

# **TWINNING CONTRACT**

**JO/13/ENP/ST/23**

## **Strengthening the capabilities of the Department of Statistics in Jordan**



### **MISSION REPORT**

**on**

**Activity: 1.4 Supply and Use Tables II**

Mission carried out by  
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## List of Abbreviations

DoS	Department of Statistics of Jordan
ToR	Terms of Reference

## 1. General comments

This mission report was prepared within the Twinning Project "Strengthening the capabilities of the Department of Statistics in Jordan". It was the second mission to be devoted to national accounts within Component 1 of the project.

The main purposes of the mission were:

- To familiarize the DoS staff with the IT-tool for SUT
- To review calculations for output, intermediate consumption and value added as well as procedures for enumeration.
- To decide on the number of products in the SUT
- To make plans for further work and agree upon work to be done before next mission scheduled August 2014.

The consultants would like to express their thanks to all DoS officials and individuals met for the kind support and valuable information which they received during their stay in Jordan and which highly facilitated their work.

The views and observations stated in this report are those of the consultants and do not necessarily correspond to the views of EU, DoS or Statistics Denmark.

## 2. Assessment and results

At the first mission devoted to the compilation of a Jordanian SUT, there was general support to a suggested new strategy for compiling and balancing supply and use. This new strategy involves:

- A SUT-framework with 2 digit ISIC3.1 industries and around 250 rows for products defined as aggregates of CPC numbers (A replacement for square output- and input- matrices with characteristic output products of ISIC-industries as rows).
- The use of a newly developed EXCEL-based IT SUT program tool based on macros. This can facilitate the work with entering and updating the data within the framework from files that are coded and formatted in a standardized way. The system contains macros that can be used for balancing supply and use when at a later stage the framework has been fully populated by data. The tool is now installed in most of the PC's belonging to the national accounts team, if not all. Besides, a short description of the use of the system was distributed to the Dos-staff.

Following the overall compilation plan for the new SUT, we also showed during the first mission how to code and format data properly, so they can be saved in the SUT and we agreed that employees should become familiar with the system in two ways:

1. Train and exercise with the IT SUT-program tool by saving and retrieving figures in the SUT
2. Continue working with the valid coding of all available data. By valid means supplying data with proper formats and proper codes for Product / Transaction / Industry ( or Cons. Group)

At the beginning of the second mission, the status of the project was, that most of the data needed for the SUTs were available coded with CPC1.1 supplemented by some home-made codes for residuals and products that are not easily coded by the official CPC product codes. Conversion into SUT- products requires:

1. definitions of the products used in the SUTs, and
2. a correspondance table between the CPC codes and these products.

A proposal for a classification of SUT- products and a bridge between CPC and these products was prepared for the first coding exercises. It was, however, emphasized that these proposals should be seen as a starting point and that the definitions would need to be adjusted to what is needed to give an appropriate description of the Jordanian economy.

After mission 1, at our request, the staff had been working on the coding of product taxes, product subsidies and trade margins.

But because most of the data were lacking NA-product-codes, the majority of the second mission was devoted to capacity building, through job training by the desks, ensuring that the Dos-staff is now in a position to continue the NA-product coding work that still is needed.

During the second mission a few changes were introduced to the provisional SUT- product classification and the bridge table was adjusted to provide a more correct translation from CPC 1.1. Additional changes to classification can be expected as the coding of data sources makes further progress.

Status - concerning data still missing - at the end of the second mission is as follows:

<u>Production:</u>	<u>Missing:</u>
Industry 01-02, 41, 45, 50-52	Distribution by NA-product
Industry 75-92	Non-market activity distributed by NA-product
Industry 95	
<u>Bridge column:</u>	<u>Missing:</u>
Gross sales taxes	Distribution by NA-product
Other Taxes and subsidies	Distribution by NA-product
Trade Margins	Division by type (Wholesale trade margins or Retail trade margins) and by NA-product
<u>Intermediate production:</u>	<u>Missing:</u>
Industry 01-93	Distribution by NA-product
<u>Household final consumption:</u>	Coded.
<u>Final consumption of NPISHs:</u>	<u>Missing:</u>
	Distribution by NA-product
<u>Final cons. of general government:</u>	<u>Missing:</u>
	Distribution by Collective Cons. Groups and by NA-product
<u>Gross fixed capital formation:</u>	<u>Missing:</u>
	Distribution by GFCF-type and NA-product
<u>Changes in inventories:</u>	<u>Missing:</u>
Materials	Distribution by type and NA-product
Trade	Distribution by type and NA-product
<u>Imports and exports of goods:</u>	Coded.
<u>Imports and exports of services:</u>	Coded.

### 3. Conclusions and recommendations

After the first mission on Supply and Use tables, the experts believe that the primary goal: to establish a new supply and use table for 2010 is achievable within the time schedule.

It must however be stressed, that this task is very specific and involves a considerable amount of work. Therefore resources continuously have to be available and involvement of many people is necessary if the project is going to succeed. We strongly urge the management to consider this.

In accordance with the abovementioned status at the end of the second mission, we agreed that the DoS-staff should:

1. Try to finalize the NA-product coding of all missing parts of the SUT input-data. Begin with the rest of the Production matrix and Intermediate consumption.
2. Try to save the figures in the SUT thereby initializing the SUT-table
3. The definition of agricultural SUT- products should be worked out during the mission with two Danish experts from Agricultural statistics scheduled to take place the following week.

Concerning figures for taxes and the trade margins, we have some specific remarks:

#### Taxes on products less subsidies on products:

The EXCEL-workbook “national acc\_imp tax,tax on product.xlsx” contain two sheets. One sheet with figures for taxes and duties on imported goods and another sheet with taxes and subsidies on domestic products and services all items with CPC-codes. Instead the following two data-columns are needed:

- One column with “taxes less subsidies on products” coded with NA-product-codes. The column is part of the Bridge-column in the SUT which again corresponds to the tax-layer on the use-side
- One column with “Sales taxes” coded with NA-product-codes. The column is part of the Bridge-column in the SUT which again corresponds to the VAT-layer on the use-side.

The “Goods and Sales Tax” seems to have some characteristics of a Value Added Tax, i.e. that registered enterprises can deduct tax paid in earlier stages of production or distribution. The tax should be modelled in a way that provides a calculated distribution by uses for all taxed products. The Danish experts will look at this topic before next mission, *but this is only possible, if the Goods and sales taxes could be separated from other product taxes.*

#### Trade margins:

The EXCEL-workbook “trade margin %.xlsx” contains a single sheet with calculations of trade-margins for various CPC-coded goods. Instead two data-columns are needed:

- One column with wholesale trade margins coded with NA-product-codes. The column is part of the Bridge-column in the SUT which again corresponds to the wholesale trade-layer on the use-side. The total of the column corresponds to the production in basic prices of the NA-product 61000 Wholesale trade services which is the main product in industry 51 Wholesale trade
- One column with retail trade margins coded with NA-product-codes. The column is part of the Bridge-column in the SUT which again corresponds to the retail trade-layer on the use-side. The total of the column corresponds to the production in basic prices of the NA-product 62000 Retail trade services which is the main product in industry 52 Retail trade.

The need for separate matrices for trade- and transport margins, taxes on products and general sales tax was discussed in one of the meetings. The Danish experts stressed that despite the fact that data on the uses side is available in purchasers' prices, estimated uses at basic prices are useful for calculation of use in constant prices and they are needed for construction of input-output in basic prices. However, as a starting point the data on the uses side should be entered as the values at purchasers' prices. The margins- and tax- layers in the system will need to be calculated using appropriate models for distribution of the "supply" of margins and taxes shown for each product in the "bridge column" .

When the supply-side part of the SUT is completely populated with figures and we therefore also know the production values of both the wholesale trade and the retail trade, a first round estimation of the wholesale trade-layer and the retail trade-layer can be made.

The Danish experts will propose models for distribution of margins and taxes by uses and products. It is the intention to use formulas in the SUT-environment for an initial automatic calculation of the values in the margins-, tax on products- and VAT-layers. This work will require that the margins and taxes are split into components as mentioned above. **It is highly recommendable that this work is given priority to make possible that these values and formulas can be added to a new version of the SUT-workbook before the next planned mission in august.**

It is strongly recommended that all targets for column totals for output and input are documented in a systematic way and that it is made possible to track down changes to these estimates during the balancing process. **A directory at a specific PC should always contain the central "current version" of the system.** It should include:

- Current versions of the definitions and descriptions for transaction codes, industries, consumption groups and products as well as those correspondence tables that are needed to convert the information from the data sources into the appropriate SUT-codes.
- A current version of the targets for column totals, the names of the Excel sheets that contain their calculations and where to find a description of the data and calculation methods used.
- The most up to data versions of the Excel sheets with values of the outputs and inputs by products ready to be entered into the SUT framework.
- The current version of the SUT-framework populated with data. It is also recommendable to keep a number of backup copies of this framework from earlier stages of the process. This will make it possible to go back to an earlier stage when major errors are detected in the recent copy of the system.

A separate Excel workbook should always contain:

- Estimated values of supply from output by industries and imports in basic prices
- Estimated uses for intermediate consumption by industries, final consumption by consumption groups as well as other final uses including exports in purchasers' prices.

These values can be considered as targets for the corresponding column-totals in the SUT environment. They may – especially for the uses – differ from the column-totals that can be calculated by adding together the values specified by products that can initially be entered into the SUT environment. It is furthermore recommended that a table shows which data sources are used to compile the totals and product structures for each individual industry, consumption group and the other categories of supply and use.

The people that work on different areas of the system will usually work on local Excel sheets. As long as such calculations are in an experimental stage, they should stay on the local PCs, but when the calculations has got a final form they should be copied as the current version of to the central system while previous version could be kept separately as backup for some time.

When the work on various issues is distributed to different PCs, updating of Excel workbooks may result in different versions of the same Excel sheets. Confusion can easily arise regarding which versions should be considered the “current” versions. It is therefore recommendable that the newly updated Excel workbooks are stored in the central system as soon as they found to be free of errors.

Well defined procedures for updating of the central system are recommended. The responsibility for maintenance of this system should preferably be shared by one or two persons.



## Annex 1. Terms of Reference

### Terms of Reference

### EU Twinning Project JO/13/ENP/ST/23

**15-19 June 2014**

#### Component 1: National Accounts

#### Activity 1.4: Supply and Use Tables II

##### 0. Mandatory results and benchmarks for the component

- The national accounts system in Jordan updated to SNA 2008 (Apr 2015)
- The national accounts system in Jordan will cover the informal sector (Apr 2015)
- Assessment report on current situation (Jan 2014)
- Review of the GDP methodology (Apr 2014)
- Plan for how to change base year in the fixed price calculations (Jan 2015)
- Plan for how to improve the current accounts (Jan 2015)
- Present and discuss the concept of different types of agricultural accounts (Jan 2015)
- Data sources, compilation methods, and balancing in relation to supply and use tables reviewed and updated towards SNA08 principles (Apr 2015)
- Provide recommendations on how to update input-output tables (Apr 2015)
- Update the methodology for calculation the informal sector (Apr 2015)

##### 1. Purpose of the activity

- To familiarize the DoS staff with the IT-tool for SUT
- To review and assess the data sources, their exhaustiveness in relation to the informal sector as well as their internal consistency
- To review calculations for output, intermediate consumption and value added as well as procedures for enumeration.
- To decide on the number of products in the SUT
- To discuss compilation strategies for balancing supply and use
- Special focus on changes needed in the current system in order to comply with the ESA10/SNA08
- To introduce the DoS staff to requirements regarding supply and use tables in the ESA 2010 / SNA2008

##### 2. Expected output of the activity

- DoS staff familiarised with the IT-tool for SUT
- Decision made on the number of products to be included in the SUT
- Recommendations prepared on the next steps in relation to how to deal with the imbalances
- A lining up of work programme for the next activity (1.5, scheduled for 21. September – 25. September 2014)
- DoS staff introduced to the Danish and in general European experiences in compiling Supply and Use tables

### **3. Participants**

#### DoS:

Mr Moawiah Alzghoul Director of National Accounts Directorate, and component leader

#### Annual national accounts

Amal Abu Afeefeh - Head of the Annual Accounts Division

Khairallah Almarzoug

Farhan Mohammad

Loay Alrawashdeh

Ali Zaitoun

Ayman Nasir

#### Input-output division

Murad Bani-Hamad

Murad Omari

#### Quarterly accounts division

Walid Battah - Head of the Quarterly Accounts Division

Jaber Alfazza

Walaa Gharram

#### MS experts

Mr. Søren Larsen, Senior Adviser, National Accounts division, Statistics Denmark

Mr. Jens Holst Jensen, Senior Adviser, National Accounts division, Statistics Denmark

## Programme for the mission

Time		Place	Event	Purpose / detail
Sunday, morning	08.30 – 10.00	Hotel /DoS	Meeting with RTA	To discuss the programme of the week
Sunday, morning	10.00 – 12.00	DoS	Meeting with BC Component Leader and BC Experts	Information and follow-up on activities since activity 1.4. Which part of the SUT is now completed?  Discussion of challenges faced when using the SUT-IT tool. Can everyone format, test and save data in the SUT? Can everyone extract data from the SUT. Correct data and save again?
	12.00 – 01.00		Break / Preparations / Report writing	Break / Preparations / Report writing
Sunday, afternoon	01.00 – 03.30	DoS	Meeting with BC Component Leader and BC Experts	Review of the populated SUT. Column by column.  Review of data for each industry and the calculations behind them. - Output - Intermediate consumption - Value added - Procedures for enumeration - Correction for informal sector? - Break down by which products?
	03.30 – 04.00		Preparations / Report writing	Preparations / Report writing
Monday, morning	08.30 – 09.00	DoS	Preparations / Report writing	Preparations / Report writing
	09.00 – 12.00		Meeting with BC Component Leader and BC Experts	Continued from Sunday afternoon.
	12.00 – 01.00		Break / Preparations / Report writing	Break / Preparations / Report writing
Monday, afternoon	01.00 – 03.30	DoS	Meeting with BC Component Leader and BC Experts	Continued from Monday morning.
	03.30 – 04.00		Preparations / Report writing	Preparations / Report writing

Tuesday, morning	08.30 – 09.00	DoS	Preparations / Report writing	Preparations / Report writing
	09.00 – 12.00		Meeting with BC Component Leader and BC Experts	Continued from Monday afternoon.
	12.00 – 01.00		Break / Preparations / Report writing	Break / Preparations / Report writing
Tuesday, afternoon	01.00 – 03.30	DoS	Meeting with BC Component Leader and BC Experts	Continued from Tuesday morning.  Review of remaining columns. Private consumption, Government consumption, NPISH, GFCF, Changes in inventories.
	03.30 – 04.00		Preparations / Report writing	Preparations / Report writing
Wednesday, morning	08.30 – 09.00	DoS	Preparations / Report writing	Preparations / Report writing
	09.00 – 12.00		Meeting with BC Component Leader and BC Experts	Continued from Tuesday afternoon.
	12.00 – 01.00		Break / Preparations / Report writing	Break / Preparations / Report writing
Wednesday, afternoon	01.00 – 03.30	DoS	Meeting with BC Component Leader and BC Experts	Review of a number of product balances extracted from the now populated SUT (first discussions of what to do with the imbalances)
	03.30 – 04.00		Preparations / Report writing	Preparations / Report writing
Thursday, morning	08.30 – 09.00	DoS	Preparations / Report writing	Preparations / Report writing
	09.00 – 11.30		Meeting with BC Component Leader and BC Experts	Discussions of open issues.  Discussions of work programme until next mission (21-25 September 2014)
			Ad-hoc meetings	Final clarifications with BC Experts, preparation of report and presentation for BC Project Leader
Thursday, morning	11.30 – 12.30	DoS	Meeting with BC Component Leader	Presentation for BC Project Leader
Thursday, noon	12.30 – 01.00	DoS	Debriefing with BC Project Leader	Conclusions and decisions and their consequences for the next activity and the implied work programme for BC Experts

## **Annex 2. Persons met**

### DoS:

Mr Moawiah Alzghoul Director of National Accounts Directorate, and component leader

### Annual national accounts

Amal Abu Afeefeh - Head of the Annual Accounts Division

Khairallah Almarzoug

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Walid Battah - Head of the Quarterly Accounts Division

Jaber Alfazza

Walaa Gharram

### **RTA team**

RTA, Thomas Olsen,

RTA Assistant Amal Aliah