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Measuring Global Production**Implementation of the new guidelines concerning processing activities in Denmark – consistency problems detected****Prepared by Statistics Denmark***Summary*

This paper describes how the BPM6 guidelines concerning processing activities have been implemented in Denmark with respect to sources, methods, and quality assurance. The scope being the adjustment of the International trade in goods statistics to the balance of payments (BoP) concept of goods, manufacturing services on physical inputs owned by others, goods acquired abroad for processing abroad, and goods sold abroad after processing abroad. Until shortly before the release of the BPM6 figures the implementation seemed a success, however, an important lesson learned is that what seems correct within an individual statistical domain might be very wrong when looked upon in a broader perspective. The National Account (NA) pointed to some inconsistencies in primary data relating to processing activities which initiated a consistency analysis of the BoP – a comparison across statistical domains of related information with the aim of ensuring quality. The result is a forthcoming revision of the BoP as well as NA this autumn. The experiences from this consistency check is a first step in the direction of establishing a large cases unit (LCU) in Statistics Denmark that shall ensure consistency across domains for the largest and most influential enterprises. Assuring consistency between primary statistics at an early stage of the production process before they enter the national accounts is expected to have a positive influence on the quality of the supply-use tables and GNP.

I. Introduction

1. The first part of the paper focuses on BPM6 implementation of processing activities - sources, methods, and quality assurance. The focus is especially on the identification of the flows of goods before/after processing and the changes to the Danish survey questionnaires to collect e.g. the manufacturing services. To ensure the quality of the new information various checks have been implemented.
2. Despite the rigorous preparations described in the first part of the paper, the National Account (NA) pointed to some inconsistencies in primary data relating to processing activities which sparked a broader consistency check – a comparison across statistical domains of related information, primarily related to processing and merchanting activities. The second part of the paper will highlight the methods, results, and implications for the future consistency work in Statistics Denmark, where a large cases unit (LCU) is being established, as well as the implications for the quality of the supply-use tables.

II. BPM6 implementation of processing activities

3. Goods for processing encompasses several elements: 1) adjusting the International trade in goods statistics (ITGS) to the balance of payments (BoP) concept of goods, 2) collecting manufacturing services on physical inputs owned by others, 3) adding goods acquired abroad for processing abroad and goods sold abroad after processing abroad to the BoP concept of goods.

A. Adjusting the International trade in goods statistics

4. We use information from the ITGS to identify goods movements for/following processing in order to adjust to the goods concept of the BoP. Adjusting the ITGS have turned out to be quite problematic, especially with regard to transactions recorded in the Customs system.
5. For the intra-EU transactions (Intrastat) we collect the nature of transaction (NoT) that clearly indicates goods movements for/following processing. However, NoT is not currently available in the Danish Customs system. Instead the Customs Procedure Codes (CPC) is used. However, CPCs can only be used as an indicator of processing activities since enterprises are often the legal owner of the semi-finished goods/materials. A detailed description of the methods used to identify and validate the goods movements concerning processing in the ITGS are presented in annex 1.
6. Transactions indicating processing activities are removed from the ITGS and are flagged at the 8 digit commodity level. Flagging the ITGS at the detailed level implies easy adjustment of the supply-use tables by the National accounts.

B. Changes to the survey design

1. Manufacturing services

7. Information on manufacturing services on physical inputs owned by others is collected on the international trade in services (ITSS) questionnaire. In Denmark the ITSS is based on a sample covering about 80 percent of the total trade in services.

8. The manufacturing services are not deduced from the ITGS – this would be only partly possible. Given good quality NoT data, and for goods that both enter and leave the territory, the information could be partly deduced, but in Denmark only for EU countries since the information is not being collected in the Customs system.

2. Goods acquired abroad for processing abroad and goods sold abroad after processing abroad

9. Goods acquired abroad for processing abroad and goods sold abroad after processing abroad are collected as part of the ITSS questionnaire. Only the total value split by partner country is collected (i.e. no information about the products).

10. When preparing for the BPM6 the ITSS questionnaire was extended with these elements. To ensure an adequate base for drawing the sample for the ITSS survey, the enterprises that have been reporting processing transactions using the relevant NoT and CPC codes in the ITGS were identified. In addition, information from Manufactures' sales (Prodcom) was used to identify relevant enterprises (in Denmark the Prodcom survey contains information about turnover from manufacturing of inputs owned by others).

3. Merchanting

11. Statistics Denmark has been collecting Merchanting data on a gross basis before the new requirements were introduced. We collect the information on the ITSS questionnaire along with other goods items (goods procured in foreign ports, goods acquired for processing abroad, and goods sold after processing abroad).

C. Validation procedures

12. Multiple validation procedures have been implemented to ensure the quality of the new variables and of the identification of goods movements related to processing. The validation procedures described in this section involves cross checking information from different sources – ITSS, ITGS and Customs data.

1. Validation of data collected in the ITGS and ITSS

13. Based on the new NoT codes in the ITGS and new information from the ITSS we have established a validation system where we check for consistency between reported information on the ITGS and ITSS questionnaires. If manufacturing services on physical inputs owned by others have been reported to the ITSS we will expect to find a NoT indicating processing in the ITGS reports. Another example is that if a NoT indicating goods sent abroad for processing where the goods are not expected to return to Denmark we would expect to find a report on goods sold abroad after processing abroad in the ITSS report.

2. Using Customs procedure codes to validate the manufacturing services

14. When re-importing goods that have been declared in the Customs system as “temporary export under the outward processing procedure” the value both before and after processing is available in the Customs data and can be compared to reports on manufacturing services reported to the ITSS.

15. In addition, the CPC contain some information on processing fees directly – in the Customs system the second subdivision on the CPC contains a code (B05) that are used when only the processing value have been declared on imports following “Temporary

export under outward processing”. These checks are not done systematically at the moment but are in our plans for future improvements.

3. Using information from Customs to validate goods acquired abroad for processing abroad

16. There are numerous authorizations that enterprises can apply for at Customs. One is of particular interest to us, “Triangulating”. Triangulation implies that an enterprise can buy goods in a EU Member state and ship them to a third country (outside the EU) for processing and subsequently import them after processing without having to pay duties of the part of the final good that originated in another Member state. This information is valuable to ensure the quality of “goods acquired abroad for processing abroad” reported to the ITSS. We are currently trying to get regular access to these data from Customs.

III. Consistency check across statistical domains

17. Despite the quality checks implemented a significant problem with the reporting of processing activities was detected shortly before the BPM6 figures were released in October 2014. NA found a significant inconsistency between manufactures' sales (Prodcom) and turnover as reported to business accounts/structural business statistics (SBS) related to merchanting and processing activities. The finding implicated an error in the BoP figures and that the information had either not been reported or reported incorrectly on the ITSS questionnaire. Especially two points of concern was highlighted – problems with the distinction between processing and merchanting activities and significant under reporting of goods sold abroad after processing abroad.

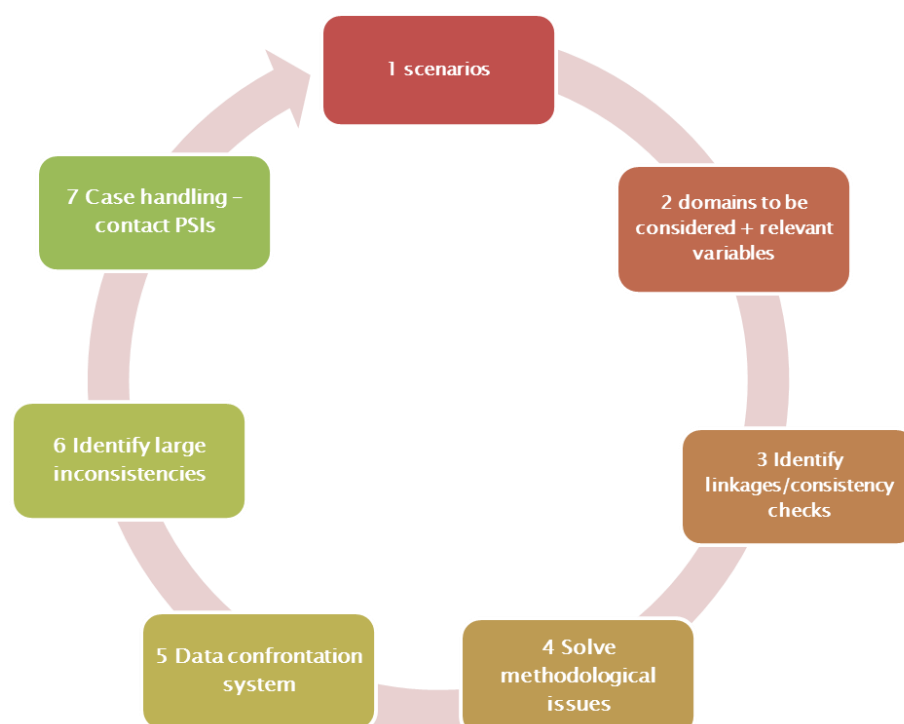
18. The new variables collected in connection with the new survey design have made it possible to validate the information by comparing more directly vis-à-vis other statistical domains. Against that background, Statistics Denmark initiated an investigation of the international activities of selected larger Danish enterprises to ensure consistency in collected data and the quality of the BoP.

A. The project of consistency check across statistical domains

19. A group of domain experts was established and from November 2014 to June 2015 the activities of a number of Danish corporations was investigated. The group was composed of participants from the statistics on international trade in goods, international trade in services, balance of payments, manufactures' sales, industrial production and turnover, business accounts and the national accounts.

20. The first phase of the group's work was to identify which scenarios of activity on foreign markets that should be the main focus of the analysis. In the second phase the group identified relevant statistical domains and variables. In the third stage, linkages between related variables was established and various consistency checks was agreed on. Before phase five, where an IT system was built to compare data across the different domains, some methodological problems needed to be addressed in order to ensure a uniform treatment across domains (stage four). The various phases in the project are depicted in the figure below and some are further addressed subsequently.

Figure 1
Project phases



B. Focus on scenarios concerning production abroad

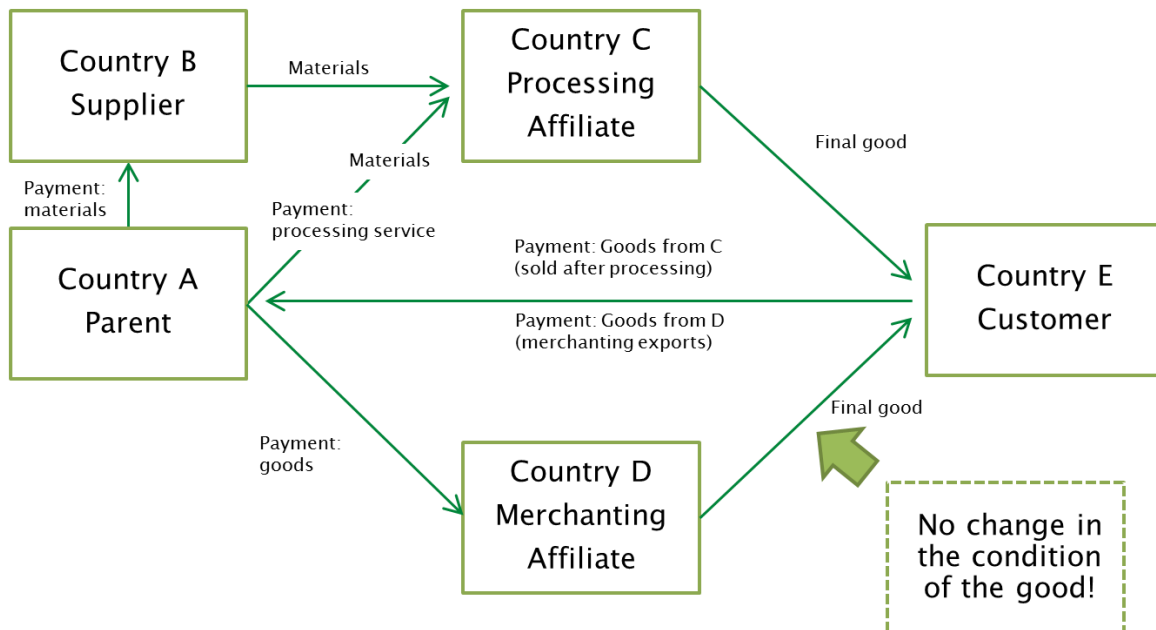
21. The starting point of the analysis was the new question included in the ITSS questionnaire related to production abroad. Specifically, there were indications of underreporting of sales abroad after processing abroad as well as the related payment for manufacturing services.

22. A scenario that is also linked to multinationals production abroad is merchanting. For ordinary commercial enterprises merchanting is often the core business model, but for multinational enterprises merchanting can be a result of their international organisation. Typically the group's goods are produced by a foreign subsidiary that the parent enterprise subsequently buys and resells to either customers outside the group or to sales subsidiaries in the group.

23. The established statistical checks focused mainly on the above mentioned scenarios but in addition the quality of the value of total exports of goods and services was also a central part of the analysis.

Figure 2

Scenarios considered – merchandising and processing (including related transactions)

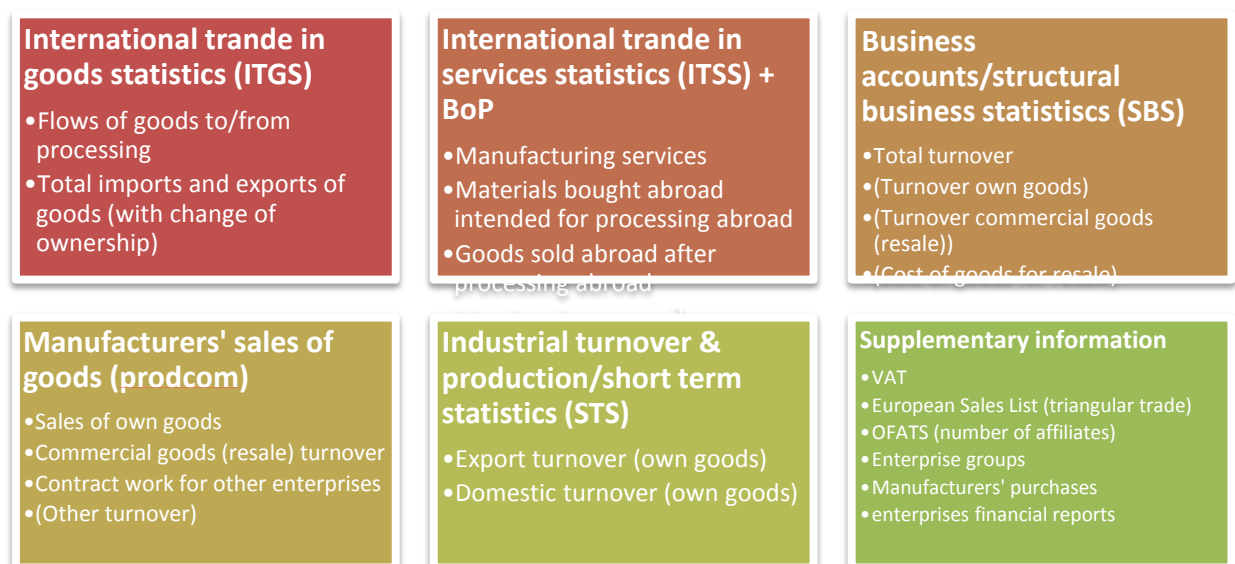


C. Domains and variables included in the consistency check

24. The following statistics and variables have been considered when mapping foreign activities of major Danish enterprises.

Figure 3

Domains and variables included in the consistency check



Not readily comparable

25. The variables are not readily comparable but must be transformed into comparable units and concepts. E.g. the different statistical/observation units – VAT number, kind of activity unit, legal units – are aggregated into legal units before being comparable. In some cases the information might be provided at the complex enterprise level consisting of several legal units. However, this was not the case for the enterprises considered in this analysis, i.e. the legal unit is identical to the enterprise level.

26. In the business account statistics data collected at the legal unit level is allocated into kind of activity units within the industrial sector to be comparable to Manufacturers' sales and Industrial turnover that are only covering manufacturing enterprises. The allocation is done proportionally according to the number of employees of the local kind of activity units. This allocation implies some uncertainty that must be taken into account when comparing to manufactures' sales and industrial turnover statistics.

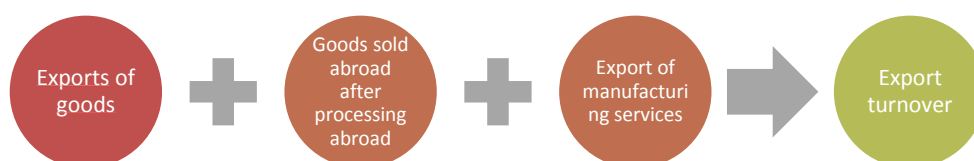
27. Further there are different concepts of “turnover” - Industrial turnover includes both goods and services and ITGS includes transactions without a change in ownership. There are also differences with respect to geographical coverage - Manufacturers' sales and Business accounts hold no distinction between domestic turnover and turnover from exports. Industrial turnover contains a valuable split between export and domestic turnover. The lack of geo information, however, is not crucial when looking at MNEs which have a relatively low domestic turnover, at least in Denmark.

D. Linkages between related information across domains

28. On the basis of the selected variables from the various statistical domains some linkages – or consistency checks – were identified. They form the basis of a comparison of reported information at enterprise level.

29. Given the different concepts data can be prepared to be as comparable as possible; and while it is not possible to establish identities, it is possible to identify linkages that can pinpoint problems with incoherence in the reported data which need further attention. The following consistency checks have been considered¹:

#1 Export turnover



30. The comparison takes into account that not all statistical data can be compared directly. For example ITGS transactions includes transactions that do not involve a change of ownership (e.g. goods sent to/received after processing), which is not the case with

¹ In the continuous quality assurance some data are already compared today across domains – ITGS (Intrastat) and information from the VAT returns on goods bought/sold in other EU countries. There are also made comparisons across ITGS and ITSS with respect to transactions relating to processing and construction.

industrial turnover. These transactions are removed before the comparison. Further the export turnover contains turnover from repair and installation work as well as contract work performed for others. As a result it may be appropriate to consider the processing, repair, and construction services when comparing the data.

31. An example of a conceptual difference that cannot be corrected for with the available information is goods purchased for resale in the same condition (commercial goods) which is not included in the export turnover. But it will appear in ITGS. The industrial turnover statistics includes only manufactured goods (own goods). *Ceteris paribus*, goods exports in ITGS should exceed export turnover.

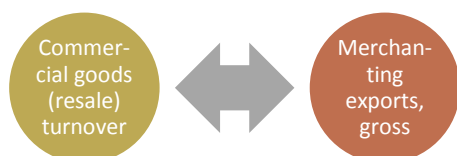
#2 Sales of own goods

32. The consistency check regarding sales of own goods from Manufacturers' sales statistics contain the same problems as mentioned above. Manufacturers' sales contain no territorial split and the consistency check therefore contains domestic turnover in addition to foreign sales.



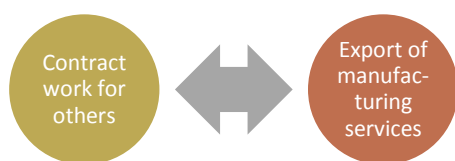
#3 Commercial goods (resale) turnover

33. The lack of geographical distinction in Manufacturers' sales makes it difficult to compare turnover from goods purchased for resale in the same condition and merchanting, when the point of departure is to ensure quality of the reported merchanting. Merchanting will be a subset of the turnover from goods for resale. However, when enterprises are predominantly international oriented, and if the ITGS indicates that the goods are not crossing the border, one would expect to find merchanting.



#4 Manufacturing services

34. Merchanting is when goods are purchased and sold abroad, not passing the Danish border and not having been processed in the time between the purchase and the sale. Commercial (resale) turnover in Manufacturers' sales equivalently concerns products not being processed in the time between the purchase and the sale. Comparing turnover from processing of goods owned by others and manufacturing services on physical input owned is also impeded by the lack of geographical distinction. Again the latter will be a subset of the former. However, if ITGS reflects goods movements to/from processing one would expect to find a related manufacturing service.



#5 Total turnover

35. Total turnover in Business accounts is composed of foreign and domestic sales of goods and services. The extension to the ITSS questionnaire regarding goods sold abroad after processing abroad facilitated a more direct comparison between balance of payments statistics and business statistics. This check benefits from that since it has been possible to decompose the total turnover into domestic and foreign turnover.

36. As a measure of domestic turnover, turnover from the Industrial turnover statistics is preferred when analysing manufacturing industries. The VAT information can be used as a (often problematic) substitute. Exports of goods have been adjusted for cross border movements of goods not involving a change of ownership.



E. Methodological issues important for the consistency across domains

37. In particular two methodological issues are relevant to obtain the best possible consistency in data across domains. The first is the distinction between merchanting and processing in the balance of payments and similarly between commercial (resale) goods and own goods in Manufacturers' sales statistics. The other is the handling of "factory-less goods producers" (FGP).

1. Processing-merchanting vs. own goods-goods for resale

38. The key question concerns the extent to which goods can be processed without the activity being classified as manufacturing rather than commercial (resale) goods/distributive services. The equivalent question is valid for merchanting vs. processing. If the good is being "altered" in the period between the purchase and sale the transactions must be recorded as processing, i.e. a purchase of goods for processing abroad (imports) and the subsequent sale of goods after processing (export) must be recorded.

39. The distinction between merchanting and processing is essential but the net effect on the current account is not affected by this distinction. Only the sizes of the gross flows are influenced. The distinction is particularly important in relation to the calculation of Danish industrial production, as only turnover from own produced goods is included. The turnover from goods for resale is not included.

40. There are differences in the wording used concerning the delineation of processing and merchanting (and own goods vs. goods for resale) in the manuals on balance of payments, international trade in goods, trade in services, and statistical classifications of

economic activities (NACE) which can lead to inconsistent decisions across domains – e.g. “Change the condition of the goods” (BPM6), “Physical form of the goods is changed” (ESA2010).

41. In NACE manufacturing is defined by “physical or chemical transformation of materials, substances, or components into new products” or “substantial alteration of goods”. Wholesale and retail trade are “resale (sale without transformation)”, and some handling can occur without being manufacturing - “not affect the basic character”, e.g. mixing, packaging.

42. To ensure consistency the project group decided to follow the principles and guidelines of NACE. Consistent treatment of “own goods vs. goods for resale” and “processing vs. merchanting” requires coordination in difficult cases.

2. Factoryless goods producers

43. Factoryless goods producers (FGP) are defined as enterprises that have outsourced the entire production, including ownership of the raw materials, but are providing intellectual rights etc. The key question is whether transactions in the balance of payments should be classified as processing or merchanting, i.e. whether there should be recorded imports of manufacturing services with subsequent recording of a sale abroad after processing abroad or whether such transactions should be recorded as merchanting buying and selling.

44. In the current practice NACE requires ownership of the raw materials - or parts thereof – in order for the transactions to be recorded as manufacturing. This practice means that Danish FGP are not covered by Manufacturers' sales as they are not part of manufacturing. In the balance of payments there is a parallel treatment to ensure consistency and the transactions are recorded as merchanting. The practice will be reviewed when clear international recommendations will be available.

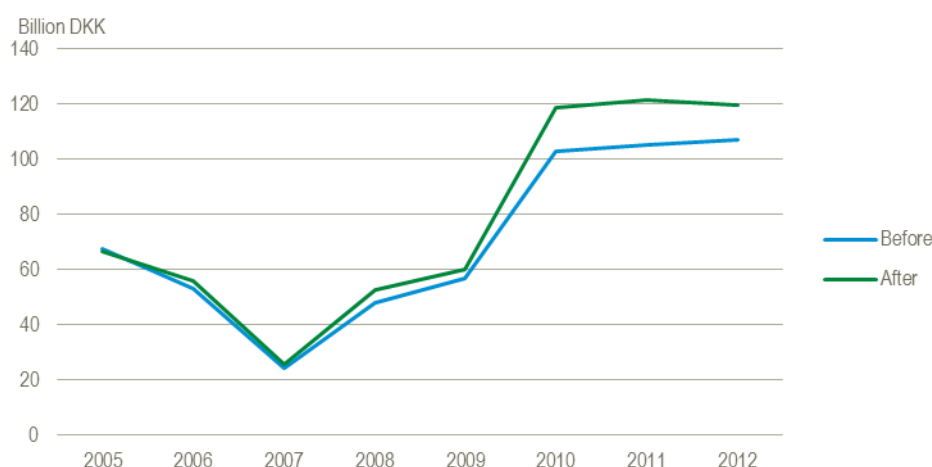
F. Results and lessons learned – data revision in autumn 2016

1. Data revision of the balance of payments and the national accounts

45. The results of the consistency check have indicated the need to revise the balance of payments statistics, the international trade in services statistics, and the international trade goods statistics. The revision will be implemented in October 2016 covering 2005-2016. At the same time some additional data revisions are implemented. The results mentioned in this paper are preliminary and limited. As a consequence of the principle of consistency between Statistics Denmark's primary macro statistics the National accounts will be revised accordingly in November 2016.

46. The new information gives rise to substantial revisions of the balance of payments current account. The preliminary impact of the revision for 2005-2012, including revisions as a result of a number of other data corrections, is seen in figure 4. The size of the revisions after 2012 is expected to be at the same level as 2010-2012.

Figure 4

The current account balance before/after the consistency check (etc.)

2. Lessons learned

47. One of the key elements of the analysis has been to account for enterprises total turnover by decomposing into domestic and international sales. Despite a number of difficulties with this approach – e.g. regarding geographical information – we have successfully uncovered many examples of underreporting to the ITSS/balance of payments.

48. The outcome of the analysis has shown that there has been a low level of reporting of goods not passing the Danish border – such as goods sold abroad after processing abroad and merchanting. Also international trade in services is significantly impacted as e.g. manufacturing services and trading with intellectual property rights have been found to be undervalued. International trade in goods statistics is only slightly affected since most transactions of goods sent for processing are properly flagged (probable due to the existing error detection procedures).

49. The value of the consistency check has been substantial. In particular for the balance of payments, but all the statistical domains included in the analysis have improved the quality. Especially the distinction between own produced goods and goods for resale in Manufactures' sales have been affected.

50. The analysis has shown that there is a general tendency for multinational enterprises to under-report their international activities to Statistics Denmark. Especially intra group trade is often underreported. Merchanting is an example of this. Merchanting is common among multinational enterprises as part of international organization of their production. Typically, the group's goods are produced by a foreign subsidiary that the parent enterprise purchases and resells either to final customers or to sales subsidiaries within the group.

51. Furthermore, multinational enterprises seemingly find it difficult to distinguish between their own produced products and goods for resale in the statistical sense. Seen from the perspective of the enterprise often all goods, whether produced by the domestic production site or a foreign subsidiary, is sometimes considered own goods.

52. The consistency check across statistical domains has revealed the strength of comparing related information. It provides the ability to detect reporting errors that are

difficult if not impossible to detect within individual statistics and it ensures a uniform treatment of related issues among compilers.

53. The analysis focused on the largest Danish enterprises (20) and in addition to the consistency checks mentioned the financial reports were studied for each of them. First of all this gave an indication of their business models and international organization needed in order to fully understand if the reported statistical information was valid. In addition some valuable insight was obtained concerning significant trade with intellectual property rights. Financial statements will be an integral part of the validation procedures in the future for the largest and most influential enterprises.

54. The work has been challenging, not only for compilers, but also for the involved enterprises. Including many statistical domains increases complexity of the process which in many cases has lasted for months and has included contact with several persons in the enterprises. But the work has generally been appreciated by the enterprises.

55. It has become evident that implementation of new future data requirements will have to be tackled differently. Especially concerning the information and guidance to the data providers. A more active approach is needed, at least for the largest and most influential enterprises. E.g. we need to make sure that they are not only aware of the requirements but that they understand them correctly, e.g. by paying the enterprises a visit, and to make sure they are also aware of the linkages between related statistical domains.

IV. Implication for future work – a large cases unit (LCU)

56. The experiences from this consistency check is a first step in the direction of establishing a large cases unit or organisation (LCU) in Statistics Denmark that will ensure consistency across domains for the largest and most influential enterprises.

57. The LCU organisation is expected to consist of employees from the involved units producing the statistics, including National Accounts, and a small dedicated section under the Business Register.

58. Getting the figures right for the largest enterprises is of paramount importance for the quality of the statistics. Establishing a LCU unit will ensure consistency at an early stage of the production process. It is expected that this will be very beneficial for not only the primary statistics involved but also for the national accounts.

59. The consistency checks and domains considered in the consistency check of the balance of payments will be maintained and further expanded into other statistical fields in the coming years. At the moment new linkages are being identified but the variables and domains to be included have not yet been decided. The following are being – or expected to be – considered:

Figure 5

Statistical domains to be considered included in the LCU

60. In addition to ensuring consistency the LCU unit will include a key account function and do profiling work. The key account function is expected to provide enterprises with a single point of entry at Statistics Denmark. This is expected to improve the relationship with the most influential enterprises and thus result in better quality. The aim of the profiling work is to create complex enterprise units (i.e. statistical units consisting of more than one legal unit).

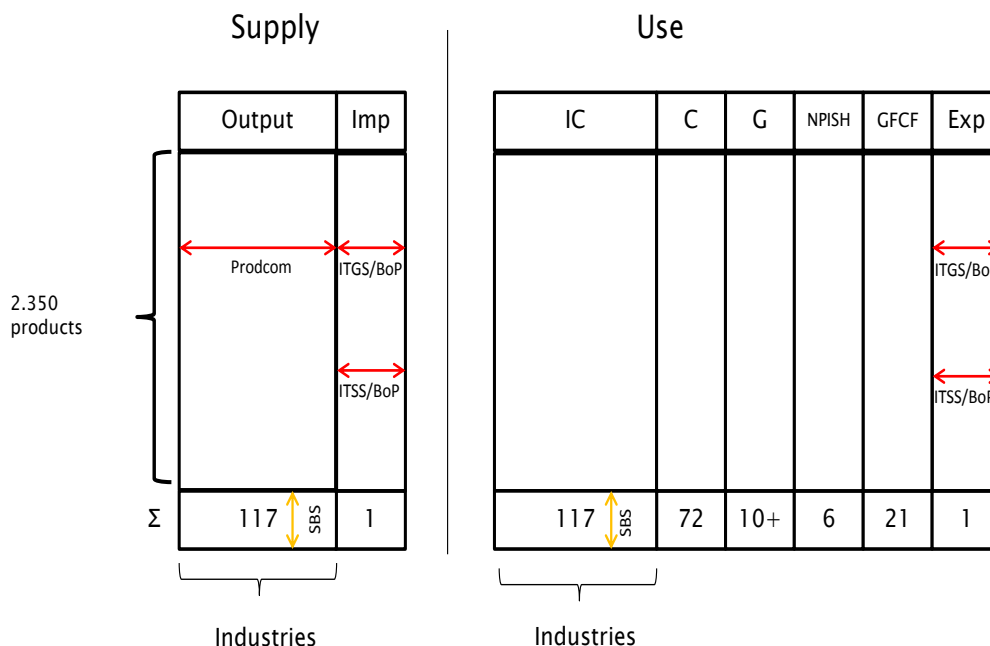
V. Implementing SNA2008/ESA2010 guidelines concerning merchanting and goods sent abroad for processing in supply-use tables

61. The National Accounts implemented revised guidelines (SNA2008/ESA2010) relating to the treatment of *merchanting* and *goods sent abroad for processing* in parallel with balance of payments in 2014. Specifically, the import and export figures from the balance of payments were implemented in the supply-use tables. The problems in imports and exports relating to merchanting and goods sent abroad for processing, as described earlier in this paper, were first revealed in this process.

62. In the supply-use tables data is confronted at the detailed level using various sources of information. Three important sources are:

- Account Statistics for target totals at the industry level
- Manufacturers' Sales of Goods (Prodcom) for the product level
- Balance of Payments/ITGS for imports and exports (product level and totals)

Figure 6
Supply-Use tables



63. The above figure shows in a schematic and simplified form the Danish supply-use table. In the context of this paper, we have total supply at the product level as the sum of output (from the prodcom statistics) and imports (from ITGS/BoP). This information is considered predetermined and cannot be changed during the balancing process. From the use side, we have information from various sources. Again, in the context of this paper, exports (from ITGS/BoP) are predetermined. For all products supply must equal use. It should be noted that the information received from the BoP related to processing are distributed to products by the national accounts.

64. When import and export data according to BPM6 was first implemented at the detailed product level, it became obvious that something was wrong: The balancing problems for some products with high values and a high degree of globalisation became very big.

65. For example for one product (good), the supply for domestic use was much too high which made it impossible to balance the product. The solution – given the information available at the time – was to convert output of goods to output of trade margins. However, the balance of payments project showed that the export value had been too low (lacking value of goods sold abroad after processing abroad). Other examples could be given for other products.

66. Given the high degree of detail in our supply-use tables, it is possible for us to detect inconsistencies in the primary statistics. However, the compilation of supply-use tables takes place with a lag of three years (at year t+3 after the reference year). At this point in time, the primary statistics have already been published and it is not appropriate to contact the data providers almost three years after the reference year.

67. Taking forward the work of the balance of payments project in the future Large Case Unit, and thereby making consistency checks in primary statistics before they enter the

national accounts, is therefore expected to have a positive influence on the quality of the supply-use tables and hence on GDP calculations.

VI. Conclusions

68. The paper focused on the Danish implementation of the new guidelines concerning processing activities. The implementation revealed significant inconsistencies across statistical domains, especially regarding large multinational enterprises, and has been a “game changer” for the quality ensuring work. The problem has especially been that goods not crossing the border have been inadequately accounted for in the balance of payments.

69. The starting point of the BoP consistency check was the increasing globalisation and the implementation of the Sixth edition of the Balance of payments manual (BPM6). The focus has primarily been on accounting correctly for the various ways of firms’ international organisation - goods sent abroad for processing abroad, merchanting etc. The check consisted of data from especially Manufactures' sales (Prodcom), Industrial turnover (STS), Business accounts statistics (SBS), International trade in goods (ITGS), and International trade in services (ITSS). The results of the analysis have clearly shown that this work is highly fruitful and that there is a high pay off on resources spent in terms of better quality from this work. In turn a large cases unit (LCU) is being established in Statistics Denmark that shall ensure consistency across domains for the largest and most influential enterprises.

Appendix

Identifying and validating goods movements in for/following processing in the ITGS

Nature of transaction (NoT)

NoT is recorded at each transaction according to the table below.

Table 1

Nature of transaction codes indication goods for processing

Code	Nature of transaction
41	Goods shipped/received for processing under contract (no transfer of ownership to the processor) where the goods are expected to return to the initial EU country of dispatch.
42	Goods shipped/received for processing under contract (no transfer of ownership to the processor) where the goods are not expected to return to the initial EU country of dispatch.
51	Goods shipped/received following processing under contract (no transfer of ownership to the processor) where the goods are returned to the initial EU country.
52	Goods shipped/received following processing under contract (no transfer of ownership to the processor) where the goods are not returning to the initial EU country of dispatch.

The first digit (4 or 5) is required by EU while the second digit is optional for member states. When preparing for the BPM6 the set of NoT codes was expanded with respect to whether the goods are expected to return to the initial country of dispatch (i.e. the second digit). This was done in order to prepare for a more accurate error checking. E.g. when goods are dispatched for processing and where the goods are expected to return to the initial country both an ingoing and outgoing flow must be recorded (often with a time span).

3.1.2 Customs procedure codes (CPC)

CPCs are used as a basis to adjust transactions recorded in the Customs system. The Customs procedure codes are four digit codes – the two first digits of the CPCs shows the current procedure while the third and fourth digit indicate the previous procedure that the goods were placed under.

Table 2

Customs procedure codes indicating goods for processing

Code	Customs procedures
21	Temporary export under outward processing
41	Inwards processing procedure – drawback system
51	Inwards processing procedure – suspension system

In addition to the four digits of the procedure code there exist three digit second subdivision of the procedure code that in some cases are necessary to separate goods for repair from that of processing. In these cases the ITGS have made some assumptions of repair/processing based on a review of the actual content of the CPCs in some concrete

examples. Goods are sent to/received from repair are not included in the ITGS and no adjustment of the BoP is necessary.

Inward processing CPC

CPC 41 and 51 are import procedures used by the enterprises (requires an authorisation from Customs) when there is a tariff on the materials that are going to be processed. CPC 41 and 51 are used when the goods are expected to be re-exported. In case of CPC 51 the goods are not in free circulation in the EU ('T1 goods') and after processing the exports of the processed goods must be documented. In case of CPC 41 the customs duties are paid and the goods are in free circulation ('T2 goods'). When the goods are subsequently re-exported the duties are refunded. Since the goods are in free circulation the goods can without any further notification of the Customs authorities stay in the processing economy even though this was not anticipated initially.

We believe that the coverage of the inward processing CPC is relatively good since the enterprise has an economic incentive to use a processing procedure (at least when there are tariffs on the imported goods).

To verify that the processing CPC observed in the Customs data are actually processing under contract we contacted the ten largest inward processing importers (accounting for the vast majority of inward processing in Denmark). Surprisingly nine enterprises reported that they were the legal owner of the semi-finished goods/materials. This surprising result implies that the CPC for inward processing can only be used as an indicator of processing under contract. As a result we keep a list of specific enterprises whose trade have to be recorded as ordinary trade rather than goods owned by others.

Outward processing CPC

CPC 21 and 22 are export procedure codes that are used when the processed goods are expected to return. When there is a tariff on the finished goods the enterprise has an economic incentive to use the CPC for processing. The extent of goods imported following processing but with the procedure for normal imports indicated is unknown.

When semi-finished goods are not expected to return after processing the procedure for normal exports is likely to be used. As a result we keep a list of enterprises whose trade is recorded as normal imports and exports but that are actually processing under contract transactions. The list is extended if we identify processing transactions in some of the different validation processes.
