



Estimating the non-observed economy in National accounts of Bulgaria

Sofia, 2016



- National Statistical Institute, Non-financial National accounts department, Macroeconomic statistics Directorate is in charge of the official Gross domestic product estimation in Bulgaria. GDP is a macroeconomic indicator that has to measure the value of the production that flows through the economy.
- A part of the production activities is not directly observable and usually not covered through the traditional sources of information - it is referred to as a non-observed economy.



- National accounts experts tries to measure the non-observed economy for an exhaustive description of economic activities. Additional estimates, called exhaustiveness adjustments to the source data are to be implemented.
- NSI uses internationally approved methodology for an exhaustiveness estimation and description called Tabular approach.



- **Tabular approach - exhaustiveness by types:**
 - N1. Enterprises Deliberately Not Registering – Underground
 - N2. Enterprises Deliberately Not Registering – Illegal
 - N3. Enterprises Not Required to Register
 - N4. Enterprises (Legal Persons) Not Surveyed
 - N5. Registered Entrepreneurs Not Surveyed
 - N6. Enterprises Deliberately Misreporting
 - N7. Other Statistical Deficiencies



When measuring GDP various types of adjustments take place.

The main characteristics of the different types of adjustments are as follows:

N1	Producer should have registered (underground producer)	<ul style="list-style-type: none">➤ Producer fails to register in order to avoid tax & social security obligations. These are often small producers with turnovers which exceed the thresholds above which they should register their income.➤ Type N1 does not include all underground activities, some of which are associated with type N6.
N2	Illegal producer that fails to register	<ul style="list-style-type: none">➤ N2 covers activities of producers that avoid registration entirely.➤ N2 excludes illegal activities by registered legal entities or entrepreneurs that report (or misreport) their activities under legal activity codes.
N3	Producer is not obliged to register	<ul style="list-style-type: none">➤ Producer is not required to register because it has no market output. Typically, these are non-market household producers involved in:<ul style="list-style-type: none">- production of goods for own consumption or for own fixed capital formation,- construction of and repairs to dwellings. Producer has some market output but it is below the level at which the producer is expected to register as an entrepreneur.
N4	Registered legal person is not included in statistics	<ul style="list-style-type: none">➤ The legal person may not be included in the statistics for a variety of reasons. For example; the business register is out of date or updating procedures are inadequate; the classification data (activity, size or geographic codes) are incorrect; the legal person is excluded from the survey frame because its size is below a certain threshold; etc.



N5	Registered entrepreneur is not included in statistics	<ul style="list-style-type: none">➤ A registered entrepreneur may not be included in the statistics for many reasons. The administrative source with lists of registered entrepreneurs may not always pass on complete or up to date lists to the statistical office.➤ Even if there is a regular flow of accurate and comprehensive information from the administrative source to the statistical office, the registered entrepreneur may not be included in the business register for several reasons (some examples were given under N4).
N6	Misreporting by the producer	<p>Misreporting means that gross output is under-reported and intermediate consumption is over-reported in order to evade (or reduce) income tax, value added tax or social security contributions. Examples:</p> <ul style="list-style-type: none">- payments in cash without receipts;- VAT fraud.
N7	Statistical deficiencies in the data	<ul style="list-style-type: none">➤ N7 could be of type a) - data that is incomplete, not collected or not directly collectable, and b) - data that is incorrectly handled, processed or compiled by statisticians.➤ Statistical deficiencies: some examples:<ul style="list-style-type: none">- Handling of non-response;- Production for own final use by market producers;- Tips;- Wages & salaries in kind;- Secondary activities.



- NSI elaborate the estimates of all types of exhaustiveness adjustments
 - ✓ N1 Additional income - Above the threshold.
 - ✓ N2 Illegal activities – prostitution, drugs and smuggling of tobacco and alcohol.
 - ✓ N3 Unincorporated activities; Shuttle trade; Individual building of houses;
Additional income - Below the threshold.
 - ✓ N4 National accounts adjustments - Intermediate consumption to Gross output ratio;
Adjustment for units that report quarterly but not annually.
 - ✓ N5 Adjustment for self-employed persons.
 - ✓ N6 Working without contract - Labour Force Survey. VAT fraud.
 - ✓ N7 Income in kind; Private use of business cars; Tips.



- **Methods for measuring non-observed economy**

- ✓ **By type of non-observed economy:**

- Not registered/not surveyed economic units,
- Employment method,
- Quantity (multiplied) by price,
- Grossing-up methods,
- Industry specific surveys,
- Comparison with expenditure data.

- ✓ **Enterprises deliberately misreporting:**

- Use of fiscal data
- Surveys on experts' judgment about misreporting
- Specific adjustment methods – average coefficients of the sector

- ✓ **Other Statistical Deficiencies**

- Use of fiscal data
- Households' budget survey
- Specific surveys



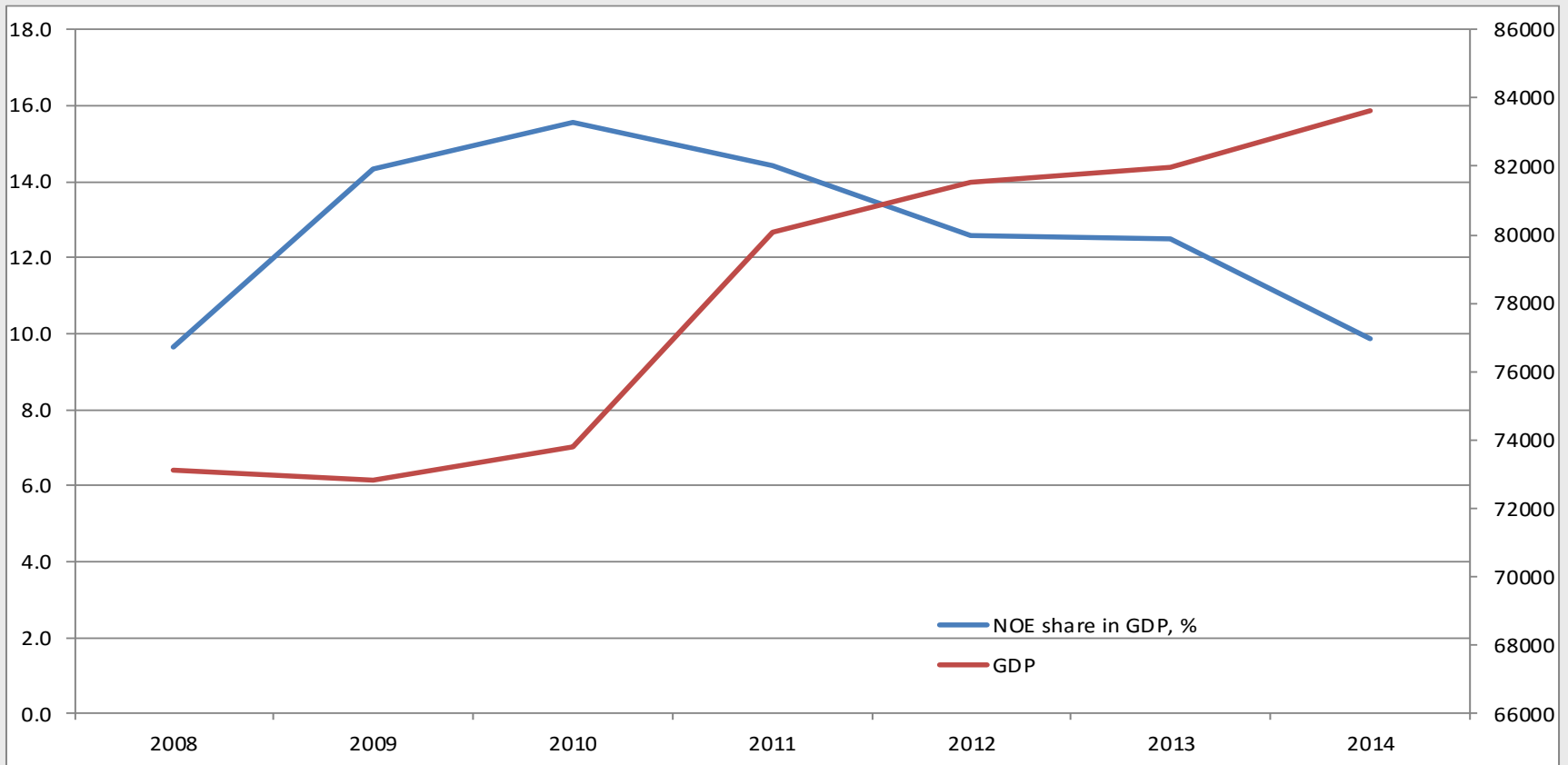
- Estimations by type of non-exhaustiveness, Million BGN

		2008	2009	2010	2011	2012	2013	2014
N1	Producer should have registered (underground producers)	293	298	233	346	262	342	283
N2	Illegal producer that fails to registered	202	207	155	177	191	219	207
N3	Producer is not obliged to registered	1 216	1 264	916	1 130	840	894	704
N4	Registered legal persons is not included in statistics	381	929	1 104	1 081	1 402	1 515	1 443
N5	Registered entrepreneurs is not included in statistics	1 276	1 212	1 197	1 718	1 101	407	289
N6	Mis-reporting by the produser	1 814	4 584	5 780	4 980	4 345	4 699	3 131
N7	Statistical deficiencies in the data	1 861	1 950	2 099	2 129	2 109	2 157	2 181
Total NOE		7 043	10 444	11 484	11 562	10 251	10 233	8 238
GDP		73 095	72 844	73 780	80 100	81 544	81 971	83 612



- Non observed economy as a share of GDP, %

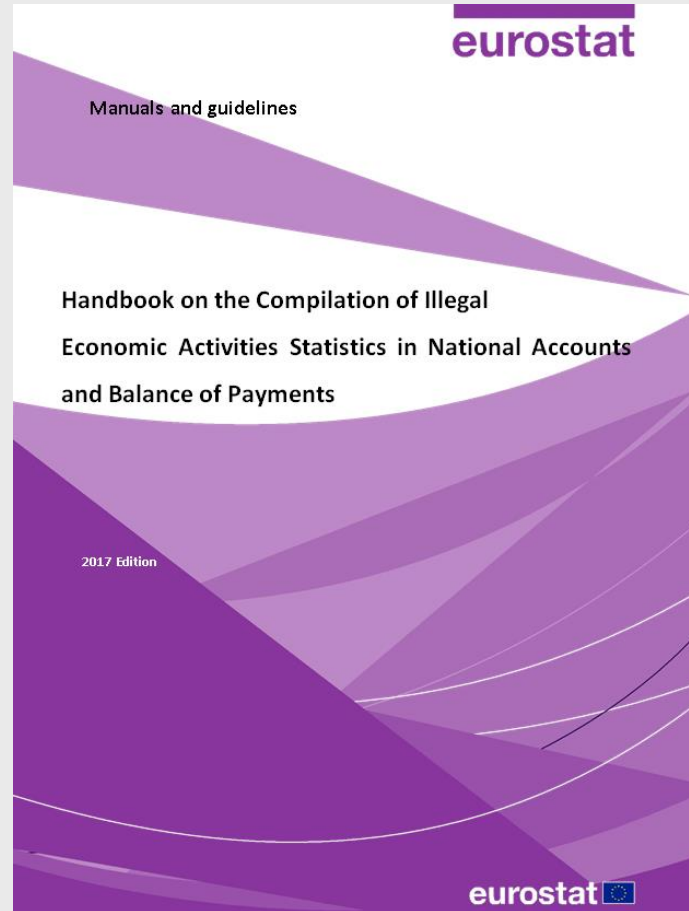
	2008	2009	2010	2011	2012	2013	2014
NOE share in GDP, %	9.6	14.3	15.6	14.4	12.6	12.5	9.9





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- Expected in 2017:





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- Thank you for your attention!

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