A few words on Danish SUTs

- Compilation of input-output tables in Denmark goes back to the years before the second world war when IO-tables were constructed for all years during the thirties. Unfortunately the German occupation of Denmark followed and it was decided not to publish the figures until the war was over.

- After the war a new system for compilation of national accounts was established around a set of product balances. With the emergence of computers in the late-sixties a new comprehensive system was established. Originally it had around 3000 product balances.

- Since then annual calculations have moved from mainframe to PC’s and the software has improved. However the system is basically the same, and it has been the core of national accounts calculations ever since.
Examples from Denmark

• The following examples are chosen from the Danish environment. Undoubtedly users with the same characteristics can be found in other countries.

• Final Danish national accounts are built around SUTs in current and previous’ years’ prices. Compilation of these SUTs will often reveal significant errors in primary statistics and inconsistencies between different data sources. This is probably the most important function of the SUTs!

• Aggregated versions of the annual IO tables are part of “ADAM”, a macroeconomic model that is maintained by Statistics Denmark and made available to users within and outside the government. Of those the Ministry of Finance must be considered the most important user.
Users of Danish SUTs and IO-tables:

- Within Statistics Denmark:
  - The macroeconomic model “ADAM”.

- Central Government Administration:
  - Ministry of Finance
  - Ministry of Taxation

- Internationally:
  - OECD
  - Eurostat

- The Central Bank “Danmarks Nationalbank”

- Danish Economic Council

- Danish Council on Climate Change
Further examples of users:

- Centre for Regional and Tourism Research
- Confederation of Danish Industry
- Danish Agriculture & Food Council
- The Danish Construction Association
- Danish Maritime Authority “Blue Denmark”
- The Economic Council of the Labour Movement
- Think Tanks: Concito, “Denmark’s green think tank”
- Researchers
- Consultancy companies
Typical uses

- Many users use IO-tables, typically to assess consequences of changing demand for the outputs of specific industries.

- There have for several years been a demand for SUTs and IOs for studies of supply and use of energy products. Balances for energy products are compiled based on volume data from the “Danish Energy Agency” combined with accounts-data from enterprises and foreign trade statistics. The balances are used as source for the SUT-environment. Here they may, however, be corrected if they are in contradiction with other information.

- The tables are used to assess effects on pollution to air and environment.

- The tables are used to assess CO2-emissions by industries.

- Users may also wish to emphasize the importance for the economy as a whole of the specific industrial complex to which they belong.

- Users can use the available data for their own calculations, but they can also purchase assistance from Statistics Denmark, for instance when they wish to create classifications that cannot be found in the published data.
Availability of data

Before 2001: Tables in common file formats were sold to outside users.

Since then access has been free. The IO tables can now be accessed on the internet at the homepage:

“www.statistikbanken.dk” under
<Productivity and input-output> <Input-output tables>

Detailed Supply- and Use matrices are not published on the net. They can be made available to users, wholly or partially, but this requires assistance from the National Accounts Staff for various reasons:

As Danish SUTs are very detailed, there is a danger that confidential data could be made available to outsiders.

Some areas within the SUTs are more reliable than others. There is a danger that those figures that are merely relying on assumptions or structures from older surveys are overinterpreted.
Danish Input-output Tables and Analyses

- Book (hardcopy and PDF) with IO tables and multipliers (production, income, import, employment, emissions etc.) and some text explaining the tables
  - In Danish 1980-2001
  - In English 2002-2009
- After change to NACE Rev 2 it was not updated.
- Now we feel that
  - there is quite some demand for updated data
  - but the format is outdated. The Web is a more obvious place to publish the data. (Work in progress)
Danish dissemination activities

- Annual transmission to Eurostat SUTs and IOTs. Some, but not all breakdowns. (2005-2014).
- Dissemination of standard IOTs as well as provisional IOTs data from a web based data bank as well as from a download page
- Dissemination of input-output consistent investment matrices
- Dissemination of environmental multipliers
- Own analyses and help to other in-house analyses
SUBJECTS

Population and elections
Living conditions
Education and knowledge
Culture and National Church
Labour, income and wealth
Prices and consumption
National accounts and government finances
Money and credit market
External economy
Business sector in general
Business sectors
Geography, environment and energy

NATIONAL ACCOUNTS AND GOVERNMENT FINANCES

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• Quarterly accounts
• Regional accounts
• Productivity and input-output
  • Productivity
  • Input-output tables
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    • NIO1F
    • NIO2
    • NIO2F
    • NIO3
    • NIO3F
    • NIO4
    • NIO4F
    • NIO5
    • NIO5F

Input-output table. Supply by industries, by use and price unit. (1966-2014)
Input-output table. Supply by industries, by use and price unit. (69 industries) (1966-2016)
Input-output table. Unallocated imports by use and price unit. (1966-2014)
Input-output table. Unallocated imports by use and price unit. (69 industries) (1966-2016)
Input-output table. Primary inputs by use and price unit. (1966-2014)
Input-output table. Primary inputs by use and price unit. (69 industries) (1966-2016)
Input-output table. Totals of supply by use and price unit. (1966-2014)
Input-output table. Totals of supply by use and price unit. (69 industries) (1966-2016)
Employment by socioeconomic status and industry (1966-2014)
Employment by socioeconomic status and industry (69 industries) (1966-2016)
IO DATA IN THE EXCEL FORMAT
All files are in the ZIP format. Right click on the link to download the files.

EXCEL FILES WITH IO DATA (ESA 2010, DB07)
Excel files with IO data for the period 2006 - 2015
Excel files with IO data for the period 1996 - 2005
Excel files with IO data for the period 1986 - 1995
Excel files with IO data for the period 1976 - 1985
Excel files with IO data for the period 1966 - 1975
Excel filer med IO data for perioden 2006 - 2015 Danske tekster
Excel filer med IO data for perioden 1996 - 2005 Danske tekster
Excel filer med IO data for perioden 1986 - 1995 Danske tekster
Excel filer med IO data for perioden 1976 - 1985 Danske tekster
Excel filer med IO data for perioden 1966 - 1975 Danske tekster
Excel files with IO data for the period 2006 - 2016 (69 industries)
Excel files with IO data for the period 1996 - 2005 (69 industries)
Excel files with IO data for the period 1986 - 1995 (69 industries)
Excel files with IO data for the period 1976 - 1985 (69 industries)
Excel files with IO data for the period 1966 - 1975 (69 industries)
Excel filer med IO data for perioden 2006 - 2016 Danske tekster (69 brancher)
Excel filer med IO data for perioden 1996 - 2005 Danske tekster (69 brancher)
Excel filer med IO data for perioden 1986 - 1995 Danske tekster (69 brancher)
Excel filer med IO data for perioden 1976 - 1985 Danske tekster (69 brancher)
Excel filer med IO data for perioden 1966 - 1975 Danske tekster (69 brancher)

IO DATA IN THE GAMS FORMAT
All files are in the ZIP format. Right click on the link to download the files.
Accurancy and reliability of data

- SUTs cover the entire economy whether closely covered by annual primary statistics, surveys conducted more or less regularly or any other type of information that can throw light on the output- and use of products in industries and final uses.

- While some areas of the SUTs are based on reliable primary statistics, the coverage of other areas is less comprehensive.

- Users outside the statistical office will typically have limited knowledge on the data and methods used to populate the SUT environment.

- It is recommendable that potential users are informed on whether the data they are planning to use for specific purposes are more or less reliable. For this reason it is often preferable to meet the users before they acquire data for their projects.
Caution when giving access to SUT – details:

- Data containing figures that are more or less based on assumptions are often described as “Prescription –data” that requires a consultation before they are dispensed to the user.

- Such figures can be assumed to be the best possible data for many studies, but the users should be aware of the limitations on their use.

- However, users within the central government administration are often familiar with the strengths and weaknesses of the SUTs. They may even be former employees of the national accounts division of Statistics Denmark.
Cooperation between users and national accounts staff

• A forum for exchange of information on compilation and use of SUTs and IOTs can be very useful for Users as well as the national accounts staff. Meetings with representatives of government bodies, associations, think tanks, university teachers and researchers can contribute to dissemination of knowledge on the potential uses of SUTs and IOTs.

• Some users want to know detailed input structures of specific industries. A side-effect has been, that contacts with users has provided data for improvement of the quality of the SUT figures.
  - An example is The Danish Construction Association, which once collected information on input structures of their member-enterprises.
  - A recent Danish service project on product balances for textiles provided us with new information on input structures in manufacturing of furniture, service to buildings/cleaning and laundries as a side effect.
Popularization?

- SUT- and IO-tables are seldom subject to huge public attention and will probably remain as an area for a limited number of specialized experts.

- The good thing is, that we are usually allowed to work undisturbed by those forces that might have strong opinions on certain economic magnitudes.

- Nevertheless one could hope that wider circles would obtain a basic understanding of how specific outputs require direct as well as indirect use of resources.