

Chapter 9

ILLEGAL PRODUCTION

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9. ILLEGAL PRODUCTION

9.1. Introduction

9.1. As previously noted, the 1993 SNA explicitly states that productive illegal activities should be included in national accounts. There are several reasons for this. The 1993 SNA emphasises the need for overall consistency. “Clearly, the accounts as a whole are liable to be seriously distorted if monetary transactions that in fact take place are excluded.” (SNA 1993: 3.54.) Not taking illegal activities fully into account gives rise to discrepancies in the accounts. The incomes earned from illegal production are largely spent on the purchase of legal goods and services, on the acquisition of legal fixed or financial assets or other legal transactions. Since all these transactions are recorded in the accounts along with those that are financed by incomes from legal activities, there is inevitably a discrepancy between supply and uses for the economy as a whole if the production and imports of illegal goods and services are omitted.

9.2. For the same reasons the ESA 1995 includes illegal production. “All such activities are included even if they are illegal or non-registered at tax, social security, statistical and other public authorities.” (ESA 1995: 3.08). Thus, both the 1993 SNA and ESA 1995 depart from a “moral” point of view in which illegal activities should not be included in GDP, because “representatives of the people have determined such products to be ‘bads’ rather than ‘goods’ with sufficient conviction to outlaw them” (Dennison, 1982).

9.3. In addition to the consistency of the overall system, comparability of national accounts figures between countries and over time is another major reason for the inclusion of illegal activities. Some activities, for example the production and distribution of alcohol, or prostitution, may be illegal in one country and legal in another. Exclusion of illegal production may thus distort international comparisons. Likewise, it will give rise to distortions over time if some activities switch from being illegal to be legal, or conversely. Production and distribution of alcohol during the prohibition period in the USA is an example.

9.4. Production and distribution of illegal drugs is a relatively major economic activity in some countries of Latin America and Asia. Excluding drugs production and distribution from the accounts seriously understates value added in agriculture, manufacturing and domestic and international trade and results in GDP estimates that are grossly understated.

9.5. Another consideration is that much of the value of illegal products – over 90% in the case of some narcotics – exists only because their illegality makes their prices high. According to Dennison (1982) “the value of the quantities of drugs now produced would be of trivial importance in the economy if they were legalised”. This is sometimes used as an argument for excluding drug production and trade from the national accounts. However, following the 1993 SNA, the national accounts should describe the economic environment as it actually is. The economic behaviour of households and enterprises is based on the relative prices and costs actually existing in society. It is not based on a hypothetical situation that would exist without illegal production. Suppose that drugs were legalised and prices subsequently dropped to a third of current prices. This certainly would affect the behaviour of economic actors. The consumption patterns of drugs dealers would (have to) change dramatically due to the decrease in income. On the other hand there might be an increase of the volume of drugs consumed. Simply disregarding illegal production overlooks this reality.

9.6. In countries where the output and value added of illegal productive activities is quantitatively insignificant, it is almost certainly a poor use of resources to try to cover them in the national accounts. Efforts are better directed to reducing the amount of underground, informal sector or own final use household production that are omitted from the GDP. In addition, the methods available to measure illegal activities are still experimental. Indeed, although there seems to be more or less agreement on the correctness, in principle, of including illegal activities, very few countries explicitly include estimates of illegal production in their national accounts figures at the present time. However, this is slowly changing. Measurement obstacles should not stop efforts to move towards the conceptually correct system, and research on finding appropriate estimation methods continues.

9.7. In summary, the intention of this chapter is to provide a starting point for an experimental theoretical and practical investigation of illegal activities. It aims at interpreting and clarifying the SNA 1993 and ESA 1995. It builds on the previous discussion of illegal activities in Section 3.3. Section 9.2 lists and categorises the most significant types of illegal activities; Section 9.3 discusses the conceptual issues concerning the recording of illegal activities within the national accounts; Section 9.4 outlines the data sources and methods for compiling estimates for selected illegal activities; and Section 9.5 explores the issue of double counting.

9.2. Types of Illegal Activities

9.8. Based on Blades (1983), the following general types of illegal production are identified:

- production and distribution of illegal goods, such as banned drugs or pornographic material;
- production of illegal services, such as prostitution (in countries where this is illegal);
- production activities which are usually legal but which become illegal when carried out by unauthorised producers, such as unlicensed medical practices, unlicensed gambling activities, unlicensed production of alcohol; poaching, *e.g.* illegal fishing, hunting, tree cutting;
- production and sale of counterfeited products, such as watches and other products with false trade-marks and unauthorised copies of artistic originals, *e.g.* software, CDs and videos;
- smuggling, in particular of tobacco, weapons, alcohol, food, people, both wholesale and retail;
- fencing (resale) of stolen goods;
- bribery; and
- money laundering.

9.9. The scale and distribution of such activities varies across countries. For example, in the Commonwealth of Independent States, the following illegal activities are of significant size:

- bribery;
- poaching, including fishing, illegal production of caviar and similar sea products, hunting, and logging;
- illegal production of alcoholic beverages which do not meet certain standards;
- provision of medical services by the persons who do not have qualification;
- production of goods whose quality does not meet established standards;
- illegal production of copies of audio and video materials, and software programmes;
- production and distribution of pornographic materials.

9.10. In addition to the activities included in the above lists, there are many other types of illegal production, for example forgery of banknotes, contract murders, espionage, etc. For national accounts purposes, these are generally of minor importance.

9.11. As previously noted in Chapter 3, some illegal activities do not involve mutual agreement, thus are not transactions by definition and are not productive. Examples are theft and robbery, kidnapping, and extortion. However, although not productive, they may cause underestimation of the GDP. For

example, theft by employees results in less output or increased intermediate consumption and thus lower GDP estimated by the production approach.

9.3. Issues in Recording Illegal Activities

9.12. From a conceptual point of view, recording illegal production within the national accounts framework does not pose special problems if the production process resembles the production process for legal activities. This is the case for the production and distribution of illegal goods, services and counterfeit products, for productive activities carried out by unauthorised producers, and for smuggling. For other illegal activities such as theft and fencing, bribery, extortion, and money laundering, there are some difficult conceptual issues, as discussed in the following paragraphs. The 1993 SNA does not give much specific guidance in these cases. However the recording procedures that are proposed follow the general guidelines of the 1993 SNA as closely as possible.

Theft and fencing

9.13. In relation to theft, a distinction can be made between i) theft of capital goods, consumer durables, money or other financial assets, and ii) theft from the inventories of producers. Both are discussed below, together with fencing, an activity related to theft.

9.14. The 1993 SNA (Para. 3.56) states "If thefts...involve significant redistributions... of assets, it is necessary to take them into account... they are treated as *other flows* not as *transactions*". They cannot be treated as transactions because a transaction is defined as "an economic flow that is an interaction between institutional units by mutual agreement" (1993 SNA: 3.12). Theft of capital goods, consumer durables, money or other financial assets often involves significant amounts and in these cases, recording of these activities as another change in the volume of assets (*i.e.*, as a change in the value of assets (or liabilities) that does **not** take place as a result of a transaction) is appropriate.

9.15. Theft from the inventories of producers includes theft from stocks of materials, supplies and finished goods on the one hand, and theft from stocks of goods for resale on the other. In the 1993 SNA, output and intermediate consumption are defined as sales/purchases of goods and services plus/minus the value of changes in inventories. Recurrent losses due to normal rates of wastage, theft and accidental damage are considered as (negative) changes in inventories (1993 SNA: 6.62). As a consequence, normal rates of theft from the stock of finished goods lead to a decrease of output, whereas normal rates of theft from the stock of materials and supplies lead to an increase of intermediate consumption. In both cases, value added decreases accordingly. The same holds for normal rates of theft from stocks of goods for resale. Output and value added of wholesalers and retailers are influenced negatively by theft.

9.16. From the above, it can be concluded that normal rates of theft from inventories of producers are registered neither as a transaction nor as an other flow. Implicitly, they are completely removed from the system of national accounts. Only theft from inventories which exceeds the "normal rates" is included in the 1993 SNA as an other change in the volume of assets (1993 SNA: 12.41). Thus, leaving aside the (negative) consequences of theft from producers' inventories, value added is not affected by theft. No value added is generated; all that is happening is that assets are redistributed.

9.17. This statement does not apply to an activity related to theft, namely trade in stolen goods, which is not explicitly addressed in the 1993 SNA. Trade in stolen goods involves action by two units in mutual agreement, namely the purchase and the subsequent sale of stolen goods by the receiver. Clearly, these actions constitute monetary transactions and should be recorded accordingly. Furthermore, if the units are involved in these activities on a regular scale, value added (trade margin) is generated, as part of distribution of the illegal goods.

9.18. The treatment of theft recommended in the 1993 SNA requires clarification, if not elaboration, in order to take into account the special circumstances in some countries. For example, in some members of the Commonwealth of Independent States there is a widespread practice of illegal appropriation of the output of agricultural co-operatives (collective farms) by their members. This theft occurs on a large

scale and is used to supplement the low compensation of the workers or members of co-operatives. The stolen goods may be sold or used for intermediate or final consumption. In many cases this supplement is an important source of income without which the collective farmers could hardly survive. In these circumstances, consideration must be given to recording the value of the theft as income in kind of employees. If the theft is of materials and supplies, its value should be moved from intermediate consumption to compensation of employees. If the theft is of final products, both output and compensation of employees have to be adjusted upwards.

9.19. In some cases it is difficult to draw a clear distinction between theft and underreporting. For example, in the Russian Federation, the crews of the fishing ships often sell a part of the output abroad (sometimes from ship to ship) and do not show these sales in their records. The income obtained from the sale of this output may be used for a variety of purposes and the expenditure may be measured in the context of estimation of GDP by summing up expenditures on final use. It appears that this type of underreporting is actually very similar to that described in connection with collective farms. The missing production should be estimated and included in the GDP according to the 1993 SNA. Again this suggests recording such theft as income in kind.

Bribery

9.20. Two different kinds of bribery can be distinguished, first, payments linked to the provision of services, and second, payments to persons in privileged positions. In the first case, the payments may be linked to market goods and services or to non-market services. For market goods or services, the bribe usually consists of a supplementary payment above "official" prices. For example, hotel clients are required to bribe the hotel receptionists to confirm their reservations. Examples related to non-market services are payments of (additional) amounts that are required to obtain medical services from publicly financed health care, or to get passports from civil servants. Examples of payments to persons in privileged positions are those made to officials who award contracts to the highest bribing supplier, to politicians to obtain a privileged position as a producer, or to policemen or other government officials who accept bribes in return for not prosecuting the offender.

9.21. An important question, on which the 1993 SNA does not give guidance, is whether or not bribery should be considered as a transaction, or, to put it differently, whether bribery is an interaction between institutional units by mutual agreement. In general, it can be supposed that individuals have a freedom of choice to enter into bribery. The person paying the bribe agrees to pay the (additional) sum of money. In this case, recording as a transaction rather than as another flow is to be preferred.

9.22. A more difficult question is whether bribery should be recorded as part of output and value added, or as an income transfer. If the bribe is linked to the provision of services, recording as part of output seems to be preferable. This is especially true for market goods/services. The official prices plus the bribes should be considered as the genuine market prices, and, from an income point of view, the bribe adds to compensation of employees or mixed income.

9.23. In the case of non-market services, an additional criterion may be needed. If the payment to the civil servant is (implicitly) allowed by government, for example in the case of doctors or other people employed by government who receive only a small official income, or if the bribery is generally accepted as standard practice, then a bribe should be registered as additional compensation of employees. As such, it adds to total output of government. Because sales of government services are affected by the same amount, the final consumption expenditure of government remains unaffected.

9.24. If payments linked to non-market services are not allowed or not publicly accepted or expected, then recording as an income transfer seems to be preferable. The same holds for payments to persons in privileged positions to obtain a contract.

Extortion

9.25. Extortion consists of obligatory payments enforced by violence or blackmail. There is no mutual agreement, and, in line with the 1993 SNA, extortion should not be registered as a transaction. In this

respect, it resembles theft of money (or goods or services) and it should be registered as an other change in the volume of assets.

Money laundering

9.26. Money laundering is here defined as the transfer of money through different bank accounts so that its original source is concealed from the taxation authorities or other regulatory services. There is mutual agreement, at least implicitly, that the transactions should be registered in the system of national accounts. In so far as there is a difference between the value of the illegal cash and the value of the legalised cash, this should be looked upon as a provision of services. Often, the actors such as banks will be unaware of their involvement in money laundering, and the fees that banks charge for transferring money between different accounts should be included in the system of national accounts together with the fees from legal transactions.

Fraud and swindle

9.27. Fraud and swindle are quite different from the other activities mentioned above. Fraud often relates to false claims for social benefits or subsidies by giving incorrect information. The relevant transactions, however, are registered in the system. Here, a breakdown into a legal and an illegal part is needed only for a complete picture of the illegal activities within a certain country. It is not a problem of exhaustiveness of GDP.

9.4. Methods of Observation and Measurement

9.28. By their nature, illegal activities are very difficult to measure. People involved in illegal transactions have obvious reasons to hide their involvement. The more the activities are considered unacceptable by law and by the general public, the more difficult it becomes for conventional data sources to capture them. Thus, surveys and administrative data sources are “subject to particular concerns about their suitability, coverage and reliability” (Groom and Davies, 1998).

9.29. Notwithstanding the obvious difficulties, there are sometimes quite reasonable if unconventional data sources and methods to measure various types of illegal activity. It goes without saying that the quality of these estimates is subject to more discussion than that of estimates for activities that are well covered in regular surveys. In this section, the principal methods and data sources, and some important problems, are discussed in connection with two types of activities that have some impact on the transactions in goods and services and on GDP in nearly all countries, namely drugs and prostitution. Data sources and methods for these activities are illustrative of those available for other types.

9.30. Parts of some illegal activities may be implicitly included in the system of national accounts. A well-known example is prostitution. Income from prostitution may be declared as income from legal “personal care” services and expenditure on prostitution may be declared, but similarly disguised, by the purchaser. However, it seems highly probable that most illegal activities are not included in the conventional data sources used in compiling the national accounts, particularly for those activities that are considered unacceptable by society. Thus, direct methods for compiling estimates of illegal production are to be preferred. In adding these estimates to the conventional estimates there is a danger of double counting, a problem that will be discussed in the next section.

9.31. Probably the most useful approach is to use the basic national accounting identity:

- supply of goods and services (domestic output plus imports) equals use of goods and services (intermediate consumption plus final consumption plus capital formation plus exports).

In addition, estimates of value added resulting from this identity can be confronted with direct observations on income generated from illegal activities.

9.32. For any given illegal activity, data should be collected, as far as possible independently, on each of the three angles of incidence, namely supply, use and generated income. Subsequently, the data can

be confronted and integrated. In many cases, data for one of the angles may be completely absent or very weak. In that case, the identities can be used to compile the missing data.

9.33. In general, police and survey data on criminal activities are the main data sources for the compilation of estimates. Health care institutions and charities may also provide useful information, *e.g.* on the number of addicts in the case of drugs, or the number of prostitutes. Furthermore, information may be derived from more conventional data sources for the compilation of national accounts, *e.g.* labour force surveys and other household surveys. However, serious problems in relation to underreporting, selective non-response, etc. are unavoidable.

9.34. Illegal activities are a phenomenon frequently investigated in depth by universities and research institutes. Although these studies are often not concerned with the money flows involved in the illegal activities, they may provide useful supporting information. The last resort is to conduct a survey focusing on those aspects of illegal production for which it seems feasible to try and collect data.

Drugs

9.35. Directly observed data are usually not available on the production, distribution and consumption of drugs. Special studies by universities and research institutes may contain useful data, *e.g.* on domestically produced drugs. Usually, however, estimates must be based on police data on seizures and estimates of the relevant seizure rates. For domestic consumption, estimates of the number of addicts and average quantities used seem to provide the most reliable data. If the country does not have substantial exports of drugs, the data on supply and use are complete, and can be confronted with each other. In such confrontation, data on seizure rates are to be considered as especially weak. Additional information on these rates, for example obtained by interviewing convicted criminals, may improve the estimates. Moreover, a sensitivity analysis using different assumptions on seizure rates may prove helpful.

9.36. If the country also exports drugs, either domestically produced or imported, the situation becomes much more complicated. Usually, exports can be estimated only as a residual item, *i.e.*, as domestic output plus imports minus consumption minus seizures. As a consequence, the reliability of the estimates depends critically on the quality of the estimated seizure rates. Furthermore, it may be very difficult to establish the residency of the persons controlling the international trade, and therefore to establish the country to which the relevant trade and transport margins have to be allocated.

9.37. As the identity in current prices shows, total domestic output consists of domestically produced drugs (at basic prices) plus trade and transports margins on both domestically produced drugs and imported drugs. The total of this figure can be considered to be the most important item, the distinction between output of domestically produced drugs and margin is less relevant. Total domestic output in current prices equals consumption plus exports minus imports. So, additional data on street prices, import prices and export prices are needed to arrive at an estimate.

9.38. Reasonably good data on street prices are usually available from police sources or research studies. Data on prices of imports and exports are much more difficult to obtain. As in the case of drug purities, one needs additional information on the structure of the drug distribution network. Sometimes, such information may be available from police and/or customs. Information on prices in neighbouring countries may also be applicable. Trade in drugs is internationally organised, and it can be assumed that, leaving aside major differences in distribution channels and in law enforcement practices, import prices will not differ very much between countries.

9.39. To arrive at an estimate of value added, assumptions have to be made on the value of intermediate consumption. Assuming that drugs dealers take care of their own transport, intermediate consumption is rather low in the case of trade in drugs. A higher share of intermediate consumption has to be assumed in the case of drugs production itself. Often, technical coefficients are available for this purpose.

9.40. Dividing the resulting estimates of value added by estimates of the number of people involved in the drugs industry may give an insight into the plausibility of the value-added figures.

9.41. The income generated by illegal drugs transactions is used, sometimes after laundering the money, for final consumption purposes, investment in non-financial and financial assets, etc. It can be assumed that these expenditures on legitimate items will be covered implicitly in the system of national accounts.

Prostitution

9.42. The total supply of prostitution services comprises services produced domestically by residents and by non-residents and imported services, *i.e.*, prostitution services purchased by residents travelling abroad. Information on domestic output of prostitution services can be collected from health care organisations, police or prostitutes' associations. Furthermore, as prostitution is a popular theme for special studies by universities and research institutes, valuable information may be available from such sources.

9.43. Reasonable estimates of the number of prostitutes are usually available from these sources. Multiplication of the number by estimates of the average number of clients and the average price may provide a good first approximation of total domestic supply of prostitution services. Here, a breakdown into different kinds of prostitutes (call girls, prostitutes in nightclubs, "window" prostitutes, prostitutes in massage parlours, escort services, heroin prostitutes, etc.) may be needed, as the prices between these categories differ substantially. The resulting estimate of prostitution services concerns the total of these services, *i.e.*, including procurement, rents of rooms, etc. A breakdown may be possible on the basis of information on the average percentage a prostitute has to pay to the procurer, the average rent, etc. From the supply side, an estimate can also be derived of income generated by prostitutes themselves. On imports of services by residents travelling abroad, reliable data may be very scarce.

9.44. Use of prostitution services mainly consists of final use by residents (final consumption) and use by non-residents (exports). In addition, some expenditures may be paid by enterprises (intermediate consumption). Usually, data on total final use of prostitution services by residents (produced domestically plus imported) can be considered unreliable. Conventional data sources, such as household budget surveys, and also special surveys, almost inevitably contain serious underreporting. Furthermore, hardly any data will be available on expenditures by non-residents. On the other hand, from the income side, it may be possible to collect direct information on the average earnings of prostitutes, if possible broken down by categories. This can then be confronted and integrated with the relevant data from the supply side.

9.45. A problem in the measurement of the domestic output of prostitution services arises from the growing internationalisation of prostitution. One of the consequences is an increasing proportion of non-resident prostitutes staying less than one year in the host country. The services of these prostitutes are not part of domestic output and should be recorded as imports. Conversely, there may be export of services by resident prostitutes staying for short periods in other countries.

9.5. Problems of Double Counting

9.46. The previous section suggested methods to compile explicit estimates for illegal activities. Simply adding these estimates to the national accounts data on legal activities will be problematic if there are reasons to believe that part of illegal production is included implicitly. This issue of possible double counting is addressed in the following paragraphs.

9.47. As regards the output and value added of illegal activities, several possibilities for double counting can be distinguished. First of all, units providing illegal goods and services may be included in the business register. As a consequence, at least part of their output will be covered by enterprise surveys. This is a particular problem in the case of activities on the borderline of legal and illegal, *e.g.* prostitution. Often, the enterprises providing prostitution services are registered under activities such as massage salons, renting of rooms, cafés, film studios, etc.

9.48. Another reason why illegal activities may be included in the national accounts is that the units earning income from these activities want to legitimatise at least part of their earnings. For this purpose,

they may provide data to the statistical office or the tax authorities but report their output and income as coming from different activities than the ones they actually undertake.

9.49. It is also possible that illegal activities are partly included in other data sources such as household budget surveys and tax statistics. For example, payments for prostitution services and bribes that are paid by enterprises may be reported in company accounts under an “other costs” item as part of intermediate consumption. Such an overestimation of legal intermediate consumption could affect GDP in various ways depending on how supply and uses are reconciled in compiling the national accounts.

9.50. Given an explicit estimate of illegal activities, the only one way to avoid double counting output is careful research into the contents of the basic data used for the regular compilation of the national accounts and consistent recording of adjustments for illegal activities in all three approaches to GDP, allowing for possibly different implicit coverage. The enterprises listed in the business register that are most likely to be involved in illegal production should be identified and screened. Those believed to be involved in illegal production activities for which estimates are being separately compiled should be excluded from the regular survey estimates. The same applies to other basic data. Although such research is likely to involve substantial resources, it seems to be the only approach to establishing whether or not the illegal activities have been included implicitly in GDP. Furthermore, the research results may provide valuable information in compiling the illegal production estimates.

9.51. Another, rather different issue of double counting relates to expenditures on legal items by units involved in illegal activities. Here, the use of legal goods and services to produce illegal products may give rise to special problems. For example, the intermediate consumption needed to produce prostitution services is partly accounted for in the present national accounts, being recorded as final consumption of households. Another example is the use of raw materials and semi-manufactured products needed to produce soft drugs. Energy, lamps, fertiliser, seeds, ventilation and nutrition systems are needed to grow cannabis. Some of these outlays are probably included in final consumption or gross fixed capital formation of households or as intermediate consumption of horticulture.

9.52. These double-counting problems result from trying to reconcile supplies and uses when the data used as input to the reconciliation process are not complete, *i.e.*, uses of legal goods and services for the purpose of illegal production are excluded. The resulting discrepancies between supply and use will be allocated to “other uses” categories. The problem is solved automatically if data for the whole economy, *i.e.*, including illegal production, are included in the supply and use framework.