

INTERNATIONAL TRADE IN SERVICES

**selected issues on the linkage between national and
international trade statistics**

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1 Introduction

One of the major issues in the Uruguay-round of the GATT negotiations concerns the services rendered by residents to non-residents and vice versa: the so called "international trade in services". Another important issue in these negotiations concerns the services sold abroad by domestic-owned foreign-based affiliates. This is labelled "establishment trade"⁽¹⁾. It can be seen from different angles: the activities of foreign-owned affiliates in a particular country or, vice versa, the activities of foreign affiliates of resident companies. When describing the national economy both views are of interest; the GATT-negotiations focus on the latter.

Both issues are not only important to the GATT-negotiations, they are of a much wider interest. Due to the strong increase in the production and demand of services, these have gained a much more prominent position in the economy than a few decades ago. Because of the growing international links, the import and export of services have also become an important aspect. Therefore, these issues have become of great interest for domestic economic policies as well.

It is widely accepted that the statistical coverage of services is lagging in general. Efforts are made to catch up, but there is still a major difference when compared to the availability of data on goods. International trade is no exception to this. Therefore, to serve policy makers, the information gap should be closed. To do this, there are two ways to pursue. First of all, the information available in the balance of payments (BOP) is an obvious source. This source is already exploited to a large extent. Secondly, in many countries a broad range of statistics on supply and use of services is available which could serve as sources of information as well.

(1) Of course domestic-owned foreign-based affiliates can also produce goods; by the same token this can be labelled establishment trade as well. Present GATT negotiations are only dealing with services, so we will in this paper use the term in its restricted sense.

Because of the general interest of the issue, combination and integration of the information from these sources is of great importance. In many countries, the National Accounts (NA) are the main statistical information system for economic policies. Therefore, the link with the NA should also be kept in mind while developing the information on international trade in services.

Thus, in furthering the statistics on trade in services, it is important to consider the comparability of BOP-data, data from national service statistics and from the NA. This comparability is not without difficulties. The nature of these difficulties of course depends on the statistical system, which varies from country to country.

There is another problem to consider. International trade in services is a highly specific policy issue. Concepts, criteria etcetera germane to BOP or NA are not designed to cater for the information needed in respect of the GATT-negotiations and neither the BPM nor the SNA can be expected to change basic concepts to serve this particular field. However, what could be considered is expanding the information so as to serve optimally the specific requirements. A difficulty is that these requirements are not yet very articulate: clear cut definitions and criteria are lacking. This renders meeting these requirements troublesome.

The aim of the present paper is to consider these problems. First the specific needs from the point of view of the GATT-negotiations will be examined. Secondly, the links between BOP and NA will be investigated, in theory and subsequently on the basis of the experiences in two countries with well-developed but differing systems: the United States of America and the Netherlands. To conclude, some recommendations will be presented.

2 Specific data needs for GATT negotiations

The user needs regarding data on trade in services have been investigated i.a. by Hoekman. In his paper for the Voorburg group meeting in Ottawa (Hoekman, 1989) he mentions as the four most important aspects: (1) classification, (2) consistency and coverage, (3) trade by origin and destination and (4) disaggregation. Regarding the first issue he concludes that this problem is settled because now the UN's product classification is available (the Provisional Central Product Classification or CPC, see United Nations, 1991). With respect to consistency and coverage he sees as a problem that not all countries seem to use the same definitions and appear not fully to respect those of the IMF. Furthermore he observes that not all countries present a fully developed BOP. Lack of data on origin and destination hamper the Uruguay negotiations because they preclude a view at the direction of the trade flows. Lack of detail is also a problem for the negotiators because it renders it difficult to decide which products have to be covered by them.

Hoekman additionally mentions five other aspects. From these the problems of separating goods and services seem of particular interest. Two problems are noted: firstly the fact that in the BOP travel expenditures are not broken down into services and goods and secondly that goods delivered to ships and airplanes (like fuel) are considered (port) services. As a matter of classification, the latter problem is taken care of in the Eurostat/OECD classification that has become available in the mean time and as well in the proposed classification of the new IMF Balance of Payments Manual (BPM, IMF, 1992). In both classifications (port) services are considered goods instead of services. Whether countries can comply with this, of course, depends on the availability of data. Regarding the breakdown into goods and services of travel expenditures these classifications bring no change.

From this it would follow that, apart from the travel expenditures issue, these problems can be solved if only countries would better comply with existing recommendations. In our opinion, this doesn't do full justice to the difficulties in this area. Discussing data needs with negotiators and upon further thought, the authors of the present paper came across some other specific problems. A first issue to be mentioned is the valuation of the flows: CIF/FOB or FOB/FOB valuation of imports and exports of goods directly affects the value of the transport and insurance services. Especially the CIF valuation is important in this respect: it includes all transport and insurance transactions in the value of imported goods. Another issue is the nature of imports and exports of services: according to the SNA, a service rendered abroad to fellow countrymen (e.g. KLM flying a Dutch citizen from Singapore to Jakarta) is not export, while for the negotiators it may be.

Regarding establishment trade, a first issue is in how far for the GATT negotiations the data on services sold by affiliates abroad is to be combined with data regarding direct across-the-border sales of services. Attributing sales by foreign affiliates as a kind of exports to the home country, leads to pitfalls. One could question whether sales to parent companies (e.g. a research division selling its services to a parent company abroad) and sales to fellow countrymen of the parent company (like when an American stays in a hotel abroad owned by a US parent) are relevant in this respect. Thus, adding sales by affiliates to direct exports to arrive at some "extended" export figure seems rather hazardous.

Another unresolved issue regarding establishment trade is the definition of ownership: should the convention of a minimum of 50 % of the shares and control (as proposed for the revised SNA) be adopted or should the BOP convention for foreign direct investment (10 % or more of the shares and control) be applied (for a discussion on definitional issues related to foreign direct investment see Whichard, 1990). The 50 % criterion seems appropriate if sales in the host country are in some sense to be attributed to the home (investing) country. Moreover, with a percentage

of 10 double counting of sales could very well occur as more than one party could hold such a participation. Furthermore, when ownership-links include more than one level it should be decided how far to go in establishing the mother/daughter relationship (with the first parent only or up to the ultimate owner) as this can affect the domicile of the mother (the first mother can be foreign while the ultimate owner is domestic). This may also relate to the possibility of double counting, since there may be indirectly held affiliates whose sales could be included in the establishment trade of both the country of the ultimate beneficial owner and that of intermediate foreign parents in the ownership chain.

3. Conceptual aspects of the linkage between national and international service statistics

Statistical information on service activities may be derived from three main sources: statistics on the supply and use of services provide data according to various specific points of view while National Accounts and Balance of Payments furnish information in the context of wider analytical frameworks.

Statistical coverage of services is multiform, ranging from statistics on the production and intermediate use by industries to household budget surveys and statistics on tourism. Furthermore, the relevant statistics differ from country to country. As a consequence, nothing much can be said about the link between service statistics and the BOP and NA in general. Therefore this section focuses on the linkage between the BOP and the NA.

The differences between the relevant components of the respective international guidelines (UNSO's 1968 System of National Accounts and IMF's Balance of Payments Manual of 1977) partly resulted from differences in the analytical purposes of the two statistical systems. A number of discrepancies between the two systems at the time of the 1977

edition of the BPM were caused by the fact that it was thought to be neither statistically feasible nor analytically useful to incorporate in the BPM all details of the external account of the SNA. There is one difference in objective between the two systems: while the BPM aims at recording transactions between residents and non-residents mainly, the SNA records transactions not only between them but also between residents. While the transactions are mostly vertically reconciled within the external transaction account presentation of the BPM, in the SNA, there is an additional horizontal reconciliation between sector accounts. The BPM exclusively focuses on an economy's international economic transactions, that is, on the goods and services that an economy has received from and provided to the rest of the world and on the changes in the economy's claims on and liabilities to the rest of the world as well as on transfers of factor incomes, distributive current transfers and capital transfers. However, the SNA feeds models for sectoral behavior, and measures macro economic concepts such as consumption, saving, production, GDP, NNI, etcetera. In doing so, it needs imputations for components which are not reflected in actual transactions in the market and therefore would not enter into the measurement of these aggregates.

As the international community is concerned with the BOP data for its individual members, inter-country comparability has a particular importance in this case. This is why the standard components are defined in a way that serves this purpose while the SNA is also concerned with its internal consistency. Examples of the consequences of the different focuses of the two systems are certain imputations, which are made or may be made in SNA in order to be in line with the other parts of the system but which are not made in the BOP.

However, it was realized in the meantime that from the user side, harmonization greatly enhances the analytical potential of the data, while on the compilation side, harmonization can lead to improvements in the design of a data collection system. Therefore, it was agreed to minimize the discrepancies which were not caused by differences in objectives. The first phase of the harmonization project was finalized

in 1981, when a reconciliation between the components of the external account of the SNA and the BPM was drawn up. A discussion of the differences between the SNA and the BPM took place at a SNA expert group meeting in 1982 but only little was accomplished in terms of harmonization at that time. Country studies, carried out in close cooperation between the UN Statistical Office and the IMF Bureau of Statistics from 1983 to 1985, focused on identifying the differences between the concepts of both systems and on the explicit and implicit links between BOP and SNA. In the report on this by Bouter and Van Tongeren (see Bouter et al., 1991) 'bridge tables' were worked out between them. Additionally it aimed at making recommendations for further harmonization as well as the use of BOP data for reconciliation.

The 1987 Expert Group Meeting on External Sector Transactions for the Revision of the SNA reached important conclusions reducing the gaps in concepts and definitions to a minimum (see United Nations, 1987). The fact that the SNA and the BPM have been revised at the same time has presented a unique opportunity to bring these statistical systems to a greater degree of harmonization. The 1992 IMF Meeting of Balance of Payments Experts noted that the Fund has attached great importance to the issue of harmonization with the SNA (see IMF, 1992). Efforts have been made to align BPM concepts and classifications with those reflected in the ongoing work by other international organizations, such as the joint OECD-Eurostat classification and the Central Product Classification, which are related to international transactions in services.

The points of departure of the harmonization were the fourth edition of the Balance of Payments Manual (BPM, IMF, 1977) and the System of National Accounts (SNA, United Nations, 1968). We will show how the revision of these systems affects the link between them. The link between BOP and EUROSTAT's ESA is also covered, as the latter is being rewritten in line with the revised SNA.

The points of contact between National Accounts and Balance of Payments are manifold. A full-fledged system of NA contains apart from T-accounts also input/output (I/O) and supply and use (S&U) tables. Regarding transactions in goods and services, amongst the T-accounts the Goods and Services Accounts and the Production Accounts obviously are of primary interest. Both type of accounts show data on imports and exports. The same holds for the S&U and I/O tables. The External Transactions (Rest of the World) Account of the SNA calls for a detailed classification of exports and imports of services for purposes of analysis of the effect of the rest of the world on the economic conditions of a country. From the BPM some items of "Goods, services and incomes" of the Current Account are of primary interest. Therefore, we will focus on the above mentioned parts of the respective systems.

General issues:

Regarding the basic distinction between resident and non-resident units, it is worth mentioning that the concept of residence underlying the definitions and rules adopted for the fourth edition of BPM was intended to be essentially the same as in the 1968 SNA. Although it was noted that none of the differences from the wording of the corresponding passages should be taken as recommending a different coverage for the residents of an economy, there were certain differences which were somewhat confusing. As a result of the harmonization process between the two systems, resident units now are identified in an identical fashion (see IMF, 1991a). The definition of residence in the draft BPM and the draft SNA are identical.

The classification of international trade in services in the SNA of 1968 and the BOP of 1977 differed considerably. The SNA External Transactions Account distinguished exports (imports) of merchandise from services; it included a further breakdown of services into transport and insurance services, direct purchases abroad by resident units and direct purchases in the reporting economy by non-resident entities. The BPM distinguished between the categories Merchandise, Shipment, Passenger Services, Other

Transportation and Travel. Moreover, some items of services were listed under the category Other Goods and Services.

The considerable divergence between the breakdowns required complex bridge tables to link the components in details. The Bouter and Van Tongeren survey shows that the detail demanded by the SNA was not available in most countries and that countries instead accommodated unadjusted BPM components in single or combined SNA categories (see Bouter et al., 1991). Because of this, the bridge tables presented in the survey were at a high level of aggregation. E.g., regarding commodities only totals of exports and imports of goods and services were shown.

Detailed bridge tables prepared jointly by the IMF and the UN Statistical Office focusing on the explicit and implicit links between the SNA and the BOP, showed that there were major differences in the treatment of income flows and payments of services⁽²⁾. In the BOP, contrary to the NA, these items were grouped together. In the meantime, the BOP classification has also been reviewed. A very important aspect of this is that services and incomes elements, which were not distinguished before, are made separate categories in the new BPM. This distinction is essential for distinguishing between GDP and NI.

(2) These items are often referred to as factor and non-factor services respectively.

However, we abstain from using these terms because for good reasons this terminology is abolished in both the draft SNA and BPM.

Other issues:

Concerning **transactions not involving a change of ownership**, the items which needed to be harmonized between the BOP and the SNA were goods for processing and repairs as well as transportation and insurance services performed by residents on imports. Although merchanting is treated the same way in the SNA and the BPM, it is handled differently in the OECD-Eurostat classification, therefore merchanting was also a harmonization issue.

In the case of goods for processing, the BPM recommendation has been based on the fact that there was no change in ownership. Therefore, no entries were to be made under the category Merchandise, while the value added due to processing had to be recorded as a Service item. The treatment in the SNA of 1968 differed from it, the value of these goods was recorded as Merchandise at the original and processed values. The SNA Expert Group on External Sector Transactions favoured a treatment according to the fourth edition of the BPM, but only in cases where the value added due to processing was just a small proportion of the final value. In all other cases the data is recommended to be recorded as before: gross and as Merchandise. Although the IMF Balance of Payments Expert Group accepted the (new) SNA distinction on conceptual grounds, practical difficulties of distinguishing processing with substantial change from other processing were recognized. Consequently, the IMF Expert Group, while accepting the distinction in concept, agreed for practical reasons that all processing of goods that cross the customs frontier should be recorded in the category Merchandise in the BOP.

For the goods for repair, the draft new SNA discriminates between repair on investment goods and other repair activity. Since the former activity usually involves a substantial amount of manufacturing or reconstruction work, the value of repair on investment goods is considered a merchandise item, while other repair activities are recorded as services. In neither case should the value of the goods before repair be shown in the balance of payments. However, as in the case of goods for

processing, the IMF Balance of Payments Expert Group did not accept the distinction and it was agreed for practical reasons that for the BOP all repair of goods that cross the customs frontier should be recorded in the category Merchandise (see IMF, 1992).

The External Transactions Account of the SNA and the BOP are defined to cover transactions between residents of a given country and those in the rest of the world. Consequently, transportation and insurance services on imports rendered by residents to residents should not be recorded in any of them. To ascertain whether merchandise imports are actually owned by a resident or by a non-resident at the time these transportation and insurance services are being rendered is usually very difficult or impossible. This is why conventions have been adopted for constructing the entries that refer to these services on the compiling country's imports beyond the customs frontier of the exporting country. Imports were valued differently in the 1968 SNA and the 1977 BPM. In the SNA, imports were valued on a CIF basis, according to which the cost of insurance and freight are included in the value of the imports whether these services are provided by residents or non-residents. In the BPM imports are valued exclusive of these services, that is on a free on board (FOB) basis; the cost of insurance and freight services provided by non-residents being included under the category Shipment. Since the FOB convention was considered as analytically more meaningful than the CIF treatment, it was adopted in the draft SNA in order to eliminate the discrepancy between the two systems. For the detailed analysis of services as in the I/O- and S&U-tables and for the compilation of these, a CIF treatment is required to bring about the necessary homogeneity of valuation of imports and domestic production (it can be argued that a CIF valuation of imports is closest to basic prices for domestic production). Therefore, a rough adjustment will have to be made in order to adjust the CIF total from these tables to the FOB total for imports.

In spite of the different treatment in the OECD-Eurostat joint classification, merchanting is included among services on a net basis in both the draft BPM and the SNA. It was acknowledged that the proposed classification creates some practical difficulties. However, it was realized that the inclusion of merchanting in goods would inflate the trade flows and the figures would be of little analytical significance.

Some Transactions involving a change of ownership were not treated the same in the BPM and the SNA either. These are financial leasing and transactions with foreign affiliates.

Financial lease arrangements are mentioned by the fourth edition of the BPM but are not recognized in the 1968 SNA. The respective conventions in the BPM refer to arrangements that provide for the recovery of all, or a substantial amount of the cost of the equipment that is being leased, together with carrying charges. Under such arrangements the possession of the equipment passes from the lessor (the owner) to the lessee (the user) without change of ownership. The BPM recommends that the basic nature of this transactions - the transfer of the economic risk from the lessor to the lessee - be given precedence over their legal form. Therefore, as a rule of thumb, a lease arrangement expected to cover at least the three fourths of the cost of the equipment together with the carrying charges, is taken as an evidence that a change of ownership is intended. At the time the possession of the equipment passes from the lessor to the lessee, a change of ownership of the equipment from the lessor to the lessee is imputed and recorded as merchandise. Since the 1968 SNA did not distinguish between financial and other lease arrangements, lease arrangements refer to the service provided by the owner in leasing his equipment to the enterprise that operates it. Because there is no change in ownership, the market value of the equipment is not recorded under merchandise but in the service account. In order to harmonize the two systems in the draft SNA the BPM approach is adopted, only the cut-off point is not defined yet. What is agreed is, that it should be less than the 100 percent criterion mentioned in the OECD recommendation.

Transactions between affiliates of the same legal entity which are residents of different economies were not treated in the same way in the fourth edition of the BPM and the 1968 SNA neither. In the BPM goods shipped between affiliates were recorded as if a change of ownership had occurred, although these transactions are not subject to legal changes of ownership. According to the definition of residence unit adopted, enterprises are always considered residents of the economy where they operate, even if they are under the same management with enterprises that are residents of another economy. Although the 1968 SNA adopted the same definition of residency, and it recognized affiliated enterprises in different countries as separate quasi-corporate enterprises, it did not include the flows of merchandise and services to and from these affiliates in exports and imports. As the IMF-UN Statistical Office survey (Bouter et al., 1991) showed, country practices were closer to the BPM treatment than to the SNA recommendation. It is agreed that the revised SNA will adopt the BPM recommendation in the case of goods. Although in respect of services these difficulties were not explicitly discussed, the treatment will also be the same.

Other reconciliation issues are the treatment of the insurance service charge, the financial intermediary charge and the category Travel.

Measurement of insurance services entails some particular difficulties because of the time dimension of the activity. In the fourth edition of the BPM insurance covered the difference between premiums paid and claims disbursed, which was considered the insurance service charge. However, this difference may reflect not only a service charge but also capital gains or losses and prepayments (postpayments). In the 1968 SNA, the insurance premium was broken down into a service charge, a net premium (payment for the coverage of the insurance risk) and, for pension and life insurance schemes, a savings element, assigned to the household sector. The survey mentioned above (Bouter et al., 1991) shows that the SNA details were generally not available. Therefore, it was considered to simplify the treatment.

Unfortunately the simplified treatment - the BPM approach - produces peculiar fluctuations of the series on services, depending on the expiration of claims. Another element of the evaluation, that is recognized by the SNA for domestic transactions, is the investment income on the technical reserves. However, for international transactions both the SNA and the BPM ignore it because of data constraints. There is no final decision for the SNA yet, but it seems likely that the draft BOP proposal will be adopted. This means that the estimation of the imports is to be derived by applying the ratio of estimated service charges to gross premiums for exports to gross premiums paid to non-resident issuers. In the case of exports the insurance service charge is estimated by the difference between premiums earned and claims payable. Since there is no breakdown between freight and other insurance in this respect, a further estimation for input-output analysis has to be made in the SNA framework.

The imputed financial intermediary service charge in financial services is a new element in the draft SNA. The purpose of the imputation is to allocate the financial intermediary service charge between sectors and branches. In order to harmonize the two systems, the draft BPM introduced the concept, i.e. an imputation which reflects services that are not explicitly charged but may be imputed or derived from the difference between an appropriate "reference" interest rate and the interest rate actually applied to loans or debt securities and deposits. The BOP experts in the BOP meeting of March 1992 (see IMF, 1992) recognized that it would be a very demanding task to derive the necessary information needed for reasonable estimates. There was an agreement that there should be no imputation of a financial intermediary service charge in the BOP, although some experts recognized the conceptual arguments in favor of doing so. As the BPM thus differs from the proposed treatment of this item in the revised SNA, an appropriate entry may be required in the Appendix in the BPM that reconciles BOP items with the relevant categories of the SNA.

In the fourth edition of the BPM, the category Travel covers business and personal travel components which are classified under different categories in the SNA. Business travel represents an intermediate expenditure while personal travel is an element of final consumption. Also, the payments under this category comprise expenditures on services and goods. Furthermore, in the fourth edition of the BPM, it was not recommended to separate "unrequited transfers" elements such as airport taxes and visa fees from travel expenditures. Although the Bouter and Van Tongeren survey (Bouter et al., 1991) showed that the SNA detail was generally not available in the basic statistics of countries, the quoted breakdowns were considered to be so essential for the SNA that they were not to be eliminated. The new BPM does allow for a distinction between intermediate use and final consumption (business/personal) but does not require the breakdown of travel expenditures in goods and services. The airport taxes and the like are rather treated as payments for government services than transfers; it is mentioned that there is no international consensus in the field.

Difficulties in practice

Relating to the way data are collected, roughly two types of BOP compilation can be distinguished (see Nieuwkerk et al., 1987). BOP data may be compiled on an inquiry basis or on a full reporting of all agents involved in international money transactions (mainly banks). The first method is labeled as inquiry system while the second one is called direct system. The direct reporting may or may not have an intrinsic checking mechanism. If it does not have such a mechanism, it can be labeled as open direct system. If it has, it is referred to as a closed direct system. The latter system is also called ticket system.

In this respect, statistics are determined to a great extent by traditions and the regulatory environment in individual countries (see Dunavölgyi, 1991). In countries where all foreign-exchange transactions have to be conducted through authorized banks, all receipts from services must be surrendered to one of these banks (or, in some countries, can be deposited in a foreign currency account in one of these banks) and the only official sources of foreign currencies in order to effect import payments are also these banks (viz. the importer's own foreign currency accounts). Tourists are usually allowed to exchange currencies only at authorized banks or with authorized money changers. Because of the existence of the above described exchange control which is applied in many countries in the world, trade-in-services data are often mainly based on foreign exchange statistics, compiled primarily from detailed information on foreign exchange transactions reported by the authorized banks and other authorized dealers.

However, possible omissions come from the fact that a part of international trade in services can be paid in domestic currency. Another problem may be that the stricter the foreign currency control the greater the probability of illegal transactions. Although statistics in these circumstances may seem to be good in respect of both coverage and detail, some items can be underestimated and some others overestimated. Even the total can be distorted because illegal transactions are not recorded. If any of the above mentioned transactions do appear in National Accounts, there is a discrepancy between BOP and NA data.

The statistical effects of the liberalization process that took place not only in the developed but also in a number of developing countries may be sometimes contradictory. One of the methods of liberalization is to increase the threshold of reporting obligations. It means, that on one hand the proportion of detailed information that may be derived from the exchange records decreases. On the other hand, as a consequence of the liberalization, motivation for illegal transactions also decreases at the same time.

In countries where neither exchange control nor restrictions on capital movements exist or where the regulation is liberal, data on imports and exports are mostly collected by annual surveys. For some items of service transactions estimates are sometimes based on administrative data.

In the case of an inquiry system, the coverage of statistics also has some limitations. Often the frequency and scope of the surveys are limited, they are usually not conducted more frequently than once every year and are sometimes based on stratified samples of establishments or enterprises. Setting samples is particularly difficult for international service trade activities because the instability in this market is higher than in the goods' market. Another type of limitation of data collection is that some producers may not even know whether their clients were residents or non-residents.

Obtaining correct and consistent information on intra-company group settlements across the border is a problem for all types of service statistics. Large international company groups have intricate ways of transferring payments regarding receipts, overheads, investments, withdrawals from profits, etc, from one country to another. It is difficult for the compilers of various statistics to label these flows correctly in conformity with the SNA and the BOP rules. Thus, these transfers might be reflected in the BOP differently from how they appear in NA: e.g., a transfer booked as profit withdrawal in the BOP might be registered as a payment for services in the national statistics. Another problem is that companies often have various bookkeeping systems catering for differing information needs: production accounts serving to judge the performance and the profitability of the company; cash management being based on the cash-flow bookkeeping. It may well be that companies report to the various inquiries on the basis of different bookkeeping systems.

4 Relation BOP, domestic statistics and NA: the Dutch and the US situation compared

4.1 The Netherlands

In the Netherlands the NA are compiled at the Centraal Bureau voor de Statistiek (CBS). By and large the Dutch NA comply with ESA as well as SNA in the sense that they contain most data needed for the respective systems. The most important omission is the absence of a separate sector private non profit institutions. In addition the presentation of the data in accounts differs somewhat. Furthermore, for the specification by groups of activities and commodities the CBS uses its own classifications. For activities, a change towards a classification compatible with the EUROSTAT classification is envisaged shortly.

The Dutch NA include S&U and I/O tables that are fully integrated with the T-accounts. As most of the basic statistics are collected by the CBS itself, the production of statistical data is very centralized. An exception to this rule are the BOP data. To a large extent these are the responsibility of the Dutch National Bank (DNB). DNB collects all data regarding international payments on a cash base and compiles the cash base BOP. It does so fully in line with the IMF's BPM (IMF, 1977). On the basis of this and together with the CBS, the so called accrual base BOP is compiled. The transfer from cash to accrual base bears only on the imports and exports of goods for which the original cash figures are replaced by the CBS figures on foreign trade.

The yearly I/O tables are the cornerstone of the Dutch NA. From these, the goods and services accounts are derived as well as the production accounts which, in turn, serve as the starting point for the T-accounts. The I/O tables are largely based on the yearly statistics on production, called *produktie statistieken* (PS's). These PS's cover all market-activities except banking and insurance. They reflect the data from the production accounts and are fully co-ordinated with the I/O tables. They are quite detailed with regard to production but somewhat less regarding the inputs.

For the activities not covered by PS's recourse is taken to other sources. Important to mention are the statistics on banks from the DNB and the statistics on insurance from the Insurance Chamber; both compiled on a legal basis referring to the supervisory role of these institutions. Important other sources for the I/O tables are the CBS statistics on imports and exports of goods and the BOP.

The Dutch BOP is of the direct type. It is also a fully closed system. Its main component is the reporting by banks on their international payments. On a monthly basis the banks have to supply DNB with a detailed description of all transactions pertaining to the difference between their foreign currency position at the beginning of the month (which has to tally with the closing figure of the previous month) and at the end (this is why it is called a closed system). A second component is the reporting by private citizens who have an account with a bank abroad. In principle, they have to report on foreign transactions in the same way as banks do. The same holds for the third component of the BOP data sources, companies with intra-company chequing accounts.

The information gathered in this way includes details on types of services according to a classification DNB has developed on its own. Shortly this will be replaced by the Eurostat/OECD classification for BOP's which regarding services by and large follows UNSO's central product classification (CPC). Endeavors to trace the activity of the paying agents have not yet succeeded because it turned out to be quite difficult for the reporting agents. Shortly DNB itself is to apply the classification by activities; results are expected in two years time. Utmost care is given to exclude net reporting in order to have the data on a gross basis.

Until recently, the link between the BOP and the NA was a very close one (for the I/O tables as well as the T-accounts). Apart from some reclassifications due to differences between the IMF's BPM and UNSO's SNA, the BOP data were fully integrated into the NA; the balance on current account (the balance of trade) from the BOP matched the balance of the goods and services account of the NA rest of the world (ROW) accounts (viz. net exports) and the balance of imports and exports from the I/O tables. This full acceptance of the BOP data in the NA to a large extent still holds for the data on income and capital flows, although differences in revision policies caused some temporary discrepancies⁽³⁾. However, in recent years some discrepancies had to be allowed in respect of import and exports because of conflicting information from the various sources used in compiling the I/O tables. This regards the foreign transactions on services and especially those on transport and merchanting.

In the course of the 1987 revision of the Dutch NA much effort has been made to reducing these differences. It has appeared impossible to do this fully. Some of the reasons for the discrepancies mentioned above, turned out to give rise to substantial differences. In depth micro analyses evidenced the factual importance of two basic differences. The first one is that the I/O tables, via the PS's, draw on the production accounts while the DNB for the BOP is reported to on the basis of the cash-flow bookkeeping. The second one has to do with reporting units. The kind of activity units (KAU's) in the PS's do not fully coincide with the units reporting for the BOP. In large company groups international payments are sometimes settled by the central company group treasury. If several activities are performed by such a group, this severs the link between the financial flows and the activities.

(3) DNB had to introduce a re-interpretation of capital/income flows at a time the CBS couldn't follow this because of the CBS policy to introduce changes in revision years only. These discrepancies are taken care of in the course of the recently completed NA revision.

A further problem is that the Dutch BOP does not provide a breakdown of travel expenditures into final consumption by households and intermediate use and that it doesn't distinguish between travel expenditures on goods versus services. Of course this does not affect net exports, but for some uses, like tourism policies, it creates a problem. The CBS does make these breakdowns, it does so in the compilation process of the I/O tables. These breakdowns are made on the basis of CBS statistics on tourism and data on business travel expenditures from an external source.

4.2 United States of America

In the USA the BEA is responsible for the compilation of the NA as well as the BOP. Regarding compliance with international standards the situation differs; by and large the BOP follows IMF's BPM but the NA are not fully consistent with the SNA. Differences of substance relate to government investments (these are treated as current expenditures), to the treatment of insurance and pension funds and the treatment of imputed banking services. Furthermore, there is no separate sector private non profit institutions. The BEA uses classifications to group activities and commodities which are based on the IMF guidelines (services), the Harmonized System (goods) and the Standard Industrial Classification of the Office of Management and Budget (activities). On the other hand BEA has its own market-category based product classification known as the "end-use" category system; this is an elaboration of the Harmonized System. For the I/O tables these categories are converted to the product classification system that is derived from the Census Bureau's product classification. Another difference regards the valuation of foreign trade (see below).

The US NA framework contains S&U tables, I/O tables derived from these and T-accounts. The I/O tables are of the commodity/commodity type. All these tables are fully integrated with each other. There is one difference in classification. This regards exports and imports of military equipment: in the S&U and I/O tables (as well as in the BOP), due to a lack of timely source data these are recorded as goods but in the NA as services.

Information on output and outlays of industries is supplied mainly by the Bureau of the Census: every five year there is a complete census. These censuses are used for the benchmark I/O tables. The censuses are annually updated by surveys (i.a. the *Annual survey of manufacturing establishments*, the *Annual survey on retail and wholesale trade* and the *Annual survey on services*). The latest Economic Census was on 1987. These censuses cover about 75 % of non-farm industries. Annual data on banking are obtained from regulatory agencies like the Federal Reserve Board. Data on insurance are obtained from regulatory agencies also, furthermore from private companies collecting data regarding this sector. Agricultural data are obtained from annual and quarterly surveys of the Department of Agriculture on crops and livestock and from an annual survey on goods and services bought. For mining, public utilities, communication and for several transportation industries annual data are obtained from the various departments also.

For the NA and I/O tables, mainly the same basic data are used as for the BOP. Processing these basic data however partly differs: regarding goods for the I/O tables a commodity split is dominant, for the BOP and the NA end-use. Services classifications are similar. There are two major differences between BOP on the one hand and NA and the I/O tables on the other. The first regards the territorial coverage: the NA and I/O tables don't include Puerto Rico and other US territories and possessions, the BOP does. Secondly, there is a difference regarding the treatment of the production by domestic banks. This production (measured as the bank interest margin) in the NA and the I/O tables is allocated as inputs to the different users (viz. depositors) domestic and abroad. This implies i.a. that an imputation for exports of bank services is

recorded but no imputation is made for imports of foreign bank services. The BOP records neither exports nor imports of imputed bank services. In addition to this, a classification problem can be mentioned caused by the fact that the BOP is based on enterprise data, the I/O tables on data on physical location units. This causes problems for the matching of receipts and payments to services. When an enterprise (or a company group) sells or buys a service to/from an affiliate abroad, in the BOP this comes under the category "U.S. parent's receipts" respectively "U.S. parent's payments". What kind of service it is thus is not specified, nor can it reliably be inferred, in most cases, from the parent's activity, as is done for the I/O tables.

Data on expenditures of US travelers abroad are not split up but as a whole treated as services in BOP, NA and I/O tables. The same holds true for the expenditures of foreigners in the States. The reason for this is that the source for these data (mainly the data collected by the Travel and Tourism Administration by in-flight surveys in airplanes) does not allow any breakdown in this respect. The supply of fuel to ships in ports and airplanes on airports (the so called port services) in the NA as well as in the BOP are recorded as services and not as goods.

The BOP data, like the data in the NA and I/O tables are on an accrual basis. The valuation of imports and exports is also the same throughout: exports as well as imports are valued on a "free alongside ship" (FAS) basis. In this respect the US NA diverge slightly from the international standards. Regarding the recording of the transactions it is worth mentioning that in the NA as well as in the BOP some of the transactions with foreign affiliates used to be netted: the balance between the receipts and payments of US parents are recorded as exports and vice versa. This regards e.g. royalties and business services. Data on a gross-basis are available however; of late in the NA as well as in the BOP a change was made towards gross recording.

From the description of the US BOP system given above it is apparent that, when labelled according to the classification mentioned in section 3, the US BOP is of the inquiry type.

5 Coverage international trade in services

5.1 The Netherlands

Traditionally, the data on international trade in services for the Netherlands were drawn from the BOP. The CBS mainly used these data in estimating the imports and exports of services. An important exception to this has been the data on transport services for which the CBS has developed comprehensive statistics. In the past decade more and more statistical data have become available regarding domestic services. Confronting these data in the context of I/O tables, showed tensions between these data and the BOP data.

For this reason, but also because the Dutch participant in the GATT negotiations, viz. the Ministry of Economic Affairs, asked for a better coverage, the CBS started project "international trade in services" (ITIS) some years ago (see Bloem, 1988). The objective of this project, commissioned and financed by the Ministry of Economic Affairs, has been to investigate whether the required data can be found in existing national statistics or by expanding the underlying surveys.

Regarding international trade in services, the CBS' ITIS project has focussed on the export of services. One reason for this was that exports were the prime interest of the Dutch GATT negotiators. Another reason is that these exports have a larger impact on the national economy. Exports of services tend to be generated to a large extent by a limited number of industries and these may thus be heavily affected by trade barriers; on the other hand, imports are usually much more spread over the economy⁽⁴⁾. This implies also a statistical problem of a practical nature: it is much more difficult to get a good coverage of agents importing services, especially when the size of the universe necessitates sampling.

(4) Processing, which might be regarded as a service category, left aside.

The prime problem is how to identify the universe: which actors import services. First of all because these importers might be spread all over the economy. Secondly because the import of services can be very incidental, e.g. a company installing a personal computer network might need to import services from a consultant for a short introductory phase only. A solution to this could be the practice of the Australian Bureau of Statistics (ABS). In its regular statistics the ABS includes a pilot question asking whether the respondent has imported services in the survey period; those who have, subsequently are sent an inquiry form asking further questions.

To some extent the ITIS project has run in parallel with Eurostat's Mercure project; this relates to efforts to collect data on the export activities of companies in the field of business services. For ITIS some of the PS's have included questions on services rendered to non-residents. This was done in the questionnaire for large companies in the manufacturing industries, construction, transport industry and several business services. From this experiment it was concluded that in the Netherlands it is feasible to collect data on exports of services for some of the most important industries by means of the annual CBS production statistics. At the moment experiments are underway whereby some questions on the imports of services are inserted.

5.2 The USA

Partly as a consequence of the Trade and Tariff Act of 1984 an effort to improve and expand the information on international trade in services has been made. Apart from provisions regarding service industries and negotiations on services, this act contains provisions concerning data. It stipulates mandatory reporting of US international trade in services and calls for a benchmark survey of service transactions between US persons and unaffiliated foreign persons.

The effort concerning statistics on international trade in services on exports is more comprehensive than on imports. The data collection differs for the various activities. The main sources for data on (international) transport services are mandatory BEA surveys and Census Bureau tabulations. Data on travel expenditures and passenger fares are estimated on the basis of surveys administered by the US Travel and Tourism Administration and immigration data. The collection of data regarding sales to foreign persons of so-called private services (i.e. business, professional and technical services and financial and insurance services) differs between affiliated foreign persons and unaffiliated foreign persons. The data on sales to affiliated foreign persons is based solely on BEA benchmark and quarterly surveys of US direct investment abroad and foreign direct investment in the US. Regarding sales to unaffiliated foreign persons, most of the data is obtained from BEA surveys; these include surveys for royalty and license fee transactions; for architecture, construction, engineering, and mining services; for insurance and for miscellaneous selected services transactions with unaffiliated foreigners. A few services, including educational, medical and some financial services, are estimated using information from trade associations or other sources.

A special inquiry in the quinquennial censuses on services industries provides data on exports per branch. A problem for using these data in this context is that they don't provide a specification by type of service. Another problem with these Census data is that they cover only exports of services by locations primarily engaged in that service. For example, these data exclude accounting services provided by financial service locations. Put differently this means that they provide data on exports by accountant bureaus, but not on the exports of accounting services (these bureaus may also export other goods and services; units having another activity as their main activity may export accounting services as well). This kind of information is not yet used in the compilation of the I/O-tables; confronting these data with the information from the special surveys on exports of services is considered a useful future project.

That the collection of data on imports of services is less developed than on exports is exactly because of the reasons mentioned above: imports can be found in any branch of the economy and are often on an incidental basis only. In these circumstances, defining the universe is very problematic. Some years ago there was a benchmark survey which covered sales (exports) as well as purchases (imports) of services for the year 1986. The universe for this has as its legal basis a law requiring reporting. It was based on a survey bought from a private vendor of business information, to which addresses of companies were added from other sources, including addresses drawn from existing BEA surveys of direct investment and international services. It comprised over 20.000 addresses; almost 800 companies reported to have transactions above the threshold (having individual services transactions with abroad over 250.000 \$). The ones that did not were required to certify that they had nothing to report. On the basis of this benchmark survey an annual survey is held. Benchmark surveys give a detailed description; annually only aggregates are asked. The 1991 benchmark which has been conducted recently, has been mandatory. It has involved about 7000 companies. For the universe use was made of Census Bureau information on establishments from the 1987 Census of Service Industries in selected service industries that answered "yes" to a question about whether any of their receipts were from foreign sales. It has been economy wide, covering all activities, thus not specifically directed at service industries. The threshold differs from the previous one: for a given service, firms with total sales to, or purchases from, unaffiliated foreigners of over \$ 500.000 (rather than, as before, individual transactions over & 250.000) were required to report. The Census Bureau has a register, which will shortly be available to the BEA.

Annually there is a survey for insurance companies covering insurance and re-insurance transactions with foreign persons. There is also an annual survey on the sales abroad for construction, engineering, mining services and architecture. Furthermore there is a survey on royalties, licenses, fees and other receipts and payments for intangible rights between US companies and unaffiliated foreign persons. From the direct investment statistics data is available regarding charges and receipts from US affiliates abroad on a fairly aggregate level (one single figure for sales, one for royalties etc.). Still, the data on international financial services are one of the "areas that have been targeted for further development" (DiLullo et al. 1990). Some estimates are made on receipts of bank fees, stock brokers fees and commissions, based on fixed percentages and "sales" figures like the value of shares and bonds intermediated for.

6 Coverage establishment trade

6.1 The Netherlands

Concerning establishment trade ITIS began with with a focus on the sector non-financial corporations. As a next step, it is presently considered to explore the insurance sector as well; on the banking sector the CBS does not collect statistics itself. Regarding the sector non-financial corporations, one of the important findings of ITIS is that data on establishment trade can readily be derived from the CBS statistics on company finance (*Statistiek Financiën Ondernemingen, SFO*), but only in as far as foreign-owned affiliates operating on the Dutch economic territory are concerned. This is short of the data needs of the negotiators, who look for data on the **activities of domestic-owned affiliates abroad**. For several reasons it appeared difficult to collect the latter data from presently available CBS surveys.

At this moment, it is not under consideration to expand the collection to the activities of domestic-owned affiliates abroad. The main problems impeding this are the following. Firstly, the CBS does not have a register of these affiliates. Secondly, it is beyond the competence of the Bureau to collect data in other countries. In theory, it would be possible to ask the respondents to the SFO about activities of their affiliates abroad. However, it is in no way certain that thus all foreign affiliates would be captured in a comprehensive way. Furthermore, this would imply an extra burden on these respondents and also necessitate extra staff at the CBS.

Because of the lack of (internationally approved) criteria to decide when a parent-affiliate relation can be assumed, three different criteria were used: ten percent ownership of shares, fifty percent ownership and full ownership. In the case of further linkages, only the first parents domicile has served to decide on foreign ownership. This is an obvious shortcoming in view of the intricate constructions used (e.g. a Dutch company can be owned by an Aruba based mother which in turn is owned by a parent company in the Netherlands). At the time ITIS ran no information was available to redeem this; presently there is and this problem will be taken care of shortly.

The data are grouped into two fairly broad activity categories: manufacturing and services. As the SFO has the enterprise as a statistical unit, affiliates are classified according to the activity of the enterprise; this can differ from the affiliates activity. Data specified to commodities are not available. Both shortcomings could be redeemed by matching the data from the SFO and the PS's on a micro-level. However, to link the enterprises with the constituting KAU's is not an easy task. Some years ago at the CBS a project has been started to do this for the 100 largest enterprises (labelled the top-100 project); this project could also be instrumental in the present context.

6.2 The USA

In the BEA approach, data are collected on sales by foreign-owned US companies as well as on the sales of services by foreign affiliates of US companies. The data collection is based on BEA's statistics on foreign direct investment (abroad and domestic). The *Benchmark Survey of Foreign Direct Investment in the US* provides data on all domestic affiliates of foreign parents and the *Benchmark Survey of US Direct Investment Abroad* provides data on all domestic-owned foreign affiliates; affiliates being defined as companies in which another company (the parent) has over ten percent of the voting stock. These benchmark surveys are updated on an annual basis by the *Annual Survey of Foreign Direct Investment in the US* and the *Annual Survey of US Direct Investment Abroad* respectively. On the basis of these statistics, data is published regarding the sales of services by majority-owned foreign affiliates of US multinational companies (MOFA's) and by majority-owned US-affiliates of foreign companies (MOUSA's). MOFA's as well as MOUSA's are companies in which another company has over fifty percent of voting stock. Banks are not asked to supply the same data as non-bank companies because they report extensively to other agencies of the US Government; they are exempt from the BEA surveys on sales of services by affiliates (see DiLullo et al., 1990)

The problem of data collection beyond the borders is circumvented by collecting only with the US based parent/affiliate. It is always the company in the US which reports.

Regarding the decision on parent-affiliate relations, the data collected at the BEA leaves all options open. Data is available according to the direct parent or to the ultimate beneficiary.

For foreign-owned US-based affiliates as well as for US-owned foreign-based affiliates, data on establishment trade is classified according to industry of the affiliate - not to type of services. Efforts have been made to link the enterprise data on foreign direct investment in the US collected by BEA with the data on physical location units from the Census Bureau. Recently data has become available of foreign-owned companies by activity of the physical location units⁽⁵⁾.

(5) This project was mentioned i.a. in Bezirganian, 1991, page 73. At the moment of completion of this paper, no official publication on the results was available to refer to.

7 Conclusions

The revision of the SNA and the BPM now underway, brings the two systems much closer. This should greatly facilitate the matching of the respective data. Some problems still remain though. I.a. the decision to change the valuation of imports and exports in the NA to the fob/fob valuation of the BPM only affects the macro level. For the compilation of S&U and I/O tables, especially for imports a valuation is needed that comes close to the valuation of domestic production, which the FOB valuation does clearly not provide. A new problem would be the attribution to sectors of the production of banks (the bank interest margin) like introduced by the revised SNA because the new BPM does not follow this novelty.

The Dutch as well as the US experience shows, that co-ordination between BOP, service statistics and NA can be very fruitful. The problems with matching BOP data and statistics on services like experienced in the Netherlands could (at least partly) be solved by matching at a micro level; however, this appears to require a lot of manpower. Another way out (at least in a situation like in the Netherlands) could be to include questions on imports and exports of services in the statistics on production. A particular problem collecting data on services from surveys, especially when these are on a sample basis, appears to be the data on imports of services. However, practices elsewhere show that these problems need not be unsurmountable. To have experiences from other countries in this respect could therefore be very helpful in bringing things further.

The US experience shows that the collection of data on establishment trade regarding the activities of domestic-owned affiliates abroad is feasible. However, in the Dutch situation this could only be realized by expanding the inquiries, implying extra costs for the statistical agency as well as the respondents. The Dutch solution to this, using existing data on foreign owned domestic affiliates, falls short of the data needs of the participants in the GATT negotiations. A way out of this dilemma could be found when all countries involved in the negotiations would

supply the necessary data on foreign owned affiliates working on their territory. On the basis of these data, estimates of external activities of domestic-owned affiliates could then be made. This would certainly require a globally co-ordinated effort. International co-ordination regarding criteria is required in this respect anyway.

When looking at the data needs in respect of the GATT negotiations in the Uruguay round, it appears that some of the problems can be solved by bringing existing statistics up to standards. Other problems could be tackled in ways described above. Some other problems, like the valuation of foreign trade in goods, the treatment of services sold to fellow citizens abroad and the importance of attributing sales by affiliates abroad to the exports of the investing country (to arrive at a kind of "extended" exports notion), necessitate further consultations with participants in the GATT negotiations before any research can be useful. Comments from the GATT itself would be very helpful as well.

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