The Danish Experience

14.164. The implementation of SNA08 and BPM6 required Statistics Denmark to embark on a project to ensure that not only were goods for processing and merchanting estimates captured and included in the compilation process, but very importantly that there was consistency across statistical domains. The project involved a number of steps and feedback mechanisms, with an understanding there would always be “Things we don’t know that we don’t know”.

14.165. It was clear that new questions would need to be added to the Statistics Denmark International Trade in Services survey, and this was done and communicated to users explaining why the questions needed to be added and when the data collected from these questions would be disseminated in the balance of payments. The project was undertaken in 8 steps.

**Step 1 - scenarios**

14.166. The first step was to map out all the possible scenarios involving merchanting and manufacturing services on physical inputs owned by others. This would provide a solid understanding for the rest of the process and ensure that all possible angles were properly covered.

**Step 2 and 3 - domains and variables**

14.167. These steps involved listing all the statistical domains to be considered and then mapping variables relevant for both compilation purposes and consistency checking. When these two were combined the following was obtained:

- International Trade in Goods Statistics
  - Flows of goods to/from processing
  - Total imports and exports (with change of ownership)
- International trade in services survey and balance of payments
  - Manufacturing services
  - Materials bought abroad intended for processing abroad
  - Goods sold abroad after processing abroad
  - Merchanting, gross flows
  - Total imports and exports
- Business accounts (SBS)
  - Total turnover
  - Turnover own goods
  - Turnover commercial goods (resale)
  - Cost of goods for resale
- Manufacturers’ sales (PRODCOM)
  - Sales of own goods
  - Commercial goods (resale)
  - turnoverContract work for other enterprises
  - Other turnover
- Industrial turnover (STS)
  - Export turnover (own goods)
  - Domestic turnover (own goods)
- Supplementary information
  - VAT
  - European Sales List (triangular trade)
  - OFATS (number of affiliates)
  - Enterprise groups
  - Manufacturers’ purchases
  - Companies’ financial reports

**Step 4 - linkages and consistency**

14.168. Step four involved identifying linkages and undertaking consistency checks. Identifying the linkages outlined a number of issues that would need to be dealt with and understood. The underlying message from this exercise was that the data can be prepared to be as comparable as possible, however, while it isn’t possible to establish perfect linkages between variables and enterprises, it is possible to create linkages that can point to problems in reported data.

14.169. Some of the issues identified included different concepts of turnover (industrial turnover includes goods and services and IMTS includes transactions without a change in ownership). Different units e.g. KAU, VAT, legal units, enterprise, also caused problems. There were differences with respect to geo information, for example manufacturers’ sales (SBS) include no geo distinction while industrial turnover is with the Rest of the World. However, the lack of geo information is not crucial when looking at MNEs due to relatively low domestic turnover.

14.170. The following consistency checks were used -
Step 5 - methodological questions

14.171. This step looked at methodological issues, namely those between merchanting and processing and issues with factoryless goods producers.

14.172. A key question is to what extent a good can be altered before it moves from merchanting to goods for processing. Statistics Denmark found that this is the equivalent distinction between “own goods” and “goods for resale”. Processing/own goods occurs when there is a “Change the condition of the goods” (BPM6); the “Physical form of the goods is changed” (ESA2010); “…physical or chemical transformation of materials…into new products” (ISIC); and there are similar rules in Customs legislation, usually when there is a change at the HS 6 digit level. The distinction is important for the gross flows in the balance of payments and for the distinction between Danish and foreign production. What is ultimately required is a consistent treatment for “Sales of own goods vs. Commercial (resale) turnover” and “processing vs. merchanting” (in difficult cases coordination is required across the organisation).

14.173. It is understood that a FGP has outsourced the entire physical production process while maintaining control over non-physical inputs such as blue prints and the marketing activities. Statistics Denmark, in accordance with the current international guidelines, doesn’t consider FGPs as part of the manufacturing sector given the lack of ownership of the physical inputs. And to ensure consistent treatment with manufacturers’ sales etc. (which is delimited according to ISIC) the FGP activities are recorded as merchanting. However, it is understood that this isn’t really a satisfactory situation.

Step 6 - confrontation

14.174. Data were collected from all relevant sources at the unit level (legal number) for as long a time series as possible. The first confrontation was done at the unit level for all units across the whole collected dataset, detailed consistency checks were then run at the yearly level. Finally, enterprise group statistics were used to identify “unit connectivity” for complex enterprise groups, e.g. MNEs.

Step 7 - large inconsistencies
The consistency checks identified some large discrepancies, and a number of these had in fact already been identified by the national accounts as being problematic. These were placed under investigation.

Experience here showed that merchanting sales and goods sold abroad after processing often accounted for the discrepancies found in total turnover. There is serve underreporting of goods that do not cross the Danish boreders but have Danish ownership, and particular this is even more so for MNEs where in many cases, inter-enterprise transactions are poorly reported.

**Step 8 - large enterprises**

Complex enterprises and enterprise structures (e.g. MNEs) make the collection of statistics complex, and in many cases are linked to the large inconsistences (step 7). Ensuring that the statistics are correct is challenging not only for Statistics Denmark but also the enterprise, with the work being slow and time consuming. This points directly to the need to establish a large cases unit, which would allow consistency at the data entry phase, and ensure coherence between the surveys and sources with the input from the large unit involved. Experience also showed that being proactive when new data requirements are introduced and informing the large unit about the linkages and confrontation work that will be undertaken improved the overall consistency in the reporting situation from the large units.

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