Measuring merchandise and international freight transportation costs in the Balance of Payments (BOP)
A plea for a new approach in BPM 7 and the SNA 20XX

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The methodology of external statistics, e.g. Balance of Payments (BOP) and Foreign Trade Statistics (FTS) exhibits today a high degree of international harmonisation. Users, therefore, expect the data of bilateral partners or groups of partners to match. This theoretical expectation contrasts with the reality of what are sometimes huge differences between exports and imports of goods and services or other items in the BOP between trading economies. The reasons for these asymmetries have been thoroughly investigated in the past, and many studies on bilateral and global discrepancies have been discussed and published.
Although most asymmetries can be put down to simple misclassifications, differences in collection methods, and the conceptional requirements of the manuals, they often seem to be resistant to efforts to reduce them. There can be no doubt, however, that high-quality and coherent trade data are of utmost importance for economic analysis in a globalised world characterised by the free circulation of goods and services.
Growing interest among policymakers in the economic effects of the internationalisation of production has been reflected in recent work by international organisations on global value chains and has led inter alia to the development of Inter-Country Input-Output Tables. The availability of balanced trade data is essential for all these initiatives, and this has thrust the topic of asymmetries into the spotlight in various international forums.
The paper intends to shed light on one of the conceptual reasons substantially contributing to asymmetries in the worldwide BOP. It is the concept of uniform valuation of export and imports of merchandise at the border of the exporting country and the related treatment of freight transportation services. The current BPM 6 recommendation force compilers to set up what are, to a greater or lesser degree, resource- and cost-intensive methods to calculate the CIF/FOB adjustment based on information which is itself estimated (eg the CIF value). Additional assumptions have to be made for transportation without having all necessary data available (e.g. for transactions between non-residents).
To overcome these problems the paper revives the work done on this topic by statisticians over the past decades. It proposes the introduction of a new concept in BPM7 based on invoice values for merchandise imports and exports as well as invoice values for all transactions in freight transport. Furthermore, the “invoice approach” has the advantage to bring the treatment of cross-border transactions in goods and related services in line with the treatment of similar transactions within an economy, as currently defined by the SNA 2008.
Keywords: Uniform valuation of imports and exports; CIF/FOB adjustment; International Transportation, Asymmetries

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A. Introduction

1. Compilers of external statistics are confronted with a "particular problem" that compilers of statistics focussing on the national economy like enterprise statistics, price statistics or labour statistics do not have to bother with. While the latter can be regarded as quasi monopolistic producers of official national figures, external statisticians, in contrast, produce figures which are mirrored by the data of the counterpart countries around the globe. Regardless if aggregated data or highly disaggregated data are concerned, practical each national figure can be cross checked with the mirror figure on a bilateral or global level.
2. Since the methodology of external statistics, e.g. Balance of Payments (BOP) and Foreign Trade Statistics (FTS) shows a high degree of international harmonization, users expect the data of bilateral partners or groups of partners to match. This theoretical expectation is contrasted by a reality of sometimes enormous differences between exports and imports of goods and services or other items of the BOP between trading economies. According to the IMF Data Base[1], total global exports of goods and services in 2015 exceed global imports about 497 billion US-Dollar.
3. The reasons for these so called asymmetries were examined well in the past and many studies on bilateral and global discrepancies have been discussed and published.[2] Although most asymmetries can be explained by simple misclassifications, by different collection methods and by conceptional requirements of the manuals they often seem to be resistant to attempts to reduce them. However, it cannot be doubted that high quality and coherent trade data are of utmost importance for economic analysis in a globalized world characterized by the free circulation of goods and services.
4. The increasing interest of politicians regarding the economic effects of internationalisation of production is reflected in the recent work of international organisations on global value chains and led eg to the development of Trade in Value Added Database.[3] The availability of balanced trade data is the crucial core for all these initiatives thus putting asymmetries into a new spotlight of various international fora.
5. This paper intent to shed light on one of the conceptional reasons contributing to a large extent to asymmetries in the worldwide BOP. It is the concept of uniform valuation of export and imports of merchandise at the border of the exporting country and the related treatment of freight transportation services[4].
6. The current concept is a deviation from the "market price" as the general valuation principle applied in the BOP as well as in the Systems of National Accounts (SNA). The reasons for this deviation are pragmatic considerations which mainly can be ascribed to the source data used for compiling the general merchandise item, the customs documentation.
7. However, it must be questioned if in an open world where customs duties are reduced to a minimum of traded items, where goods circulate freely in customs unions, trade data in some areas is collected directly from the companies and where the use of containers question the concept of separating cost between goods and transport at the (sea) border of the exporting country justifies the adherence to this traditional concepts. The consequences are asymmetries and freight data which do not reflect market trends in transportation. Also, reporters and compilers have to spend resources to estimate the required values.

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[1] Link: http://data.imf.org/regular.aspx?key=60947556

[2] See for example Vladimir Markhonko, Asymmetries in official trade statistics and analysis of globalisation, Discussion paper, International Conference on the Measurement of International Trade and Economic Globalization Aguascalientes, Mexico, 29 Sep – 1 Oct 2014.

[3] Link: http://www.oecd.org/sti/ind/measuringtradeinvalue-addedanoecd-wtojointinitiative.htm

[4] For simplicity reasons the paper focus on transportation. The treatment of the associated insurance costs is an additional problem but will not question the approach recommended here

8. The paper intents revive the work of former statisticians in the last decades[5] on this topic. It will propose to introduce a new concept in BPM7 based on invoice values for merchandise imports and exports as well as invoice values for all transactions in freight transport. This invoice based approach has the potential to solve many current problems of balance of payments compilers in this context and will reduce the overall asymmetries. Furthermore, this concept would align the treatment of cross border transactions in goods and related services with the treatment of similar transactions within an economy as currently defined by the 2008 SNA.

B. Crucial problems with the recommendations of BPM6

9. The current treatment of general merchandise imports and exports of an economy is given in paragraph 10.30 and that of the related transport services in paragraph 10.78 of the manual. Paragraph 10.30 states that *"the principle for valuation of general merchandise is the market value of goods at the point of uniform valuation. The point of uniform valuation is at the customs frontier of the economy from which the goods are first exported, that is, free on board (FOB)."*

10. This definition goes all the way back to the very first edition of the Balance of Payments manual published in January 1948 by the IMF. On page 6 of the first edition the following statement is made: "*The balance of payments as here conceived registers all export and import transactions valued uniformly at a certain boundary (exports f.o.b. frontier of reporting country and imports f.o.b. frontier of exporting country). These uniform valuation bases determine, in turn, the transactions included in the fields of international transportation and insurance".*

11. Already here it was highlighted that the uniform valuation is related to the respective international service transactions which is currently expressed in paragraph 10.78 of the BPM 6: "*The treatment of freight services is a consequence of adopting FOB as the uniform valuation principle for goods. As discussed in paragraphs 10.31–10.34, FOB valuation is as at the customs frontier of the exporting economy, so:*

> *(a) all freight costs up to the customs frontier are shown as incurred by the exporter, and*
> *(b) all freight costs beyond the customs frontier are shown as incurred by the importer."*

12. When studying the various editions of manual the theoretical reason for this deviation of the general concept of market price does not become obvious. Nevertheless, indications can be found that separating the good value from the related distributive service was the intention and that the uniform valuation establishes a border line between them[6]. If this was the motivation one can question if not the "ex-work" definition would have served this goal much better. Therefore, it seems likely that some other –more pragmatic consideration played a major role in establishing the border of the exporting country as the uniform point. The decisive factor might have been that the information on imports and exports of goods in most countries come from customs declarations, directly or via the Foreign Trade

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[5] See report of the Technical Group "Merchandise Transport", https://circabc.europa.eu/d/d/workspace/SpacesStore/0dcb0710-198f-447d-b4f7-48da7adef5e6/BP-05-19-Revised - Final report TG Merchandise Transport.pdf or Anne Harrison, FOB/CIF Issue in Merchandise Trade/Transport of Goods in *BPM6* and the *2008 SNA,*

[6] Balance of Payments Manual, Fourth Edition, International Monetary Fund, 1977, § 238 page 83:" *Merchandise will thus be uniformly valued, in the limited sense that a border line between merchandise and distributive services, in respect of place of valuation, is established in accordance with one standard rule".*

Statistics (FTS); thus the value at the border is easily collectable by compilers[7] and is relatively close to the "ex-work" price.

13. It is worth mentioning that the recourse to the FTS and in turn to the customs valuation implies that estimates are necessary to calculate the FOB and CIF value used. While defining the statistical value for imports and exports the Concepts and Definitions for International Merchandise Trade Statistics refer in paragraph 4.2[8] to the customs value to be used to establish the statistical value for FTS. It is stated that the customs value may vary from country to country and statisticians need to be in the position to make adjustments to calculate the statistical value. When following this path down to the roots Part I, Article 1 of the WTO Agreement on Valuation[9] further clarifies that the "*..customs value of imported goods shall be the* ***transaction value****, that is the price actually paid or payable for the goods when sold for export to the country of importation adjusted in accordance with the provisions of Article 8"*. Without going into the details of Article 8, it states, beside others, that each member shall include or exclude, in whole or in part, the cost for transportation and insurance[10].

14. It follows from above that the CIF values to be adjusted by BOP-compilers for merchandise trade have already been adjusted beforehand by importers/exporters, customs authorities or FTS compilers starting with the transaction price agreed on an arm's length. How accurately this is done is often difficult to judge but it is obvious that this process is crucial for the subsequent conversion to be made for BOP purposes.

15. To align the "adjusted" import values[11] with the definitions given above several approaches were developed by BOP compilers in the past. The diversity of the currently used estimation methods is probably one reason for the observed asymmetries. For example, to adjust FTS data from CIF to FOB compilers usually need to have information about the type of goods (group), disaggregated quantities, the partner country (group), modes of transport and freight rates. There are various sources from which compilers can retrieve the information (FTS, transport statistics, specialized publications, surveys) depending of the national circumstances and resources available[12]. Estimates derived from these information are then added up to the aggregate, i.e. the total amount of transportation and insurance costs included in the import figures[13].

16. The calculation becomes even more difficult when countries use different concepts to allocate their merchandise trade, by country of origin or by country of consignment[14]. This is the case in the EU, where member states must - for consistency reasons - provide intra flows by country of consignment, extra flows by country of origin for the EU balance of payments. If for example German imports from the US are cleared by customs in the Netherlands and afterwards transported to Germany, these imports are recorded - for the EU - as imports from the Netherlands (= country of consignment) and not as imports from the US. The fob value would thus be the value at the border of the Netherlands and not the value at the US border, as it would be if the goods were imported directly into Germany (country of origin concept).

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[7] „*A main consideration in specifying the customs frontier of the exporting economy, rather than some other location, is that the frontier is the point at which customs officials will be putting their valuation on exports and, for a significant group of countries, on imports as well. It is thus the point that is most likely to be reflected in the trade statistics*." (Balance of Payments Manual, Fifth Edition, International Monetary Fund, 1993, § 224 page 59)

[8] International Merchandise Trade Statistics: Concepts and Definitions 2010, United Nations, New York 2011

[9] *WTO Agreement on Customs Valuation, article 1*

[10] WTO Agreement on Customs valuation, article 8 paragraph 2

[11] For exports no further adjustments are necessary because FTS statistics usually provide fob values.

[12] As resources are quite often limited in many countries the cif/fob adjustment is calculated by applying a fixed percentage rate on the cif value.

[13] It is not discussed here on which disaggregated level the cif/fob margin should be calculated. The list of variables can be interpreted just as an indication of elements which influence the cost of moving goods from A to B.

[14] The geographical allocation of merchandise trade is also to consider when asymmetries are analysed**.**

17. Hence, dealing with different concepts of geographical allocation does not only affect the overall CIF/FOB margin but also the transport account, and obviously requires two estimation methods from countries to be applied on both accounts.[15] Although the aggregation problem described above only concerns very few countries worldwide it sheds light on the general conceptual issue compilers are confronted with, i.e. define a clear separation between the good and the distributive service. It becomes clear from the example that if the consignment concept is used by a country in its trade statistics even the fob value can include most part of the total transportation cost.

18. To summarize: BOP compilers are forced to make a CIF/FOB conversion to align the source data which is used to compile the goods account on the import side with the BPM6-definition. Either the CIF value or FOB value used in FTS and in customs declarations is only partially obtainable from the accounting of importers or exporters directly. This is because the invoice price agreed upon reflects also the specific delivery term agreed which might be any place between the production site and the place for intermediate or final consumption. The CIF value used for by BOP-compilers is therefore only a proxy of the "real" CIF value. As a consequence the converted fob value, regardless how sophisticated the conversion method will be[16], is also only an approximation of the real fob value and will only in rare cases fit to the fob exports of the partner country. Asymmetries are the consequence caused by the current methodology!

19. In the second step of the adjustment process, compilers have to split the calculated total amount of transportation services provided between the border of the exporting and importing country into services rendered by resident and those rendered by non-residents, for the latter broken down by mode of transport and by partner country. This information is not available from FTS or other statistics known by the author. The only way to obtain this information is from surveys asking the involved parties about this and to split in addition their expenditures or revenues for transport services into those related to imports, exports and other transactions. This is done in Germany in case of shipping companies. However, such an approach cannot be regarded as a realistic one for many countries due to the costs for compilers and the reporting burden for respondents.

20. But even with such survey results available not all the necessary information to calculate the required split is available. Take for example an importer who buys goods with a CIF contract and the transportation is contracted between two non-residents. According to the current rules, this transaction has to be recorded by the importing country as a debit in the transportation account. But the information on the transportation costs cannot be collected from the resident importer. Consequently, it must be estimated by compilers: First, the transportation costs must be calculated – this might be achievable. Second, the geographical counterpart has to be found – this can only be done by what compares to glancing into a crystal ball, provocatively speaking.

21. Another problem can also distort the geographical allocation even if the costs are obtained directly from a resident unit. This is the case whenever a forwarder is involved who organizes the transport chain. Also in this case the importer will not know the residency of the actual carrier.

22. The list of problems can be extended further: Even if full information were available in the compiling country i.e. in the case of an "ex Work" contract in which the importer is responsible for the transportation or in the case "delivered duties paid" at the premises of the importer in which the exporter contracts a resident carrier. How to split in these cases the total costs between transportation in the exporting country and transportation beyond the border? Estimates are possible but can only be

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[15] A **similar** problem is given on the export side. If Denmark exports goods via Spain to Morocco, the fob value for the Danish balance of payments would be the border of Denmark, but for the EU balance of payments it should be the value at the border of Spain.

[16] An literature review on academic studies on cif/fob can be found in a paper of Guannan Miao and Fabienne Fontanier, Estimating Transport and Insurance Costs of International Trade, OECD Statistics working Paper Series,

a rough approximate of the reality in particular when the CIF/FOB conversion is done only for country groups.

23. It used to be argued that these "extreme" types of delivery terms do not play a significant role because for international transportation a country´s border was considered to constitute a "quasi-natural point" where the responsibility for transportation changes between the two contracting parties. This was found to be true, especially for sea and air transportation. However, nowadays with the high percentage of goods directly moved in containers from the producer to the buyer, it is much more likely that only one contractor is responsible for the whole journey[17].

24. But problems are not limited to the import side. For exports compilers might face the situation that they are not able to collect the information because the transportation transaction takes place between two resident units. This can occur when exports are delivered under a CIF contract and the related costs of transportation have to be entered as credit into the transportation account. If the collection system is geared on resident to non-resident transactions the collection of the data might not be possible or rather not separately identifiable and cost must also be estimated.

25. To put in a nutshell, the calculation of transport according the definition of the BPM6 is difficult and is a great challenge for the compilers. Over the decades, various methods were implemented by countries to collect the information needed to estimate transportation. An overview about methods applied and data source is given in Table 12.2 of the BPM6 Compilers Guide[18] and in the MSITS 2010 Compilers Guide in chapter 11 and 14[19]. All the approaches to derive the credit and debit entries for transportation depend on more than one data sources which have to be combined. By doing so, compilers make assumptions which in practice lead to a large variety of models producing the same number of different results. Not only is the calculation of the total costs challenging due to the lack of information - particularly about actual freight rates. Even more challenging is the correct geographical allocation; it is basically not possible at all.

26. Despite the efforts made by compilers to produce reliable figures under the given definitions, asymmetries are inevitable which questions the quality of the figures produced some extent. Users blame compilers for the lack of consistency without being aware of the complex issues and considerations reflected in the produced figures. As a reaction on these discrepancies, some users start to invent their own new models to reconcile the asymmetries because they need a balanced view on international trade for their purposes like for global input output tables. This should not be regarded as criticism! Not the statisticians and their models or the users modelling the models are the problem. The core of problem is the current concept of the BPM6 –this is where the problem has to be tackled.

27. In view of these difficulties and the unsatisfactory results the current framework of the manual produces it should be considered if an alternative concept should be implemented in the BPM7 which avoids the problems discussed above. The option the author strongly advocates is an invoiced based approach. As mentioned, this approach goes back to the late nineties, when the Eurostat Technical Group "Merchandise Transport" was mandated to propose a uniform approach for estimating transportation services in the EU.

C. Invoice values as an alternative concept to compile merchandise trade and transportation

28. Due to the considerations under section B this paper proposes to give up the current concept and to use alternative invoice approach, i.e. record imports and exports with their invoice values, and record transport services if a market transaction between a resident and a non-resident rendering the

[17] Anne Harrison, l.c. page 7.
[18] BPM6 Compilation Guide, International Monetary Fund 2014, page 196.
[19] Manual on Statistics of International Trade in Services Compilers Guide, UNSD 2016, chapter 11 section B2 and chapter 14 paragraph 14.45 et seq, https://unstats.un.org/wiki/

transport takes place. This is a statistical feasible concept. It avoids the flaws of the current approach because it will enable compilers to collect more reliable data which can be extracted easily from their accounting of the reporters. Estimations of goods and freight transportation would no longer be necessary. The asymmetries resulting from different estimation methods in different countries would belong to the past. Furthermore, the aspect of consistency between the figures of exporting and importing countries would hold because this goal can be reached with any valuation like CIF, Ex-Work or DDP[20].

29. The advantages of this approach will be elaborated further; however, it is clear that a change like this would mean that both items must be interpreted differently compared to the decades before. Goods will always include transport costs if they are included in the invoice value. Transportation would reflect only all international transactions between the economy and the rest of the world as they occur in the market. Estimations under this definition would not be necessary anymore.

30. The following table gives an example to clarify the differences between the FOP concept and the invoice concept:

Imports: transportation services covered by a FOB/FOB and invoice approach[21]

Delivery term	Carrier is	
	Resident	non-resident
FOB	Case 1.1 0 (FOB/FOB) 0 (invoice)	Case 1.2 debit (FOB/FOB) debit (invoice)
CIF	Case 2.1 0 (FOB/FOB) credit (invoice)	Case 2.2 debit (FOB/FOB) 0 (invoice)

Let assume that a US company imports goods from China with a FOB contract (case 1) and with a CIF contract (case 2); merchandise value FOB will be 100, transport cost 10 and merchandise CIF value 110. Thus, the following entries have to been made in the US balance of payments:

1.1 FOB contract / US carrier
FOB concept: General merchandise: -100; transportation freight: 0
Invoice concept: General merchandise: -100; transportation freight: 0
Under both concepts the US BOP will record the same amount in merchandise and will have no entry for freight transportation, because the service is provided by a resident company.

[20] Delivery Duties Payed
[21] The table focus on transportation as in all cases a debit entry is necessary for general merchandise; differences in the amounts become clear from the text

1.2 FOB contract / Mexican carrier
FOB concept: General merchandise: -100; transportation freight: -10
Invoice concept: General merchandise: -100; transportation freight: -10
Under both concepts the US BOP will record the same amount in merchandise and a freight debit vis-à-vis Mexico because there is a transaction between a resident and a non-resident.

2.1 CIF contract / US carrier
FOB concept: General merchandise: -100; transportation freight: 0
Invoice concept: General merchandise: -110; transportation freight: 10
The two concepts lead to different entries in BOP. According the current Manual the FOB value for merchandise (debit) is recorded. For freight transportation services no entry is made since a transaction between resident is assumed. Following the invoice approach, the CIF value is be recorded for merchandise (debit) and a credit entry in the freight account (reflecting the market transaction between the exporter (China) and the resident carrier).

2.2 CIF contract / Mexican carrier
FOB concept: General merchandise: -100; transportation freight: -10
Invoice concept: General merchandise: -110; transportation freight: -
The FOB approach would require to record the FOB value for merchandise (debits) and a debit entry in freight transportation (transaction between the resident importer and the Mexican carrier is assumed). According the invoice approach, only a debit entry under merchandise would be necessary (cost of transportation is included, no market transaction between a resident and a non-resident for the service).

31. The above example shows that the overall balance of the two accounts is the same under both concepts. However, the amounts recorded in the respective accounts will differ unless FOB is the contracted delivery term. Under all other circumstances they will be diverse in regard to the amount and -for freight transportation- also on the credit and debit side. The consequence is that also the balance of the two accounts would change when the proposed approach is used[22] and transportation debits and credits are recorded for merchandise imports and exports.

32. There are several arguments why a change from the current definition of the manual to a invoiced based approach would be worthwhile:

a. No estimates are necessary, neither for the goods account nor for the freight account. Therefore, asymmetries caused by the current estimations (statistical value, CIF/FOB adjustment, transportation) will be avoided because they are superfluous.
b. The data can be extracted directly from the company´s accounting. Thus, the reliability of the single accounts and the overall balance of both improve.
c. The data requirements for compilers are reduced since no additional information is necessary for estimates, e.g. freight rates or weights. The only information necessary is the invoice value from customs or FTS which is - as a general rule - the starting point for respondents, customs or statisticians to calculate the customs value or the statistical value.

[22] A similar result would appear on the export side.

d. The compilation of freight transportation will be completely disconnected from FTS statistics as weights or delivery terms are not needed any longer. Furthermore, a separation of the collected data via a transportation survey into "related to imports/exports" and "other transportation" as mentioned above would not be necessary anymore.
e. The problem of geographical allocation of transport in cases where a direct observation in the compiling country is not possible is avoidable. In an invoice based world the regional distribution is not a special problem.
f. Data on freight can be easily combined with merchandise data following the country of origin or/and the country of consignment concept. The simultaneous application of both concepts as it is required in the case of the EU will have no effect on the freight account. For example, Austrian transport debits under the invoice approach will be same for goods imports from Canada (country of origin) via Netherlands (country of consignment) although this transaction will be treated as intra imports form the Netherlands for the EU.
g. The invoice concept will also better fit in with other components which are relevant in case of trade or international transportation like processing and merchanting. Although for processing[23], in particular the related acquisition/selling of goods outside the national economy is not elaborated in detail in the manual, paragraph 10.32 already acknowledges that the application of FOB type values is problematic and therefore a transaction value can be used. In consequence, also the related transportation costs have to be recorded separately on the basis of visible market transaction which is in line with the invoice approach. For merchanting the manual is clearer. Paragraph 10.44 states that "*merchanting entries are valued at transaction prices as agreed by the parties, not FOB".*
h. In addition, the invoice approach would also be in line with current recommendations of the SNA 2008 regarding the valuation of goods and related transportation services inside the economic territory. In chapter 14 the SNA discusses in several paragraphs how transport charges should be recorded for domestic production and imports. Paragraph 14.54 states, "*... if the producer agrees to deliver the product to the purchaser without explicit charges, the costs of delivery is included in the basic price"*. In other words, the value includes the transport costs for delivering the goods to the place agreed with the purchaser. In turn, if the purchaser is responsible for transportation or explicitly charged for it by the producer this margin is not treated as being part of goods but treated as a separate service purchase. The reason behind is straightforward and also conceptually mirrored by the manual as a fictional assumption which is incorporated with the FOB definition: It is the change of ownership that matters. Paragraph 14.60 of the 2008 SNA sums this up as follows:

> *"The rationale behind these different recordings is that the point when change of ownership occurs is different under the different scenarios. If A agrees or is obliged to provide transport to B, even for a charge, then change of ownership takes place when the product is delivered to B's factory. If B agrees or is obliged to arrange delivery itself, then change of ownership takes place when*

[23] Although, as a general rule, imports and exports of goods under processing are not included in general merchandise, the current concept could lead to a distortion of the cif/FOB conversion if these goods are not eliminated before.

the product leaves A's factory".

i. In line with this treatment of domestic transactions, the 2008 SNA discusses the international transport charges. It acknowledges the fact that the information on imports and exports are extracted usually from customs declarations. But it also considers that an increasing part of products circulates without customs supervision internationally, for instance within the EU or ships and aircrafts. Therefore, it discusses different treatments of transportation services depending if products are or are not covered by customs documentation. As this is done in length[24], only a few central statements should be mentioned here. For the case of the absence of customs documents paragraph 14.63 states that "…*information must be obtained from surveys and other sources and will typically record the prices at which transactions are actually undertaken. The analysis above for goods transported within the domestic economy is likely to apply to international transport also. When the supplier (exporter) commits to deliver goods to the importer, the value of the goods will include the transport costs. When the purchaser (importer) is responsible for transport, the value of the goods excludes the transport costs and these features as a separate purchase"*. Further on it is clarified that if a third party supplies the transport service this is treated as a separate service transaction, i.e. as a domestic service transaction or an export/import of services depending if the third party is a co-resident or a non-resident in regard to the purchaser or the importer and who of them takes responsibility for the delivery. Again, the invoice approach is in line with these recommendations.

j. In the case customs documentation is used the SNA states that these declarations are not ideal, neither for the compilation national accounts nor BOP [25]. This is elaborated further in paragraph 14.71 assuming that the exporter is responsible for the delivery. The SNA states that regardless of the nationality of the transporter " *..it is correct that the cost of transport is included in the value of the good imported.*" and transport "*..should not be seen as a separate import of transport service*". The treatment as a service - as it is recommended by the BPM 6 - is clearly not shared by the SNA. With the application of the invoice approach the transport cost will be included in the goods value and therefore would foster the consistency between the two manuals[26].

k. But not only from the perspective of compilers and the national accounts as major users the invoice approach could be of advantage. Also for users which are interested on "real" figures on international transportation outside of the scope of BOP will profit from the invoice approach. The new concept will only record market transactions between residents and non-residents. Under the current FOB concept some of them are not captured, for example if the exporter uses a non-resident carrier to deliver the goods to the factory of the importer. Therefore, the freight account will better reflect changes in market conditions than the current approach which to a large extent is based on estimates.

[24] System of National Accounts 2008, New York 2009, paragraph 14.61 following.
[25] SNA 2008, paragraph 14.69
[26] Further clarification for the case when the importer contracts delivery is given in paragraph 12.72. The treatment would be in line with the outcome when the invoice approach is applied.

D. Summary and outlook

33. As mentioned in the introduction, the ideas presented in the paper are not new but can be tracked back to the work presented by Eurostat´s Technical Group "Merchandise Transport" at the turn of the millennium. The "old" question about adequate measuring concepts has gained new prominence as efforts to reduce asymmetries in BOP and other external statistics has moved up on the list of priorities. Do the traditional methodological concepts still make sense under current circumstances? These concepts designed at a time when goods between countries moved only under strict custom controls, when borders constituted a quasi-natural barrier where documents had to be presented and goods were reloaded from one mean of transport to the other with a huge amount of manpower involved. Under such circumstances it seems natural to separate transportation costs into three parts, the transportation up to the border of the exporting country, international transportation between the borders of partner countries and transportation inside the importing country. But the world has changed: Nowadays, goods move around the world more freely with customs controls reduced to a minimum. The simplified custom procedures shift most of the documentations and controls into the companies. Containers are now the standard to move goods, loaded in the factory of the producer and send without any notable interruptions directly to the premises of the buyer. A single cost given for the whole journey and paid completely by the producer or his customer is not the exception anymore, but the rule[27].

34. Therefore the valuation concept for exports and imports and the related transportation services has to be updated to better incorporate current transportation procedures. The coming years leading up to the work on BPM7 should be used to discuss the adequate treatment and to debate if the current guideline should be changed. The paper argued that the current principles force compilers to set up a more or less resource and cost intensive methods to calculate the CIF/FOB adjustment based on information which itself is estimated (e.g. the CIF value). Additional assumptions have to be made for transportation without having any source data available (for transactions between non-residents). However sincere the individual efforts, they result in inevitably asymmetries since there is not one method that can be recommended for all countries. An invoice based approach avoids many of the current problems. The results would be much more in line with the corresponding principles established by the 2008 SNA. A consistent treatment would be reached between domestic and international freight transportation and valuation in the goods and service account itself regarding goods and related transportation transactions which are not related to im- and exports like merchanting or processing. However, to be fair the disadvantages have to be mentioned as well, such as changes in time series. In the coming years, the pros and cons should be thoroughly examined. The arguments piled up on the table, however, do call for a "thinking out of the box".

[27] See also Anne Harrison, l.c.