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Goods sent abroad for processing

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This document has been prepared by Anne Harrison OECD/STD, Robert Dippelsman (IMF) and Ivo Havinga (UNSD). It is for information and discussion under point a) of item 12 of the draft agenda : Goods for processing.

The full document is only available in pdf format.

For further information, please contact :
anne.harrison@oecd.org

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Goods sent abroad for processing

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Prepared by Anne Harrison (SNA editor), Rob Dippelsman (IMF) and Ivo Havinga (UNSD)

Executive summary

1. The subject of goods sent abroad for processing was put before BOPCOM in October 2004 and the AEG in December 2004. Despite the background note explaining the ambiguities in the treatment of these goods, the discussion centered on the questions for the groups which expressed the choice to be made in terms of a "gross" or "net" treatment. In fact the choice is whether or not a change of ownership should be imputed when goods are passed to another unit for processing. At present in both the BPM and SNA, as pointed out tin the background paper, a change of ownership is sometimes imputed and sometimes not. What exists , therefore is a "hybrid" system. The logic of treating goods being processed by another unit in different ways under different conditions is hard to rationalise and confuses analysis.

2. Consideration of the issue since the last meetings suggests that other alternatives would be preferable. These are, essentially, to *always* impute a change of ownership of goods being processed by another unit or to *never* do so.

3. The issue impacts both the BOP and the SNA. Adopting the change to never impute a change of ownership has more significant and far-reaching implications for the SNA than doing so for the balance of payments. At present, the SNA usually (but not always) imputes a change of ownership. This means that in a supply and disposition table, or input-output table, production on own behalf and on behalf of a non-resident unit are portrayed in the same way and the pattern of inputs and outputs is similar. This stemmed in the past from a desire to focus on the production process in terms of technological coefficients since changes in technology was seen to be the main driver of economic change. It can be argued now that with the advent of globalisation, the focus of attention has shifted and a portrayal of production taking account of the fragmentation of processes across countries might be more appropriate. If this is so, then a change to restrict (or possibly eliminate completely) imputing change of ownership might be appropriate.

4. If the AEG were to decide this for the SNA, it would be consistent to chose the same approach for the BOP, which is the course most consistent with the proposed change adopted by BOPCOM in Pretoria.

5. Making this change to the SNA would have significant repercussions and cause changes to the chapters on production account and input-output tables. If the AEG rejected the change and chose instead to embrace the option of imputing a change in ownership more consistently, then there are two options open to the BOP. One is to make the same choice as the SNA. The other is to opt to never impute a change in ownership but allow for an adjustment within the SNA to use the alternative assumption.

6. Whichever alternative is chosen, there is a clear need to have available the associated information on the value of goods concerned before and after processing and a need to match these with the processing fee being made by the owner to the processor.

7. The alternatives are spelled out in the attached paper. The essential decisions for the committees are as follows:

For the AEG:

(1) Does the AEG wish:

(a) to impute a change of ownership to all goods going abroad to be processed;

(b) not to impute a change of ownership to any goods going abroad to be processed or

(c) to preserve the present position where an imputation is made in some cases and not others, as at present?

(2) If the AEG prefers options (a) or (b) above, should goods being processed by other units in the same economy, including establishments of the same enterprise, be treated in the same manner as those going abroad?

For BOPCOM:

(3) If the AEG decided to extend the imputed change of ownership to other cases of processing, would the BOPCOM wish to follow the SNA decision or to give preference to never imputing a change of ownership to goods being processed by a unit abroad?

(4) If the latter, would the BOPCOM apply the same treatment to goods being processed by non-resident unincorporated establishments and to direct investment enterprises?

For both AEG and BOPCOM:

(5) Do both the AEG and BOPCOM agree that detailed information on goods being processed by other units is needed in any circumstance to permit robust estimation of the impact of the phenomenon and to assist analysis?

Goods for processing

The problem

1. The issue of goods sent abroad for processing was raised at the December 2004 AEG and seemed straightforward. Should goods sent abroad for processing be recorded gross or net in the BOP and SNA? The meeting was divided in its view and it was decided to hold a written consultation to pursue the matter. The process of agreeing the format of the written consultation revealed that the issue was not as straightforward as it may have seemed. Rather than talking about "gross" and "net" treatments, it is more accurate to talk of imputing a change of ownership or respecting the actual ownership (not imputing a change). This document aims to clarify the exact state of the BPM and SNA on goods for processing, both those sent abroad and those processed domestically, and spell out the various option and implications for the accounts of both systems.

2. The relevant paragraphs of the SNA are 14.60 to 14.64 and of the BPM5 are 197 to 200. These are appended as an annex for ease of reference.

What do SNA/BPM specify?

3. Goods sent abroad for processing are defined as materials or semi-processed goods belonging to a unit in country A which are shipped to a unit in country B for significant transformation and then returned to the original unit in country A. The goods do not change ownership from A to B and B receives from A just a fee for processing the goods. Minor transformations of goods, such as repair and packaging are not regarded as processing and are excluded from this consideration. (In fact, in practice one discriminant between goods repaired or packaged on the one hand and processed on the other is that they are classified to different commodity codes on entering and leaving B.)

4. Prior to the 1993 revision of the SNA and BPM, the manuals had different treatments of goods for processing. In the SNA the flows of goods between the country owning the goods and the country doing the processing were recorded as imports and exports of goods; this involved imputing a change of ownership of the goods when they moved physically from one territory to another. In the BPM, although the goods were physically transported and thus included in merchandise trade statistics, the fact that they did not change ownership was recognised and so they were excluded from imports and exports on a BOP basis. Instead, the difference was recorded as a service supplied by the processing country to the country owning the goods. These two approaches are often referred to in brief as the gross and net approach respectively. In the discussion leading up to the adoption of the 1993 SNA and BPM5, it was agreed that in order to achieve harmonisation in this area, the BPM would change to recording goods for processing on a gross basis.

5. The use of the abbreviations "gross" and "net" is in fact misleading as a careful examination of the recommendations embodied in the BPM and SNA reveals. "Gross" should be interpreted as "imputing a change of ownership" and "net" as "not imputing a change of ownership".

6. BPM5 states clearly that gross recording of goods sent abroad for processing applies ***only*** to those goods which go from A to B ***and return to the same unit in A***. In this case the goods passing from A to B are recorded as exports from A to B before processing and exports from B to A after processing. In this case a change of ownership is imputed. The exports and imports of both countries on entrance and exit are recorded in the BOP under general merchandise. The excess of the value of the processed goods over the value before processing should be equivalent to the processing fee. (Data problems which may lead to this equality not holding are discussed below.)

7. If goods are sent from A to one unit in B (B1) and are then on-sold to a second unit in B (B2) the goods are not regarded as goods sent abroad for processing and are not recorded as an export from A and an import to B. Instead, there is an export of service of the value of the processing fee recorded from B1 to A. (In this case no change of ownership is imputed.) Subsequently, exports to the value of the goods after processing are recorded as passing from A to B2. These exports are recorded as services and the initial recording of the value of exports from A to B is adjusted to include the service (processing) charge.

8. If the goods are sent from A to a unit in B and then sent on to a unit in country C, again they are not treated as goods for processing and not recorded as exports from A to B before processing or from B to A after processing. Again no change of ownership is imputed. As in the case immediately above, B is regarded as providing a service to A, but in this case it is recorded under merchanting and other trade-related services or in EBOPS as "other on-site processing services". Thereafter exports of goods are recorded as going (at their post-processing value) from A to C. (The designation of this service as related to merchanting is curious. Merchanting does not involve any transformation of the goods in question and is only shown as an export, not, as in this case, as an import also.)

9. Processing goods under contract can also be undertaken domestically. In such cases, the activity is often called the provision of industrial (or manufacturing) services. In this case the goods are not recorded as passing into the ownership of the processing unit. This means that the treatment in paragraph 6 differs from the domestic equivalent but those in paragraphs 7 and 8 are similar.

10. There is an exception to not recording a change of ownership in each of the cases in paragraphs 7, 8 and 9. This is when the processing unit is either an unincorporated establishment of the enterprise in A or is a direct investment enterprise of the unit in A in which case a transfer of ownership is imputed. This applies to both domestic and international processing.

What are the accounting implications?

11. The issue of how goods for processing are recorded affects three parts of the system; the current account of the balance of payments, the production account of the SNA and the accumulation accounts (both stocks and flows) of both systems.

BOP current account

12. In the BOP current account, the current balance is assumed to be unaffected by the choice of recording when the movement of goods into and out of the processing country takes place in the same accounting period. This is because it is assumed that the value of goods after processing less the value of goods before processing is equal to the processing fee paid. This assumption is questionable for a number of reason, explored in the section on data collection implications below.

13. The situation is more questionable when the processing takes a period of time during which prices may change and especially when this period spans more than one accounting period.

14. The value of goods after processing may include holding gains (or losses) which have occurred while the processing was taking place. While these will be eliminated from the production account of the processor as long as the SNA rules on valuation of withdrawals from inventories is adhered to, if the return movement of goods is recorded at their full market value, this may well include any holding gain as if it has accrued to the processor and not to the owner of the goods.

15. If a change of ownership is imputed and if there is incomplete processing at the end of an accounting period, entries in the capital account, financial account and the balance sheets are necessary. These are described below.

SNA production account

16. In the production account of the SNA, either for the economy as a whole or on an industry by industry basis, it equally is a matter of indifference whether the goods are included gross or net. If they are recorded as if there has been a change in ownership, they will feature in both intermediate consumption and output of the processor, if they are recorded on a true ownership basis, they will appear in neither. Value added, as the difference between output and total intermediate consumption, will be invariant to the treatment chosen. The latter basis simply means that processing is treated as a service.

17. However, if a supply and use table or an input output table is being compiled with commodity detail, the second approach presents problems since the transformation of the goods being processed from their original to final state is not “documented” through the absorption of the goods as intermediate consumption in one state and emergence in output in another. This was the main consideration evoked in the 1993 revision for preferring the “gross” treatment of the SNA over the “net” treatment of the BPM.

The accumulation accounts

18. If there is unfinished processing at the end of the accounting period, it is necessary to record a change in inventories in the capital account and balance sheet. Whether these appear in the accounts of the owner or the processor depends on whether or not a change of ownership has been imputed. If it has, entries in the financial accounts of both parties are also necessary.

19. If processing spans more than one accounting period, there will be some goods held by the processor when a balance sheet is to be drawn up. If the goods are recorded in strict accordance with the ownership criterion, these will show as inventories of the owner, even though they are physically located in another territory. If a change of ownership of the goods is imputed, the change in inventories is attributed to the processor. It then follows that in order to correct the balance sheet position of both parties, it is necessary to impute an entry in the financial account of both parties to show that there is no call on the foreign exchange resources of the processing country for the value of the goods being processed.

20. Implicitly, this “reconciliation” via the accumulation accounts attributes holding gains and losses on inventories to the processor and not the owner of the goods yet it is the owner who bears the risks and earns the rewards from owning the goods. Treating this transfer of risks ad rewards as a trade credit stretches the definition of this item uncomfortably.

What are the data collection implications?

21. All balance of payments data on imports and exports of goods start with the merchandise trade data which measure the physical movement of goods across international boundaries regardless of the change of ownership. In terms of the three international examples given above, in the A to B to A case, merchandise trade data should record exports and imports on both the outward and return journey. In the A to B1 to B2 case, the flow from A to B1 will be captured, but not the flow from A to B2. In the third case, there will be two flows captured, that from A to B and another from B to C.

22. Adjustments to merchandise trade figures are always a necessity and a task undertaken by the balance of payments statistician. In the case of goods for processing there are a number of uncertainties to contend with.

23. If the goods for processing are to be included in imports and exports of goods, (as in BPM5) they do not need to be removed from the merchandise trade totals. They should however be identified to enable the national accountant to ensure that the difference in value between entrance and exit matches the processing fee recorded by the processing firm in the production account. Further, it is by detecting from the trade figures that the exit has not taken place in the same period as the entrance that the necessity to have entries for the change in inventories and in the financial accounts becomes apparent. Complete data matching between trade flows and production data should also ensure that holding gains and losses are eliminated from the processing country's accounts, if necessary by adjusting the exports value to eliminate them.

24. Whether the goods subject to processing arrangements are accurately valued in customs data is a factor to be considered. One argument used for not imputing a change of ownership is that the value ascribed to the goods in the trade figures may not be reliable or even there may be no value because the parties do not value the transactions and customs regimes often do not tax the materials subject to these arrangements. While it may be true that the national accountant may have no value of the goods to be processed from the production enquiry, the regulations for Customs documentation should mean that appropriate values for the goods do appear in the merchandise trade figures. Even if the goods are consigned with an artificial or zero value, in principle Customs should attribute an appropriate arms length valuation in keeping with agreements to combat money laundering and transfer pricing between related enterprises. This may not always happen and in any case there is a real probability that the difference between the goods on entry and departure may not agree with the processing fee received. Further consultations with Customs and related merchandise trade statisticians have to be sought to ensure a more rigorous compliance given the size and analytical importance of these trade flows.

25. Whether the goods subject to processing arrangements are accurately identified in customs data is another relevant factor. If such goods are subject to exemption from particular taxes (e.g., the processor does not pay import duties provided that they are re-exported in finished form), there may be careful procedures to identify them and to match the goods which enter with the appropriate goods on exit. It is the nature of the processing that the commodity codes for the goods will change as a result of processing, making identification difficult. Even when trade between the same partners can be identified, if the processing is done on a continuous basis with regular shipments passing back and forth, it may not be easy to establish exactly which inward consignment corresponds to the which outward one. However, where there is no concessionality on the materials or finished goods for tax purposes, there is little motivation for either the parties or customs to identify the goods separately.

26. Whether the goods for processing are to be treated as having changed ownership or not, there is clearly an urgent need for extreme clarity about exactly what is included in the merchandise trade figures concerning these goods. This information is needed by not only the balance of payments statistician but also the national accountant if each is to compile the accounts they are responsible for in accordance with the common accounting rules and ensure consistency between them. This applies whether the goods return to the country of ownership, stay in the processing country or go on to a third country.

27. The national accountant will also have information on the processing activity, coming from production enquiries. Although this information contains no values for the goods themselves before and after processing, the size of the processing fee alone is sufficient to help identify the corresponding entries in the trade figures and allow the balance of payments statistician to correct these if necessary to ensure consistency between the SNA and BOP figures.

28. Both statisticians have other items to compile, the national accountant the entries for inventories and possibly financial account entries; the balance of payments statistician the entries for transportation costs. Whether the goods are treated as if they change ownership or not, the fact that the are in fact transported from one economy to another means that they will incur freight and insurance costs. Depending on the terms of the contract, these costs may be borne by the owner or processor and may be provided by residents or either country or a third one.

What are the analytical implications?

29. There are analytical implications of whether a change of ownership is imputed for both the balance of payments and the portrayal of production within both the owning and processing countries.

30. Imputing a change of ownership to goods being processed abroad increases the value of imports and exports for both countries. Thus even if it is true that the current balance is not affected by whichever method of recording is chosen, this is not the only consideration. Analysts frequently compare the level of imports and exports with other economic aggregates such as GDP. Including the goods for processing in both overstates the magnitude of both imports and exports and may distort an assessment of the role of the foreign sector relative to the domestic economy. On the other hand, if goods for processing are excluded from imports and exports, then questions about what proportion of products shipped from a country relate to goods processed on behalf of non-residents cannot be answered.

31. One aspect which deserves special attention is the question of how the processing fee should be classified. BPM5 suggests that in the A to B1 to B2 case as well as the A to B to C one, that the processing fee should be recorded as a service. Balance of payments statisticians tend to be concerned about the distinction between goods and services, a concern related to various trade negotiations where the difference is important. Trade negotiators have not been able to agree in general whether processing output of a manufacturing industry should be considered as goods or services depending on the ownership of the inputs. They prefer to consider these on a case by case basis as it impacts the use of GATT or GATS rules, for example, in dispute settlements.. This does not inhibit recording only the processing fee as the relevant entry in the BOP but does suggest that, like the repair of goods, it could be classified under goods rather than services. From an activity perspective, the industries undertaking the processing are typically goods-producing industries rather than service industries and activity classifications would include them with goods production..

32. Imputing a change of ownership of the goods to the processing country allowed the traditional approach to input output which shows the full transformation of goods from one commodity heading to another via a supply and use table, to be undertaken there. In the owning country, the original goods "disappear" as exports of one type of product and "reappear" as imports of another at a higher value. The processing country is shown as producing these finished goods and the owning country does not produce them but only imports them.

33. Input-output and supply and use tables compiled in this way provide information which can respond to questions about industrial structures and production technology in a familiar way but it does not demonstrate clearly the nature of international outsourcing. Given the increasing interest in, and importance of, this phenomenon an alternative basis for compiling input-output tables can be considered. Under this, the processing country would record as intermediate consumption only the products they buy to augment the goods received for processing and would record as output only the fee to be received. As noted above, value added would be unaffected by this presentation and the whole of the output would register as exports of the processing fee.

34. In the owning country, a somewhat strange production account might result, one where the original goods and the processing fee (imported) were combined to produce the finished goods without the use of either labour or capital, so with no value added. (Remember that input-output tables are compiled at the level of establishment and here we are assuming it is the whole of one type of activity which has been outsourced abroad.) This is different from the usual domestic case where industrial services are usually a small part of the activity of an established full production process.

35. For either option on input-output presentation there is the complication that not all processing is treated the same way in the 1993 SNA and BPM5. Domestic processing is recorded without imputing a change of ownership *unless the establishment is part of the same enterprise as that supplying the goods.* International processing is recorded without imputing a change of ownership if the goods remain in the processing country or go on to a third country *unless the establishment is part of the same enterprise as that supply the goods or is a direct investment enterprise of the owner*. It is difficult to imagine that analysts are aware of these variations and can successfully discern exactly what changes are taking place in industries subject to growth in out-sourcing without extensive assistance on untangling how many goods are subject to each of the different sorts of recording. Nor does the different treatment assist the statistician responsible for compiling the tables.

36. When processing is incomplete in the accounting period, an entry for changes in inventories is to be expected but the entry in the financial account which is necessary when a change of ownership is imputed is puzzling to those not very familiar with the implications of the imputed change in ownership in certain cases.

What are the alternatives?

37. As noted above, the present system is not, as sometimes suppose, a pure "gross" system. It is a hybrid system with some flows being recorded as if a change of ownership has taken place and some on a true ownership basis. This is difficult to follow both for analysts and compilers. Why should a single consignment of goods, part of which returns to its country of origin, part stays in the country where it is processed and part goes on to a third country be recorded under three different trade categories? While not changing the system would appear to require the least effort, it would not help to demonstrate the impact of international off-shoring, a new economic phenomenon of the sort that the update to the SNA is supposed to address. The two main

alternatives would seem to be to *never* impute a change of ownership when goods are processed under contract and *always* to impute a change of ownership. The consequences for these two alternatives for recording in the balance of payments and in production accounts and related tables are discussed separately. Since the option to always impute the change requires more entries, it is discussed first to facilitate the presentation of the shorter alternative.

Balance of payments

38. Assuming a change of ownership is imputed everywhere, it would be possible to envisage a presentation of imports and exports of goods in the BOP in the following manner[1].

Table 1: Option 1 for BOP – change of ownership always

Imports		Exports	
Goods changing ownership	***	Goods changing ownership	***
Goods received for processing for a non-resident	X1	Goods despatched after processing for a non-resident	X2
Goods received after processing by a non-resident	Y2	Goods despatched for processing by a non-resident	Y1

39. If on the other hand, a change of ownership were imputed nowhere, then the presentation might look like:

Table 2: Option 2 for BOP – change of ownership never

Imports		Exports	
Goods changing ownership	***	Goods changing ownership	***
Processing fee paid to a non-resident	Dy	Processing fee received from a non-resident	Dx

where Dx = X2-X1 and Dy = Y2-Y1.

40. An alternative presentation combining the extra detail in the first presentation without increasing imports and exports by imputing a change in ownership might be the following.

Table 3: Option 3 for BOP – change of ownership never

Imports		Exports	
Goods changing ownership	***	Goods changing ownership	***
Goods received after processing by a non-resident	Y2	Goods despatched after processing for a non-resident	X2
Less Goods despatched for processing by a non-resident	-Y1	*Less* Goods received for processing for a non-resident	-X1

[1] The annex contains the same tables with numerical examples.

41. Note that for both table 1 and table 3, the same identities for the relationship between the BOP entries, X1,X2, Y1 and Y2 and the processing fees coming from production statistics, Dx and Dy must hold.

42. Note, also, that options 2 and 3 assume that the present SNA ruling that transactions between related establishments and with direct investment enterprises is changed and no imputed change of ownership is recorded. Given the amount of world trade that takes place between branches of multinational corporations, this change could affect the level of imports and exports for some countries significantly and affect the global totals.

Production accounts and related tables

43. The first option is again that where change of ownership is always imputed. This involves no change in the current practice for recording production accounts and a supply and use table (except for those items where change of ownership is currently not imputed). For these example, only the transforming of goods X1 belonging to A by a unit in B to the value of X2 is assumed. In all cases it is assumed for simplicity that the full value of X2 is used for final consumption in A.

Table 4: Production account, option 1 – change of ownership always; production in B

	Country A	Country B
Goods belonging to A as intermediate consumption		X1
Other intermediate consumption		***
Processing fee		Dx
Value added		***
Production		X2

44. The corresponding supply and use table is as follows.

Table 5: Supply and use table, option 1 – change of ownership always; production in B

Country	Prodn	Imports	Total supply/use	Int cons	Final use	Exports
A	X1		X1			X1
A		X2	X2		X2	
B		X1	X1	X1		
B	X2		X2			X2

45. When considering option 2, no imputed change of ownership, two alternatives are possible. The first of these still assumes that the full production process is to be shown in B but this is to be reconciled with the fact that imports of X1 are not shown and exports are valued only at Dx (=X2-X1).

46. The production account is as in table 4. The supply and use table is different, though, as it includes a reconciliation column which "explains" how goods move between economies without corresponding imports or exports being recorded. The adjustment column suggested is reminiscent of that for the cif to fob adjustment. The total for each country and for transactions related to the

same product sum to zero but allow imports, exports and final demand to be recorded in strict accordance with the actual ownership. Only the production process is affected by the adjustments with both intermediate consumption and output being increased by the value of the goods to be processed.

Table 6: Supply and use table, option 2 –change of ownership never, production in B

Country	Prodn	Imports	Total supply	Processing adj	Total use	Int cons	Final use	Exports
A	X1		X1	-X1	0			
A		Dx	Dx	+X1	X2		X2	
B			0	+X1	X1	X1		
B	X2		X2	-X1	Dx			Dx

47. The second option when no change of ownership is imputed is more radical. This moves the conversion of the goods from state and value X1 to state and value X2 in country A with country B only producing the service Dx. The production account would look as follows.

Table 7: Production account, option 2 – change of ownership never: production in A

	Country A	Country B
Goods belonging to A as intermediate consumption	X1	
Other intermediate consumption		***
Processing fee	Dx	
Value added		***
Production	X2	Dx

48. This presentation conforms better to economic reality in terms of ownership of the goods. As long as only part of the total manufacturing activity is performed by a non-resident, the production account looks like any other in the system where services are bought in. However, if the whole of the manufacturing process is undertaken by a non-resident leaving the resident unit purchasing the initial materials and receiving back finished products ready for resale, the possibility arises of needing a dummy production account with no value added. This is the case shown in table 7. Since neither labour not capital are involved, it does not strictly meet the criterion of production in the SNA but, no doubt, this could be encompassed if desired. When this presentation is transformed into a supply and use table, the need for an adjustment column disappears but the impacts on technological coefficient are considerable. Analysis of cross-country industrial structures, competitiveness and productivity would need some rethinking if this manner of presentation were to be adopted generally.

49. Table 7 represents the extreme case but an increasingly common one. To date, the assumption has been that only part of a production process is sub-contracted to another unit for a particular part of the process. Increasingly, it is common for the whole of the process to be subcontracted so that the owner of the goods, buys them, has them processed and then sells them. The wholesaling or retailing activity would normally be shown in a separate part of the input-output tables, thus leaving the highly stylised production account shown in the column for country A.

Table 8: Supply and use table, option 2 – change of ownership never; production in A

Country	Prodn	Imports	Total supply/use	Int cons	Final use	Exports
A	X1		X1	X1		
A		Dx	Dx	Dx		
A	X2		X2		X2	
B	Dx		Dx			Dx

50. (If these suggestions for alternative formats for the supply and use table are not rejected in principle, they need to be carefully elaborated and the consequences for the symmetric input output tables documented.)

Inventories

51. As noted earlier but ignored throughout the tables so far, it is possible that not all of X2 is supplied in the same period as X1 and Y1 enter into processing. Suppose that only a proportion of X2, rX2, is delivered in the same period. Let us assume that this corresponds to the fact that only rX1 has been processed and only rDx has been earned as the corresponding fee. (Other assumptions could be made but these are the easiest to follow through and are economically plausible.)

52. If we assume that X1 has been delivered to the processing unit in the first period, only rX1 has been used as intermediate input and (1-r)X1 remains in inventories. The consistency check between the movements of goods and the processing fee is that the fee should be equal to rX2-rX1. This is rDx as expected. At the same time, (1-r)X1 has to be recorded as a change in inventories. If a change of ownership is imputed, then these inventories will show as those of the processor. It would be useful to identify them as such, though so they could be described as a new category of inventories, *goods held for processing* ***for*** *non-residents.* Then the rationale for the matching adjustment in the trade credit item is clear. If there is no change of ownership imputed, then the inventories belong to A. It would still be helpful to identify them as *goods held for processing* ***by*** *non-residents*. In this case no adjustment to trade credit is needed.

53. The following changes to the tables would be needed.

- In table 1, X2 is replaced by rX2. A trade credit of (1-r)X1 should also be shown in the BOP as received by B.

- In table 2, Dx is replaced by rDx.

- In table 3, X2 is replaced by rX2, X1 by rX1.

- In table 4, X1 and X2 are replaced by rX1 and rX2; in addition there will be an increase in inventories in B under goods held for processing for non-residents of (1-r)X1.

- In table 5, all entries of X2 in line 2 are replaced by rX2, in line 3, intermediate consumption in reduced from X1 to rX1 and an entry of (i-r)X1 should appear in a new column for inventories (goods held for processing for a non-resident); all entries of X2 in line 4 should be replaced by rX2.

- In table 6, line 1, the processing adjustment becomes –rX1, there needs to be an entry in a new column for inventories of (1-r)X1, (goods held for processing by non-residents); in lines 2, 3 and 4, every entry is preceded by r. (the processing adjustments still balance as before but at rX1 rather than X1.)

- In table 7, all entries are preceded by r and in addition, there is an entry for inventories in A of (1-r)X1 (goods held for processing by non-residents).

- In table 8, in line one intermediate consumption changes to rX1 and an entry of (1-r) X1 appears in a new column for inventories as goods held for processing by non-residents; all entries in lines 2,3, and 4 are preceded by r.

What are the options?

54. The simplest option would be to do nothing and leave both the SNA and the BPM as they are. However, this does not seem desirable on a number of counts. One is that the internal inconsistencies of the present treatment do not bear close scrutiny and are difficult to rationalise. The other, more important, factor is that the phenomenon of international out-sourcing has become so fast growing and such an important source of growth for a number of developing countries that the update process could be fairly criticised if it did not provide a better way of representing it.

55. One option would be to impute a change of ownership in all cases where goods were physically delivered to another unit for processing and again when they were delivered (to any unit) after processing. This would represent a significant change for domestic processing in many cases. It could also be argued that it placed more emphasis on the physical transformation process than on the economic transactions actually taking place.

56. Another option would be to never impute a change of ownership, including in those cases where related[2] units were involved. This also would have an impact on the domestic accounts if it were also applied to goods delivered to another establishment of the same enterprise. One rationale for the present treatment is that the deliveries may not always be for intermediate consumption but could be for use as fixed capital (para 6.82). This would need investigation to see if a satisfactory solution could be found which did not open up a major inconsistency between domestic and international recording conventions.

57. As shown in tables 6 and 8, it seems possible to associate production being carried out either by the owner or the processor without an imputed change of ownership at the cost of including an adjustment column in the supply and use table.

58. Another issue to be resolved is whether the activity of processing should be always regarded as a manufacturing activity and treated as goods rather than as services. The implications for changes in the classifications systems currently underway need to be taken into consideration for this also.

59. No matter which option is chosen, is that it is clear that if out-sourcing is to be recorded in the fullest way, making alternative analyses possible, then the same data requirements exist under

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[2] An establishment processing on behalf of its parent or two units with a direct investment realtionship.

both the foregoing sets of options. It is only the way in which the elements are assembled that varies.

60. Assuming that it is indeed possible to render each of these options in the accounts of the SNA and BOP in a more transparent manner, than at present, one possible way forward might be to consider first how we want to portray production under outsourcing and work back from there to the implications throughout the system.

Annex – Numerical examples

The first set of tables is exactly the same as those shown in paragraphs 38 to 50 but with numerical values replacing the stylistic values given earlier. Here we assume that X1 has a value of 100, X2 of 120 and Dx of 20. Y1 is assumed to have a value of 50, Y2 of 110 and thus Dy of 60.

Table 1a: Option 1 for BOP – change of ownership always

Imports		Exports	
Goods changing ownership	***	Goods changing ownership	***
Goods received for processing for a non-resident	100	Goods despatched after processing for a non-resident	120
Goods received after processing by a non-resident	110	Goods despatched for processing by a non-resident	50

Table 2a: Option 2 for BOP – change of ownership never

Imports		Exports	
Goods changing ownership	***	Goods changing ownership	***
Processing fee paid to a non-resident	60	Processing fee received from a non-resident	20

where 20 = 120-100 and 60 = 110-50.

Table 3a: Option 3 for BOP – change of ownership never

Imports		Exports	
Goods changing ownership	***	Goods changing ownership	***
Goods received after processing by a non-resident	110	Goods despatched after processing for a non-resident	120
Less Goods despatched for processing by a non-resident	-50	*Less* Goods received for processing for a non-resident	-100

Table 4a: Production account, option 1 – change of ownership always; production in B

	Country A	Country B
Goods belonging to A as intermediate consumption		100
Other intermediate consumption		5
Processing fee		
Value added		15
Production		120

Table 5a: Supply and use table, option 1 – change of ownership always; production in B

Country	Prodn	Imports	Total supply/use	Int cons	Final use	Exports
A	100		100			100
A		120	120		120	
B		100	100	100		
B	120		120			120

Table 6a: Supply and use table, option 2 –change of ownership never, production in B

Country	Prodn	Imports	Total supply	Processing adj	Total use	Int cons	Final use	Exports
A	100		100	-100	0			
A		20	20	+100	120		120	
B			0	+100	100	100		
B	120		120	-100	20			20

Table 7a: Production account, option 2 – change of ownership never: production in A

	Country A	Country B
Goods belong to A as intermediate consumption	100	
Other intermediate consumption		5
Processing fee	20	
Value added		15
Production	120	20

Table 8a: Supply and use table, option 2 – change of ownership never; production in A

Country	Prodn	Imports	Total supply/use	Int cons	Final use	Exports
A	100		100	100		
A		20	20	20		
A	120		120		120	
B	20		20			20

The second set of tables incorporates the changes necessary to accommodate changes for inventories when only 70 % of the goods X are processed in the accounting period. It is assumed for simplicity that this means that 70 % of intermediate consumption is used, both X and others and 70 % of value added is generated.

Table 1b: Option 1 for BOP – change of ownership always

Imports		Exports	
Goods changing ownership	***	Goods changing ownership	***
Goods received for processing for a non-resident	100	Goods despatched after processing for a non-resident	84
Goods received after processing by a non-resident	110	Goods despatched for processing by a non-resident	50
		Trade credit received by B	30
		Inventories held by B	30

Note 30 % of the processing output (30% of 20 = 6) has not yet been undertaken

Table 2b: Option 2 for BOP – change of ownership never

Imports		Exports	
Goods changing ownership	***	Goods changing ownership	***
Processing fee paid to a non-resident	60	Processing fee received from a non-resident	14

where 14=84+30-100 and 60=110-50.

Table 3b: Option 3 for BOP – change of ownership never

Imports		Exports	
Goods changing ownership	***	Goods changing ownership	***
Goods received after processing by a non-resident	110	Goods despatched after processing for a non-resident	84
Less Goods despatched for processing by a non-resident	-50	*Less* Goods received for processing for a non-resident	-100
		Plus Goods held for processing for a non-resident	30

Table 4b: Production account, option 1 – change of ownership always; production in B

	Country A	Country B
Goods belonging to A as intermediate consumption		70
Other intermediate consumption		3.5
Processing fee		
Value added		10.5
Production		84
Goods held for processing for a non-resident		30

Table 5b: Supply and use table, option 1 – change of ownership always; production in B

Country	Prodn	Imports	Total supply/use	Int cons	Final use	Invents	Exports
A	100		100				100
A		84	84		84		
B		100	100	70		30	
B	84		84				84

Table 6b: Supply and use table, option 2 –change of ownership never, production in B

Country	Prodn	Imports	Total supply	Processing adj	Total use	Int cons	Final use	Invent	Exports
A	100		100	-70	0			30	
A		14	14	+70	84		84		
B			0	+70	+70	70			
B	84		84	-70	14				14

Table 7b: Production account, option 2 – change of ownership never: production in A

	Country A	Country B
Goods belong to A as intermediate consumption	70	
Other intermediate consumption		3.5
Processing fee	14	
Value added		10.5
Production	84	14
Goods held for processing by a non-resident	30	

Table 8b: Supply and use table, option 2 – change of ownership never; production in A

Country	Prodn	Imports	Total supply/use	Int cons	Final use	Invent	Exports
A	100		100	70		30	
A		14	14	14			
A	84		84		84		
B	14		14				14

Paragraphs 14.60 to 14.64 of the 1993 SNA

14.60. The third exception is one in which a change of ownership may occur but is ignored in the accounts. The exception relates to merchants or commodity dealers who buy commodities or other goods from non-residents and then sell them again to non-residents within the same accounting period without the commodities actually entering the economy in which the merchants are resident. The difference between the receipts and the sales of such dealers is treated as measuring the value of the services they provide and recorded under exports or imports of services. If, however, the goods are not resold within the same accounting period, the purchases have to be recorded as imports of goods which are temporarily held in inventory; when they are sold abroad in a later period they should be treated as negative imports.

14.61. The fourth and final exception to the change in ownership principle relates to goods which are sent for processing abroad. In general, the principle adopted in the System is that goods sent abroad temporarily without change of ownership between resident and non-resident units are not to be counted as exports or imports. Goods sent abroad temporarily are to be understood as goods which return in more or less the same condition as they left, apart possibly from any maintenance, servicing or routine repairs carried out on them. However, these conditions are not satisfied when an enterprise engages or contracts with another enterprise to carry out certain manufacturing processes on the goods while abroad. In this case the enterprise may ship materials or semi-processed goods abroad, which become inputs into the foreign manufacturer's production processes, and then receive back the outputs from these processes, paying the manufacturer a fee for the production carried out. In these circumstances the goods originally sent abroad lose their identity by being transformed or incorporated into other goods. Similarly, the goods received back are essentially new goods produced abroad. The goods received back may well be classified quite differently, by customs authorities and in international trade statistics, from those which were sent. In these circumstances the System requires that the goods sent abroad be recorded as exports, even though they may not be sold to a non-resident, while the goods received back are recorded as imports, even though they were not purchased from a non-resident.

14.62. Essentially, the treatment of processing involves two issues - whether to record certain flows on a gross or a net basis, and whether to classify those flows as goods or services. If the goods are excluded from exports and imports on the grounds that there has been no change of ownership, then it becomes necessary to identify and record separately as the import of a service the payment which the enterprise makes to the foreign producer for the value added by his processing. If, on the other hand, the flows are recorded gross, as the System requires, the difference between the value of the imports and the value of the exports should be equal to the payment made for the service provided by the foreign processor. The balance between total exports and imports of goods and services is the same in either case, the difference being whether the balance appears as a net import of goods or a net import of services.

14.63. When goods are sent abroad temporarily to return in the same form as they left without change of ownership, their leaving the economy has no impact on the domestic economy and can, therefore, be ignored in the accounts. However, when the goods which return are different in form from those which left, the supply and disposition of goods or resources within the economy which sent the goods abroad for processing are changed and for this reason the export and import of the goods concerned cannot be ignored. Another relevant consideration is that it is often difficult to separate goods sent out for processing, and those returned after processing, from other movements of goods in records of international trade flows, so that the gross treatment required by the System is usually easier to implement in practice. However, when it is actually feasible to identify in the trade statistics goods intended for processing abroad and returned after processing, it is recommended that they should be shown separately in both exports and imports in the external account for goods and services in the System. When goods sent abroad for processing in one accounting period are not re-imported until a later accounting period, it is necessary to enter a counterpart financial claim (liability) in the financial accounts of the countries concerned.

14.64. When goods are returned after only a very small amount of processing abroad, such as storage or packaging, it can be argued that the net treatment should be adopted on the grounds that the processing is insignificant, so that it is preferable to record the small amount of value added abroad as an import of a service. It is difficult, however, to provide objective criteria as to what constitutes a significant amount of processing which would make it possible to delineate certain kinds of processes from others. It is suggested, therefore, that goods should be treated as being processed when the goods from abroad have to be classified in a different group (3 digit level) of the Central Product Classification (CPC) from the goods sent abroad out of which they have been processed. On the other hand, when the goods returned fall in the same group of the CPC as the goods sent abroad, they should not be included in exports and imports of goods, the processing being treated as a service activity.

X. Goods

Coverage and Principles

195. As subsequently defined in this *Manual*, ***goods*** covers *general merchandise*, *goods for processing*, *repairs on goods*, *goods procured in ports by carriers*, and *nonmonetary gold*. In accordance with general balance of payments principles, change of ownership is the principle determining the coverage and time of recording of international transactions in ***goods***. Certain exceptions are applied to the principle; these are discussed in subsequent sections. Exports and imports of goods are recorded at market values at points of uniform valuation, that is, the customs frontiers of exporting economies.

Definitions

196. *General merchandise* refers, with some exceptions specified later in this chapter, to movable goods for which changes in ownership—actual or imputed—occur between residents and nonresidents.

197. *Goods for processing* covers goods that are exported or imported for processing and that involve two transactions: (i) the export of a good (e.g., crude oil, vehicle parts, fabric) and (ii) the re-import of the good (refining of crude oil into petroleum, transformation of fabric into clothing) on the basis of a contract and for a fee. Symmetrically, processing performed (for nonresidents) in the partner economy consists of an import followed by an export. The inclusion, on a gross basis, of these transactions under ***goods*** is an exception to the change of ownership principle.

198. Processing can consist of any activity performed under contract: oil refining, metal processing, vehicle assembly, clothing manufacture, etc. In this *Manual*, there is concordance with the *SNA* concept of distinguishing between processing in which goods undergo substantial physical change and other processing. The former is included under goods and the latter, under services, in the *SNA*. However, because it is difficult to make such a distinction and because most international processing involves substantial physical change, it is recommended, for practical reasons, that *all processing be included under* ***goods***. The basis of the conceptual distinction is that goods originally exported or imported essentially lose identity by being transformed or incorporated into other goods. The goods subsequently re-imported or re-exported essentially become new goods produced abroad or in the compiling economy and classified in a different group (three-digit level) of the CPC than the goods originally exported abroad or originally imported into the partner economy. The value of the goods before and after processing should be recorded when the goods are exported and then imported, or vice versa. (Corresponding entries in the ***financial account*** are required when goods remain in the processing economy after the end of a recording period.)

199. Excluded from the category of *goods for processing* are goods subject to on-site processing involving an import not followed by an export (or vice versa). These goods are included under *general merchandise*. Two particular cases warrant mention. The first concerns the treatment of goods that are sent abroad for processing and subsequently sold to a resident of the processing economy. Such goods are included under exports of *general merchandise*. The payment for processing is entered as a debit under ***services,*** and an adjustment is made to the merchandise export figure to include the value of processing. The second case concerns the treatment of goods that are sent abroad for processing in one economy and then sold to another economy. A service payment from the original economy to the processing economy is entered under merchanting and other trade-related services, and an export (including the value of processing) from the original economy to the (third) purchasing economy is recorded under *general merchandise*. Included under processing (on practical grounds, as noted in paragraph 198) are goods to which some value (e.g., packaging, labeling, etc.) is added. (This added value would be recorded in the SNA as a transaction in services.)

200. The category of *repairs on goods* covers repair activity that involves work performed by residents on movable goods owned by nonresidents (or vice versa). Examples of such goods are ships, aircraft, and other transportation equipment. In contrast to the value recorded for *goods for processing*, the value recorded for *repairs on goods* reflects the value of the repairs (the fee paid or received) rather than the gross value of the goods before and after repairs. The *SNA* distinction between repairs performed on investment goods and those performed on other goods is recognized as a valid one. (The latter are included under services in the SNA.) Nonetheless, it is recommended that *the value of all repairs be included under* ***goods***. This recommendation is made because of the practical difficulty involved in making distinctions between the two types of goods and the fact that the bulk of international repairs are performed on investment goods. Excluded are construction repairs (recorded under *construction services*), computer repairs (recorded under *computer and information services*), and maintenance performed in ports and airports on transportation equipment (recorded under other transportation services).

201. *Goods procured in ports* covers goods (e.g., fuels, provisions, stores, and supplies) procured by resident or nonresident carriers abroad or in the compiling economy. Related services (e.g., towing, storage, maintenance, etc.) are excluded; these are recorded under other transportation services.

202. *Nonmonetary gold* covers exports and imports of all gold not held as reserve assets (monetary gold) by the authorities. *Nonmonetary gold* is treated as any other commodity and, when feasible, is subdivided into gold held as a store of value and other (industrial) gold.

Change of Ownership

203. With specified exceptions, application of the change of ownership (between a resident and nonresident) concept to goods ensures, in principle, that the ***goods*** component is consistent in coverage and timing with other items, particularly financial items, in the balance of payments. However, international standards for trade statistics (see the *Guide*), as well as customs returns in most countries, are based instead on physical movements of goods across national or customs frontiers. Although the goods that change ownership internationally are for the most part the same goods that move across frontiers, the changes and movements often do not occur at exactly the same time.

Convention for recording

204. Goods for export are generally considered to change ownership at the time the exporter ceases to carry the goods on his books as a real asset (i.e., when he records a sale and makes a corresponding entry in his financial items). Goods for import are considered to change ownership when the importer enters them on his books as a real asset (i.e., when he records a purchase and makes a corresponding entry in his financial items). This convention is designed to promote consistency between the ***goods*** component and the ***financial account*** in the balance of payments of the compiling country, as well as consistency between the compilation of ***goods*** by the exporting and importing countries. In practice, however, exporters and importers may not enter the transactions in their books as of the same date, so significant differences in timing may result even when this convention is followed.

Other exceptions to change of ownership rule

205. The definition of residence presented in this *Manual* has implications for the coverage of ***goods*** because of the change of ownership rule. Although enterprises are always considered residents of the economies in which the enterprises operate, enterprises in different economies may be under the same management. Affiliated enterprises may therefore engage in transactions that are not subject to the legal changes of ownership that would occur if the enterprises were independently managed. In fact, transactions between a parent company and a direct investment branch (an unincorporated enterprise) could never involve legal changes of ownership in the literal sense because both parties are part of the same legal entity. Moreover, while a parent company and a direct investment subsidiary (an incorporated enterprise) constitute separate legal entities, a different balance of payments treatment for transactions that take the form of legal changes of ownership and those that do not would seem neither feasible nor desirable. Therefore, it is recommended that transactions involving goods and taking place between direct investment enterprises and parent companies or other related enterprises should be recorded as if changes of ownership have occurred. (Exceptions are transactions in goods specified in paragraph 209.)

206. There are also important instances in which the possession of goods passes, without the defined change of ownership, between residents and nonresidents who are not affiliated. The effect of a legal change of ownership between independent parties can be achieved by other means. A significant example is financial leasing or lease arrangements (made for a capital good for most or all of its expected economic life) under which the lessor expects to recover most or all of the cost of the goods and the carrying charges. It is recommended that the economic nature of these transactions be given precedence over the legal form. Therefore, a financial lease arrangement is to be taken as presumptive evidence that a change of ownership is intended. A change of ownership is imputed because in practice, the lessee assumes the rights, risks, rewards, and responsibilities of ownership and, from an economic point of view, can be regarded as the de facto owner. A financial lease is a means by which the lessee finances the purchase (as opposed to taking out a loan for the purchase) of the good. The full equivalent of the market value of the goods (not the cumulative total of expected lease payments) should be recorded under ***goods***, and an offsetting entry should be made in the ***financial account*** to record the credit extended to the lessee.

207. In contrast, a change, between a resident and a nonresident, in ownership of goods may occur when goods do not physically cross the frontier of the economy of the resident who acquires or relinquishes ownership. When goods are acquired from one economy, relinquished again to that or some other economy, and do not cross the frontier of the economy in which the temporary owner is a resident, the activity is considered a merchanting transaction rather than an import and re-export of the goods. It is recommended that the country of the temporary owner exclude such goods from the ***goods*** component unless the recording periods in which the goods are acquired and relinquished are not the same. If the recording periods differ, increases or decreases in stocks abroad from one reporting period to another should be shown as imports of goods or reductions in imports. (For a fuller explanation of the treatment of these transactions, see paragraphs 213 and 262.)

Inclusion, in exports or imports, of goods not crossing frontiers

208. Goods not crossing frontiers should be included in exports or imports if changes of ownership occur. Exceptions are changes of ownership that are temporary (see preceding paragraph) or not related to significant economic activity. Such changes are to be disregarded. Examples of goods that do not cross frontiers but should nonetheless be included in exports or imports are

ships, aircraft, railway rolling stock, gas and oil drilling rigs and production platforms, and other movable equipment not tied to a fixed location

nonmonetary gold

goods consumed in resident-owned, offshore installations (e.g., gas and oil drilling rigs and production platforms, ships, or aircraft that are operating in international waters or airspace and are purchased from nonresidents)

goods salvaged and fish and other marine products caught by ships of the compiling economy and sold directly abroad

goods purchased in one foreign country by the government of the compiling economy for its own use in a foreign country

goods lost or destroyed after ownership has been acquired by the importer but before the goods have crossed a frontier.

Exclusion, from exports or imports, of goods crossing frontiers but not changing ownership

209. Goods that cross frontiers without changing ownership should not be covered under ***goods***, except as noted in paragraphs 197 and 198 and in the previous section on other exceptions to the change of ownership rule. The principal types of goods that may cross frontiers without changes of ownership are

direct transit trade (i.e., goods in transit through an economy)

returned exports and imports (see paragraph 210)

goods shipped under operational, that is, nonfinancial leasing arrangements (see paragraph 263)

transportation equipment, fishing vessels, gas and oil drilling rigs, and other mobile equipment that leaves or enters an economy without changes of ownership

shipments by a specific economy to that economy's military and diplomatic establishments located outside the territory of the economy

goods that cross frontiers and are lost or destroyed before being delivered by exporters

temporary exports and imports of goods that are not for sale (e.g., display equipment for trade fairs and exhibitions; art exhibits; animals for breeding, show, or racing; stage and circus equipment)

samples of no commercial value.

The recommendation that transactions between direct investment affiliates be recorded as if changes of