

Chapter 5	Establishments and industries	3
A.	Introduction	3
B.	Productive activities	3
1.	The classification of activities in the System	4
2.	Principal and secondary activities	4
	Principal activities	4
	Secondary activities	4
C.	Partitioning enterprises into more homogeneous units	4
1.	Types of production units	5
	Kind-of-activity units	5
	Local units	5
	Establishments	5
2.	Accounts for establishments	5
3.	Application of the principles in specific situations	6
	Establishments within integrated enterprises	6
	Establishments owned by general government	6
D.	Ancillary activities	7
	Recording (or not) the output of ancillary services	8
	The role of ancillary activities in the economic system	9
E.	Industries	9
1.	Market, own account and other non-market producers	9
2.	Industries and products	9
F.	Units of homogeneous production	10

Chapter 5 Establishments and industries

A. Introduction

5.1 Institutional units are defined in chapter 4. The present chapter is concerned with production activities and the units that undertake them, starting with institutional units and then considering parts of institutional units. *An enterprise is an institutional unit engaged in production.* All institutional units in the corporations sectors are enterprises whether they are legally constituted corporations or simply treated as corporations in the System. *An unincorporated enterprise represents the production activity of a household or a government unit.* Whereas all households engage in consumption, not all engage in production and thus many households do not contain an unincorporated enterprise.

5.2 The majority of enterprises by number engage in only one sort of production. The majority of production, though, is carried out by relatively small number of large corporations that undertake many different kinds of production, there being virtually no upper limit to the extent of diversity of production in a large enterprise. If enterprises are grouped together on the basis of their principal activities, at least some of the resulting groupings are likely to be very heterogeneous with respect to the type of production processes carried out and also the goods and services produced. Thus, for analyses of production in which the technology of production plays an important role, it is necessary to work with groups of producers that are engaged in essentially the same kind of production. This requirement means that some institutional units must be partitioned into smaller and more homogeneous units, which the

System defines as establishments. *An establishment is an enterprise, or part of an enterprise, that is situated in a single location and in which only a single productive activity is carried out or in which the principal productive activity accounts for most of the value added.* Further, the System defines industries in terms of establishments. *An industry consists of a group of establishments engaged on the same, or similar, kinds of activity.* In the System, production accounts and generation of income accounts are compiled for industries as well as sectors.

5.3 This chapter first discusses productive activity and its classification in order to lay the ground for defining establishments and subsequently industries. All enterprises require some basic, routine services to support its production activities. When they are provided in house they are called ancillary activities. The recording of ancillary activities follows a number of conventions depending on exactly how they are provided and these are described in this chapter also.

5.4 The definitions that emerge, as well as the underlying definitions of kinds of activities and of statistical units other than establishments, are consistent with the definitions in the fourth revision of the International Standard Industrial Classification of All Economic Activities (ISIC, Rev.4), published by the United Nations. Any slight differences in wording between this chapter and the "Introduction" to the ISIC are needed to make the definitions clearer in an SNA context.

B. Productive activities

5.5 Production in the System, as will be discussed in detail in chapter 6, consists of processes or activities carried out under the control and

responsibility of institutional units that use inputs of labour, capital and goods and services to produce outputs of goods and services. Any

such activity may be described, and classified, with reference to various characteristics, for example:

Type of goods or services produced as outputs

Type of inputs used or consumed

Technique of production employed

Ways in which the outputs are used.

The same goods or services may be produced using different methods of production. Certain types of goods may be produced from quite different inputs; for example, sugar may be produced from sugar cane or from sugar beet, or electricity from coal, oil, nuclear power stations or from hydroelectric plants. Many production processes also produce joint products, such as meat and hides, whose uses are quite different.

1. The classification of activities in the System

5.6 The classification of productive activities used in the System is ISIC (Rev.4). The criteria used in ISIC to delineate each of its four levels of the classification are complex. The structure consists of 21 Sections, 88 Divisions, 238 Groups and 420 Classes. At the Division and Group levels, substantial weight is placed on the nature of the good or service that is produced as the principal product of the activity in question. In this context, this refers to the physical composition and stage of fabrication of the item and the needs served by the item. This criterion furnishes the basis for grouping producer units according to similarities in, and links between, the raw materials consumed and the sources of demand for the items. As well, two other major criteria are considered at these levels: the uses to which the goods and services are put, and the

inputs, the process and the technology of production.

5.7 While it is not necessary for purposes of this chapter to explain the concept of an activity in any detail, it is necessary to clarify the fundamental distinction between principal and secondary activities on the one hand and ancillary activities on the other.

2. Principal and secondary activities

Principal activities

5.8 *The principal activity of a producer unit is the activity whose value added exceeds that of any other activity carried out within the same unit.* (The producer unit may be an enterprise or an establishment as defined below.) The classification of the principal activity is determined by reference to ISIC, first at the highest level of the classification and then at more detailed levels. The output of the principal activity - its principal product and any by-products (i.e., a product necessarily produced together with principal products) - must consist of goods or services that are capable of being delivered to other units even though they may be used for own consumption or own capital formation.

Secondary activities

5.9 *A secondary activity is an activity carried out within a single producer unit in addition to the principal activity and whose output, like that of the principal activity, must be suitable for delivery outside the producer unit.* The value added of a secondary activity must be less than that of the principal activity, by definition of the latter. The output of the secondary activity is a secondary product. Most producer units produce at least some secondary products.

C. Partitioning enterprises into more homogeneous units

5.10 Although it is possible to classify enterprises according to their principal activities using the ISIC and to group them into "industries", some of the resulting "industries" are likely to be very heterogeneous because some enterprises may have several secondary activities that are quite

different from their principal activities. In order to obtain groups of producers whose activities are more homogeneous, enterprises have to be partitioned into smaller and more homogeneous units.

1. Types of production units

Kind-of-activity units

- 5.11 One way to partition an enterprise is by reference to activities. A unit resulting from such a partitioning is called a kind-of-activity unit. ***A kind-of-activity unit is an enterprise, or a part of an enterprise, that engages in only one kind of (non-ancillary) productive activity or in which the principal productive activity accounts for most of the value added.*** Each enterprise must, by definition, consist of one or more kind-of-activity units. When partitioned into two or more kind-of-activity units, the resulting units must be more homogeneous with respect to output, cost structure and technology of production than the enterprise as a whole.

Local units

- 5.12 Enterprises often engage in productive activity at more than one location, and for some purposes it may be useful to partition them accordingly. Thus, ***a local unit is an enterprise, or a part of an enterprise, that engages in productive activity at or from one location.*** The definition has only one dimension in that it does not refer to the kind of activity that is carried out. Location may be interpreted according to the purpose - narrowly, such as a specific address, or more broadly, such as within a province, state, county, etc.

Establishments

- 5.13 The establishment combines both the kind-of-activity dimension and the locality dimension. ***An establishment is an enterprise, or part of an enterprise, that is situated in a single location and in which only a single productive activity is carried out or in which the principal productive activity accounts for most of the value added.***
- 5.14 Although the definition of an establishment allows for the possibility that there may be one or more secondary activities carried out, they should be on a small scale compared with the principal activity. If a secondary activity within an enterprise is as important, or nearly as important, as the principal activity, then that activity should be treated as taking place within

a separate establishment from that in which the principal activity takes place.

- 5.15 Thus, establishments are designed to be units that provide data that are more suitable for analyses of production in which the technology of production plays an important role. However, it may still be necessary to transform the resulting data subsequently for purposes of input-output analysis, as explained briefly below in describing the unit of homogeneous production and in more detail in [chapter 15](#).
- 5.16 In practice, an establishment may usually be identified with an individual workplace in which a particular kind of productive activity is carried out: an individual farm, mine, quarry, factory, plant, shop, store, construction site, transport depot, airport, garage, bank, office, clinic, etc.

2. Accounts for establishments

- 5.17 Establishments are conceptually quite distinct from institutional units. If an institutional unit contains only a single establishment, the two units coincide in the sense that the production account for the establishment is the same as that for the institutional unit. However, an establishment as such is not an institutional unit of the System, engaging in transactions on its own account, incurring liabilities, entering into contracts, and so on. For example, the purchases and sales associated with the productive activities of an establishment are actually made by the institutional unit to which it belongs and not by the establishment itself. It is not possible, therefore, to envisage a complete set of accounts, including balance sheets, being compiled for an establishment, not because of practical data difficulties but because an establishment is not an entity capable of owning goods or assets in its own right or capable of receiving or disbursing income, etc.
- 5.18 The only data that can meaningfully be compiled for an establishment relate to its production activities. They include the following:
- The items included in the production account and the generation of income account;

- (b) Statistics of numbers of employees, types of employees and hours worked;
- (c) Estimates of the stock of non-financial capital and natural resources used;
- (d) Estimates of changes in inventories and gross fixed capital formation undertaken.

5.19 The compilation of a production account and a generation of income account implies that it must be feasible to calculate output and intermediate consumption and thus value added and also compensation of employees, taxes on production and imports, subsidies and the operating surplus/mixed income. In principle, it must be feasible to collect at least the above kinds of statistics for an establishment, even if they may not always be available, or needed, in practice.

3. Application of the principles in specific situations

5.28 The application of the principles given above for partitioning an enterprise into establishments is not always straightforward. This section discusses several situations in which the organization of production is such that the application is particularly difficult.

Establishments within integrated enterprises

5.20 *A horizontally integrated enterprise is one in which several different kinds of activities that produce different kinds of goods or services for sale on the market are carried out in parallel with each other.* It follows from the definition of an establishment that a separate establishment should be identified for each different kind of activity wherever possible.

5.21 *A vertically integrated enterprise is one in which different stages of production, which are usually carried out by different enterprises, are carried out in succession by different parts of the same enterprise.* The output of one stage becomes an input into the next stage, only the output from the final stage being actually sold on the market. There are numerous examples of vertically integrated enterprises.

5.22 For example, an enterprise may use its own fishing fleet to catch the fish it then processes


into manufactured products such as frozen or canned food products. Similarly, an enterprise may have its own plantations on which it grows tea it then processes and blends into packages of tea for sale to final consumers. A manufacturer of bricks may process clay mined from its own quarries. A striking feature of the examples just given is that the vertical integration extends beyond different stages of manufacturing by integrating fishing, agriculture, or mining with manufacturing. However, vertical integration is also very common within manufacturing, while some types of vertical integration do not involve manufacturing.

5.23 From an accounting point of view it can be difficult to partition a vertically integrated enterprise into establishments because values have to be imputed for the outputs from the earlier stages of production which are not actually sold on the market and which become intermediate inputs into later stages. Some of these enterprises may record the intra-enterprise deliveries at prices that reflect market values, but others may not. Even if adequate data are available on the costs incurred at each stage of production, it may be difficult to decide what is the appropriate way in which to allocate the operating surplus of the enterprise among the various stages. One possibility is that a uniform rate of operating surplus could be applied to the costs incurred at each stage.

5.24 Despite the practical difficulties involved in partitioning vertically integrated enterprises into establishments, it is recommended that when a vertically integrated enterprise spans two or more sections of the ISIC, at least one establishment must be distinguished within each section. ISIC sections correspond to broad industry groups such as agriculture, fishing, mining and quarrying, manufacturing, etc.

Establishments owned by general government

5.25 Government units, especially central governments, may be particularly large and complex in terms of the kinds of activities in which they engage. The principles outlined above have to be applied consistently and systematically to government units. The procedures to be followed when dealing with the main kinds of producer units owned by government may be summarized as follows.

- 5.26 If an unincorporated enterprise of government is a market producer and there is sufficient data available to treat it as a quasi-corporation, it should be treated as a publicly controlled unit in the non-financial or financial corporations sectors as appropriate. The usual conventions about distinguishing different establishments within the quasi-corporation apply.
- 5.27 If an unincorporated enterprise of government is a market producer and there is insufficient data to treat it as a quasi-corporation, or if the unincorporated enterprise is a non-market producer, then it remains within the general government sector but it should be treated as an establishment in its own right and allocated to the appropriate industry.
- 5.28 Examples of unincorporated market enterprises include a municipal swimming pool 
- 5.29 if it is independently managed and if its accounts permit its income, saving and capital to be measured separately from government so that flows of income, or capital, between the unit and government can be identified.
- 5.30 Non-market producers such as public administration, defence, health and education providing final goods or services should be partitioned into establishments using the activity classification given in Sections O, P and Q of the ISIC. Agencies of central government may be dispersed over the country as a whole in which case it will be necessary to distinguish different establishments for activities that are carried out in different locations.
- 5.31 When a government agency supplies goods to other government agencies it should be treated as a separate establishment and classified under the appropriate heading of ISIC. This applies to the production of munitions or weapons, printed documents or stationery, roads or other structures, etc. A government that produces its own weapons to supply to its own armed forces is, in effect, a vertically integrated enterprise that spans two or more sections of ISIC. Therefore, at least one separate establishment should be distinguished in each heading. The same argument applies to a government printing office and other goods producers owned by government.

D. Ancillary activities

- 5.32 There are some basic services that every enterprise needs to have in order to operate effectively. The sorts of services referred to are the following:
- (a) Keeping records, files or accounts in written form or on computers;
 - (b) Providing electronic and traditional written communication facilities;
 - (c) Purchasing of materials and equipment;
 - (d) Hiring, training, managing and paying employees;
 - (e) Storing materials or equipment: warehousing;
 - (f) Transporting goods or persons inside or outside the producer unit;
 - (g) Promoting sales;
 - (h) Cleaning and maintenance of buildings and other structures;
 - (i) Repairing and servicing machinery and equipment;
 - (j) Providing security and surveillance.
- 5.33 These types of services can be produced in house or can be purchased on the market from specialist service producers though, in practice, the requisite services may not be readily available in the right quantities on local markets. When the services are produced in house, they are termed ancillary activities. ***An ancillary activity is a supporting activity undertaken within an enterprise in order to create the conditions within which the principal or secondary activities can be carried out.*** In addition, ancillary activities have certain common characteristics related to their output. These additional characteristics include:

- (a) The output of an ancillary activity is not intended for use outside the enterprise.
- (b) Ancillary activities typically produce outputs that are commonly found as inputs into almost any kind of productive activity;
- (c) Ancillary activities produce services (and, as exceptions, goods that do not become a physical part of the output of the principal or secondary activity) as output;
- (d) The value of ancillary activity output is likely to be small compared with that of the principal or secondary activities of an enterprise.

5.34 The defining characteristics that ancillary activities support the principal and secondary activities of an enterprise and are used within the enterprise are by no means sufficient to identify an ancillary activity. There are many kinds of activities whose outputs are entirely consumed within the same enterprise but which could not possibly be considered as ancillary. Goods are not commonly used as inputs in the same way as services such as accounting, transportation or cleaning. For example, an enterprise may produce milk, all of which is processed into butter or cheese within the same enterprise. However, milk production cannot be considered an ancillary activity, because milk is a particular kind of input found only in special types of productive activity. In general, goods that become embodied in the output of the principal or secondary activities are not outputs of ancillary activities.

5.35 Certain activities, although common, are not so common as to be considered ancillary. Many enterprises produce their own machinery and equipment, build their own structures and carry out their own research and development. These activities are not to be treated as ancillary, whether carried out centrally or not, as they are not found frequently and extensively in all kinds of enterprises, small as well as large.


Recording (or not) the output of ancillary services

5.36 An ancillary activity is not undertaken for its own sake but purely in order to provide supporting services for the principal or

secondary activities with which it is associated. If the ancillary activity is undertaken in the establishment where its output is used, the ancillary activity is regarded as an integral part of the principal or secondary activities with which they are associated. As a result:

- (a) The output of an ancillary activity is not explicitly recognized and recorded separately in the System. It follows that the use of this output is also not recorded.
- (b) All the inputs consumed by an ancillary activity, materials, labour, consumption of fixed capital, etc., are treated as inputs into the principal or secondary activity that it supports.

In this case it is not possible to identify the value added of an ancillary activity because that value added is combined with the value added of the principal or secondary activity.

5.37 When the production of an enterprise takes place in two or more different establishments, certain ancillary activities may be carried out centrally for the benefit of all the establishments collectively. For example, the purchasing, sales, accounts, computing, maintenance or other departments of an enterprise may all be the responsibility of a head office located separately from the establishments in which the principal or secondary activities of the enterprise are carried out. In such a case, the unit is treated as producing services (and exceptionally goods as long as the goods are not incorporated into the products emerging from the principal or secondary activities of the enterprise). The ~~ancillary activities~~ delivered to the other establishments in the enterprise are recorded in the same manner as if they had been purchased from an outside specialist supplier. 


5.38 Very large specialized agencies serving central government as a whole, for example, a very large computer or communications agency, may be so large that it is appropriate to treat them as separate establishments.

5.39 An ancillary activity may grow to the point that it has the capacity to provide services outside the enterprise. For example, a computer processing unit may develop in-house capabilities for which there is an outside demand. When an activity starts to provide

services to outsiders, the part that produces output for sale has to be treated as secondary activity rather than ancillary activity.

The role of ancillary activities in the economic system

- 5.40 The production accounts of the System do not provide comprehensive information about the production of services treated in some cases as ancillary services. It is therefore difficult to obtain information about their role in the economy. For example, it is difficult to know how much output is produced, how many persons are engaged in such activities, how many resources are consumed, etc. This may be

regarded as a serious disadvantage for certain purposes, such as analysing the impact of “information technology” on productivity when the processing and communication of information are typical ancillary activities or when looking at the role of freight transport. For some purposes, a satellite account may be compiled that makes estimates of all activities of a certain type regardless of whether they are ancillary or not. The overall measure of value added does not alter because both output and intermediate consumption increase by the same amount but a more inclusive picture of the role of the activity in the economy can be obtained.  is a discussion on the role of satellite accounts in chapter ????

E. Industries

- 5.41 Industries are defined in the System in the same way as in ISIC: *an industry consists of a group of establishments engaged on the same, or similar, kinds of activity*. At the most detailed level of classification, an industry consists of all the establishments falling within a single Class of ISIC. At higher levels of aggregation corresponding to the Groups, Divisions and, ultimately, Sections of the ISIC, industries consist of groups of establishments engaged on similar types of activities.

1. Market, own account and non-market producers

- 5.42 The term “industry” is not reserved for market producers. An industry, as defined in the ISIC and in the System, consists of a group of establishments engaged on the same type of productive activity, whether the institutional units to which they belong are market producers or not. The distinction between market and other production is a different dimension of production activity. For example, the health industry in a particular country may consist of a group of establishments, some of which are market producers while others are non-market producers. Because the distinction between market and other kinds of production is based on a different criterion from the nature of activity itself, it is possible to cross-classify establishments by type of activity and by

whether they are market producers, non-market producers or produce for own final use.

2. Industries and products

- 5.43 As already mentioned, a one-to-one correspondence does not exist between activities and products and hence between industries and products. Certain activities produce more than one product simultaneously, while the same product may sometimes be produced by using different techniques of production.
- 5.44 When two or more products are produced simultaneously by a single productive activity they are “joint products”. Examples of joint products are meat and hides produced by slaughtering animals or sugar and molasses produced by refining sugar canes. The by-product from one activity may also be produced by other activities, but there are examples of by-products, such as molasses, that are produced exclusively as the by-products of one particular activity.
- 5.45 The relationship between an activity and a product classification is exemplified by that between the ISIC and Central Product Classification (CPC) of the United Nations. The CPC is the classification of products in the System. The CPC is a classification based on the physical characteristics of goods or on the

nature of the services rendered, while the ISIC also takes into account the inputs in the production process and the technology used in the production process. In the development of the CPC, it is intended that each good or service distinguished in the CPC is defined in such a way that it is normally produced by only one activity as defined in ISIC. However, due to different types of criteria employed, this is not always possible. An example would be the product of mushrooms, which can be produced by controlled growing, that is, an activity classified in Agriculture in ISIC, or by simply gathering wild growing mushrooms, an activity classified in Forestry. More detailed national classifications may distinguish different forms of energy production in ISIC, based on different technologies, resulting separate in activities for the operation of hydroelectric power plants, nuclear power plants etc. The output of all these activities, however, would be the single product electricity.

5.46 Conversely, each activity of the ISIC, no matter how narrowly defined, will tend to produce a number of products as defined in the CPC, although they are often clustered within the CPC structure and could be perceived as one 'type' of product. As far as practically possible, an attempt is made to establish a correspondence between the two classifications, by allocating to each category of the CPC a reference to the ISIC class in which the good or service is mainly produced. However, due to the reasons outlined above, this typically does not result in a one-to-one correspondence. The majority of links between ISIC and CPC will tend to be one-to-many links, with a few cases requiring many-to-one links. It is possible to force this correspondence into a stricter relationship by selecting one link out of the many-to-one correspondence. This selection may facilitate data conversion, but is not a real description of the link between the two classifications.


F. Units of homogeneous production

5.47 For purposes of input-output analysis, the optimal situation would be one in which each producer unit were engaged in only a single productive activity so that an industry could be formed by grouping together all the units engaged on a particular type of productive activity without the intrusion of any secondary activities. The desirable unit for purposes of input-output analysis is, therefore, a "unit of homogeneous production", which may be defined as a producer unit in which only a single (non-ancillary) production activity_A is carried out.

5.48 Although the unit of homogeneous production may be the optimal unit for purposes of certain kinds of analysis, particularly input-output analysis, it may not be possible to collect directly from the enterprise or establishment the accounting data corresponding to units of homogeneous production. Such data may have

to be estimated subsequently by transforming the data supplied by enterprises on the basis of various assumptions or hypotheses. Units that are constructed by statistical manipulation of the data collected by the agency are called analytical units.

5.49 If a producer unit carries out a principal activity and also one or more secondary activities, it will be partitioned into the same number of units of homogeneous production. If it is desired to compile production accounts and input-output tables by region, it is necessary to treat units of homogeneous production located in different places as separate units even though they may be engaged in the same activity and belong to the same institutional unit.

5.50  Chapter ??? discusses the estimation of analytical units for use in an input-output context.