

The black economy in the Belgian national accounts¹

2007 figures in national accounts and evaluation of higher estimates suggested by other studies

Principal elements

- In the Belgian national accounts, the amount added for the black economy is 3,7 to 3,9 p.c. of gross domestic product (GDP). National accounts are a complex system in which basic data from virtually all the main dimensions of the economy are coordinated to form a reliable reference framework.
- In the production approach, the official returns submitted by self-employed persons excluding administrators, business managers and non-financial Small and Medium sized Enterprises (SME) are increased by around 25 p.c. However, those production entities represent less than 20 p.c. of total value added.
- The term 'black economy' should not be confused with the term 'tax evasion'. The black economy attributed in the national accounts consists of hidden or partly hidden transactions/activities which should be included in GDP (e.g. transactions which are under-invoiced). In contrast, tax evasion also includes activities which have no impact on GDP themselves but do reduce the tax revenue collected by the government (e.g. VAT merry-go-round).
- According to some studies, the Belgian black economy is around 4 to 5 times bigger than what is included in the national accounts (in the order of EUR 60 billion instead of EUR 13 billion). If such figures were included in the reference framework of the national accounts, it would appear that the administrative data and statistics on which the national accounts are based fail to meet the minimum quality standards.
Integration of those large amounts of the black economy in the national accounts would imply, for example, that the addition for the black economy among self-employed persons and SME should not be 25 p.c. (as now) but 100 p.c., and that household consumption would increase by over 20 p.c.
- Despite the uncertainty over information which could make a further contribution to the exhaustive estimate of GDP, the National Accounts Institute conducts additional research every year to improve the methods of incorporating the results in the official figures via methodological revisions.

¹ Provisional draft document drawn up by the National Bank of Belgium, September 2010

GENERAL

This paper considers the concept of exhaustiveness followed by the importance of the addition for the black economy (per institutional sector and per branch of activity) in the national accounts. The figures given here concern the year 2007 (semi-final estimates as published in September 2009).² Various authors have proposed alternative estimates of the black economy with a range of results. Those alternatives adopt an approach which differs from the national accounts, which estimate economic activity according to an integrating view in terms of concepts and the application of statistical material. One recent alternative approach arrives at a figure of almost EUR 60 billion – i.e. 17,9 p.c. of GDP in 2007- for the black economy in Belgium. This paper examines whether such a figure can be meaningfully inserted in the three national accounts approaches which serve as a reference framework here.

1 EXHAUSTIVENESS

One of the aims of the national accounts is to be exhaustive, which means that they include all transactions taking place in the period considered. The administrative and fiscal returns which form the main basis of the statistical material for compiling the national accounts do not include all transactions.

GDP exhaustiveness is achieved by:

- using a business register to extrapolate administrative data and the results of sampling and other research as accurately as possible to the population;
- applying the ESA 1995 definitions as closely as possible and, more specifically, including the underground economy in the calculation methods.

1.1 LIST OF PRODUCTION UNITS

Every year, a 'List of production units' is compiled for the national accounts, containing all except production units which are not liable for VAT and which have no legal personality and no staff either. The aggregates for the latter units are calculated via a different register, namely the file containing personal income tax returns (used to obtain information regarding the legal professions, medical professions, administrators and business managers). It can therefore be said that the calculation of GDP via the production approach is based on an exhaustive register.

1.2 COMPLIANCE WITH THE ESA 1995 DEFINITIONS

In the production approach, the ESA³ 1995 definitions are applied by making a detailed estimate of all transitional components between the administrative aggregates and the aggregates according to the national accounts concepts. In regard to the issue of exhaustiveness, the most relevant adjustments are the ones for wages in kind, tips and the underground economy.

Wages in kind are goods and services produced or bought in by the employers themselves and made available to employees free of charge or at less than their actual value. Company cars are the prime example. Recording of wages in kind augments value added because the corresponding production is increased (P1+, D1+) or the goods and services bought in by the employers are classed as wages (P2-, D1+).

In a number of branches (hotels and restaurants, taxis) **tips** are taken into account. They are added to the sales. On the income side, these tips come under wages (S11 undertakings) and self-employed persons' incomes (S14 undertakings).

² Revised GDP figures were published in July 2010. However, the revision relating to the year 2007 is only marginal (GDP + EUR 137 million or + 0,04 p.c.).

³ European System of Accounts.

Wages paid in kind and tips are estimated respectively at EUR 1,875 million and EUR 478 million in 2007 (0,7 p.c. of GDP in total).

The **underground economy** comprises:

- the illegal economy, and
- the black economy.

The *illegal economy* comprises activities which fall within the production boundary according to the national accounts concepts but are prohibited by law. So far, these activities (production of and trade in drugs, prostitution, smuggling of alcohol and cigarettes, illegal arms trade etc.) have not been included in the national accounts.⁴

The *black economy* comprises undertakings and activities which are concealed. Although there could be active undertakings which are not registered with the tax and social security authorities, we assume that this is not a widespread phenomenon in Belgium. The fact that employment as derived from the labour force survey (covering households) does not differ significantly from employment according to administrative sources indicates that the phenomenon of hidden undertakings/labour is limited. From a statistical angle, there is therefore no estimated addition for hidden undertakings, though in regard to hidden activities a transitional adjustment is made to the administrative aggregates (sales and purchases of current goods and services in the annual accounts and VAT returns, professional incomes and business expenses in personal income tax returns) to obtain the ESA 1995 aggregates.

The intention is in that way to estimate the black value added. An overall adjustment per SUT branch⁵ is obtained by applying percentages to sales and purchases for S11-SME non-financial corporations⁶ and S14 undertakings (self-employed) separately, in accordance with the NACE classification considered relevant within an SUT branch for a differential adjustment per activity (NACE 3 or NACE 4 digit). Here it is assumed that tax evasion affecting GDP does not arise in the financial sector (S12), Non Profit Institutions Serving Households (NPISH) (S15) and general government (S13).⁷ As in most other European countries, the black economy is most highly developed in the branches which supply most of their output to individuals. This applies, for instance, to the construction industry (especially fitting out and finishing), the retail trade, maintenance and repair of motor vehicles, hotels and restaurants, and other services to individuals.

In practice, the addition for the black economy estimated in the national accounts covers an estimate of non-invoiced sales for goods and services supplied, and the associated inputs bought off the record. Since part of the black activity involves the use of undeclared labour, an estimate is also made for black wages and black employment.

These hidden activities reduce the revenue generated by direct taxes (personal income tax, corporation tax), social security (employees' and employers' contributions) and VAT. That adjustment therefore certainly does not cover the whole of the evasion but only the part relating to under-reporting of incomes earned via a production activity (by corporations and self-employed persons).

Other forms of fraud such as the inflation of professional expenses by employed persons (leading to lower personal income tax revenues), non-declaration of capital incomes or the capital assets themselves (leading to lower revenues from withholding tax on income from movable assets and inheritance taxes), hidden assets held abroad and regularised via a one-off assessment, abuses

⁴ According to provisional estimates, drugs and prostitution come to 0,6 p.c. of GDP in Belgium.

⁵ Classification of branches as used in the Supply and Use Table. This table identifies 120 branches of activity.

⁶ No addition is made in the case of large corporations which file full-format accounts or for Non Profit Institutions (NPI) classified in S11.

⁷ In S13 and S15, value added is equal to the wage bill plus economic depreciation estimated by the Perpetual Inventory Method.

relating to the notional interest allowance, financial engineering with money-box companies or fraudulent use of the system of “finally taxed income” (giving rise to lower corporation tax revenues) etc. are not captured in the national accounts.

2 ESTIMATED ADDITION FOR THE BLACK ECONOMY IN THE NATIONAL ACCOUNTS 1997-2007: SUMMARY

Table 1: Estimated addition for the black economy in the production approach of the national accounts

A. In EUR million	1997	2000	2003	2007
estimated addition to value added for the black economy	7.704	9.282	10.129	12.350
household services	464	502	613	530
total	8.168	9.784	10.742	12.879
GDP	221.202	252.216	275.716	334.948

B. In p.c. of GDP	1997	2000	2003	2007
estimated addition to value added for the black economy	3,48%	3,68%	3,67%	3,69%
household services	0,21%	0,20%	0,22%	0,16%
total	3,69%	3,88%	3,90%	3,85%

The total amount of the estimated addition to value added for the black economy and the estimate for undeclared household help comes to EUR 12.879 million (EUR 12.350 million and EUR 530 million respectively) or 3,85 p.c. of 2007 GDP.

Since the percentages allocated in respect of the black economy have not been revised since the ESA 1995 was introduced 10 years ago, there has been little change in the black economy's share of GDP (3,7 p.c. to 3,9 p.c.). Changes in the weight of the various branches of activity have a small net effect on the total percentage of GDP represented by the black economy. For instance, the success of the service vouchers has led to a decline in the percentage of undeclared household help in recent years.

One might consider evaluating, and if necessary adjusting, the estimated addition ratios as part of the occasional review of the national accounts every five years.

3 ESTIMATED ADDITION FOR THE BLACK ECONOMY IN THE NATIONAL ACCOUNTS 2007: BY SECTOR

Table 2 shows an estimated addition of EUR 8.043 million for undeclared value added in S11 Non-financial corporations (estimated addition of 4,5 p.c.) and EUR 4.837 million (including household help) in S14 Households (estimated addition of almost 11 p.c.). In S12 Financial sector, S13 General government and S15 NPISH there are no estimated additions.

Institutions in the "non profit sector" (hospitals, rest homes, care of the disabled, youth welfare, etc.) are classified in S11 and, like utilities, are unaffected by estimated additions.

Table 2: Scale of the black economy in Belgium according to the national accounts (production approach 2007)

(EUR million)	Value added			hidden/declared (%)
	declared	hidden	total	
Non-financial corporations (S11)				
full-format accounts (excl. energy)	115.050	0	115.050	0,0%
abridged format accounts	38.781	8.043	46.823	20,7%
hospitals	8.305	0	8.305	0,0%
market NPI (a)	8.608	0	8.608	0,0%
electricity, gas and water	6.262	0	6.262	0,0%
<u>total</u>	<u>177.006</u>	<u>8.043</u>	<u>185.048</u>	<u>4,5%</u>
Households (S14)				
residential services	24.226	0	24.226	0,0%
household services	0	530	530	
other (self-employed)	20.093	4.307	24.400	21,4%
administrators and business managers	8.429	0	8.429	0,0%
other self-employed	11.664	4.307	15.971	36,9%
<u>total</u>	<u>44.319</u>	<u>4.837</u>	<u>49.156</u>	<u>10,9%</u>
Financial institutions (S12)				
S121+S122	8.202	0	8.202	
S123+S124	4.652	0	4.652	
S125	3.224	0	3.224	
<u>total</u>	<u>16.078</u>	<u>0</u>	<u>16.078</u>	<u>0,0%</u>
General government (S13)- <u>total</u>	<u>44.974</u>	<u>0</u>	<u>44.974</u>	<u>0,0%</u>
Non-profit institutions serving households (S15) - <u>total</u>	<u>3.007</u>	<u>0</u>	<u>3.007</u>	<u>0,0%</u>
Total economy (S1)	285.384	12.879	298.263	4,5%
Component with estimated addition	50.445	12.879	63.324	25,5%
Component without estimated addition	234.939	0	234.939	0,0%
taxes on products (D21)			39.180	
subsidies on products (D31) (-)			-2.495	
GDP			334.948	
share of hidden value added in GDP		3,8%		

(a) social services (rest homes, care of the handicapped, youth welfare), social secretariats, etc.

The activities of undertakings filing full-format accounts in other branches are also not subject to estimated additions.⁸ It is assumed that those corporations do not minimise their tax base by setting up hidden networks of sales and purchases but instead use legal techniques for optimising their tax bill.

In the case of SME, the estimated additions to the administrative data come to almost 21 p.c.; that is attributable to a few specific branches (cf. point 4).

Half of the value added in S14 Households is represented by housing services. In practice, this concerns the actual rental income on rented housing and the imputed rents on owner-occupied housing. These amounts are not susceptible to fraud for the purpose of the national accounts owing to the "price x quantity approach" used (in this case the average rental value x the housing stock).

⁸ This group of undertakings also includes some very large government-controlled enterprises (SNCB (national railway company), The Post Office, Belgacom, etc.); in their case it is also reasonable to assume that their accounts are exhaustive.

The compensation paid to domestic staff almost all comes under the black economy.⁹ The part of this activity covered by the declared figures (via the system of service vouchers) is found in the branches which use service vouchers to pay employees.

The estimated addition to the value added of self-employed persons is just over 21 p.c.

In this approach, the value added component with an estimated addition is almost EUR 50 billion (value added of non-financial SME and value added of self-employed persons excluding administrators and business managers) out of a total of approximately EUR 285 billion, or 17,6 p.c. However, the estimated addition of EUR 12,9 billion for that relatively small component is rather significant (something over 25 p.c.). If that estimated addition is compared to the total declared value added it comes to only 4,5 p.c. The black economy (the estimated addition) expressed as a percentage of GDP (declared value added + undeclared value added + net taxes on products) came to 3,8 p.c. in 2007.

4 ESTIMATED ADDITION FOR THE BLACK ECONOMY IN THE NATIONAL ACCOUNTS 2007: BY BRANCH OF ACTIVITY

In agriculture, forestry and fishing the estimated addition for the black economy is very low because the output of this sector is estimated on the basis of the price x quantity approach backed by observable recorded prices and production volumes. As already stated, there is also no estimated addition in the energy sector, housing services, financial services, incomes of administrators and business manager, but the whole of household services is regarded as undeclared.

In S14 Households the amounts from the tax returns (VAT in the case of persons liable for VAT, personal income tax for non-VAT-liable persons) are subject to a global estimated addition. The percentage estimated additions are lowest (23 to 33 p.c.) in manufacturing industry, health care and social services, other personal services and transport, storage and communication. In the branches comprising garages and trade, hotels and restaurants, and business services the estimated addition ranges between 41 and 54 p.c., and in construction it is 100 p.c.

In S11 Non-financial corporations the estimated addition for the black economy depends on the share of SME in total value added – there is no estimated addition to the value added of large corporations and market NPI – and on the estimated addition percentages per branch of activity (NACE3 and/or NACE4 level).

The small estimated addition in manufacturing industry (0,6 p.c.) and transport, storage and communication (1,5 p.c.) is due to the predominance of large undertakings in total value added (88 and 83 p.c. respectively). In the other branches, SME are more prevalent and that is reflected in higher estimated addition percentages.

⁹ A small proportion of domestic staff are officially registered with the social security authority, but the figure is taken as zero here.

Table 3.1: Undeclared value added in S14 per branch of activity (2007)

(EUR million)	declared	hidden	total	hidden/ declared
agriculture, forestry and fisheries	1.937	14	1.951	0,7%
manufacturing industry (incl. extraction of minerals)	589	133	722	22,6%
construction	1.260	1.259	2.518	99,9%
garages, wholesale and retail trade	1.896	782	2.678	41,2%
hotels, restaurants and cafés	874	463	1.337	52,9%
transport, storage and communication	222	72	294	32,4%
support services for financial institutions	528	0	528	0,0%
property management and trading	24.276	16	24.292	0,1%
housing services	24.226	0	24.226	0,0%
other	50	16	66	32,1%
renting and business services	10.056	890	10.947	8,9%
business managers and administrators	8.429	0	8.429	0,0%
other	1.627	890	2.517	54,7%
education, health care and social services	2.066	509	2.575	24,6%
other community facilities and socio-cultural and personal services	615	169	784	27,4%
private households with employed persons	0	530	530	-
total	44.319	4.837	49.156	10,9%

Table 3.2: Undeclared value added in S11 per branch of activity (2007)

(EUR million)	declared	hidden	total	hidden/ declared
agriculture, forestry and fisheries	645	0	645	0,0%
manufacturing industry (incl. extraction of minerals)	47.954	312	48.266	0,6%
production and distribution of electricity, gas and water	6.262	0	6.262	0,0%
construction	10.659	2.450	13.109	23,0%
garages, wholesale and retail trade	34.169	2.013	36.183	5,9%
hotels, restaurants and cafés	3.296	223	3.519	6,8%
transport, storage and communication	19.442	287	19.729	1,5%
property management and trading	4.415	634	5.049	14,4%
renting and business services	28.738	1.277	30.016	4,4%
education, health care and social services	16.660	646	17.306	3,9%
other community facilities and socio-cultural and personal services	4.765	201	4.966	4,2%
total	177.006	8.043	185.048	4,5%

Table 3.3: Undeclared value added in S11 + S14 per branch of activity (2007)

(EUR million)	declared	hidden	total	hidden/ declared
agriculture, forestry and fisheries	2.581	14	2.596	0,6%
manufacturing industry (incl. extraction of minerals)	48.543	445	48.988	0,9%
production and distribution of electricity, gas and water	6.262	0	6.262	0,0%
construction	11.918	3.709	15.627	31,1%
garages, wholesale and retail trade	36.066	2.795	38.861	7,8%
hotels, restaurants and cafés	4.170	686	4.856	16,4%
transport, storage and communication	19.665	359	20.023	1,8%
support services for financial institutions	528	0	528	0,0%
property management and trading	28.691	650	29.341	2,3%
housing services	24.226	0	24.226	0,0%
other	4.465	650	5.115	14,6%
renting and business services	38.795	2.167	40.962	5,6%
administrators and business managers	8.429	0	8.429	0,0%
other	30.365	2.167	32.533	7,1%
education, health care and social services	18.726	1.155	19.881	6,2%
other community facilities and socio-cultural and personal services	5.380	370	5.750	6,9%
private households with employed persons	0	530	530	-
total	221.325	12.879	234.204	5,8%

5 CAN A FIGURE OF EUR 60 BILLION IN THE BLACK ECONOMY BE MEANINGFULLY INCORPORATED IN THE NATIONAL ACCOUNTS?

In Belgium, according to some studies, fraud amounts to around EUR 60 billion¹⁰ (= 17,9 p.c. of GDP in 2007). There follows an investigation to find out whether such a figure can be meaningfully included in the production, income and expenditure approaches of the national accounts. It can be useful to perform such simulations within the concept of the national accounts, as the simulation is conducted according to the 3 approaches (production, income and expenditure) of the national accounts which are integrated and which, furthermore, are based on statistical data from various autonomous sets of statistics and administrative sources, making them a highly acceptable reference framework.

5.1 POSSIBLE INCLUSION OF FRAUD AMOUNTING TO EUR 60 BILLION IN THE PRODUCTION APPROACH

Assuming that an estimated addition applies only to the value added of SME engaging in non-financial activities and to that of self-employed persons, the attribution of EUR 60 billion in undeclared value added would imply that their undeclared output is equal to the amount that they officially declare (see table 4).

Table 4: Alternative scenario 1 in which the black economy amounts to EUR 60 billion (*)

(EUR million)	declared	hidden	total	hidden/ declared
Non-financial corporations (S11)				
full-format accounts (excl. energy)	115.050	0	115.050	0,0%
abridged format accounts	38.781	39.377	78.157	101,5%
hospitals	8.305	0	8.305	0,0%
market NPI (a)	8.608	0	8.608	0,0%
electricity, gas and water	6.262	0	6.262	0,0%
<u>total</u>	<u>177.006</u>	<u>39.377</u>	<u>216.382</u>	<u>22,2%</u>
Households (S14)				
residential services	24.226	0	24.226	0,0%
household services	0	530	530	
other (self-employed)	20.093	20.093	40.186	100,0%
administrators and business managers	8.429			
other self-employed	11.664			
<u>total</u>	<u>44.319</u>	<u>20.623</u>	<u>64.942</u>	<u>46,5%</u>
Financial institutions (S12)				
S121+S122	8.202	0	8.202	0,0%
S123+S124	4.652	0	4.652	0,0%
S125	3.224	0	3.224	0,0%
<u>total</u>	<u>16.078</u>	<u>0</u>	<u>16.078</u>	<u>0,0%</u>
General government (S13)- <u>total</u>	<u>44.974</u>	<u>0</u>	<u>44.974</u>	<u>0,0%</u>
Non-profit institutions serving households (S15) - <u>total</u>	<u>3.007</u>	<u>0</u>	<u>3.007</u>	<u>0,0%</u>
Total economy (S1)	285.384	60.000	345.383	21,0%
Component with estimated addition	58.874	60.000	118.874	101,9%
Component without estimated addition, not susceptible to fraud	226.510	0	226.510	0,0%
taxes on products (D21)			39.180	
subsidies on products (D31) (-)			-2.495	
GDP	285.384	60.000	382.068	21,0%
share of undeclared B1g in GDP		15,7%		

(*) undeclared value added is allocated among self-employed persons and SME

(a) social services (rest homes, handicapped sector, youth welfare services), social secretariats, etc.

¹⁰ Schneider F. (2010), The influence of the economic crisis on the underground economy in Germany and the other OECD-countries in 2010: a (further) increase.

The question is what would the impact be if the component with an estimated addition were extended to administrators and business managers in S14 (hypothesis: 15 p.c. fraud and 60 p.c. for other self-employed persons), part of S12 (hypothesis: 20 p.c. in S123 and S124) and large undertakings in S11 (in the case of SME we accept a maximum figure of 40 p.c. fraud). Under that hypothesis, almost EUR 35 billion of the total estimated addition for undeclared value added is attributed to large corporations, so that their value added would have to be increased by 30 p.c. (see table 5). This would therefore imply the systematic establishment of significant undeclared cash circuits (with an impact on GDP) by large undertakings (a significant percentage of sales and purchases of goods and services are not invoiced and/or fictitious purchase invoices are recorded on a large scale).

Under this hypothesis, the certification of the annual accounts by the auditor ("true and fair view") and/or tax audits would be less than ideal.

Table 5: Alternative scenario 2 in which the black economy amounts to EUR 60 billion (*)

(EUR million)	Value added 2007			hidden/ declared
	declared	hidden	total	
Non-financial corporations (S11)				
full-format accounts (excl. energy)	115.050	34.778	149.828	30,2%
abridged format accounts	38.781	15.498	54.278	40,0%
hospitals	8.305	0	8.305	0,0%
market NPI (a)	8.608	0	8.608	0,0%
electricity, gas and water	6.262	0	6.262	0,0%
<u>total</u>	<u>177.006</u>	<u>50.276</u>	<u>227.281</u>	<u>28,4%</u>
Households (S14)				
residential services	24.226	0	24.226	0,0%
household services	0	530	530	
other (self-employed)	20.093	8.265	28.358	41,1%
administrators and business managers	8.429	1.265		15,0%
other self-employed	11.664	7.000		60,0%
<u>total</u>	<u>44.319</u>	<u>8.795</u>	<u>53.114</u>	<u>19,8%</u>
Financial institutions (S12)				
S121+S122	8.202	0	0	0,0%
S123+S124	4.652	930	5.582	20,0%
S125	3.224	0	0	0,0%
<u>total</u>	<u>16.078</u>	<u>930</u>	<u>17.008</u>	<u>5,8%</u>
General government (S13)- <u>total</u>	<u>44.974</u>	<u>0</u>	<u>44.974</u>	<u>0,0%</u>
Non-profit institutions serving households (S15) - <u>total</u>	<u>3.007</u>	<u>0</u>	<u>3.007</u>	<u>0,0%</u>
Total economy (S1)	285.384	60.000	345.384	21,0%
Component with estimated addition	178.576	60.000	238.576	<u>33,6%</u>
Component without estimated addition	106.807	0	106.807	
taxes on products (D21)			39.180	
subsidies on products (D31) (-)			-2.495	
GDP	285.384	60.000	382.068	21,0%
share of undeclared B1g in GDP		15,7%		

(*) Maximum 15 p.c. estimated addition in the case of business managers and administrators and 60 p.c. for other self-employed persons,

40 p.c. for small and medium-sized corporations and 20 p.c. for financial service companies.

The remaining undeclared value added is attributed to large non-financial corporations.

(a) social services (rest homes, handicapped sector, youth welfare services), social secretariats, etc.

The inclusion of an amount of EUR 60 billion in fraud with an impact on GDP (EUR 47 billion more than at present) raises statistical doubts. There is also the question of what its inclusion under income and expenditure would lead to.

5.2 POSSIBLE INCLUSION OF EUR 47 BILLION ADDITIONAL UNDECLARED ACTIVITY IN THE INCOME APPROACH

5.2.1 ALLOCATION BETWEEN WAGES AND OPERATING SURPLUS/MIXED INCOME

At present, the national accounts include EUR 12,9 billion in undeclared value added. To allow for EUR 60 billion would mean that an extra EUR 47,1 billion would have to be allocated between self-employed persons (S14) and corporations (S11/S12). Since only a small minority of self-employed persons employ staff, only a tiny fraction of the undeclared value added is paid out in (undeclared) wages (EUR 0,1 billion). The rest constitutes the undeclared income of self-employed persons. In the case of corporations, declared labour costs represent roughly 55 p.c. of declared value added. Since undeclared wages are paid out net, they can be estimated at 45 p.c. of labour costs. The undeclared wages paid out by corporations can therefore be estimated at around 1/4 of undeclared value added or EUR 10,7 billion (the balance is undeclared operating surplus, most of which presumably ends up with households in the form of 'undeclared dividend').

Table 6: Allocation of an extra EUR 47.1 billion undeclared value added between wages and mixed income/operating surplus

(EUR billion)	B1g	D1	B2g/B3g
S14 Self-employed	4,0	0,1	3,9
S11/S12 Corporations	43,1	10,7	32,4

The allocation of this extra value added between wages and operating surplus/mixed income would result in situation B (relatively small increase in wages and large increase in profits/mixed income. Consequently, the share of profit in GDP (43,4 p.c.) would almost equal the share of wages (46,8 p.c.). The relationship between the two would give a ratio of 1,07, which is very different from the ratios in neighbouring countries (1,24 to 1,47).

Table 7: Income approach after inclusion of EUR 47.1 billion in extra undeclared wages and operating surplus/mixed income (2007)

(EUR million)	Current national accounts (A)	With extra EUR 47,1 billion imputed (B)	Changes in p.c.
compensation of employees	167.900	178.700	6,4%
gross operating surplus/mixed income	129.501	165.822	28,0%
net taxes on production and imports	37.547	37.547	0,0%
GDP	334.948	382.069	14,1%

(share of GDP in %)	A	B	B-A
compensation of employees	50,1%	46,8%	-3,4%
gross operating surplus/mixed income	38,7%	43,4%	4,7%
net taxes on production and imports	11,2%	9,8%	-1,4%
GDP	100,0%	100,0%	0,0%

5.2.2 IMPACT ON THE FINANCING BALANCE OF HOUSEHOLDS

A question which arises is the impact of any substantial underestimate of the undeclared income of households on their financing balance. That balance is estimated autonomously, using a range of source material, in both the real accounts (difference between resources/revenues and expenditure/outgoings) and in the financial accounts (net formation of financial assets).

Economic agents whose resources (revenues) exceed their expenditure (outgoings) will build up financial assets and/or redeem financial liabilities. That is the case of the household sector which records a structural surplus of resources (positive financing balance). Declared and undeclared incomes which individuals earn and which are not consumed or invested turn up in the financial circuit. If the undeclared incomes earned by households – undeclared incomes of self-employed persons, undeclared wages, undeclared operating surplus of SME that accrues to households – are structurally underestimated in the real accounts, one effect would be that the financing balance estimated in the financial accounts (net formation of financial assets) is structurally higher than the financing balance in the real accounts.

In the period 2001-2008 the financial savings ratio (financing balance/gross disposable income) of households averaged 6,6 p.c. This is the part of gross disposable income which is not consumed or invested, and is therefore used to build up net financial assets. That percentage is presumably a lower limit for undeclared incomes because it is not in the interests of those who commit fraud to maintain an extravagant lifestyle (the tax authorities can also make an assessment on the basis of “signs and indications”). A financial savings ratio of 10 p.c. for undeclared incomes is presumably more realistic. If we assume that the annual disposable income of households is structurally underestimated by an average of EUR 44 billion during that period, then the result would be that the annual balance in the financial accounts is EUR 2,9 billion ($44 \times 0,066$) to EUR 4,4 billion ($44 \times 0,1$) higher than in the real accounts, or a cumulative total of between EUR 23 and 35 billion over the period as a whole.

Table 8 shows that the financial savings of individuals estimated in the financial accounts are not systematically higher than the financing balance in the real accounts. There is nothing to support the hypothesis of a substantial underestimate of undeclared incomes in the real accounts as opposed to the financial accounts.

Table 8: Financing balance of individuals (*) according to the real and financial accounts

(EUR billion)	2001	2002	2003	2004	2005	2006	2007	2008	cumulative
Financial accounts	20,9	13,4	11,8	8,5	13,1	9,7	7,0	11,9	96,1
Real accounts	15,4	15,4	13,6	10,4	7,5	9,2	10,7	12,2	94,4
difference	5,5	-2,0	-1,9	-1,9	5,6	0,5	-3,7	-0,3	1,8

(*) Households (S14) and NPISH (S15).

The financing balance of S15 is negligible (+/- EUR 0,1 billion per annum)

FA: net formation of financial assets as estimated in the Financial Accounts

RA: financing surplus (resources less expenditure) in the Real Accounts

5.3 POSSIBLE INCLUSION OF EUR 47 BILLION EXTRA UNDECLARED ACTIVITY IN THE EXPENDITURE APPROACH

Table 9: Expenditure approach before and after inclusion of EUR 47,1 billion extra undeclared activity (2007)

(EUR million)	Current national accounts (A)	Adjustment for undeclared activity	With extra EUR 47.1 billion imputed (B)	Change in p.c.
P3	245.442	37.500	282.942	15,3%
P3S13	74.659	0	74.659	0,0%
P3S14	167.110	37.500	204.610	22,4%
exogenous	62.093	0	62.093	0,0%
other components	105.018	37.500	142.518	35,7%
P3S15	3.673	0	3.673	0,0%
P51	72.753	2.500	75.253	3,4%
P51S11	43.420	1.000	44.420	2,3%
P51S12	2.609	0	2.609	0,0%
P51S13	5.384	0	5.384	0,0%
P51S14	20.814	1.500	22.314	7,2%
investments of self-employed persons (incl. original)	2.459	0	2.459	0,0%
registration fees	3.245	0	3.245	0,0%
investments in residential property	15.110	1.500	16.610	9,9%
P51S15	526	0	526	0,0%
P52	3.848	621	4.469	16,1%
P61	223.489	2.500	225.989	1,1%
P62	55.947	1.000	56.947	1,8%
P71	218.153	-2.000	216.153	-0,9%
P72	48.379	-1.000	47.379	-2,1%
P6-P7	12.905	6.500	19.405	50,4%
GDP	334.948	47.121	382.069	14,1%
with estimated addition	186.004	47.121	233.125	25,3%
without estimated addition (P3S13+P3S15+P51S12+P51S13+P51S15+partP3S14)	148.944	0	148.944	0,0%

As in the production approach, a large part (around 45 p.c.) of the expenditure approach is not susceptible to fraud

- government spending (consumption expenditure and investment: P3S13+P51S13);
- consumption expenditure and investment of NPI: P3S15+P51S15;
- investments in the financial sector (we have exhaustive information on this);
- a large part (37 p.c.) of the consumption expenditure of households.¹¹

Any estimated additions would therefore have to be made in the component of household consumption susceptible to fraud, net exports and investments. The following hypothetical figures are purely an illustration for the purpose of showing the possible consequences of the additional attribution of EUR 47,1 billion:

- net exports are currently underestimated by 50 p.c. (there are no practical indications that this is so);
- the price level of new housing is underestimated by 10 p.c. (there are no practical indications that this is so);

¹¹ The expenditure components not susceptible to fraud on the production side (actual and imputed rents, expenditure on water, electricity and gas, expenditure on hospitals and social services, insurance and financial services) or those estimated via administrative information which is considered reliable (purchase of private vehicles, postal services, education).

- changes in stocks are underestimated by EUR 0,6 billion (there are no practical indications that this is so);
- sales of existing investment goods in S11 are overestimated by EUR 1 billion (there are no practical indications that this is so). There is no reason to assume that the acquisitions of fixed assets in the administrative returns (annual accounts and VAT) are underestimated because they form the basis for determining depreciation for tax purposes.

Under these hypotheses, the *total* consumption expenditure of households would have to be increased by around 22 p.c.; since only the component with an estimated addition qualifies, the estimated addition relating to that element would ultimately come to 36 p.c. The household budget survey is the principal source used for estimating this element of household consumption. The expenditure which households report in that survey relates to both the official and the undeclared circuit for purchases of goods and services, and that expenditure is financed both out of officially declared incomes and out of incomes earned on the side. There is therefore no reason to assume that the total consumption expenditure of households which can be deduced from the household budget survey is structurally distorted (underestimated) as a result of fraud.

The inclusion of an extra EUR 47 billion in fraud (with an impact on GDP) would produce some very surprising results in the expenditure approach: the impact on private consumption is very striking and raises questions of plausibility.

Table 10: Synthetic expenditure approach before and after inclusion of EUR 47,1 billion extra for undeclared activity 2007

(EUR million)	Current national accounts (A)	With extra EUR 47,1 billion imputed (B)	B/A
government consumption	74.659	74.659	0,0%
consumption expenditure of individuals (S14 and S15)	170.784	208.284	22,0%
government investment	5.384	5.384	0,0%
other investment in fixed assets	67.369	69.869	3,7%
change in stocks	3.848	4.469	16,1%
net exports	12.905	19.405	50,4%
GDP	334.948	382.069	14,1%
(percentage of GDP)	A	B	B-A
government consumption	22,3%	19,5%	-2,7%
consumption expenditure of individuals (S14 and S15)	51,0%	54,5%	3,5%
government investment	1,6%	1,4%	-0,2%
other investment in fixed assets	20,1%	18,3%	-1,8%
change in stocks	1,1%	1,2%	0,0%
net exports	3,9%	5,1%	1,2%
GDP	100,0%	100,0%	0,0%

6 THE SIZE OF THE BLACK ECONOMY ACCORDING TO THE NATIONAL ACCOUNTS AND ACCORDING TO F. SCHNEIDER

The EU Member States are required to give a detailed description of the sources and methods used to estimate GDP and gross national income. On that basis it is possible to deduce the estimated addition which some of them make for the black economy. F. Schneider also publishes estimates of the size of the "shadow economy" in various OECD countries.

The table below compares these figures for a number of countries.

Table 11: Estimate of the black economy

(in p.c. of GDP)	National	Schneider (b)		
	Accounts (a)	1999-2000	2008-2009 ¹	2010 ¹
Belgium	3,9	22,2	17,7	17,9
Austria	approx. 3	9,8	8,3	8,7
Denmark	0,8	18,0	14,1	14,4
France	3,4	15,2	11,4	11,7
Norway	2,4	19,1	15,0	15,4
Netherlands	2 to 3	13,1	9,9	10,3
Slovenia	6,2	n.b.	n.b.	n.b.
Czech Republic	6,9	n.b.	n.b.	n.b.
Estonia	7,4	n.b.	n.b.	n.b.
Latvia	10,1	n.b.	n.b.	n.b.
Poland	12,1	n.b.	n.b.	n.b.
Italy	n.b.	27,1	21,7	22,2
Germany	n.b.	16,0	14,4	14,7
OECD (c)	n.b.	16,8	13,6	14,0

¹ Provisional figures

- (a) Amounts which can be deduced from GNI records of the various EU Member States. Mainly relating to the period 2001-2004. Hidden undertakings plus hidden activities (excl. illegal economy).
- (b) Schneider F. (2010), The influence of the economic crisis on the underground economy in Germany and the other OECD-countries in 2010: a (further) increase.
- (c) Unweighted average for 21 OECD countries.

The black economy figures according to the national accounts are between 1 and 4 p.c. for the old EU Member States; that is well below the figures given by F. Schneider (10 to 20 p.c. in about 2000). The size of the black economy in the new EU Member States – for which Schneider has not made an estimate – is probably considerably greater than in the old EU Member States (6 to 12 p.c.). The estimated addition relating purely to unregistered (hidden) undertakings is between 4 and 6 p.c. in Estonia, Latvia and Poland.

The black economy seems to have declined in the past 10 years, according to F. Schneider, but has begun expanding again in 2010.

7 CONCLUSION

By definition, the national accounts can only allow for fraud with an impact on GDP. Other fraud, which may also result in reduced tax revenues, is unknown.

Fraud with an impact on GDP is estimated by the national accounts at EUR 12,9 billion, or 3,8 p.c. of GDP. That approach makes an estimated addition (depending on the sector and branch of activity) for corporations with limited annual accounts and for self-employed persons (except administrators and business managers).

A figure of EUR 60 billion for fraud in Belgium is also suggested (source: F. Schneider). Such a high figure for the black economy with an impact on GDP is hard to reconcile with the system of national accounts which, as a complex system, can be taken as a benchmark:

- this figure implies undeclared activities which are equal to the official activities of self-employed persons and SME or, if the undeclared activity among those producers is kept to more realistic proportions, very significant fraud circuits among large undertakings (systematic and significant under-reporting of value added);
- the profit share would be almost as large as the wage share;
- consumption expenditure of households would be structurally much higher.

Moreover, the exogenous estimate of the net formation of financial assets by households in the financial accounts simply does not indicate any divergence from the financing balance of households according to the real accounts.

If the black economy were to represent 18 p.c. of GDP (or EUR 60 billion), the link between the administrative, fiscal and statistical sources (annual accounts, tax returns, social security declarations, foreign trade statistics and balance of payments, household budget survey, etc.) and economic reality would be totally broken. The figure of EUR 12,9 billion (2007) in the Belgian national accounts is based on detailed estimated addition ratios per institutional sector and per branch of activity which have remained unchanged for the past 10 years.

Annex: ESA 1995 classificationsSectors

S11	Non-financial corporations
S12	Financial corporations
S121	<i>Central bank</i>
S122	<i>Other monetary financial institutions</i>
S123	<i>Other financial intermediaries except insurance corporations and pension funds</i>
S124	<i>Financial auxiliaries</i>
S125	<i>Insurance institutions and pension funds</i>
S13	General government
S14	Households
S15	Non-profit institutions serving households

Transactions

P1	production
P2	intermediate consumption
P3	consumption expenditure
P5	Investments (gross)
P51	<i>Gross fixed capital formation</i>
P52	<i>Changes in inventories</i>
P6	exports of goods and services
P61	<i>exports of goods</i>
P62	<i>exports of services</i>
P7	imports of goods and services
P71	<i>imports of goods</i>
P72	<i>imports of services</i>
D1	compensation of employees

Balances

B1g	value added (gross)
B2g	operating surplus (gross) (corporations)
B3g	mixed income (gross) (self-employed persons)