

MACRO-STATISTICAL CHALLENGES: MEASURING ILLEGAL ACTIVITIES IN ROMANIA

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Abstract

This article proposes a sensitive subject for society, but a challenge for macroeconomic statistics under development: the illegal activities. Why it is necessary to be measured, how should be measured and included in statistics, how they impact the macroeconomic indicators, irrespectively Gross domestic product? These are real problems faced by statisticians responsible of official macroeconomic data from world-wide and in particular from European Union countries. It is useful to shed some light on the methodological aspects which underline the solutions offered at the level of Romanian statistics within the general effort to align to European standards. Fortunately, as long as Romanian agriculture is not a supplier of row products for drugs and smuggled alcohol and tobacco, we cannot talk about illegal activities in agriculture.

Keywords

estimates, national accounts, demand method, supply method

1. Why must be measured illegal activities?

At macroeconomic level, national accounts are the figures which reflect the results of activities developed within country and its relations with rest of the world. Indicators as Gross domestic product or Gross national income are intense communicated and debated, becoming political goals. Moreover, the contribution of each Member State to EU Budget is established based on reported GNI figures. Behind these aggregated figures stands a complex national statistical system, governed by standardised rules at European and worldwide level. The new European System of National and Regional Accounts version 2010 (ESA 2010) is applied in European Union countries starting year 2014, being a more improved version of ESA 1995. This system was adopted in the form of a regulation of the European Parliament and of the Council dated 21 May 2013.

ESA95 paragraphs 1.13g and 3.08 require that illegal activities which fulfil the characteristics of an economic transaction should be included in the measure of GDP/GNI. Illegal activities are defined as those transactions which are generally forbidden by national law. The delineation between what is considered legal or illegal can vary between countries. ESA 2010 states in paragraph 1.79 that illegal economic actions shall be considered as transactions when all units involved enter the actions by mutual agreement. Thus, purchases, sales or barter of illegal drugs or stolen property are transactions, while theft is not.

Once the ESA 2010 is implemented in all Member Countries, it is compulsory the inclusion of illegal activities estimates in GDP/GNI. Thus, there were formulated clearer and more specific recommendations for estimation methods, even it is well-known the fact that scarce data sources exist, or does not exist at all. Anyway, due to their significance in the EU the following illegal activities should be included in national accounts estimates:

- Prostitution;
- Production and trafficking of drugs;
- Smuggling of alcohol and tobacco products.

In a broader sense, the estimates of illegal activities are part of the estimates made for non-observed economy, the so-called exhaustiveness adjustments. In this way the coverage of

national accounts, irrespectively GDP/GNI is improved. According to European Commission, there are identified seven types of adjustments to be made, depending on the causes of their non-inclusion in official statistical system (Essential SNA: Building the basics, Eurostat, 2014):

N1: Producer deliberately not registering – underground. Producer deliberately does not register to avoid tax and social security obligations.

N2: Producers deliberately not registering because they are involved in illegal activities; excludes illegal activities by registered legal entities or entrepreneurs that report (or misreport) their activities under legal activity codes.

N3: Producers not required to register (as producers from households producing for their own, only sometimes selling their few products)

N4: Legal persons not surveyed due to various statistical deficiencies;

N5: Registered entrepreneurs not surveyed due to statistical deficiencies or administrative shortcuts;

N6: Producers deliberately misreporting their results from activity (for example, VAT fraud);

N7: Other statistical deficiencies, as: incomplete statistical data, data incorrectly handled, processed by statisticians, etc.

One must observe that this classification does not refer to specific economic activities. Depending on countries, these adjustments could affect all or part of economic activities (according to NACE Rev.2 classification). By example, in Romania, non-observed economy does not affect the agriculture activities, due to the fact that the estimates of agriculture production within statistical system are based on the exhaustive quantitative outcomes, which are valued with the observed relative prices. The quantitative results are validated by using technological information. This is why so important the agricultural census for statistical system, in order to avoid non-exhaustiveness of agricultural data.

The N1-N7 detailed approach should be applied in each Member State, even the types of adjustments could be grouped because it is sometimes difficult to clearly delimit among them.

Anyway, the illegal activities (N2) represent a separate item due to specific observation and compilation.

**Table 1 Estimates of illegal activities by types – as in July 2012
by respondent Member Countries**

Country		Estimates on illegal activities are included in national accounts?		
		<i>Prostitution</i>	<i>Drugs</i>	<i>Smuggling</i>
BE	Belgium	No	No	No
BG	Bulgaria			Da
DK	Denmark	Yes	Yes	Yes
DE	Germany	Yes	No	No
EE	Estonia	Yes	Yes	Yes
FR	France	Yes	No	Yes
IE	Ireland	No	Yes	Yes
IT	Italy	No	No	No
LV	Leetonia	No	No	No
LT	Lithuania	Yes	Yes	Yes
LU	Luxemburg	No	No	No
HU	Hungary	Yes	Yes	No
MT	Malta	No	No	No

Country		Estimates on illegal activities are included in national accounts?		
		<i>Prostitution</i>	<i>Drugs</i>	<i>Smuggling</i>
NL	Netherlands	No	No	No
AT	Austria	Yes	Yes	Yes
PL	Poland	No	No	No
RO	Romania	No	No	No
SI	Slovenia	Yes	Yes	No
SK	Slovakia	Yes	Yes	Yes
FI	Finland	Yes	Yes	Yes
SE	Suede	Yes	Yes	Yes
UK	United Kingdom	No	No	Yes
NO	Norway	Yes	Yes	Yes

Source: „*Illegal activities in National Accounts*” – recommendations of GNI Committee from 10-11 July 2012 - Eurostat/C3/GNIC/230

Until year 2014 the non-inclusion of illegal activities in national accounts was accepted, but starting year 2014 Member States have the obligation to include them in the current compilations. The deviations are sanctioned with reservations applied on data delivered to European Commission (Eurostat), which could be turned into fines. Usually, the estimates for illegal activities are not published, being up to each country to communicate them separately. They are included in the aggregates at the level of activity and product from national accounts, being verified by European Commission experts during their mission of control/audit undertaken regularly in Member Countries.

Table 1 presents the state of inclusion of illegal activities estimates in national accounts of the Member States which have answered to a Eurostat questionnaire. One could observe a variety of implementation stages, which raises the question of data comparability among Countries.

2. Measuring methods

National accountants face three major problems when trying to include illegal activities:

- availability of reliable sources and measurement problems;
- best estimation methods and accuracy of the estimates;
- the risk of double counting of production, expenditure or income when adding explicit estimates of illegal activities (Measuring the Non-observed Economy, OECD, 2002)

For all three forms of illegal activities taken into account there are proposed by European Commission methods based on demand and supply sides. Anyway, for the same activity, the difference between the separate compilations based on demand, irrespectively on supply side could be high, while theoretically the results should converge (Gyomai, van de Ven, 2014). From experience, only one from the two methods could be more reliable, while the other one is recommended to be kept for balancing. In the following we will not enter into details regarding distribution of results by macroeconomic indicators, but we will resume to compilation of production/output (P), its related intermediate consumption (IC) and value added (as difference between output and intermediate consumption) with direct impact in GDP.

2.1. Methods for estimates of prostitution services

It is recommended that a supply method to be used. The demand method is more social sensitive and is based on the sincerity of the consumers answers.

Practical, the supply method is based on the estimation of output of the prostitution services. It is obvious that standard data sources, such as administrative records. However, in most country cases there are ad hoc studies on the subject or irregular reports by police, government institutions or welfare organizations, etc.

First an estimate of the number of prostitutes needs to be done in a suitable breakdown for different types of prostitution (e.g. street, brothel, apartment, club). It could be useful to further differentiate between legal and illegal prostitution, but this is not obligatory. At that point prostitution services clearly performed without mutual agreement should be excluded from the measurement. Estimates on the average number of contacts per prostitute per considered period should be based on expert estimates or specific studies. Average prices for the different types of prostitution must be estimated. Thus, the following equation is obtained :

$$P = Sales = Number\ of\ persons \times Number\ of\ contact\ per\ person \times Price$$

Finally, in order to obtain Value added, estimates on the IC for prostitution activities should be compiled based on possible expenditures with rents for locations where the activity is developed, clothes and other necessary goods.

2.2. Methods for estimates of production and trafficking of drugs.

The production and trafficking of drugs is illegal in all EU/EFTA countries. In general, for the following types of drugs were commonly based the countries analysis: cannabis, ecstasy, amphetamines (speed), cocaine and heroin (opiates).

It is recommended to apply the demand side method. The supply side is too volatile because is based on seized quantities. Estimates must rely on the following sources: administrative information from police, customs or ministries (in form of reports or expert opinions), reports from health/welfare or specific drug institutions, research reports, information from drug assistance or other non-profit organisations, etc.

In terms of production and trafficking of drugs, various situations are known in different countries: in some countries drugs are produced, in other only are consumed and/or are transit countries. For Romania, we cannot talk about the production of drugs in agriculture, even sometimes there are reported some findings of cannabis plantations. Here the method described will address the situation of consumption of drugs and transit countries.

First step in the consumption based approach is the estimate of the quantity of drugs consumed, by the five types: cannabis, ecstasy, amphetamines, cocaine and heroin. This can be split into estimates of the number of users, frequency of use and average quantity consumed per use per year. Depending on the available data sources the estimate should be stratified by type of drug, by age groups, by type of user. Information on average street prices and import prices could be available and could be used for the estimation of the sold drugs for consumption, thus obtaining production.

The share of IC (for transport, storage or production) in output needs to be estimated on basis of expert estimates. The value added is obtained by subtracting from production (sales of drugs) the intermediate consumption.

2.3. Methods for estimates of smuggling tobacco products and alcohol

Smuggling is defined as the illegal import or export of goods which are legal products in themselves. The incentive for smuggling stems from legal settings, i.e. the prohibition or restrictions on trading the good in a country, or unusually high price differences. Also in this case, many situations could be observed in different countries: mainly illegal imports, or could be some illegal production and exports, or could be observed transit trade, etc. Talking about agriculture, In Romania, the home-made alcohol for own use of households, not

intended to be sold, it is not considered illegal production, because of small quantities produced. Anyway, these quantities are already included in national accounts, due to quantitative compilations and use of technological transformation coefficients applied for the agriculture products which could be used to obtain alcohol. Regarding tobacco products, there were not observed in Romania high surfaces of cultivated tobacco plants for producing substantial quantities of tobacco products to be smuggled, so the isolated cases reported by media are not considered significant.

A demand side based approach is recommended for compilation of smuggling of alcohol and tobacco. A supply side based approach, based on quantities seized, is considered as potentially too instable. The smuggled quantities and their relevant prices must be separately estimated. In order to estimate the smuggled quantities it is first necessary to estimate the total consumption by domestic territory, by age, sex, etc. The expert from relevant fields could add valuable judgments in identification of the share of smuggled goods consumed from total consumption.

The import price can be approximated with the average price of the relevant good in the main origin/exporting country or countries or on the basis of domestic prices as reasonable assumptions. The estimate of average sales prices for the smuggled goods can be based on available statistics or expert estimates. Output is the difference between the sales of smuggled goods on domestic market and the import value of these goods. The intermediate consumption for transport, storage, etc. must be further deducted in order to obtain value added.

3. The Romania case: where we are?

Substantial efforts were conducted in Romania in order to fulfil ESA2010 requirements and to start the first estimates of illegal activities. The main problem is represented by the availability of data sources followed by their translation into national accounts concepts.

One could enumerate the main data sources used (according to INS Romania, 2015):

- for trafficking and consumption of drugs: National report on the drug situation in Romania issued by National Anti-Drug Agency of Romania and the European Observer for Drugs and Toxic mania; supplementary information offered by National Anti-Drug Agency of Romania;
- for prostitution: studies made by Romanian Harm Reduction Network (RHRN); The Report of Presidential Commission for Analyzing the Social and Demographic Risks; Press articles;
- for smuggling of tobacco and alcohol: information from Ministry of Administration and Interior – Romanian Border Police; information from National Customs Authority of Ministry of Public Finances; data from Novel Research (private research institute).

Besides this information from official sources, the expert opinion in the field, the statistical estimates and statisticians experience were intensively used in order to answer to methodological recommendations addressed to Member States.

For all three types of illegal activities it was tried to approach both the supply method and demand method in order to test the stability of estimates. For prostitution, the recommended supply method was developed, even the official data were almost inexistent. For estimation of drug trafficking, the recommended demand method was applied based on existing official reports in the field, but also the supply method was tested. For estimation of smuggling of tobacco and alcohol, the recommended demand method was applied, even the supply method was developed based on more available input data but with more volatile results in time series.

For all types of illegal activities, no statistical impact on agriculture was found for Romania (for example due to production of cannabis seeds, tobacco leaves, or alcohol). This is in special due to the exhaustive statistical compilation of production in agricultural activities, based on the methodology adopted according to European Commission requirements.

Conclusions

The estimation methods applied need many improvements because they heavily depend on the input information. Data are often almost inexistent (as in the case of prostitution) or are taken from non-official sources as mass-media (for example, the news on disclosure of a plantation of cannabis). It is necessary to carry on permanent investigation activity to find new information. The priority is given to official information issued by the government institutions involved in the field, followed by the reports published by private and non-profit corporations which are interested by different aspects of illegal activities, in the last instance being used the punctual information from media. The regular publications and information are the highest utility, based on these being possible the development of a time series coherent and comparable. In the absence of such data, the statisticians use any veridical information which could be coherently integrated into developed methods, without alter the observed tendency of these activities.

Thus, the contribution of the experts from outside of statistical system who are involved into defeating and observing the illegal activities could be crucial in the future development process and for the credibility of the estimates obtained for illegal activities in Romania national accounts. Moreover, even at the moment one conclude that some economic activities as agriculture are not subject to the illegality phenomenon, one must track all annual information and see which incidental findings could become regular.

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