

# **TWINNING CONTRACT**

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

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



### **MISSION REPORT**

**on**

#### **Activity 1.8: Informal sector**

Mission carried out by  
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## List of Abbreviations

CPI	Consumer Price Index
DoS	Department of Statistics of Jordan
ESA/10	European System of National Account 2010
ISTAT	Italian National Institute of Statistics
IPI	Investment Price Index
LIM	Labour Input Method
NOE	Non observed economy
PPI	Producer Price Index
SNA08	United Nation System of National Account 2008
ToR	Terms of Reference
WPI	Wholesale Price Index

## 1. General comments

This was the first Activity devoted to “Informal sector” within Component 1: National Account.

The purposes of the mission were:

- To introduce the DoS staff to Eurostat’s tabular approach to exhaustiveness of GDP
- To provide a survey of the methods used to calculate the hidden economy
- To prepare recommendation on how to implement a methodology for measuring the hidden economy / informal sector, particular care will be devoted to distinguish the underground economy and the informal sector
- To introduce the DoS staff to the most recent updates regarding accounting for the hidden economy / informal sector in the ESA10/SNA08

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

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

## 2. Assessment and results

The main activities carried out were:

1. Definition of the exhaustiveness criterion of GDP as stated by European Commission.
2. Introduction on the general definition of the component of NOE: Statistical underground, informal sector, economic underground, illegal (see annex 3).
3. Focus on Eurostat tabular approach to classify the different components of NOE:
  - N1 Producer should have registered;
  - N2 Illegal producer that falls to register;
  - N3 Producer not obliged to register;
  - N4 Registered legal person not included in statistics;
  - N5 Registered entrepreneur not included in statistics;
  - N6 Miss-reporting by the producer;
  - N7 Statistical deficiencies in the data.
4. The illegal sector has not been treated because it has not been included in the targets of the action.
5. General overview of the methods used to calculate the NOE:
  - 5.1 direct methods;
  - 5.2 indirect methods (not based on model, model based).Furthermore a description of methods used by the National Statistical Institutes has been provided (see Annex 4).
6. Detailed description of the “Labour Input method (LIM)” and analysis of the data sources available to implement the LIM in Jordan.
7. Lining up of work programme for implement the calculation of NOE in Jordan.

Regarding the application of LIM to Jordan (item 6) the following specific item have been analysed in detail.

### Unregistered labour input

During the mission a classification of labor input useful to the estimation of the informal and underground sectors has been proposed. This classification consists of the following items:

*A* = Unique jobs, registered

*B* = Multiple jobs, registered

*C* = Informal jobs

*D* = jobs of resident, unregistered

*E* = Foreigner jobs, non-resident (and unregistered)

*F* = Multiple jobs, unregistered

Summing up all these components it is possible to obtain an exhaustive quantification of labour input.

As second step, an analysis to link each item of the classification with the corresponding available data source has been performed. The result is shown in table 1.

**Table 1. Link between the input of labour classification and the corresponding available data source**

INPUT OF LABOUR CLASSIFICATION		SURVEY ON ENTERPRISE	LABOUR FORCE SURVEY
A -REGISTERED -UNIQUE JOB	RESIDENT	A11 - YES	A21 - YES
	NON RESIDENT(1)	A12 - YES	A22 -YES(2)
B- REGISTERED MULTIPLE JOBS	RESIDENT	B11 - YES	B21- YES
	NON RESIDENT(1)	B12 - YES	B22 -YES(2)
C- INFORMAL		C1 - ABSENT	C2 - YES
D- RESIDENT UNREGISTERED		D1 -ABSENT	D2 - YES
E - UNREGISTERED FOREIGNERS		E1 - ABSENT	E2 - ABSENT
F- UNREGISTERED MULTIPLE JOBS	RESIDENT	F11 - ABSENT	F21 - YES
	NON RESIDENT	F12 - ABSENT	F22 - ABSENT

(1) The residence is not referred to the national account definition, but it refers to the nationality. (2) Unpublished data

The input of labour method is based on the comparison between the data collected through the labour force survey and those derived by the survey on enterprise, where the former provides exhaustive figures of the phenomenon and the latter the regular component of the input of labour.

In order to perform a consistent comparison, the input of labour must be quantified in terms of “Job Positions”.

From Table 1 we can derive an estimate of the regular position Job (RJB residents and non-residents), from the survey on enterprise using the following sum:

$$RJP = A11 + A12 + B11 + B12 \quad [1]$$

From labour force survey the following more exhaustive quantification of the input of labour can be obtained:

$$LFS = A21 + A22 + B21 + B22 + C2 + D2 + F21 \quad [2]$$

By subtracting the [2] from the [1] we have:

$$IRR_1 = C2 + D2 + F21 \quad [3]$$

$IRR_1$  is the sum of the input of labor informal (C2) plus the input of labor “unregistered (not regular) resident” (D2 + F21).

To achieve a comprehensive quantification of the input of labor is necessary to integrate the [2] with an estimate of the labor input and the non-resident non-registered (E2 + F22). Currently in Jordan the problem of unregistered non-resident is a very sensitive because of the strong presence of refugees from neighboring countries.

During the mission a preliminary estimate of non-resident non-registered was made.

The starting point is the estimation of the non-resident (not Jordan) registered workers (A22 + B22), that is about 126,000 people.

Furthermore, based on the labor force survey, the rate of the active population (70.5%) and the employment rate (41%) of non Jordan were calculated.

Considering a prudential hypothesis, it was assumed that the lower limit of non-Jordanians living in Jordan is 1 million people. By applying the rate of the active population and the employment rate to the target population, a preliminary estimate of the non Jordan working in Jordan (NJWJ) was made. In formal terms

$$NJWJ = 1,000,000 * 0.705 * 0.41 = 307,500$$

NJWJ is equal to A22+B22+E2+F22. By subtracting from NJWJ the amount of non Jordan regular workers (A22+B22, 126,000 people), we obtain 181,200 people that is the estimate of non Jordan non regular workers (E2 + F22). Adding this figure to LFS data an exhaustive estimate of employed people is performed.

In order to get a exhaustive estimate of GDP is necessary to multiply a value added per capita to the number of informal and non-regular workers: C2, D2, E2, F21 and F22. The per capita values are derived from business surveys. That choice must be made on the basis of enterprise size classes and industries more similar to those in which they work irregular workers

### **Correction for the underreporting of turnover and the over reporting of intermediate costs**

The assumption is that enterprise net income should grant self-employed remuneration not lower than the wage of an employee working in the same industry with similar skills and working time.

If self-employed workers earn less than employees, it is assumed that they prefer to change their employment status, from self-employed to employed.

When profit and losses data declared by enterprises are not consistent with the above hypothesis, it is then assumed that self-employed were reluctant to state their receipts or over-reported intermediate costs; the above enterprises are then identified as under-reporting enterprises and, as consequence, undergo revaluation (see slide “NOE\_A2”).

The method is designed to be applied only to the small firms: the physical person, the simple society and the limited liability company. This is due to the fact that the method is based on the comparison between the revenue of the employee and of the employer and only for the former kind of enterprise it is possible to define the role of the entrepreneur<sup>1</sup>.

In order to take in account the business life cycle of the enterprises, the method should be differentiated according to the years of activity of the firms, e.g. in the following way:

- a) up to 1 year of activity the method is not applied;
- b) from 1 to 2 years of activity the method is applied at 50%;
- c) more than 2 years of activity the method is fully applied.

This limitation is due to the fact that the method does not require the existence of firm with negative gross profit. Given that this event may occur in the early years of a firm, the previous corrections have been applied.

## **3. Conclusions and recommendations**

On the basis of the training delivered during the mission and taking into account the methodologies adopted by DoS, we propose the implementation of the following procedures:

1. an exhaustive estimation of the input of labour;
2. the estimation of the value added, intermediate consumption and output generated by the informal and by the irregular (not registered) workers;
3. implementation of a procedure to correct for the underreporting.

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<sup>1</sup> It is impossible to identify the role of the entrepreneur in the unincorporated society. The limited liability company is included because it is a special form of unincorporated society very similar, from the governance point of view, to physical person and simple society.

Given the complexity of the topics is suggested to carry out another mission to analyze the results obtained from the estimates of the underground economy.



## Annex 1. Terms of Reference

### Component 1: National Accounts

#### Activity 1.8: Informal sector

##### 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 introduce the DoS staff to Eurostat's tabular approach to exhaustiveness of GDP
- To provide a survey of the methods used to calculate the hidden economy
- To prepare recommendation on how to implement a methodology for measuring the hidden economy / informal sector, particular care will be devoted to distinguish the underground economy and the informal sector
- To introduce the DoS staff to the most recent updates regarding accounting for the hidden economy / informal sector in the ESA10/SNA08

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

- DoS staff introduced to Eurostat's tabular approach to exhaustiveness of GDP
- Recommendations prepared on how to update the current methodology for measuring the hidden economy / informal sector
- DoS staff introduced to the most recent updates regarding accounting for the hidden economy / informal sector in the ESA10/SNA08
- DoS staff introduced to the Italian and in general European experiences in measuring the hidden economy / informal sector

## Programme of 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	Introduction to the concepts and definitions regarding hidden economy, informal sector, underground economy.  Discussion of the scope and agreeing on the terminology
	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	Presentation of Eurostat's tabular approach to exhaustiveness of GDP
	03.30 – 04.00		Preparations / Report writing	Preparations / Report writing
Monday, morning	08.30 – 09.30	DoS	Preparations / Report writing	Preparations / Report writing
	09.30 – 12.00		Meeting with BC Component Leader and BC Experts	Discussions of what is possible in Jordan in relation to measuring the informal / hidden economy.  Survey of the methods used to calculate the hidden economy
	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	Presentation of the most recent updates regarding accounting for the hidden economy / informal sector in the ESA10/SNA08
	03.30 – 04.00		Preparations / Report writing	Preparations / Report writing
Tuesday, morning	08.30 – 09.30	DoS	Preparations / Report writing	Preparations / Report writing
	09.30 – 12.00		Meeting with BC Component Leader and BC Experts	Discussions of what is possible in Jordan in relation to measuring the informal / hidden economy.  Survey of the methods used to calculate the hidden economy

			Break / Preparations / Report writing	Break / Preparations / Report writing
	12.00 – 01.00		Break / Preparations / Report writing	
Tuesday, afternoon	01.00 – 03.30	DoS	Meeting with BC Component Leader and BC Experts	Presentation of the Italian experiences in measuring the hidden economy / informal sector
	03.30 – 04.00		Preparations / Report writing	Preparations / Report writing
Wednesday, morning	08.30 – 09.30	DoS	Preparations / Report writing	Preparations / Report writing
	09.30 – 12.00		Meeting with BC Component Leader and BC Experts	Discussions of what is possible in Jordan in relation to measuring the informal / hidden economy.
				Survey of the methods used to calculate the hidden economy
	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	Discussions of what is possible in Jordan in relation to measuring the informal / hidden economy.
				Survey of the methods used to calculate the hidden economy
	03.30 – 04.00		Preparations / Report writing	Preparations / Report writing
Thursday, morning	08.30 – 09.30	DoS	Preparations / Report writing	Preparations / Report writing
			Meeting with BC Component Leader and BC Experts	Discussions of what is possible in Jordan in relation to measuring the informal / hidden economy.
				Survey of the methods used to calculate the hidden economy
	09.30 – 11.30		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

## **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

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

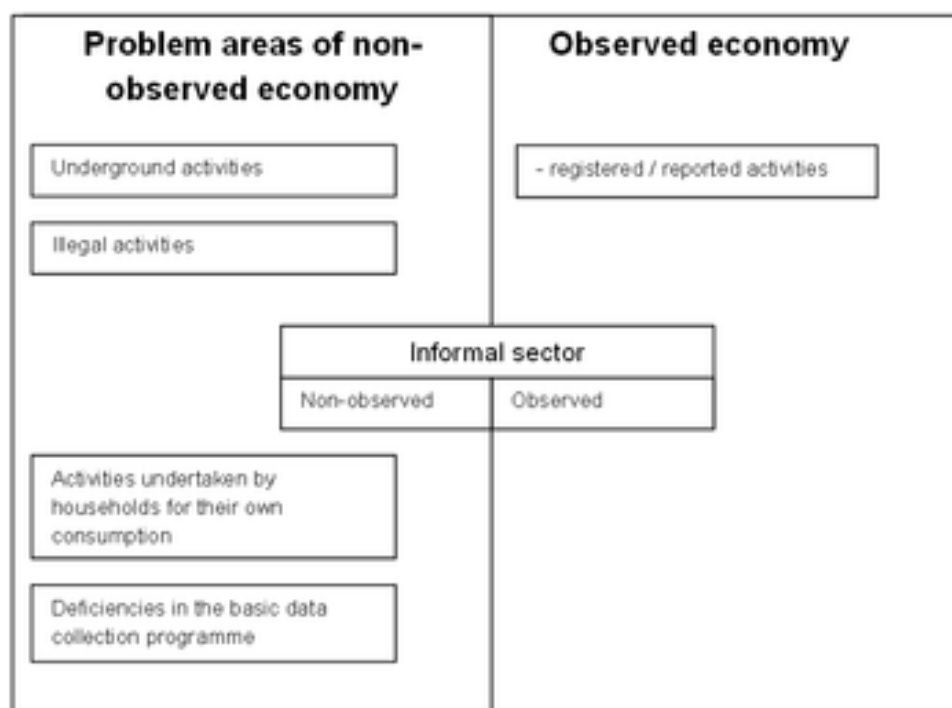
### **Other stakeholders taking part in the activity**

Mr. Mohammad Abed Alrazzag, Head of Prices Division

### Annex 3. Delimiting the observed from non-observed economy in the 2008 SNA

**Non-observed economy (NOE)** refers to all productive activities that may not be captured in the basic data sources used for compiling national accounts. The following activities are included: underground, informal (including those undertaken by households for their own final use), illegal, and other activities omitted due to deficiencies in the basic data collection program. The term ‘non-observed economy’ encompasses all of these activities and the related statistical estimation problems.

The **informal sector** may be broadly characterized as consisting of units engaged in the production of goods or services with the primary objective of generating employment and incomes for the persons concerned. These units typically operate at a low level of organization, with little or no division between labour and capital as factors of production and on a small scale. Labour relations - where they exist - are based mostly on casual employment, kinship or personal and social relations rather than contractual arrangements with formal guarantees.



## Annex 4. Methods used by statistical institute to calculate NOE

Country	National Statistical Institutes' approaches
UK	Discrepancies between independent estimates from the production and income distribution
France	1) Fiscal audit: imputation to all similar enterprises of a share of evasion equal to that one observed during fiscal inspections on not random samples of enterprises; 2) Sensitivity analysis for integrating the production of industry affected by unregistered work
Netherlands	1) Sensitivity analysis on national accounts aggregates; 2) Sample survey on the demand and supply of unregistered work; 3) Discrepancies analysis between NA estimates and fiscal data
United States	Direct survey for adjusting fiscal data with direct results of confidential statistical survey on tax payers
Austria	Adjustment for turnover underreporting: coherence between the entrepreneurs and employees remunerations (Franz method – MF)
Italy – Albania – Moldova – Brasil - ...	Labour input method or so-called Italian approach: per capita productivity values, as obtained on economic data of enterprises, are expanded to the universe of production units using FTE's estimates