

Chapter 3

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3. NOTIONS OF THE NON-OBSERVED ECONOMY

3.1. Definition of Non-Observed Economy

3.1. This chapter supports the first line of action in the NOE measurement strategy. It deals with the definition of the NOE and the development of a framework for its analysis. As discussed in the previous chapter, the 1993 SNA offers a coherent, internationally accepted conceptual framework for economic statistics, which is the starting point for identifying and analysing the NOE problem areas. In aiming for exhaustive measurement of activities within the 1993 SNA production boundary, the goal of the national statistical system is to reduce as far as possible the incidence of non-observed activities and to ensure that those remaining are appropriately measured and included in the GDP estimates.

3.2. As noted in Chapter 1, the groups of activities most likely to be non-observed are those that are *underground, illegal, informal sector, or undertaken by households for their own final use*. Activities may also be missed because of *deficiencies in the basic data collection programme*. These five groups of activities are referred to as the NOE *problem areas*, and activities not included in the basic data because they are in one or more of these problem areas are collectively said to comprise the *non-observed economy* (NOE).

3.3. The term is used by the European Union in connection with its programme to guarantee the exhaustiveness of the GDP. A European Commission (1994) Decision notes that “within the production boundary, national accounts provide an exhaustive measure of production when they cover production, primary income and expenditure that are directly and *not* directly *observed* in statistical or administrative files”.

3.4. The order in which the problem areas are listed is not intended as an indication of their relative importance. In fact their sizes and impacts vary from country to country. For example, non-observed activities in the informal sector may be relatively unimportant in developed countries and of great significance in developing countries. Neither should it be assumed that the problem areas are mutually exclusive. In particular, informal sector units may conduct activities that are underground or are non-observed because of deficiencies in the data collection programme.

3.5. Section 3.2 describes each of the NOE problem areas, drawing on the conceptual framework presented in Chapter 2. Section 3.3 discusses the characteristics of non-observed activities and the formulation of an analytical framework as the basis for NOE assessment and measurement as described in subsequent chapters.

3.2. NOE Problem Areas

3.2.1. Underground Production

3.6. The 1993 SNA (Para 6.34) states that “Certain activities may be both productive in an economic sense and also quite legal (provided certain standards or regulations are complied with) but deliberately concealed from public authorities for the following kinds of reasons:

- a) to avoid the payment of income, value added or other taxes;
- b) to avoid the payment of social security contributions;

- c) to avoid having to meet certain legal standards such as minimum wages, maximum hours, safety or health standards, etc.;
- d) to avoid complying with certain administrative procedures, such as completing statistical questionnaires or other administrative forms.”

It also states that “Producers engaged in this type of production may be described as belonging to the ‘underground economy’”.

3.7. Examples of activities belonging to the underground economy are where enterprises choose not to declare part or all of their income in order to avoid direct or indirect taxation; or choose not to respect employment regulations or immigration laws by hiring labour “off the books”, or decide to operate unofficially in order to avoid long and costly bureaucratic procedures, or where self-employed workers declare fraudulently that they are unemployed in order to draw unemployment benefits.

3.8. As noted in the 1993 SNA (Para 6.35) the borderline between underground and illegal production is not entirely clear. “For example production that does not comply with certain safety, health or other standards could be described as illegal. Similarly, the evasion of taxes is itself usually a criminal offence.” Two observations help to clarify the boundary. First, the lack of administrative authorisation alone is not sufficient to define an activity as illegal. Second, a distinction can be made between the various kinds of activities that break the law. On the one hand, *illegality in a strict sense* refers to acts violating the penal code. This kind of illegality is typical of illegal activities defined by the 1993 SNA. On the other hand, *illegality in a broad sense* refers to all other activities that break the law, in particular violation of rules and standards concerning taxes, social security/pension contributions, minimum wages, maximum hours, safety or health standards, etc. So the rule of thumb is that underground activities according to the 1993 SNA are those not complying with administrative rules, whereas illegal activities are associated with criminal behaviour. Also, as further noted in the 1993 SNA (Para 6.35) “it is not necessary for the purposes of the System to try and fix the precise borderline between underground and illegal production as both are included within the production boundary”.

3.2.2. Illegal Production

3.9. The 1993 SNA states explicitly that illegal activities should be included in the system of national accounts, noting that “despite the obvious practical difficulties in obtaining data on illegal production, it is included within the production boundary of the System” (1993 SNA: 6.30), and that: “All illegal actions that fit the characteristics of transactions – notably the characteristic that there is mutual agreement between the parties – are treated the same way as legal actions” (1993 SNA: 3.54). Illegal activities are activities forbidden by law, for example production and distribution of illegal drugs, or activities that are illegal when they are carried out by unauthorised actors, for example unlicensed practice of medicine. Illegal production is thus classified by the 1993 SNA in two categories:

- the production of goods and services whose production, sale or mere possession is forbidden by law;
- production activities which are usually legal but which become illegal when carried out by unauthorised producers.

Both kinds of production are included within the production boundary, provided that they are genuine processes whose outputs consist of goods and services for which there is an effective market demand.

3.10. When recommending the inclusion of illegal activities within the production boundary, the 1993 SNA makes a clear distinction between transactions mutually agreed upon by the purchaser and the seller (for example, sale of drugs, trafficking stolen goods, or prostitution), which are included within the production boundary, and other activities where such mutual agreement is missing (for example, extortion or theft), which are excluded. The 1993 SNA suggests that illegal actions for which there is no mutual agreement can be construed as an extreme form of *externality* for which, in general, no values are imputed in the national accounts. So it is *absence of consent* rather than illegality that is actually the criterion for exclusion from the production boundary. *Theft* is mentioned explicitly (1993 SNA: 3.55 and 6.33) as an example of an illegal activity that has no effect on output and value added.

3.11. Illegal activities can be either *productive* or *distributive*. As mentioned in Chapter 2, the former have a direct impact on the level of GDP estimates whereas the latter involve redistribution among the various institutional sectors. However, for consistency between transactions, other flows and the balance sheets, illegal activities that are distributive in nature also need to be taken into account if they involve redistribution between different institutional sectors.

3.12. A particular activity cannot always be characterised as exclusively productive or distributive. Productive activities may also have consequences for the distribution of incomes – in particular they are a source of additional income. Distributive activities may also have consequences for the level of GDP if the new distribution of goods and services and of incomes turns out to be more or less efficient than the previous one. Thus, the designation of a particular activity as productive or distributive must be based on the dominant features of that activity.

3.13. Variations in the definition of illegal production occur across countries. What is illegal in one country may be legal in others. From the perspective of exhaustive estimates of GDP, in principle the boundary between underground and illegal activities does not need to be precise, given that both should be included within GDP estimates. However, differences in the boundary between countries, or changes in the boundary within a country over time, can cause inconsistencies in practice because GDP is often compiled without explicitly including illegal activities. Thus a difference in what is defined as illegal, or change from illegal to legal, or *vice versa*, affects the estimates. For example, prostitution and the production of alcoholic beverages are illegal in some countries and legal in others. The case of abortion in Italy is an example of a change over time. Before 1978, abortion in Italy was illegal and activities related to it were not recorded in the national accounts. Its legalisation in 1978 led to inclusion in the national accounts of outputs and household expenditures for legal abortions. As a result there was a sudden (small) increase in the size of the health sector on both the output and expenditure sides. Thus, it is important to describe what is defined as illegal production in a country in order to be aware of any limitations in the comparison of GDP estimates with other countries and over time. This is further discussed in Chapter 9.

3.2.3. Informal Sector Production

3.14. The informal sector represents an important part of the economy and the labour market in many countries, especially developing countries. Thus, measurements of the informal sector are important in their own right as well as contributing towards exhaustive estimates of GDP. This section summarises the international definition of the informal sector that was adopted in 1993 by the Fifteenth International Conference of Labour Statisticians (15th ICLS) Resolution *concerning statistics of employment in the informal sector* (International Labour Organization, 1993), and that was included in the 1993 SNA (Para. 4.159). The summary is in sufficient detail for discussion of the NOE. The definition and the thinking behind it are further elaborated in Chapter 10.

3.15. Paragraph 5(1) of the 15th ICLS Resolution describes the underlying concept. “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.”

3.16. Most informal sector activities provide goods and services whose production and distribution are perfectly legal. This is the characteristic that distinguishes them from illegal production. There is also a distinction between informal sector and underground activities, although it may be more blurred. Informal sector activities are not necessarily performed with the deliberate intention of evading the payment of taxes or social security contributions, or infringing labour legislation or other regulations. However, there can be some overlap, as some informal sector enterprises may prefer to remain unregistered or unlicensed in order to avoid compliance with regulations and thereby reduce production costs.

3.17. The characteristic features of household unincorporated enterprises as described in the 1993 SNA correspond well to the concept of the informal sector. In particular, the fixed and other capital used does not belong to the production units as such but to their owners; the enterprises as such cannot engage in transactions or enter into contracts with other units, nor incur liabilities on their own behalf; the owners have to raise the necessary finance at their own risk and are personally liable, without limit, for any debts or obligations incurred in the production process; expenditure for production is often indistinguishable from household expenditure; and capital equipment such as buildings or vehicles may be used indistinguishably for business and household purposes. Accordingly, the 15th ICLS defined the informal sector in operational terms as a subset of household unincorporated enterprises.

3.18. In addition, the 15th ICLS aimed to ensure that the activities included in the informal sector were as homogeneous as possible both regarding their economic behaviour and the data required to analyse them, and also that these data could be collected in practice. Thus, it introduced further criteria for inclusion. First, an enterprise must have at least some market output. Second, an enterprise that is an employer must satisfy one or more of the following three criteria:

- The enterprise is less than a specified size in terms of persons engaged, employees or employees employed on a continuous basis.
- Non-registration of the enterprise under specific forms of national legislation, such as factories' or commercial acts, tax or social security laws, professional groups' regulatory acts, or similar acts, laws or regulations established by national legislative bodies.
- Non-registration of the employees of the enterprise in terms of the absence of employment or apprenticeship contracts which commit the employer to pay relevant taxes and social security contributions on behalf of the employees or which make the employment relationships subject to standard labour legislation.¹

For enterprises that are not employers only the second of these criteria is relevant.

3.19. In addition, for practical reasons the 15th ICLS introduced the optional exclusion from the informal sector of household unincorporated enterprises that are classified to agriculture.

3.20. These criteria provide the framework within which the actual definition of informal sector should be constructed in any given country. Evidently, they may not necessarily result in exactly the same definition of the informal sector across countries. The criteria can be applied in different combinations, the national legislations may differ, the employment size limits and how they are measured may vary, etc. The *Delhi Group* has been trying to narrow down the options as further discussed in Chapter 10.

3.21. The 15th ICLS definition is not designed to lead to a segmentation of the economy according to a formal/informal sector dichotomy. In fact it does not explicitly define a formal sector. It recognised that certain activities excluded from the scope of the informal sector were not formal and recommended that such activities should be identified as a separate category outside a formal/informal sector distinction. Also, the 1993 SNA (Annex I, B: 2.31) notes that “depending on national circumstances, certain production units of the household sector may fall outside the distinction between formal and informal sectors (*i.e.*, units exclusively engaged in agricultural activities, the production of goods for own final use, or the production of services for own final consumption by employing paid domestic workers)”. This implies a trichotomy – an enterprise is formal, informal or neither. However, the 15th ICLS Resolution was not completely reproduced in the Annex to Chapter IV of the 1993 SNA. Furthermore, the 1993 SNA contains several references to formal/informal sectors, which may be taken to imply that there are only two sectors, namely formal and informal, and that, if an enterprise does not belong to one, it must belong to the other. Thus, this alternative option for sub-sectoring the household sector can be regarded as available for national accounting purposes.

1. Registration of the employees is a useful criterion only in countries where it implies that the enterprise itself is also registered.

3.2.4. Household Production for Own Final Use

3.22. Production undertaken by household unincorporated enterprises exclusively for own final use by the owners' households is not part of the informal sector according to the 15th ICLS Resolution, and is thus regarded as a separate NOE problem area in this Handbook. It includes production of crops and livestock, production of other goods for their own final use, construction of own houses and other own-account fixed capital formation, imputed rents of owners-occupiers, and services of paid domestic servants.

3.23. Evidently, some household production activities are on a very small scale. Thus, the 1993 SNA: Paragraph 6.25 suggests a criterion of *significance* for deciding whether or not to record the production of a particular good. Only if the amount produced is believed to be quantitatively important in relation to the total supply of that good in the country should it be estimated. The 1993 SNA (Para 6.24) lists some of the most common types of production for which estimates should be made. (See Section 2.2.)

3.24. For complete consistency this problem area should be defined as *production performed by enterprises that are not classified as formal or informal*, thereby including any other enterprise that falls outside the formal/informal distinction in addition to those producing for their own final use.

3.2.5. Production Missed Due to Deficiencies in Data Collection Programme

3.25. This problem area is an inseparable aspect of exhaustiveness. It comprises all the productive activities that should be accounted for by the basic data collection programme but are missed due to statistical deficiencies. It is sometimes referred to as the *statistical underground* – in contrast to the *economic underground*, which comprises activities that have been concealed by the producing units for economic reasons.

3.26. Viewed from the production approach to GDP compilation, the reasons why activities may escape direct measurement by the basic data collection system can be grouped into three main categories, as follows.

- *Undercoverage of enterprises.* Enterprises, or parts of them, are excluded from the data collection programme though in principle they should have been included. This may occur, for example, because an enterprise is new and has not yet been included in the survey frames, or it falls below the size cut-off for surveys, or it has been incorrectly classified by kind of activity or by region and thus improperly excluded from the survey frame.
- *Non-response by enterprises.* Enterprises are included in the sample but no data are collected from them (for example, because the survey questionnaire was wrongly addressed or the enterprise, or part of it, did not return the questionnaire) and no imputation is made for the missing observations.
- *Underreporting by enterprises.* Data are obtained from enterprises, but are misreported by the respondent in such a way as to underreport value added, or correct data are received but are inappropriately edited or weighted.

3.3. Analytical Framework for the NOE

3.3.1. Introduction

3.27. Insight into the nature of the NOE and ways to measure non-observed activities requires the use of an analytical framework. The essence of such a framework is the division of non-observed activities into groups that help their identification and proper measurement. Ideally, the groups should be mutually exclusive and exhaustive so that non-observed production can be summed across them. As previously noted, the NOE problem areas are not mutually exclusive, although mutually exclusive groups can readily be derived by selecting one of the problem areas as the first group and defining

subsequent groups to exclude any activities already included in a previous group. An example of an analytical framework based on this approach would be:

- underground production;
- illegal production (which, by definition, is not underground);
- informal sector production that is not underground or illegal;
- household production for own final use that is not underground or illegal (and by definition is not informal sector);
- other missed productive activities.

3.28. However, such a classification is too broad to provide much insight into the NOE. An analytical framework needs to provide a finer breakdown, incorporating additional characteristics of non-observed activities. The characteristics by which non-observed activities may be subdivided into mutually exclusive groups include the following.

Characteristics of enterprise carrying out the activity

- institutional sector: financial corporation/non financial corporation/government/NPISH/household;
- economic activity classification;
- size of enterprise, in terms of employment, turnover or value of assets;
- type: formal/informal/other;

Characteristics of activity

- legal and not underground/underground/illegal;

Characteristics of observation method

- compilation approach for which data are being collected: production/income/expenditure;
- GDP component for which data are being collected;
- source of data: survey/administrative source;

Cause of measurement deficiency:

- enterprise not registered/non-response/data under-reported.

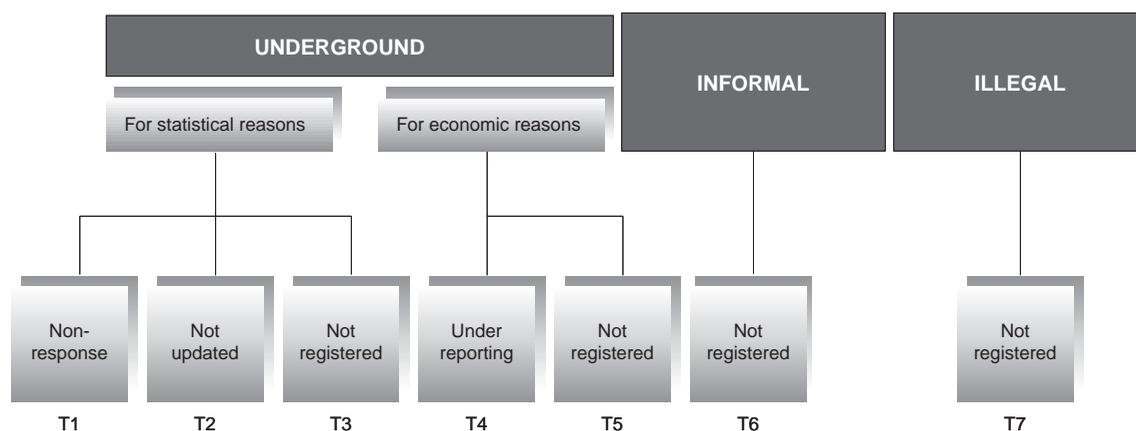
3.29. There may be other characteristics that are useful. They may be used in any combination to model NOE activities. Use of too many dimensions may obscure the main issues. Use of too few dimensions may not give enough insight. Whatever criteria are used to classify non-observed activities into groups, they must be explicitly described. The essence of an analytical framework is that it should be useful in understanding the NOE causes, or in reflecting the various measurement options, or both. There is no perfect model. As the statistician George Box once said, "All models are wrong, some are useful".

3.30. Four examples of a NOE analytical framework are described in the following paragraphs. Two of these – the Istat and the Eurostat frameworks – have been well tried and tested. The others are presented to illustrate the range of options available.

3.3.2. Istat Analytical Framework

3.31. From the statistical point of view, measuring the NOE is difficult because of the elusive nature of what is being measured and the approximations that have to be made in the measurement process. The Istat Analytical 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 and their impact on the statistical system. The issues in constructing the framework are briefly described in the following paragraphs, which also highlight the statistical aspects of measuring the five individual NOE problem areas. More details are provided by Calzaroni (2000). In this context it should be noted that deficiencies inherent in

Figure 3.1. Istat analytical framework



the statistical system are linked to the *underground for statistical reasons*, and the informal sector is assumed to include household production for own final use.

3.32. The framework views the NOE problem areas in terms of three types of statistical problem.

- *Non-registration and lack of updated information.* Non-registered production units and the inappropriate presence or absence, or misclassification, of registered units occur due to missing or incorrect updating information from statistical and administrative sources. The most important consequence is the failure to maintain a reliable, comprehensive business register. The situation may arise for a variety of reasons: high turnover rate of enterprises; lack of adequate laws and rules about statistics; inefficiency of the statistical system; deliberate failure to register totally or in part by some enterprises; or absence of an obligation to register. For example, enterprises engaged in illegal activities or small scale informal sector enterprises may not register.
- *Non-response.* Non-response is one of the main problems affecting the quality of data. Enterprises and households may fail to respond because they do not want to waste their time in completing a questionnaire or are afraid the information they provide will be used for administrative purposes, or because the questionnaire is badly designed or unduly burdensome.
- *Underreporting.* Even if all units are included in the survey frame and the questionnaires have been completed there may still be a problem of misreporting. Often it is because the respondent is understating income for tax purposes, either by overstating costs or understating revenues and decides to make the same false declarations to the statistical office. When misreporting is due to genuine mistakes by the respondent, the errors may go in either direction. When the misreporting is deliberate, the usual effect is to understate incomes and value added.

3.33. Figure 3.1 shows the relationship between the NOE problem areas and the statistical measurement problems. It groups non-observed activities into seven types, which are described in the following paragraphs.

Statistical underground: non-response (NOE type 1)

3.34. The main impact of non-response is the bias that is introduced into the statistical output if all non-respondents are assumed to have zero output. There is a vast literature outlining methods for encouraging response and dealing with non-response in the basic data collection programme. These are discussed in Chapter 6.

Statistical underground: units not updated (NOE Type 2)

- 3.35. The business register may be out of date in the following respects:
- enterprises that no longer exist (so called *dead units*) are included;
 - new enterprises are excluded;
 - wrong information about enterprises, due to mergers, splits, etc.;
 - incorrect details about economic activity, size of enterprise, or address.

Statistical underground: units not registered (NOE Type 3)

3.36. Enterprises may be completely missing from data sources due to statistical reasons and not because they are trying to hide from the authorities. For example, this can occur due to high rates of enterprise turnover, which is a common problem in countries where the share of small-sized production units is particularly high or due to absence of adequate statistical laws and rules, or inefficiencies in the statistical system.

Economic underground: underreporting (NOE Type 4)

3.37. As previously noted, value added may be understated in order to avoid taxes, social charges, etc.

Economic underground: units not registered (NOE Type 5)

3.38. Some enterprises may be missing because the owners have deliberately avoided the obligations to register in order to avoid additional costs of various kinds such as value added taxes, social security contributions, costs related to the compliance with health and safety standards, etc. Non-registration may involve the whole enterprise being completely missing, or the enterprises being registered but one or more local units not being registered.

Informal sector: units not registered (NOE Type 6)

3.39. As previously noted, non-registration can be a criterion for defining the informal sector and enterprises may be missing simply because they are not required to register by any kind of legislation.

Illegal production: units not registered (NOE Type 7)

3.40. In most cases illegal production units are not registered. In a few cases they may be registered but under incorrect activity descriptions. For example, illegal brothels may be described as health-care clubs or massage shops, illegal gambling operations may be described as nightclubs, etc.

3.41. In summary, the Istat analytical framework is built by matching the NOE problem areas with the statistical measurement problems that a statistical office must address in aiming for exhaustive measurement of GDP. Given that the NOE types are defined to be mutually exclusive, they may be grouped in various ways in order to give insight into different aspects of the NOE. For example, coverage problems are the sum of types T2, T3, T5, T6, and T7, underreporting problems are represented by T4, and non-response problems are represented by T1.

Units, Activities and Causes Variant of Istat Framework

3.42. A variant of the Istat Analytical Framework is shown in Table 3.1. The NOE types are essentially the same as described in the Istat model but in defining them an explicit distinction is made between the type of activity and the type of unit engaged in the activity. This sharpens the conceptual boundary between the NOE types, giving a clearer separation. For a finer breakdown of non-observed activities, the types could be further subdivided according to rows and columns. The framework has not yet been tested through practical application.

Table 3.1. **Unit by activity by cause classification of non-observed activities**

Type of activity	Type of cause	Type of unit		
		Formal	Informal	Household production for own use
Illegal underground	Not registered Not registered Underreporting		NOE Type 7 NOE Type 5 NOE Type 4	
Legal and not underground	Not registered Not updated Non-response	NOE Type 3		NOE Type 6 NOE Type 2 NOE Type 1

3.3.3. Eurostat Tabular Framework

3.43. The Eurostat tabular framework was developed in the course of technical assistance to the European Union Candidate Countries in order to gauge the comparability and exhaustiveness of their GDP estimates. It is described in detail by Hein (1998) and Stapel (2001), from where the following summary is drawn.

3.44. The framework is very similar to the Istat framework from which it was originally derived. The main difference is the introduction of an additional type (T8) of non-observed activity. T8 includes a series of reasons for the lack of exhaustiveness that are very significant in transition countries, the main ones being production for own final use, tips, wages and salaries in kind.

3.45. An extremely useful, integral part of this framework is the accompanying documentation template comprising three tables that summarise non-observed activities by type, and the adjustments (if any) made for each of them in the national accounts aggregates. Completion of these tables encourages a systematic analysis of non-observed activities, the methods adopted to deal with them and the adjustments and estimates obtained in the national accounts.

3.46. The first table comprises a listing of the types of NOE that affect the main components of the national accounts, together with cross-references to the adjustments that are made for each in compiling the accounts. The listing has three parts, one for the production components, one for the expenditure components and one for the income components. The production components are divided by institutional sector, and by industry group and size within sector. There is also an entry for taxes and subsidies on products. The income components have a similar structure. The expenditure components are divided as usual. There are also entries for a specified set of illegal production activities. Thus, completion of the first table involves consideration of the possible effects of, and adjustments for, each NOE type on each major component of GDP.

3.47. The second table is also in three parts, one for each compilation approach. Each part comprises a list of the NOE adjustments by type of adjustment, GDP component, data source, size of adjustment and relative size of adjustment, also by industry group, size group or COICOP code as appropriate. The third table summarises the adjustments by NOE type for the production and expenditure components.

3.48. A full description of the NOE types and examples of the tables, which can be adapted on a case by case basis to any specific country, are appended in Annex 4.

3.3.4. Unit and Labour Input Framework

3.49. Whereas the Istat and Eurostat analytical frameworks arise from consideration of the NOE problem areas and statistical measurement problems, the *unit and labour input framework* starts from the

data collection programme and the main reasons for non-observed activities. It follows a production approach perspective. It assumes the existence of a business register, data from enterprise and labour force surveys and supply and use tables. The basic idea is that for each entry (or combination of entries) in the supply and use tables, a table can be created in which the data from all sources can be confronted. The classifications on the axes of the table are chosen so as to highlight the most plausible reasons for errors and wrong observations, and hence the actions to be taken. The most practical and illustrative confrontation table for analysing the NOE is presented in Table 3.2.

3.50. The horizontal axis (columns) provides a breakdown of the observation of activities, *i.e.*, data collection from the production side, which is mainly by means of enterprise surveys. Such surveys require a solid frame covering as many production units as possible. Nevertheless, there are units that are not in the survey frame and this is the reason for making the distinction between registered and unregistered units.

3.51. From the perspective of data collection, the most relevant breakdown is into own account enterprises (self-employed workers), enterprises engaged in production for own use, and other enterprises. In most countries, the legal status and legal obligations for own account enterprises differ significantly from those for other enterprises. For example, the book keeping requirements are less strict and business and private book keeping is frequently combined. The data available from own account enterprises are less detailed than from other enterprises. Enterprises engaged in production for own use are not required to keep books.

3.52. The vertical axis (rows) looks at the production process from the input side. With the exception of dwelling services provided by owner-occupiers, all production requires input of labour. Labour can be observed by various means, but the most common way to obtain an independent estimate of the volume of labour input is by labour force survey. In general, it is not very difficult to survey labour as most people will report that they are working. Moreover, their involvement in the labour market can often be checked in administrative files, for example in enterprise payrolls. However, there are situations in which people prefer to hide their income from work and special observation methods are needed. The distinction between registered and unregistered labour leads to the two rows in the table.

3.53. Of the eight possible cells in Table 3.2, only six can be filled. The two cells at the top right are expected to be empty as registration of labour does not make sense for them. The contents of the cells are described in Annex 4.2 and further details are available in Luttikhuizen and Kazemier (2000).

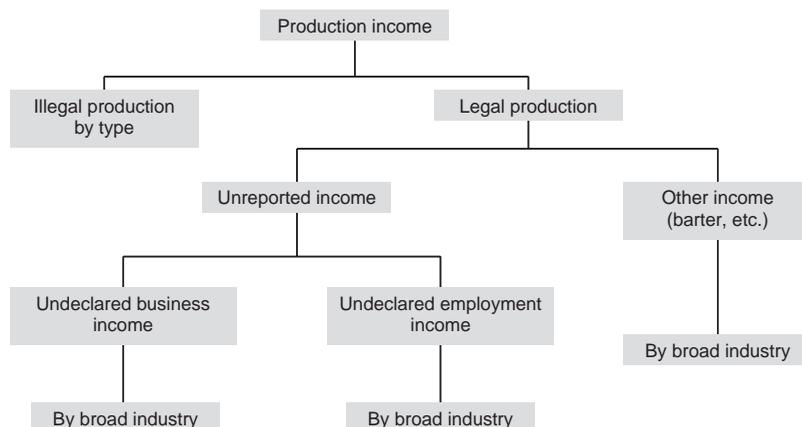
Table 3.2. **Classification of NOE by registration of units and labour input**

Labour		Production units			
		Enterprises registered in business register	Enterprises not registered in business register		
			Other	Own account	Production for own use
Registered	C1	C3			
Not registered	C2	C4	C5	C6	

3.3.5. Production Income Framework

3.54. A rather different analytical framework such as that shown in Figure 3.2 might be used if the focal point of the analysis were unreported income from production.

Figure 3.2. Production income framework



3.3.6. Concluding Remarks

3.55. Each of these frameworks has limitations in the sense that some of the borderlines between the various types of NOE activities are not distinct conceptually or cannot be easily determined in practice. Furthermore, most of them are geared to a view of the NOE from the production approach and need to be supplemented by analysis from the expenditure side.

3.56. In summary, a national statistical system should choose or develop an analytical framework that best suits its circumstances, depending upon the nature and extent of underground, illegal, informal sector and household production for own use and the coverage and quality of the basic data collection programme.