

The treatment of NOE in the framework of the National Accounts

by
Alessandro Faramondi and Stefano Pisani
4-8 May 2014



Summary

- 1) Why is important to estimate NOE
- 2) International acts on non-observed economy
- 3) International definitions
- 4) Categories of NOE framework
- 5) The N1-N7 Eurostat tabular approach
- 6) Conclusions



1. Why is important to estimate the NOE

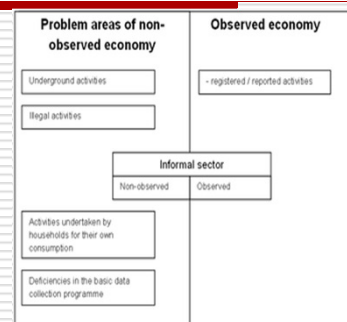
Good quality of national accounts is reached when the coverage of all the economic activities is considered exhaustive. **Exhaustive coverage** is reached when the NA estimates are in compliance with the international framework and when all the productive activities, even if those concealed from the observation, are measured.

The non-inclusion of the hidden productive activities in the context of the national accounts would entail, in particular:

1. the overestimate of the unemployment level and the underestimate of the persons employed;
2. an erroneous estimate of the development rate of the economic system;
3. A biased income distribution;
4. A tax burden on the GDP lower than the actual one;
5. an overestimate of the non market sector over the market.



1. Why is important to estimate the NOE



1. Why is important to estimate the NOE

The international standard: United Nations System of National Accounts (SNA). It provides the boundaries of the productive activities that have to be considered for reaching the exhaustiveness of GDP.

As regards productive activities, the System introduces two fundamental boundaries:

- (1) distinction between non-economic and economic production, the latter includes all activities "carried out under the control and responsibility of an institutional unit that uses inputs of labour, capital, and goods and services to produce outputs of goods or services of a kind that can be delivered or provided to other institutional units" (SNA93: 6.15 and 6.6).
- (2) the SNA production delimits the range of productive economic activities which should be accounted for GNP estimates. Activities excluded from this boundary are all household activities that produce personal or domestic services for their own final consumption within the same household, except for services produced by employing paid domestic staff and the imputed rent on owner-occupied dwellings.



1. Why is important to estimate the NOE

DEFINITION OF INFORMAL SECTOR

Since its first appearance in the early 1970s, the term informal sector has become so popular that nowadays it is used with different meanings for different purposes. Originally, it referred to a concept for data analysis and policy-making. Now it is sometimes used in a much broader sense to refer to a concept for the collection of data on activities not covered by the existing, conventional sources of statistics. In line with the original notion behind the concept, the starting point of the 15th ICLS in defining the informal sector was an understanding of the informal sector as an analytical/political concept rather than a statistical one. Paragraph 5 (1) of the Resolution states: "The informal sector may be broadly characterised as consisting of units engaged in the production of goods or services with the primary objective of generating employment and incomes to the persons concerned. These units typically operate at a low level of organisation, 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."



1. Why is important to estimate the NOE

The SNA provides a list of types of production included, irrespective of whether or not they are intended for own final consumption:

1. production of agricultural products and their subsequent storage;
2. production of other primary products such as mining salt, cutting peat, the supply of water, etc.
3. processing of agricultural products.
4. other kinds of processing such as weaving cloth; dress making or tailoring; production of footwear, pottery, furnishings, etc.
5. small-scale do-it-yourself repairs and maintenance of dwellings and consumer durables carried out by members of the household constitute the own-account production of services and are excluded from the production boundary of the system. The materials purchased are treated as final consumption expenditure.
6. exception to the general exclusion of own-account service production: when repairs to dwellings are major, such as those that a landlord would be expected to perform, then the repair activity is included within the production boundary.



1. Why is important to estimate the NOE

The System acknowledges that certain kinds of household activities may be particularly important in some developing countries and that this issue deserves careful consideration; however, the choice made against imputing values for unpaid domestic or personal services produced and consumed within households has been justified on the grounds of the three main issues listed below:

1. limited repercussions on the rest of the economy;
2. difficulty in the imputation of monetary values;
3. adverse effects on the usefulness of the accounts for macroeconomic analysis and policy purposes.

The SNA production boundary is also relevant for labour force and employment statistics: according to ILO guidelines, it applies to the definition of the category of the **economically active population**, which should comprise all persons of either sex who furnish the supply of labour for the production of economic goods and services as defined by the SNA.



2. International acts on non-observed economy

Research of the GNP Committee on the harmonisation of the GDP started at the beginning of nineties

Objectives:

- ✓ the comparative analysis of the sources and calculation methods used in national accounts
- ✓ the exhaustiveness analysis of the national accounts estimates



2. International acts on non-observed economy

The European System of National Accounts (ESA95)

International acknowledgement on the necessity of integration due to the *non observed economy*. The term refers to those activities which should be included in the GDP but, for different reasons, are not covered in the statistical surveys or administrative records from which the national accounts are constructed.



2. International acts on non-observed economy

The exhaustiveness criterion Commission decision of 22 February 1994 (1/3)

Definition - Article 2

GNP and GDP estimates are exhaustive when they cover not only production, primary income and expenditure which are directly observed in statistical surveys or administrative files, but include production, primary income and expenditure which are not directly observed



2. International acts on non-observed economy

The exhaustiveness criterion Commission decision of 22 February 1994 (2/3)

Calculations - Article 3

Member States shall draw up a description of all the calculations and adjustments which are considered to capture the production, primary income and expenditure which are not directly observable in accordance with Article 2. (description of adjustments that could be implicit or explicit)



2. International acts on non-observed economy

The exhaustiveness criterion *Commission decision of 22 February 1994 (3/3)*

- ✓ Article 1 recognizes the role of GDP to measure economic wellbeing of the Member States
- ✓ GDP regards economic activities within the production boundary of ESA 95
- ✓ ECs make systematic comparisons with underlying employment
- ✓ Production includes legal activity not carried out in conformity of tax and social regulations
- ✓ This decision excludes illegal activities



2. International acts on non-observed economy

Results of the above acts

- GDP comparability at the international level
- Establishing that the NA estimates include the various components of the non-observed economy and other forms of under-coverage resulting from poor source quality and reliability and that they comply with the ESA95 criteria.
- The adoption of an univocal definition of non observed economy



3. International definitions

According to ESA95

the **non observed economy** refers to the economic activities that are to be included in the GDP estimate but that are not recorded in the statistical surveys on enterprises or in the tax and administrative data used for calculating estimates of the national accounts, as it is not possible to observe them directly



3. International definitions

NOE includes the following groups of activities:

Underground: legal productive activities that are not registered mainly due to a deficiency of the statistical data collection system or to economic reasons, that is the will to avoid the tax and social contributions obligations in order to reduce the production costs.

Informal: legal productive activities carried out on a small scale, with low organization levels, little or no division between capital and work, and where the work relationships are based on occasional employment, personal or family relations in contrast with formal contracts.

Illegal: productive activities of goods and services whose sale, distribution or possession are forbidden by law and activities, that though being legal, are carried out by non-authorised operators.



3. International definitions

The OECD Handbook on non-observed economy (2002)

The Handbook is mainly a supplement to SNA93 on specific measurement problems and methods. In particular, it includes explicitly in the definition of non-observed the area of **production of households for own finale use**.

It is defined as those productive activities that result in goods and services consumed or capitalised by the households that produced them.



4- Categories of NOE framework

In order to measure non-observed activities is important to use an analytical framework that splits activities into groups that help their identification and proper measurement.

The characteristics by which non-observed activities may be subdivided into mutually exclusive groups include:

- ☐ Characteristics of enterprise (institutional sector, economic activity, size of enterprise, etc.)
- ☐ Characteristics of activity (legal, illegal, underground)
- ☐ Characteristics of observation method (compilation approach, source of data, etc.)
- ☐ Cause of measurement deficiency (non-response, underreporting, etc.)



4- Categories of NOE framework

Eurostat tabular approach 2005

According to this classification, seven types of non-exhaustiveness have been identified.

The aim of the framework is the following:

- 1) To assure that the NOE is measured systematically;
- 2) That all potential NOE areas are covered;
- 3) No activities are double counted



5- The N1-N7 Eurostat framework

The N1-N7 framework is based on subdividing the producers according to their potential for non-exhaustiveness. The 7 types can be classified in the main four categories:

- ❑ Not registered
- ❑ Not surveyed
- ❑ Misreporting

The above classification is more appropriate within the production approach but it can be used for the expenditure approach too. The breakdown is not a goal in itself. Relevant is to cover all the exhaustiveness elements.



5- Eurostat N1-N7: Not registered

❑ N1: Producer should have registered (underground producer)

- ✓ Producer fails to register in order to avoid tax & social security obligations. These are often small producers with turnovers which exceed the thresholds above which they should register their income.
- ✓ Producers that fail to register because they are involved in illegal activities that fall under N2, rather than N1.
- ✓ Type N1 does not include all underground activities, some of which are associated with type N6.



5- Eurostat N1-N7: Not registered

❑ N2: Illegal producer that fails to register

- ✓ N2 covers activities of producers that avoid registration entirely.
- ✓ N2 excludes illegal activities by registered legal entities or entrepreneurs that report (or misreport) their activities under legal activity codes.

❑ N3: Producer is not obliged to register

- ✓ Producer is not required to register because it has no market output. Typically, these are non-market household producers involved in: (a) production of goods for own consumption or for own fixed capital formation, and (b) construction of and repairs to dwellings.
- ✓ Producer has some market output but it is below the level at which the producer is expected to register as an entrepreneur.



5- Eurostat approach: Not surveyed

❑ N4: Registered legal person not included in statistics

- ✓ The legal person may not be included in the statistics for a variety of reasons. Eg, the business register is out of date or updating procedures are inadequate; the classification data (activity, size or geographic codes) are incorrect; the legal person is excluded from the survey frame because its size is below a certain threshold; etc..

❑ N5: Registered entrepreneur not included in statistics

- ✓ A registered entrepreneur may not be included in the statistics for many reasons. Eg, the administrative source with lists of registered entrepreneurs may not always pass on complete or up to date lists to the statistical office.
- ✓ Even if there is a regular flow of accurate and comprehensive information from the administrative source to the statistical office, the registered entrepreneur may not be included in the business register for several reasons (see those given under N4).



5- Eurostat approach: Misreporting

❑ N6: Mis-reporting by the producer

- ✓ Mis-reporting invariably means that gross output is under-reported and intermediate consumption is over-reported in order to evade (or reduce) income tax, value added tax or social security contributions. Mis-reporting often involves: the maintenance of two sets of books; payments of *envelope salaries* which are recorded as intermediate consumption; payments in cash without receipts; and VAT fraud.



5- Eurostat approach: Other

❑ N7: Statistical deficiencies in the data

- ✓ Type N7 is sub-divided between N7a - data that is incomplete, not collected or not directly collectable, and N7b - data that is incorrectly handled, processed or compiled by statisticians. This distinction is useful because it helps one to better understand the huge variety of possible statistical deficiencies. However, in practice, N7a and N7b cannot always be easily separated.
- ✓ Statistical deficiencies: the following list is not comprehensive but these topics should be investigated for non-exhaustiveness: Handling of non-response; Production for own final use by market producers; Tips; Wages & salaries in kind; Secondary activities.
- ✓ Clearly, not all statistical deficiencies result in the under-estimation of GDP. (The focus here has been to identify and target those areas which are likely to lead to non-exhaustiveness in the NA.)



6- Conclusions (1/2)

According to the last survey on NOE practice conducted by the UNECE in 2005, countries use a wide variety of methods to estimate GDP stemming from the non-observed activities that are the following:

1. The labour input method
 2. Commodity flow method
 3. Balancing supply-use tables
 4. Other reconciliation method (comparison theoretical VAT and actual VAT, theoretical income tax and actual income tax)
 5. Comparisons with norm
- Use of fiscal data on audit surveys



6- Conclusions (2/2)

Achieving exhaustiveness requires a lot of work since it is difficult to account for certain types of productive activities that cannot be observed and measured directly by the official statisticians when the national accounts and GDP are compiled.

Despite the difficulties, the goals of most national statistical systems is to ensure that the non-observed activities are appropriately measured and included in the GDP estimates.

It is possible to reach the goal using an appropriate classification within a general framework, for example the national account system, several sources of information and a few of estimation methods.



Back Slide



B1- Eurostat T1-T8 framework

In 1998 Tabular approach, Eurostat identified 8 categories of NOE problem areas. The framework relates the NOE to the statistical problems to be addressed by national accountants so as to identify the origins of the lack of exhaustiveness. The 8 categories are grouped in the following 5 bigger areas :

- ❑ Statistical undercoverage
- ❑ Economic underground
- ❑ Informal sector
- ❑ Illegal production
- ❑ Other



B1- Eurostat T1-T8: Statistical undercoverage

■ T1: Non-response

Undercoverage arises due to non-response to statistical questionnaires or non coverage of active units in administrative files. This may be attributable to the time required to complete questionnaires, belief that information will be used for other than statistical reasons and poorly designed questionnaires.

■ T2: Out of date registers

Undercoverage occurs due to units missing from statistical registers or out of date registers that may contain incorrect information

■ T3: Units not registered or not surveyed

Undercoverage results from non-coverage because of established thresholds for registration, non-coverage of certain activities, exclusion of newly created units and due to the disappearance of unit in the course of the year.



B1- Eurostat T1-T8: Economic underground

■ T4: Under-reporting of turnover/income

Enterprise owners may intentionally under-report gross output or over report intermediate consumption to evade income tax, value added tax or other such taxes or to avoid social security obligations

■ T5: Units intentionally not registered

Units may not be covered because they are intentionally not registered to avoid tax payments or social security obligations.



B1- Eurostat T1-T8: Informal sector

■ T6: Unregistered units

Units may not be required to register due to their small-scale in production (typically household units)



B1- Eurostat T1-T8: Illegal production

■ T7: Unregistered units

Production units do not report or register their illegal activities



B1- Eurostat T1-T8: Other

■ T8: Other types of GDP undercoverage

This is a residual category that can comprise several other categories like production for own final use, tips, wages and salaries paid in kind.

