problems for the accountants include[37]:

Creative accounting can include internal offsetting of reciprocally used services and other transactions, for many reasons such as reducing bank charges, tax, foreign exchange restrictions or investment performance requirements, work authorisation.

Some services transactions may end up included in royalties, franchise and licence fees, or alternatively in investment income.

Company accounting classifications are not identical to those used for statistical reporting

Partnerships and private or closed companies do not publish accounts, but may form a significant proportion of SMEs where growth is occurring.

Results vary according to the nature of company structure, for instance whether it is integrated, has wholly owned affiliates, equity participation, or is organised in non-equity forms of network.

Services have greater room for discretionary declaration of value for transfer pricing concentrating profits in least taxed countries, and biasing reported figures.

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[37] This section draws on work by Paul Luyten, in correspondence

It is difficult to delineate boundaries in fast developing, innovative services. The most dynamic areas probably have the weakest data.

Identical transactions are not reported consistently by different companies, affecting both national accounts and trade figures.

Merchandise goods are bundled with services in complex systems without separate invoicing.

Many professional and business services leave little material traces, allowing large discretion for all reporting.

In large groups, accounting is on a net basis for given periods, instead of gross transactions in each direction, which is not possible in the case of arms length transactions, nor for SMEs.

Recording is by industry to which the enterprise belongs, not the service provided and as firms widen their range of services the reporting becomes less accurate.

The assessment of specific commitments

The GATT paper "Evaluating Offers in the Services Context" (MTN.GNS/W/118, 1991) stated that "Trade statistics for services are inaccurate, incomplete, and not readily comparable across countries. Of the data that do exist, they neglect the sales of foreign-owned firms that have established a commercial presence, are incomplete with respect to cross border flow of services, are highly aggregated, and are not available on an origin and destination basis".

The indicators needed to assess the values of commitments bound in country schedules are not the same as for goods. For goods the indicators include average tariff rates, the proportion of lines bound, shares of import value, tariff revenue, and so on: which can be used for broad assessments of market access and liberalisation achieved.

For services the scene is more complex. To devise indicators it will need much work on classifications, output based measures for market size and foreign penetration of domestic consumption. A concordance will be necessary between the product (CPC) and activity (ISIC) based classifications for the collection of FDI and output data. In order to evaluate liberalisation commitments meaningfully, countries will have to supply data on imports, exports, output and sales of foreign enterprises.

The GATT notion of "equivalent concessions" will have to be addressed, which will need objective statistical indicators. Limitations to market access or national treatment will not generally be quantifiable, unlike the case for tariffs. Further complications will arise from the need to assess these limitations for each mode of supply separately.

Even then there are many other barriers within the market which the scheduling does not catch, but which can reduce the value of the offer. These aspects include: labour and social security laws, land availability and tenure, tax complexities, fees for permits, successive layers of approval by different authorities (at federal, regional, and local levels), overlapping government agency jurisdictions, economic plans, control over charging, monopolies, dominance, delays at ports on sales literature, lack of accountancy and fraud laws, etc

ANNEX H: itemised progress being made on statistics by the HK CSI

- a new internationally harmonised classification system introduced by government. using a sufficiently disaggregated level of detail to ensure highly heterogeneous industries are not lumped together

- development of the CSI's own Consumer Services Price Index providing an illustration of price movements

- the government being urged to introduce a new Quarterly Business Receipts Indices for Services Industries, covering 12 groupings that account for about 60% off GDP. Though not adding up to production index, they would indicate the performance of a majority of service industries.

- the Census and Statistics Department planning a new annual survey of foreign investment in non-manufacturing sectors, to supplement that for manufacturing, with an initial sample of 3500 companies in eight service sector groups

- with the help of government and a sponsor, the CSI annual statistical datacard "Services Sector Statistics in Hong Kong" is being widely distributed

- a close informal relationship has been forged with government to discuss developments, and the CSI Secretary General sits on the government's Statistics Advisory Board

- specific improvements made on shipping statistics

- more banking statistics

- research into concrete problems to overcome in order to construct a producer price index, as a vital leading indicator of movement in the economy

- increasing the degree of sector detail in the GDP statistics (see over page for the CSI proposal)

- ironing out anomalies in the HK trade statistics (I imagine one problem is how to treat the massive re-export trade)

- the development of indicators for overall productivity

- the publication of analytical findings on Chinese statistics

Classification framework - the Hong Kong CSI's ideal framework

(the groupings not yet available are in italics)

Electricity, gas & water

- *Electricity*
- *Gas and water*

Construction

- Architectural & civil engineering works
- Other construction

Wholesale, retail, import/export trades, restaurants & hotels

- Distributive trades (Wholesale, retail, import/export trades)
  - *Wholesale*
  - *Retail*
  - *Import/export trades*
- Catering trades (restaurants & hotels)
  - *Restaurants*
  - *Hotels*

Transport, storage and communications

- Transport and related services
  - *Storage*
  - *Communication*

Financing, insurance, real estate and business services

- *Banks and deposit-taking companies*
- *Financial auxiliaries*
- Insurance services
- Real estate development, leasing, brokerage & management
- Business services

Community, social and personal services

- Government services
- Commercial services
- Private non-profit bodies

ANNEX 1: Economic and Financial Instability: What Dangers Arise from False Statistical Foundations ?

The elements of a lurking nightmare are now in play together:

- services form the largest share of economic activities in advanced economies
- statistics on the services fundamentals are either poor or lacking
- accounting principles are not always dependable for large service companies
- financial and other markets are linked by IT, and use economic data and company accounts for trading decisions
- many western governments face increasing over-indebtedness
- the key risks might crystallise simultaneously, causing contagious economic panic
- there are no global rules or emergency plans, G7 political leadership is poor, and their combined financial weight insufficient to cope with such an emergency

The New Global Scene

As eyes are lifted to a new future, it is important to pause a moment to take in how different is the scene in 1995 compared with that of 1947. Much of the Havana outcome was designed to banish the chance of a Third World War, and a recurrence of the Great World Depression of the inter-World War years. The Cold War has come and gone, but now there is the possibility of many nuclear powers, and the actuality of many local wars, with consequent regional instability, heightened in some areas by Islamic fundamentalism. Command economies have mostly imploded due to lack of market entrepreneurial energies, and the past ideological suppression of their services infrastructure on which modern economies rely. Globalisation of production and trade has become a reality due to advances in transport, and especially in IT, enabling greater returns from the law of comparative advantage - where trade provides the possibility of gain for all, and is not a zero-sum game, and the imperatives of economies of scale and scope, are now played out in a single world dimension. With this come the dangers of concentration and dominance on a global scale, with competition policy lagging behind.

The growth of the service sector

In the US employment in services equalled that of manufacturing in 1900, grew to half of total employment in the 1950s, and has now almost reached 80%. Perhaps half of the GDP generated by this majority of workers is tradable. In Canada the figures are 70% in services and 42% of GDP tradable. The figures in the UK are much the same, and 24% of UK exports are services, above the world average of 20%. All major advanced economies show the same trend: the new jobs are being created in services activities, many of the gazelles are services firms, the highest added value work is in business services, and they often pay the best. The IT revolution will continue to impel these trends of the information era.

Government statisticians are not collecting data on much of this service production and international trade, and many multinational companies playing on the world scene are simply not telling, partly for reasons of tax optimisation perhaps, but more because they do not know themselves - their accounting systems cannot yield the information in the cut desired by governments. National boundaries based on geography are no longer relevant. These companies are integrated networks, with services output multi-sourced from many countries according to varying, market driven needs.

Defects in the measurement of services activities

Measuring the services economy and trade in services is presenting serious challenges which have not been mastered. Academic economists have not yet agreed on basic definitions and concepts for their models. Conventional tools do not work when measuring invisibles that are dependent on the educational skills of people, and their handling of information, where value is generated over time in service supply, not in the accumulated one-off sales of goods products. In many cases the consumer helps with the production, and this input is never measured. There are no good measures of services at constant prices or volumes, and services productivity is still unmeasurable in practice, since the physical proxies used are not dependable indicators.

Government Statistical Offices planning to improve this sorry picture are thwarted by working with reducing budgets and staff, contemplating survey frames which are more difficult and expensive due to the large number of relatively small units in services activities.

Accounting principles can fail in company accounts used by financial markets

Now we hear from accounting experts that their normal basic tools can fail them when producing accounts for transnational services corporations. Their three basic principles of prudence, realisation value and matching income and expenditure no longer always work. They do not know how best to value information, which can be resold, repackaged again and again. Their amortisation tables are of no help in valuing investment and work in progress which depend mainly on the skills of people who can walk out of the door and not return, and relate to services to be rendered over unforseeable future periods. Recent claims against accountants show that routinely values can be seriously adrift in mergers and acquisitions and listing on different stock exchanges (Daimler Benz and Elf Aquitaine), let alone in cases of unmanaged financial trading (Kidders, Orange County, Barings and others), and outright fraud. Instability in increased where major firms, such as Boeing, Intel and Microsoft, bet their entire net worth on the next product, in ever shorter cycles.

Government over-indebtedness

Consider the over-indebtedness of many governments resulting from growing social payments from high unemployment and bailing out bankrupt state companies, governments which face the demographically-driven financial time bomb of unfunded state pensions.

As they attempt to encouragement employment and exports, there is the possibility that government policies may be misplaced to an important extent, since they are based on basic figures which have quietly but dramatically diminished in coverage and usefulness in the past two decades.

Systemic risk in the financial markets

Global markets in money operate around the clock, never entirely shutting down. The convergence of telecommunications and computing, through the control which digitalisation grants over information, and its instantaneous transmission, has created a convergence of currency exchange markets, with those of commodities and securities and other investments,, and purely financial instruments such as swaps, options, futures and derivatives, that all interact on a 24 hour basis, some of it computer driven. Not even the auditors appear to

comprehend where the risk of some of these innovative instruments lies, once capital, interest, and risk elements are stripped out, and where companies remain linked together by protracted promises of risk. More trading frauds here might also be simmering unspotted near to boiling point. The sheer quantities of capital and money flows at play, now dwarf anything which one country, or even the G7 can command.

We are not sure what would it take to produce a scenario of exploding systemic risk, or be the trigger for such a collective state of jitters, magnifying perceived risks in a run-away fashion. Suppose that one or two major banks fall below their safe capital ratios due to over-lending on crashed property portfolios and are not saved as was Credit Lyonnais, or due to the mega frauds of media tycoons and property developers; or if a few more major companies sink due to unwise trading of financial derivatives. Together. Perhaps as a combination of the factors we see around us every day - no more, no less.

Lack of G7 plans for financial meltdown

The ominous silence from the G7 could mean they have no emergency plan: they simply do not know what to do, that finance ministers and regulators truly do not comprehend the linkages which digital convergence has forged: the diverse markets and vast liquidity pools joined by one underground river, some indeed unregulated. Just think of the accumulated trillions of private pensions savings awaiting our old age; immense insurance funds unpaid out; investment funds highly leveraged by borrowing to bet on currency movements, as well as on government bonds and company shares, the value of which could evaporate.

With the ruling body headless, there may be no hope for fair play on the financial race track, whilst the actors dice with their spectators' money - our wealth. There are no global race rules. The racing board cannot see the entire track, they do not count the laps completed, they have no published plan to improve spectator safety, and no comprehensive contingency plans for when the odds turn sour in a week of wreckage. None of us want to pay to watch a race like that. Yet in the developed world nearly everyone is forced to stand close around the circuit at ground level behind crash barriers which look dangerously low, and have never been tested.

Some of the elements as seen by the financial journalists:

"Governments lose clout in new Monetary Order"

"More than a decade after governments began liberalising and deregulating financial markets, a new monetary order is taking shape, one that raises the question: Are the governments fast becoming the governed? .. The Group of Seven .. will be hard pressed to show that despite the new imperatives of the marketplace they are still in charge. 'The privilege of government is being squeezed away', says Richard O'Brien at American Express Bank. .. [there is] the fear of .. contagious instability - exacerbated by the volume, speed and complexity of international capital flows - ". Carl Gerwitz, IHT, 8 July 1994.

"World money system needs urgent reform says former Fed Chief"

"Reform of the global monetary system is urgently needed to reduce exchange rate volatility,, [according to] an independent group of experts headed by Mr Paul Volcker, the former chairman of the US Federal Reserve ..[which] the group criticised the .. Group of Seven .

for failing to cope with the task .. The report .. urges sweeping reforms of the IMF and World Bank". Michael Prowse, FT, 7 July 1994.

"No longer as safe as houses"

"Take a $1,500 bn financial market, a handful of ambitious investment banks, and a group off incautious investors willing to risk their (or someone else's) money. Add the latest high-tec wizardry Wall Street has to offer. Then sit back and wait for external events to take their course - an unexpected rise in interest rates, for instance. Suddenly, you have all the ingredients for a market upheaval ... the most attractive parts of the bonds have been made into new instruments, the remainder - known as 'toxic waste' is sold cheaply to risk-hungry investors, retained by the investment bank, or perhaps thrown together with odds and ends left over from other pools of mortgages to create more new instruments (known as 'kitchen sink bonds', since a bit of everything has been thrown in). ... The actions of regulators may have worsened the impact. ... Dealers and investors alike put much trust in the ability of computer-driven analyses to predict what would happen to prices in different market conditions. As things turned out, their assumptions were wrong." Richard Waters, FT, 27 July 1994

"A disease is eating Wall Street and it's spilling over to Main Street"

"The disease is the obsession to trade rather than to invest. Symptoms include a passion for highly complex investment vehicles, mainly derivatives, and an eagerness to use huge sums of money to make quick bets. .. "innocents are being hurt when their mutual funds or county governments lose millions in esoteric mortgage-backed securities .. all this activity eventually could lead to a market meltdown." James Glassman, IHT, 23 Sep 94

"Through a market, darkly"

"Is the fear that derivatives are a multi-billion accident waiting to happen justified? The report of an internal working group of the Bank of England concluded last year that the unsupervised status of some of the large players in the system 'does represent a supervisory hole at the very heart of the derivatives market'. .. much of the US investment banks' derivatives dealing is conducted through unsupervised, special-purpose subsidiaries .. some central bankers question whether this artificial structure, despite numerous inbuilt safety devices, would stand up in a financial fire-storm. .. liquidity in over-the-counter markets cam evaporate in a panic. .. Central bankers .. also worry that lack of information about exposures could exacerbate a financial crisis; and that complex derivative linkages across global markets could then make the contamination hard to contain. The real problems .. are about opacity, leverage and lack of managerial competence. Central bankers will have to be on their mettle if that potentially lethal combination is not to lead to trouble." John Plender, FT, 27 May 1994.

"Chaos in Economics" "Some imperceptible noise in the system can escalate into major qualitative changes in the behaviour of that system. In such systems we cannot safely assume that small errors are unimportant ... In fact, the links between cause and effect disappear in the complexity of interactions In consequence, the long-term future of the system is inherently unpredictable." quoted from "Chaos, Management and Economics: the Implications of Non-Linear Thinking" by David Parker and Ralph Stacey, Hobart Paper 125., Institute of Economic Affairs, London, 1994. Martin Wolf, FT, 6 June 1994.