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**Regional Workshop on Measuring the Informal Sector and the  
Non-Observed Economy**

**4 – 7 October 2015**

**Tehran**

**NON OBSERVED ECONOMY  
IN NATIONAL ACCOUNTS**

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## **Content**

- Introduction and literature
- Definitions and NOE problem areas
- Eurostat tabular Approach
- NA methods to achieve exhaustiveness
- Exhaustiveness studies in Turkey
  - Data sources
  - Estimation methods

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## Introduction and literature

- OECD 2002: Measuring the non-observed economy, a handbook.
- Eurostat 2005: Eurostat's tabular approach to exhaustiveness, guidelines.
- UN 2008: Non-observed economy in national accounts, survey of country practices.
- OECD 2011: Towards a better understanding of the informal economy, working papers, no. 873.
- SNA 2008: Chapter 25, pages 471-482.

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## Why is this important?

- The main objective of NA is to offer an *exhaustive description* of an economy.
- Comparability of GDP across countries and time
- Contributions and subsidies based on GDP
- Growth rates if Unobserved growth  $\neq$  Observed Growth
- Economic/fiscal policy
- GDP per capita, emissions, debt, deficit % of GDP

## NOE Problem Areas

OECD, IMF, ILO ve CIS-Stat Handbook outlines 5 problem areas:

- 1) Underground activities
- 2) Illegal activities
- 3) Household Production for Own Final Use
- 4) Non-Observed Informal activities
- 5) Deficiencies in Data Collection

Problem areas of NOE		Observed Economy	
Underground activities		Registered/reported activities	
Illegal activities			
Production of households for own final use			
Deficiencies in data collection			
	Informal activities		
	Non-observed	Observed	

## Non-Observed informal activity

Informal activities are:

- conducted by unincorporated enterprises
- in the household sector that are unregistered
- and that have some market production.

Characterised by:

- a low level of organisation,
- informal employment relations (e.g. oral agreements)
- little or no division between labour and capital as factors of production, on a small scale

## Eurostat Tabular Approach

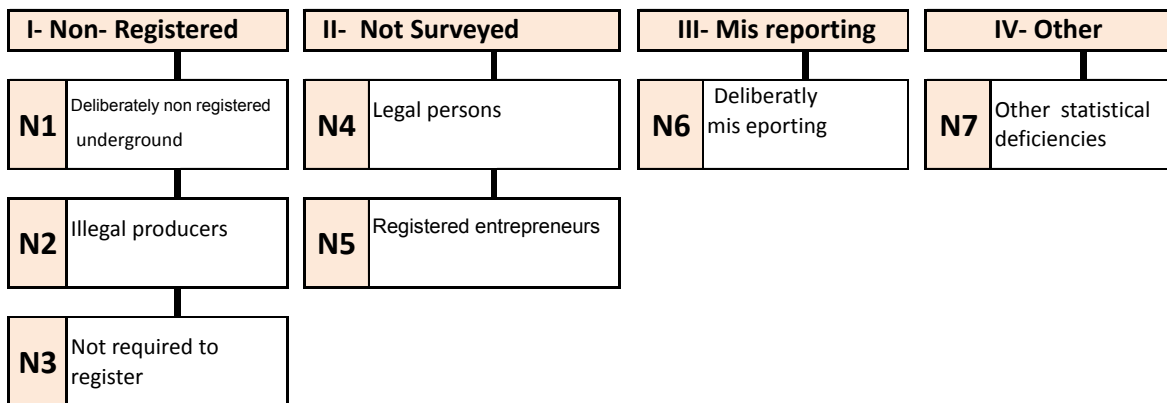
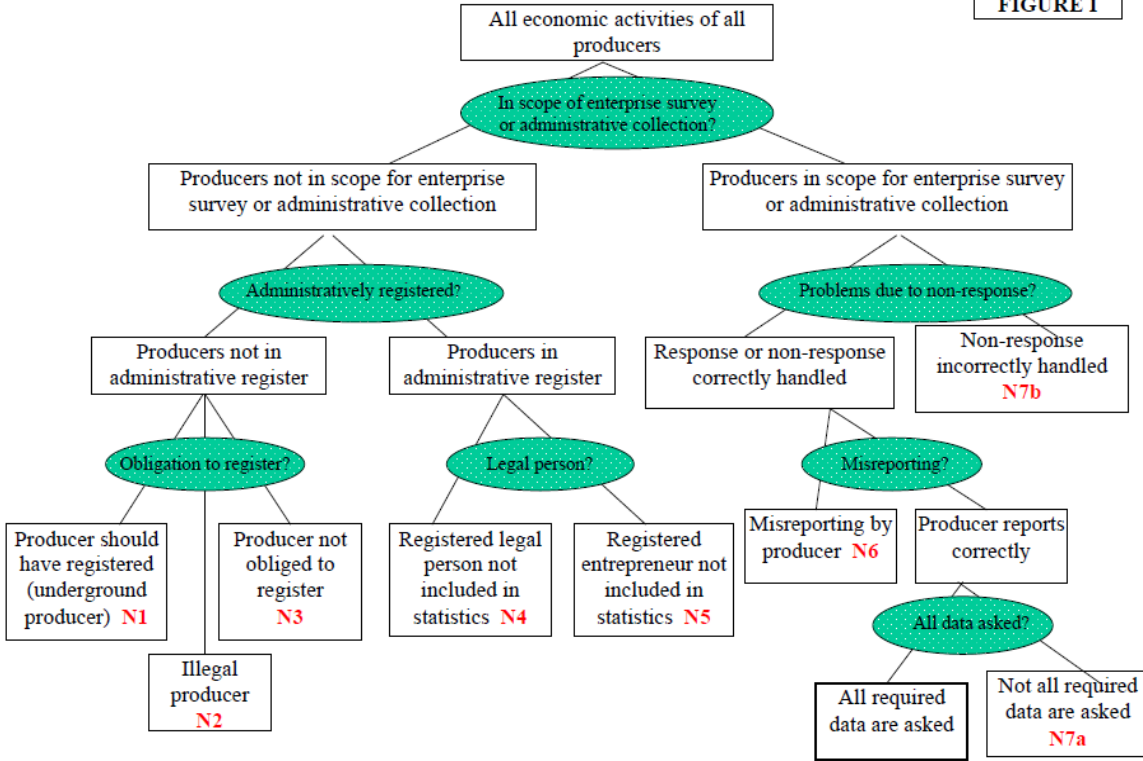


FIGURE I



## Measurement methods

- 1- Statistical methods
- 2 - Methods based on modeling techniques

**ISWGNA declaration ( UN, Eurostat, OECD, IMF, WB) not recommended to use modelling for measuring NOE**

The choice of an appropriate method depends on the availability and quality of the data that can be used and the phenomenon in the country

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## Statistical methods

1- Direct methods based on direct surveys (survey on expenditures, income, labor, etc)

2- Indirect methods

- Supply based methods
- Labour input methods
- Demand based methods
- Income based methods
- Commodity-flow method

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## Labor input method

There are three basic steps:

- obtain estimates of the **supply** of labour input to GDP, for selected economic activity and size of enterprise, from a household labour force survey and/or other demographic sources;
- obtain estimates of **output per unit of labour** input and value added per unit of labour input for the same activity and size breakdown from regular or special purpose enterprise survey;
- multiply the labour input estimates by the per unit ratios to get **output and value added** for the activity and size categories

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## Labor input method (cont)

### Steps:

- Collection of enterprise data- surveys and administrative data ( **use**)
- Collection of household data – LFS, population census ( **supply**)
- Comparison supply-use of labor inputs
- Identification of labor missing from use side
- Compilation of O and GVA

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## Exhaustiveness Studies in Turkey

New estimates are made for the relevant N-types taking into the consideration the institutional sectors.

- N1 (Enterprises deliberately not registering – underground),
- N3 (Producers not required to register),
- N6 (Enterprises deliberately misreporting)
- N7 (Other statistic

are estimated.

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## Exhaustiveness Studies in Turkey

For identifying N- types;

- Labour Force Survey (LFS )
- Structural Business Survey (SBS) results,
- The status of work place (private),
- The legal status of employees,
- The number of employees,
- The taxation method of the establishment
- The registration in the social security institution questions are reviewed.

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## Data Sources

### Production approach

LFS

SBS

Administrative records

### Expenditure approach

Trade statistics

HBS

Administrative records

The most important source is the SUT tables. SBS and LFS are used for the labour input method.

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## Selected LFS questions

26. Did you work to earn income in cash or in kind in the reference week?  
(As regular or casual employee, self employed, employer or unpaid family worker)

1. Yes → **Q 33** 2. No

27. Did you work as paid or unpaid worker (even if you are a housewife, student or retired person) even for one hour in the reference week?

1. Yes → **Q 33** 2. No

28. In the reference week, did you have a business in which you were temporarily absent with any reasons or a job you will return back?

1. Yes 2. No → **Q 75**

52. In addition to your main job, during the reference week, did you have any other job or business to earn income cash or in kind (or did you have a job that you were temporarily absent)?

1. Yes 2. No → **Q 55**



Employment



Second Job

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## Selected LFS questions

35. What is the type of your workplace?

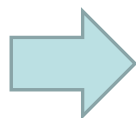
1. Field, garden
2. Regular workplace (fixed place)
3. Market place
4. Mobile or Irregular workplace
5. At home (*his/her or other's home*)

36. What is the legal status of your establishment for which you work?

1. Individual ownership
2. Ordinary partnership
3. Private company (Limited, Collective, Limited Partnership, Joint Stock)

39. What is your employment status in this workplace (firm/organisation)?

1. Regular or casual employee → **Q 41**
2. Employer
3. Self employed
4. Unpaid family worker



•Institutional sector classification

•N1/N6 decision

•Employed, self employed decision

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## Selected LFS questions

40. What is the taxation method for your establishment?

1. Lump sum tax
2. Real tax
3. Exempt from tax
4. Paid not at all
4. Do not know

Q 42

42. Are you registered with any social security institution related to this job?

1. Yes
2. No



•Institutional Sector Classification

•N1/N6 decision

•Non register workers,  
•Non registered enterprised

## Selected LFS questions

56. How many hours did you actually work in your main and additional job during the reference week?

	a) Main job	b) Add. job
Monday	<input type="text"/>	<input type="text"/>
Tuesday	<input type="text"/>	<input type="text"/>
Wednesday	<input type="text"/>	<input type="text"/>
Thursday	<input type="text"/>	<input type="text"/>
Friday	<input type="text"/>	<input type="text"/>
Saturday	<input type="text"/>	<input type="text"/>
Sunday	<input type="text"/>	<input type="text"/>
TOTAL	<input type="text"/>	<input type="text"/>



•Full time equivalent

•Working hours

## Selected LFS questions

<i>Ask Q 68 and Q 69; for those who take codes 1, 2, 3 in Q 39 and who start job before survey's month.</i>
68. How many days did you work in your main job during the last one month?
69. How much did you earn from your main job activity during the last month? (TL)
<i>Ask Q 70 and Q 71 for those who take codes "1" in Q 39 and who start job before survey's month</i>
70. In relation with your main job, do you have any irregular payment like bonus pay, premiums etc. on addition to your salary wage or daily wage? 1. Yes      2. No
71. What is the share of that amount for the last month? (TL)
<i>Ask Q 72 for those who take code "1" in Q 39 and who has started his/her job within the survey month</i>
72. How much do you expect to receive in your main job as monthly? (TL)
<i>Ask Q 73 and Q 74 for those who take codes "2" or "3" in Q 39 and Q 69=0</i>
73. How many days in total did you work in your main job during the last one year?
74. How much net cash income did you earn during the last one year in your main job? (TL)



Difference between registered and unregistered workers wages according to the institutional sector.

## Selected LFS questions

33. a) What is the name and phone number (if any) of the place (firm or organisation) where you worked?  
*(if not worked at a specific place, specify clearly the name of the place worked even in the case of working at home or on the street. If you worked at more than one job, specify the name and the address of the place where you spend most of your time)*
- b) Indicate the province of your workplace (If it is in foreign countries use "99" code)
- c) What is the main activity of this workplace (firm/organisation)? (NACE Rev 2)
- d) Related with the main activity of workplace, give one or two examples of the product or service produced by your workplace?



- Determination of main and second job
- NOE estimations for Regional Accounts

53. a) What is the main activity of this additional job? (NACE Rev 2)
- b) Related with the main activity of this workplace, give one or two examples of the product or service produced by your workplace?



- Determination of main and second job

## Scope of the SBS Data

### Sectors on coverage

- |  |   |
|--|---|
| B - Mining and quarrying   | J - Information and communication                     |
| C - Manufacturing  | L - Real estate activities                            |
| D - Electricity, gas, steam and air conditioning supply                  | M - Professional, scientific and technical activities |
| E - Water supply; sewerage, waste management and remediation activities  | N - Administrative and support service activities     |
| F - Construction   | P - Education   |
| G - Wholesale and retail trade; repair of motor vehicles and motorcycles | Q - Human health and social work activities           |
| H - Transportation and storage   | R - Arts, entertainment and recreation                |
| I - Accommodation and food service activities                            | S - Other service activities                          |

## Selected SBS questions

NACE2_KOD	NACE Rev. 2	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
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7. Annual average number of male and female employees	7.1. Female	7.2. male
1. Gross payments to personnel. (Employers contributions to social security and compensations excluded)	Account no: 720,730,740,750,760 and 770	TL.
2. Social security contribution of employer (Only employers share): SGK, Bağkur, Emekli Sandığı, unemployment insurance and other social security	Account no: 720,730,740,750,760 and 770	TL.
3. Payment in lieu of notice	Account no: 720,730,740,750,760	TL.
4. Seniority allowance	Account no: 720,730,740,750,760	TL.
5. Total personnel cost		TL.

- Main activity of enterprise
- Employees in the enterprise
- Self employees in the enterprise
- determination of 1-9,10-19,20+ employees enterprises
- Wages and salaries

## Selected SBS questions

### Stocks

14. TOTAL EXPENDITURES OF ENTERPRISE (Question 1 + ..... + Question 13)

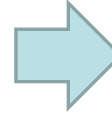
15. Expenditures on commissions taken place at question 10 "Ordinary expenses and costs from other activities"

16. Depreciations and depletion allowances in 2011  
(except accumulated depreciation)

20. TOTAL INCOME OF ENTERPRISE (Question 1 + ..... + Question 19)

21. Rental income taken place at question 18 "Other ordinary revenues and profits" .....

22. Commission revenues taken place at question 18 "Other ordinary revenues and profits"



- Production
- Intermediate consumption

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## Selected SBS questions

Yerel birimin faaliyet gösterdiği il	Yerel birimin ana faaliyeti nedir ? (Bölüm 2' deki esaslara göre doldurunuz.)	İktisadi faaliyet kodu NACE Rev.2-	Yıllık ortalama çalışan sayısı (ücretli ve ücretsiz)	Üretilere yapılan toplam brüt ödemelerde yerel birimin payı (%)	Toplam yıllık cirodaki yerel birimin payı (%)	Maddi mallara yapılan yatırımda (8. Bölüm, 1.10. satır) yerel birimin payı (%)	Yerel birimin niteliği: büro, mağaza, büfe, fabrika, atölye, şantiye, otel-lokanta-kafe, maden ocağı, okul vb.
IL_KODU	ANAAALİYET_ACIK LAMA	Rev.2 NACE2_KOD Rev.1.1	ORTALA MA_CAL ISAN	ODEME_B IRIM_PAY	CIRO_BI RIM_PAY	YATIRI M_BIRI M_PAY	BIRIM_NITELIK



- Local Activity units (regional accounts, KAU)
- Variables :
  - Employed/ number of self employed
  - Wages and salaries
  - Social security premiums

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## Administrative Data Sources

- Transportation statistics
  - Motor land vehicles numbers
  - ....
- Smuggling statistics
- Illegal activities statistics
- ....

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## Process Flow



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## The exhaustiveness adjustments are carried out in five stages;

### Stage 1

The labour input method is used in the production approach. According to the classification of exhaustiveness adjustments, N1 and N6 cover the vast majority of adjustments in the production approach.

### Stage 2

The working hours and full time equivalents were analysed. In Turkey, the official number of working hours for a week is 40. The figures estimated from survey are compared with the legal time of work. The full time equivalent for each sector is estimated using LFS data

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## The exhaustiveness adjustments are carried out in five stages;

### Stage 3

The income tax and value added tax audit controls are also analysed for some specified sectors such as trade, manufacturing industry, personal services, hotels and restaurants, etc..

### Stage 4

N3 is estimated from consumption of own production and imputed rent estimations.

### Stage 5

N7 estimation takes place in the framework of SUT balancing:

*Thank You...*