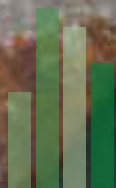


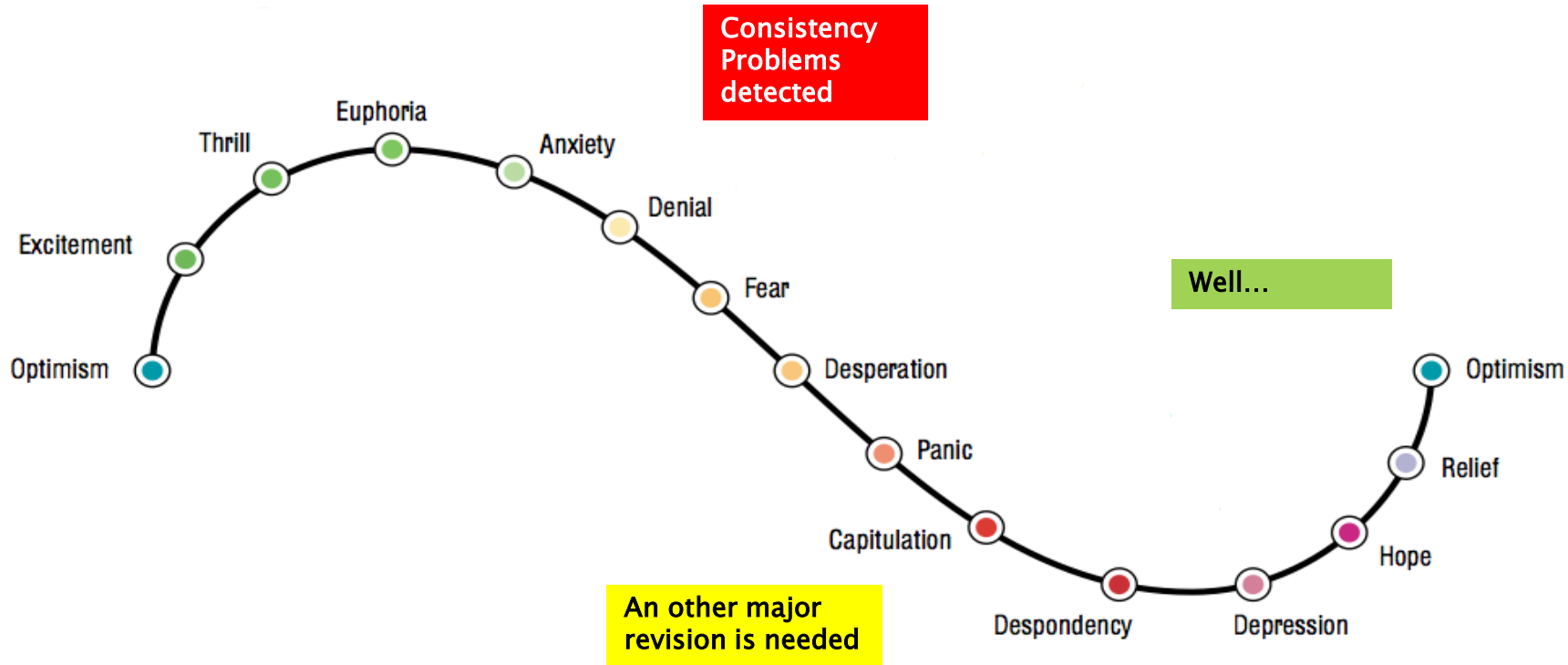
# Implementation of the new guidelines concerning processing activities in Denmark – consistency problems detected Item 4a

Meeting of the Group of Experts on National Accounts, Geneva, 18- 20 May 2016

Annette Thomsen ath@dst.dk, National Accounts  
Casper Winther caw@dst.dk, External Economy



# BPM6/SNA2008 implementation in Denmark...

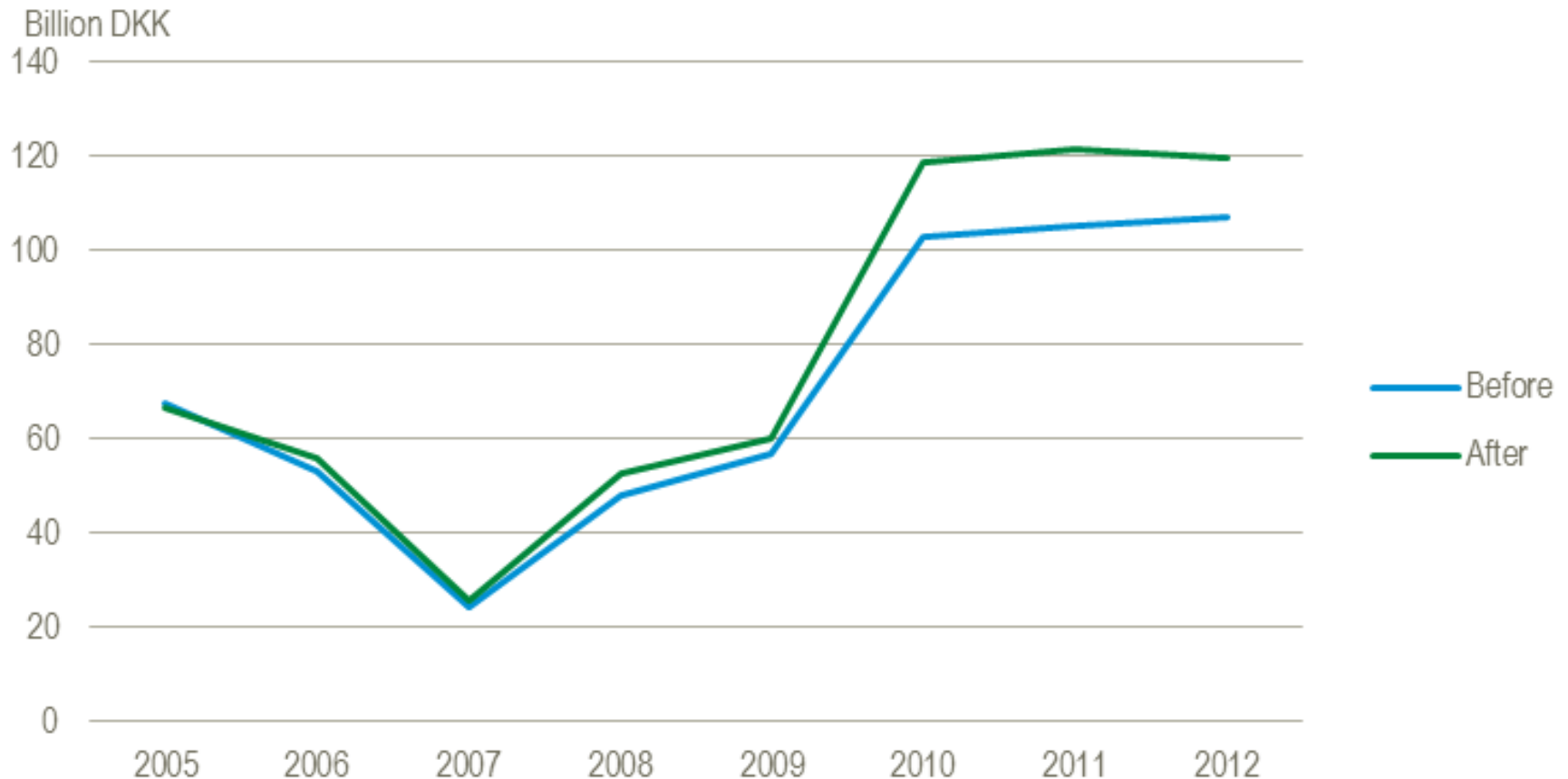


# Time line

- Significant problem with the reporting of processing activities detected shortly before the BPM6 figures were released in October 2014
- Investigation of foreign activities of selected larger Danish enterprises – first results June 2015
- First (limited) results published – working paper, October 2015
- Revision (2005-) of BOP, ITGS and ITSS in October 2016
- Revision of the National Account (2005-) in November 2016 (integrated economic statistics! –BOP and NA fully aligned)




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



# Background



- Implementation of guidelines concerning processing activities in Denmark
  1. Identify and adjust for goods flows to/from processing (detailed level)
  2. Collect new information
    - Manufacturing services on physical inputs owned by others
    - Materials bought abroad intended for processing abroad
    - Goods sold abroad after processing abroad
    - Merchanting – no changes in Denmark
  3. Validation
    - NoT and CPC (used to identify goods flows)
    - Combined check of ITSS and ITGS
- All looked fine... 

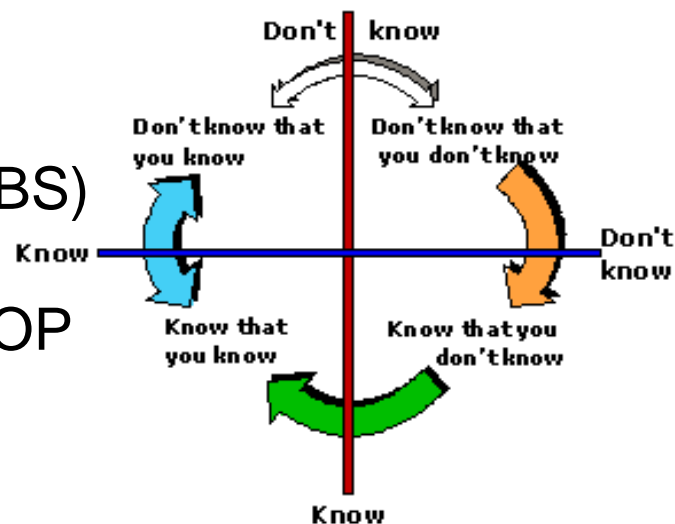






# Things we don't know we don't know

- NA found (when implementing SNA2008/ESA2010) a significant inconsistency between manufactures' sales (prodcom) and total turnover (SBS) - merchanting and processing activities...not reported to the ITSS/BOP as well
- Other cases? – yes, significant under reporting of goods sold abroad after processing abroad => project established to compare related information from different sources - ensure consistency in collected data and the quality of the BOP



# Domains and variables included in the consistency check

## International trade in goods statistics (ITGS)

- Flows of goods to/from processing
- Total imports and exports of goods (with change of ownership)

## International trade in services statistics (ITSS) + BoP

- Manufacturing services
- Materials bought abroad intended for processing abroad
- Goods sold abroad after processing abroad
- Merchanting, gross flows
- Total imports and exports

## Business accounts/structural business statistics (SBS)

- Total turnover
- (Turnover own goods)
- (Turnover commercial goods (resale))
- (Cost of goods for resale)

## Manufacturers' sales of goods (prodcom)

- Sales of own goods
- Commercial goods (resale) turnover
- Contract work for other enterprises
- (Other turnover)

## Industrial turnover & production/short term statistics (STS)

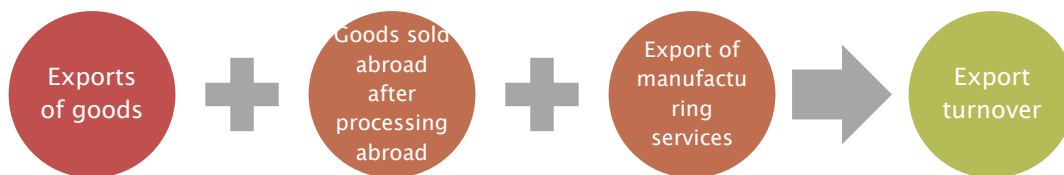
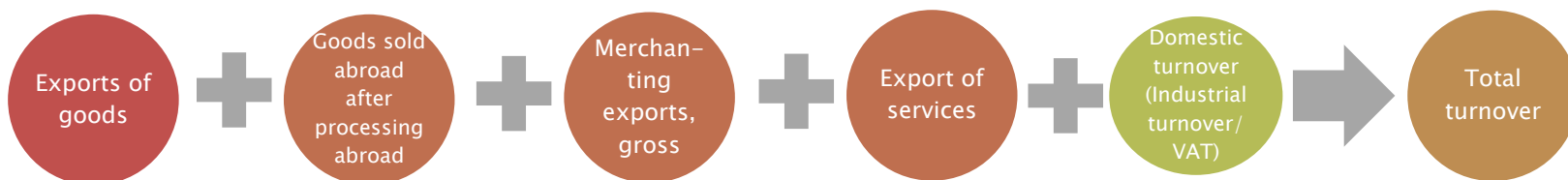
- Export turnover (own goods)
- Domestic turnover (own goods)

## Supplementary information

- VAT
- European Sales List (triangular trade)
- OFATS (number of affiliates)
- Enterprise groups
- Manufacturers' purchases
- enterprises financial reports

# Consistency checks

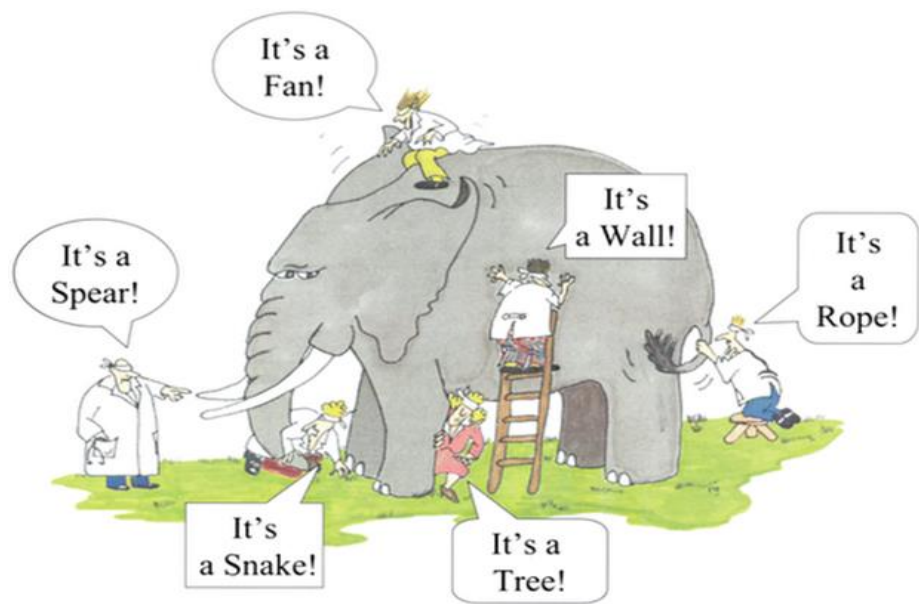
## - total turnover





# Experiences/results

- Looking across statistical domains have made it possible to see the full picture and identify errors that within a single (or few) fields seemed correct.



# Experiences/results

- Merchanted sales and goods sold abroad after processing often account for the discrepancies to the total turnover...significant under reporting of goods that do not cross the border
- This is especially a problem for MNEs, where transactions within the enterprise group often seems to be flying below the radar



# Experiences/results

- Trade with intellectual property rights and manufacturing services are also underreported
- Very useful to study the financial reports
- Imperative to to fully understand the business case/int.org. of production – id relevant transactions
- Implementation of new future data requirements have to be tackled differently - need to be more proactive – awareness + understanding
- Need to inform companies about the linkages (will improve consistency in the reporting situation)
- Attention to non-residents trade in ITGS



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

- The analysis has been a game changer
- Statistical domains to be considered included in the future LCU:



- Ensure consistency at an early stage of the production process - beneficial for not only the primary statistics involved but also for the national accounts.

# Implementing revised im- and export figures in the s-u tables

- When implementing the revised SNA2008/ESA2010 guidelines related to Processing and Merchanting in the national accounts we used im- and export data according to BPM6
- The problems in im- and exports were revealed in this process:

*It was not possible to balance some products (high values, high degree of globalisation, involved in merchanting/processing)*



# Implementing revised im- and export figures in the s-u tables

- In the s-u tables we confront data at the detailed (product) level using various sources of information
- *Three important sources are:*
  - Structural Business Statistics (Business accounts)
  - Manufacturer's Sales of Goods (Danish Prodcom)
  - ITSS/ITGS/BoP (international trade statistics)



# Danish supply-use table

Supply

2.350  
products

	Output	Imp
Σ		
	117	1

Industries

Use

	IC	C	G	NPISH	GFCF	Exp
Σ						
	117	72	10+	6	21	1

Industries





# Danish supply-use table

Supply

2.350 products

	Output	Imp
Σ	117	1

Industries

*Note: A yellow double-headed arrow labeled 'SBS' is positioned between the 'Output' and 'Imp' cells in the bottom row.*

Use

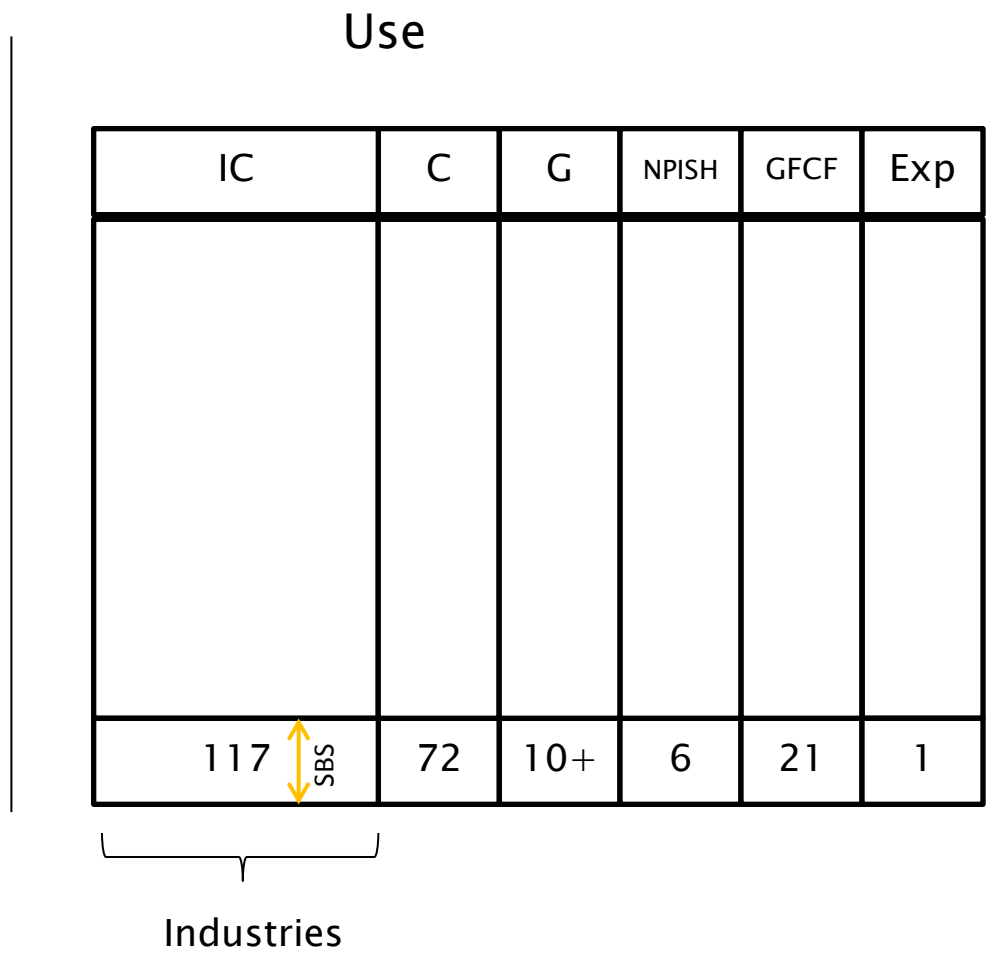
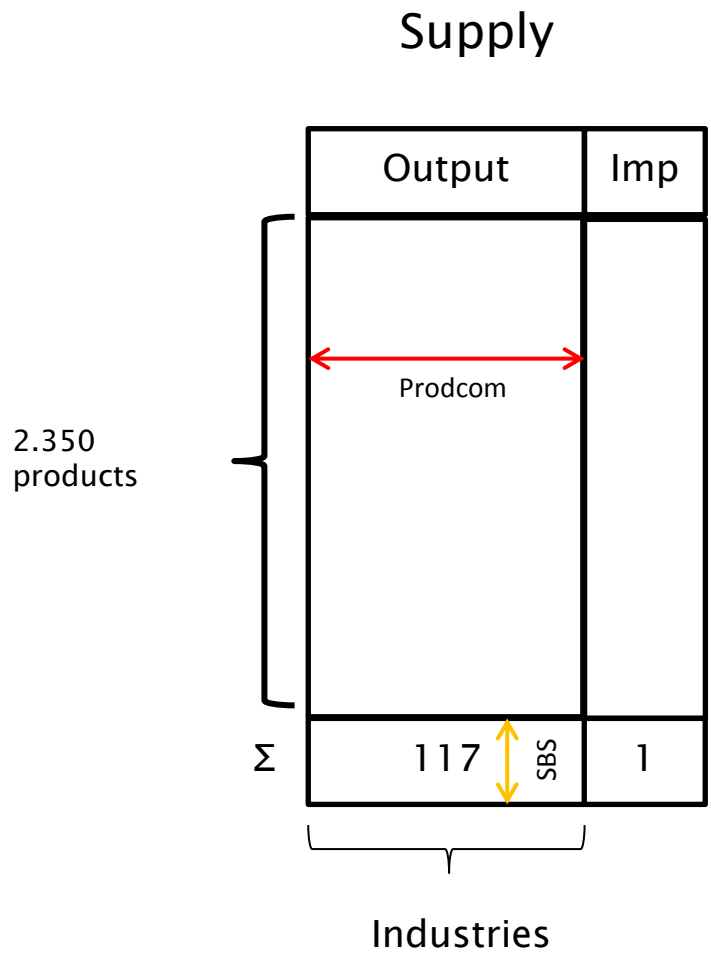
IC	C	G	NPISH	GFCF	Exp
117	72	10+	6	21	1

Industries

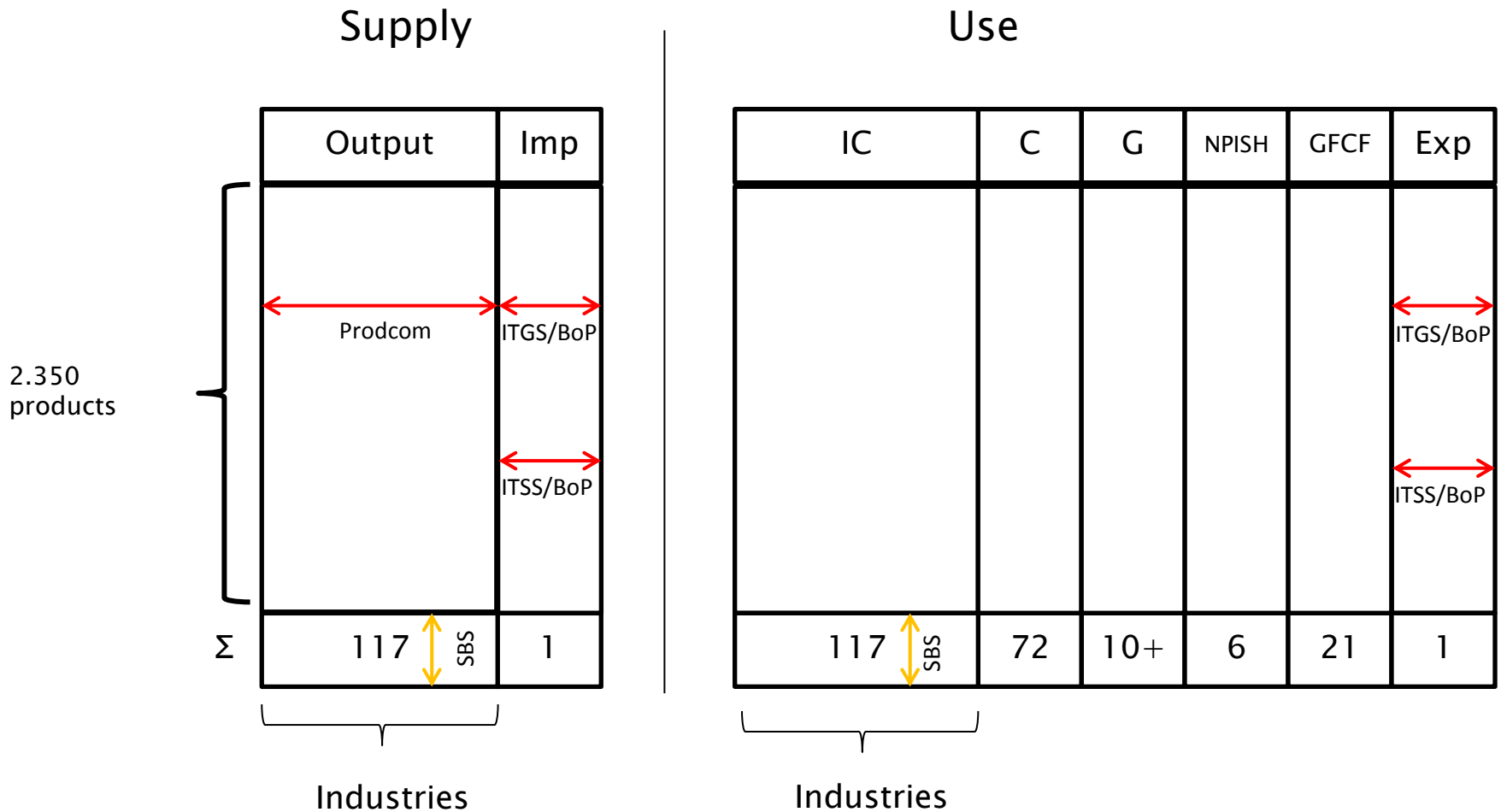
*Note: A yellow double-headed arrow labeled 'SBS' is positioned between the 'IC' and 'C' cells in the bottom row.*



# Danish supply-use table



# Danish supply-use table



# Balancing problems

## Example of a balancing problem and solution:

Due to inconsistencies in the primary statistics, **supply to domestic use was much too high**

- Solution in the first place (2014):

Converting output of goods to trade margins

- The BoP project showed that the export value had been too low (lacking value of goods exported after processing)

- Generally, the mis-reporting of merchandising and goods exported after processing affects GDP and the goods and services account.

# Balancing revised im- and export figures

Implementing the revised BoP (im- and export) has affected the goods and services account:

## *GDP production side:*

- Revision of value added mainly in manufacturing and trade

## *GDP expenditure side:*

- Upward adjustment of net-export (=BoP)
- GFCF and changes in inventories affected (varies over the years)
- Household final consumption expenditure only marginally affected
- Government and NPISH final consumption expenditure unchanged

# Conclusion

- The confrontation of different primary statistics in the s-u tables makes it possible to detect inconsistencies and solve them in this framework
- Making consistency checks at an earlier stage as part of the validation of primary statistics is expected to have a positive effect on the quality of the s-u tables and GDP.

