

Structure of public revenues

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1. Optimum level and structure of public revenues: a few considerations

1.1 Level

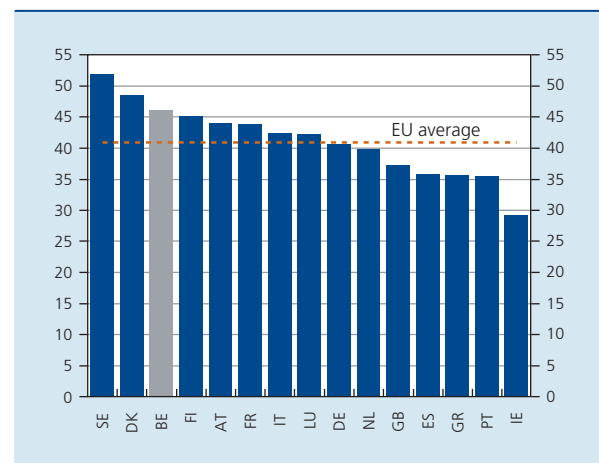
From the point of view of economic growth, public revenue and expenditure have opposing effects.

Taxes and social security contributions exert a predominantly negative influence on overall economic results, in that they interfere with market mechanisms and decisions on employment, investment, consumption and savings, and curb business initiative.

On the other hand, some public spending (on infrastructure, education, research and development, for example) increases the productivity of the economy and is therefore essential to the achievement of satisfactory economic growth. However, there is less of a consensus on the favourable effect on growth of the other spending (mainly social transfers): some people consider that this effect exists, while others take the view that it does not, and that such spending tends to be motivated by social and political objectives (such as fair distribution of income, a peaceful society, welfare). Finally, it is obvious that interest charges can be regarded as non-productive expenditure, since they make no contribution at all to the determinants of economic growth (such as the deployment of labour and capital, efficiency, technological progress and standards of education).

On the basis of these considerations, it is generally acknowledged that if public spending remains below a certain level and essentially takes the form of clearly productive expenditure, its beneficial effects offset the adverse impact of taxation. Beyond a certain level, the strictly economic benefits of further government intervention are smaller, more uncertain or more debatable, so that there is less unanimity to state that the benefits outweigh the drawbacks of higher taxes. Similarly, empirical research sheds no clear light on a possible link between the level of the public budget and the strength of economic growth.

CHART 1 FISCAL AND PARAFISCAL LEVIES
 (Percentages of GDP, 2003)



Source: EC.

(1) The authors would like to thank G. Langenus for his contribution.

Be that as it may, within the European Union⁽¹⁾ there are wide variations in the burden of fiscal and parafiscal levies, ranging from over 50 p.c. of GDP in Sweden to around 35 p.c. of GDP in the United Kingdom, Spain, Greece and Portugal, and even less than 30 p.c. of GDP in Ireland. With a figure of 46.6 p.c., Belgium is among the group of countries where the burden of fiscal and parafiscal levies is clearly above the average for the EU (40.9 p.c.).

1.2 Structure

Leaving aside issues concerning the optimum size of the public sector, one might wonder in what way a given desirable level of public spending can best be financed, how the necessary levies should be distributed over labour, consumption, capital or other tax bases, or in other words, what is the public revenue structure that has the least adverse impact on growth. Just as there is no consensus on the optimum size of the public sector, so there is debate over the optimum composition of public revenues. Without attempting to give an exhaustive account, we can mention the following guidelines.

First, it seems appropriate to distribute the burden of taxation as evenly as possible over the various tax bases, as the loss of efficiency in the allocation of resources caused by the disruption of market mechanisms is more than proportionate to the rate of tax.

Next, a tax system which encourages growth must minimise the disincentive to use the available factors of production. For example, where the labour supply is concerned, there must be sufficient financial incentives for working (employment rate), for doing more work (e.g. full-time rather than part-time), and for working more intensively and productively (e.g. by in-service training). These financial incentives will be all the greater if the worker keeps, in net terms, a larger share of the fruits of his additional labour (or increased productivity), i.e. if the marginal rates are lower. In this connection, it is also necessary to take account of the amount and duration of replacement benefits, as these can create unemployment traps.

Furthermore, the government's freedom of action in levying taxes is often limited by the great mobility of certain tax bases. This primarily concerns business activity, incomes from movable property and – to an increasing extent – skilled labour. Individually, the government of a country often cannot tax these sources at the desirable level (e.g. according to the said need for a balanced distribution of the tax burden), owing to the risk that these tax bases may be transferred to economies where the tax burden will be lower. In that context, there appears to be

a need for some international coordination or harmonisation of tax systems.

Finally, it is clear that shifts in the composition of public revenues generally have both advantages and disadvantages which need to be assessed, and the end result may depend very much on the reactions of the economic agents.

Thus, a shift from taxes on labour to taxes on consumption, for example, should encourage employment, as taxes on labour may depress supply and demand on the labour market, whereas a tax on consumption does not, in principle, affect the employment content of production, and is borne not only by those in work but by the population as a whole. Moreover, labour taxes concern only national production, whereas consumption taxes affect both home-produced goods and imports.

These advantages of a shift from taxes on labour to taxes on consumption are entirely valid only in a theoretical world where, apart from the altered composition of public revenues, everything else remains unchanged. In reality, that is never the case, and tax changes very often trigger reactions and indirect effects which are at odds with the expected positive effect, and may even negate it altogether.

The effect of a shift in taxation was demonstrated empirically in a recent Working Paper⁽²⁾ published by the Bank.

That study simulates the effect of a linear 5 p.c. reduction⁽³⁾ in the implicit rate of employers' contributions, offset by an increase in the VAT rate. The scale of this measure is such that its influence can be simulated by means of an econometric model based on observations of periods when such changes took place. For Belgium, such a simulation gives an increase in employment (after 4 years) of 8,500 units, as the reduction in social security contributions lowers the cost of labour both in relation to capital and in comparison with other countries. In an open economy, this positive effect outweighs the negative influence of the contraction in domestic demand caused by the loss of purchasing power of individuals (following the rise in consumer prices caused by the higher rate of VAT)⁽⁴⁾.

(1) For statistical reasons, only the Member States prior to May 2004.

(2) K. Burggraeve and Ph. Du Caju (March 2003), "The labour market and fiscal impact of labour tax reductions", Working Paper, National Bank of Belgium – Research, No. 36.

(3) Applied to the current rate, this corresponds to a reduction of around 1.3 percentage points.

(4) This simulation is based on the assumption that the reduction in charges is linear, i.e., the same for all levels of pay. If the reduction in charges is granted to certain categories, such as the low-skilled, it may have a considerably greater positive impact on employment. (P. Stockman (December 2001), "General and selective wage cost reduction policies in a model with heterogeneous labour", Federal Planning Bureau, Working papers).

However, that favourable impact of a shift in taxation diminishes or even disappears in the event of reactions and indirect effects.

- a. If the rise in consumer prices prompts a corresponding increase in gross wages – which happens automatically in the case of indexation – part of the initial advantage will be lost and the rise in employment shown by the simulation exercise will be only 3,300 units (after four years).
- b. Furthermore, if – on the occasion of wage bargaining – the reduction in labour costs (resulting from the cut in employers’ contributions) is used to finance real wage increases, so that labour costs ultimately exceed their pre-reform level, there would actually be job losses totalling 6,100.

It is therefore clear that a shift in the burden of taxes (and para-fiscal charges) from labour to consumption is beneficial only in so far as these secondary effects are limited. The best conditions for success exist where the consumer price increases resulting from higher taxes on consumption do not give rise directly to wage indexation,⁽¹⁾ and the reduction in employers’ contributions does not lead to real wage increases.

A shift in taxation is therefore no panacea. It can only have a substantial impact on employment and growth if there is proper consultation between the government and the social partners.

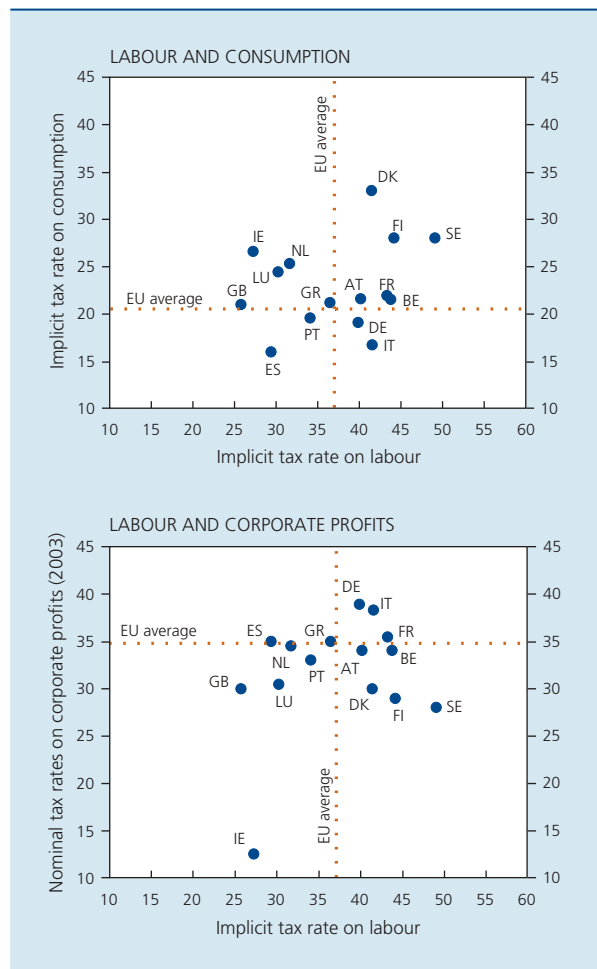
In the event of a major shift from labour taxes to consumption taxes, it is also necessary to take account of the fact that consumption taxes generally exert a much more direct effect on inflation than labour taxes, and that they increase income inequality. The highest incomes are in fact relatively less affected, since the average rate of consumption declines as income increases. However, this last objection is not insurmountable since the unwelcome effects of a rise in indirect taxation on the distribution of incomes can, possibly, be reduced or cancelled out by compensatory measures in respect of personal income tax and/or social security. Moreover, the regressive nature of consumption taxes can be attenuated in two ways: by higher rates on luxury goods (e.g. the road fund tax, which increases sharply with the power of the vehicle) and by charging lower rates on essential commodities (such as food).

2. International comparison of the structure of taxation

The following comparison is based mainly on recent studies conducted by the European Commission⁽²⁾, in which the various types of tax are expressed as a percentage of the tax base according to the national accounts approach.

In the EU, the implicit tax rate on labour is, on average, far greater than that on consumption, at 37 p.c. against 20.4 p.c.; this situation prevails in all Member States except Ireland. In relation to the European average, however, each country places different emphasis on one form of taxation or the other: one group, consisting of the Scandinavian countries, features a high level of taxation on both sources, in contrast to Spain which has relatively low rates of tax in both cases. In other countries, the bias

CHART 2 IMPLICIT TAX RATES ON VARIOUS TAX BASES
(Percentages of the tax base, 2001, unless otherwise stated)



Sources: EC, OECD.

(1) In Belgium, this applies to products which are excluded from the health index, namely tobacco, alcoholic beverages, benzine and diesel.

(2) EC (2003), "Structures of the taxation systems in the European Union".

in favour of one form of taxation is more marked: in Italy, labour is subject to above-average rates of tax, while taxes on consumption are relatively low; on the other hand, in Ireland and the Netherlands, taxation is concentrated to a relatively greater degree on consumption. Finally, Belgium and France are in an intermediate position: taxes on labour are considerably higher than the average, whereas the burden of taxes on consumer spending is close to the European average.

In Belgium, however, taxes on labour incomes have been falling since 2001, following the decline in personal income tax and social security contributions, and it was recently decided to increase certain indirect taxes. The burden of taxation has therefore shifted slightly towards consumption, and the concentration of the burden on labour has been somewhat tempered.

With the exception of Ireland, where the figure was only 12.5 p.c. in 2003, the nominal rate of corporation tax in most countries is fairly concentrated around the average level of 35 p.c., 2 points below the implicit rate of tax on labour. There is some correlation between the level of these two rates, except in the Scandinavian countries which, while imposing substantially higher labour taxes than the European average, have nominal rates of corporation tax which are decidedly lower than elsewhere.

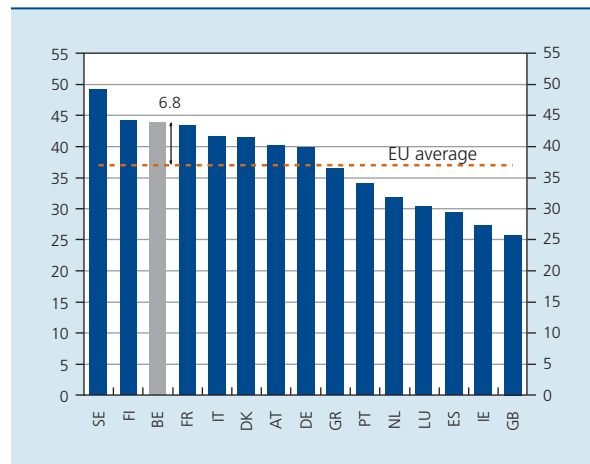
3. Taxes on labour incomes

3.1 Macro-economic implicit rate

In 2001, the latest year for which data are available, the implicit tax rate on wages⁽¹⁾ – calculated by the European Commission on the basis of the national accounts – was 6.8 percentage points above the EU average in Belgium, practically equalling the level in France and Finland, around 5 percentage points lower than in Sweden, but higher than the figure recorded in other countries, often to a very substantial degree⁽²⁾.

As already stated, levies on labour incomes in Belgium have declined since 2001 as a result of the cuts in personal income tax and social security contributions.

CHART 3 IMPLICIT TAX RATES ON WAGES
(Percentages, 2001)



Source: EC.

3.2 Micro-economic approach: average rates and marginal rates

To gain a fuller picture of the levies on labour incomes, it is worthwhile supplementing the analysis based on macro-economic data with an examination based on microeconomic data collected by the OECD⁽³⁾. This second source calculates the average and marginal rates for various levels of income.

The picture is comparable to that seen at aggregate level, in that Belgium practically always has the highest average rate for an unmarried employee with no children, even in the case of the lowest incomes. The rate is in fact already close to 50 p.c. for an income equal to two-thirds of the average production worker's wages, and the difference in relation to the European average is 11 percentage points. All countries have progressive systems, since the average rate increases everywhere with income. Belgium has a relatively steeper progression, as the difference in relation to the European average widens: at the level of the average wage it is over 12 percentage points, rising to almost 14 points once gross pay totals 167 p.c. of the average production worker's wages.

The countries with a high average rate often also have high marginal rates. That is particularly true in Belgium where, whatever the level of income, they are always the highest for any EU country, already exceeding 65 p.c. in the case of low and average incomes and reaching 70 p.c. for high incomes. The difference in relation to the European average ranges between 14 and 20 percentage points.

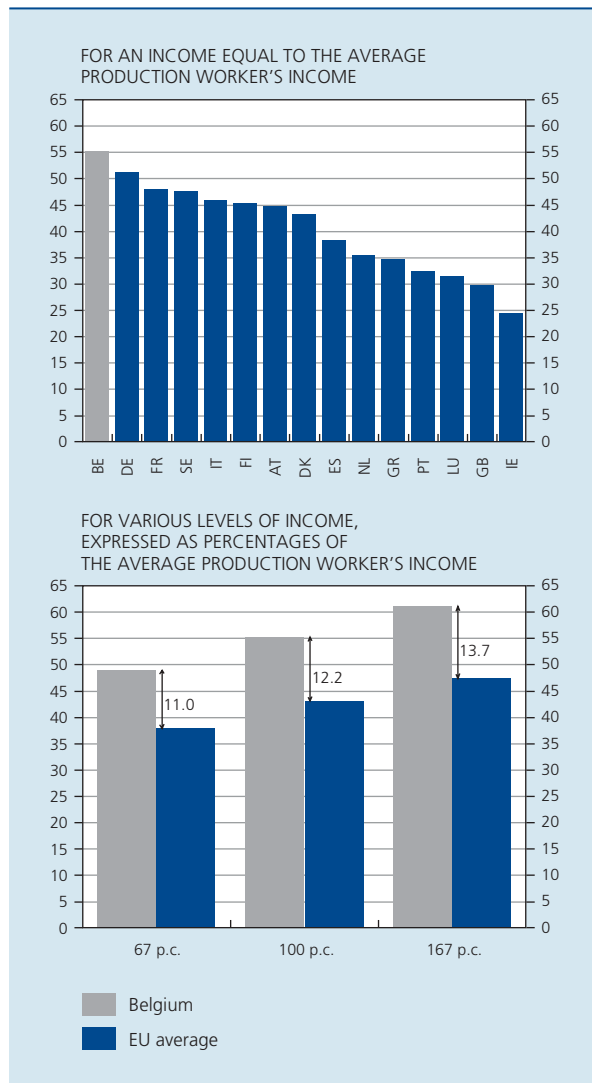
(1) The implicit tax rate on wages is defined as all charges levied on incomes from paid employment and paid over to the government (taxes and actual social security contributions paid by employers and employees) divided by the wage bill.

(2) The relatively low level of this rate in the Netherlands is due to the fact that some of the social security contributions are paid to entities which are not included in the general government sector.

(3) OECD (2003) "Taxing wages 2001-02".

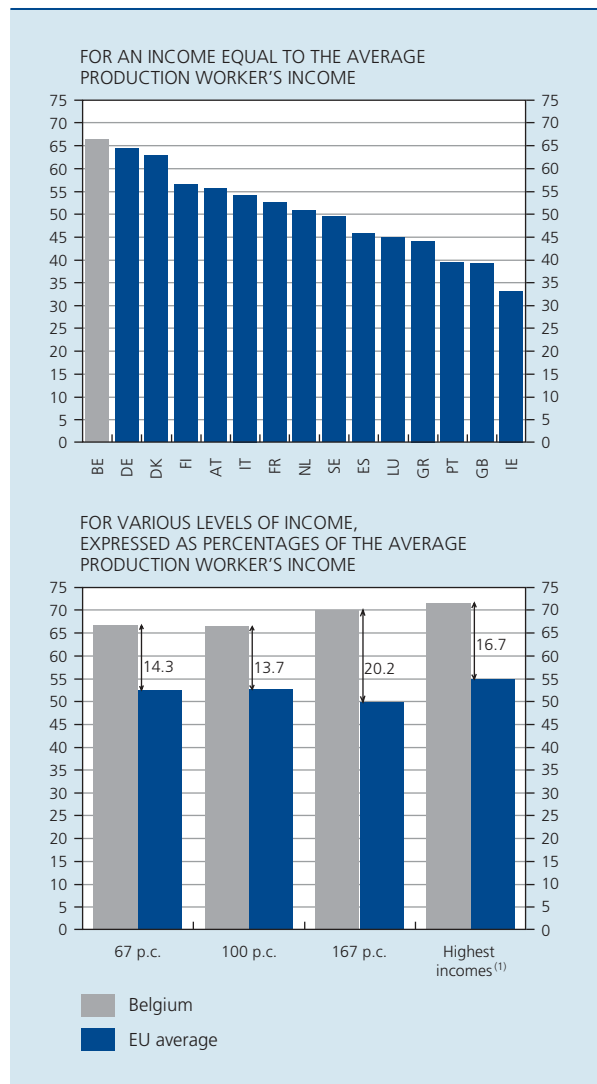
The level of these marginal rates of fiscal and parafiscal levies depends on the marginal rates of personal income tax (plus additional levies, such as regional and local taxes, if any) and the rates of social security contributions. For the latter, many countries have an income ceiling above which the levy (or part of it) becomes zero. That is not the case in Belgium, placing the country at a disadvantage in regard to high incomes.

CHART 4 AVERAGE RATES OF FISCAL AND PARAFISCAL LEVIES ON LABOUR FOR AN UNMARRIED EMPLOYEE WITH NO CHILDREN
(Percentages of labour costs, 2002)



Source : OECD.

CHART 5 MARGINAL RATES OF FISCAL AND PARAFISCAL LEVIES ON LABOUR FOR AN UNMARRIED EMPLOYEE WITH NO CHILDREN
(Percentages of labour costs, 2002)



Source : OECD.

(1) These are the rates applicable to the highest income bracket, for which the threshold varies from one country to another.

3.3 Structure of the levies on labour incomes

As already mentioned in 3.1, the macroeconomic data reveal that Belgium has a high implicit tax rate on income from employment, and that undeniably has an adverse impact on economic growth since it depresses supply and demand on the labour market and thus discourages new initiatives.

Apart from the level of the implicit burden, the composition or structure of the burden is probably also of great significance here. The level of the implicit tax rate can be regarded as resulting partly from the level of the marginal rates applicable to the various income brackets and partly from all the other determinants, such as tax expenditure – e.g. for the acquisition and renovation of property, long-term savings or for family reasons – the level of the tax-free allowance and the allowance for business expenses.

From the point of view of economic growth, the level of the marginal rates undoubtedly plays a key role: these rates in fact determine the net advantage for taxpayers in performing additional work. As shown in 3.2, around two-thirds of an increase in wages costs in Belgium was absorbed by fiscal and parafiscal levies, whatever the level of personal income.

As already stated, the difference between Belgium and the EU average is larger for the marginal rates than for the implicit rates. That suggests that the influence of tax expenditure and other variables is more favourable to taxpayers in Belgium than elsewhere. Such a structure for the burden of fiscal and parafiscal levies – high marginal rates partly attenuated by other tax variables – is probably not ideal from the point of view of economic growth and employment.

There are no harmonised statistics permitting direct international comparison of the scale and content of tax expenditure.

In Belgium's case, there are no specific data on tax expenditure relating to labour incomes either. However, the High Council of Finance (HCF) has compiled figures indicating the impact of tax expenditure on all personal incomes. These show that, in 1999, tax expenditure reduced revenues by almost 1.6 billion euro, or 5.9 p.c. of the yield from personal income tax.

The largest tax expenditure relates to property incomes; it covers the allowances for life insurance related to housing and allowances for the repayment of capital on mortgage loans, plus the additional allowance for mortgage interest. This expenditure costs the budget over 900 million euro, and its influence is decisive: according to the HCF, microeconomic calculations show that the effective rate of tax on an investment in a person's own home totalled less than 7 p.c., whereas the rate on a risk-free long-term investment came to almost 20 p.c.⁽¹⁾ All these incentives are intended to encourage individuals to own their home and thus to support the building and renovation sector, encouraging growth and employment.

TABLE 1 TAX EXPENDITURE (PERSONAL INCOME TAX) IN BELGIUM

(Estimated loss of revenue, millions of euro, 1999)

Measures relating to property incomes	912
Life insurance linked to housing and mortgage capital	806
Additional allowances for mortgage interest	106
Measures relating to long-term savings	556
Life insurance	230
Pension savings	227
Group insurance	91
Other (Local Employment Agency, child care costs, etc.)	118
Total	1,586
<i>p.m. Total as p.c. of personal income tax revenues</i>	<i>5.9</i>

Source: HCF.

In second place comes tax expenditure relating to long-term financial savings, namely the allowances granted for the second and especially the third pillar of the pension system. In 1999 this caused a loss of revenue estimated at 556 million euro⁽²⁾. It fulfils a number of purposes, such as encouraging long-term savings and compensating for the high marginal rates. However, it is questionable whether these tax concessions have any significant effect on the aggregate savings level or whether their main effect is to encourage portfolio reallocation. Moreover, this tax expenditure is concentrated mainly on the highest income brackets where households already have a high savings rate on average⁽³⁾.

The other types of tax expenditure cover various minor measures, though some of them are directly relevant to a policy of supporting growth via employment since they promote either demand for labour, by reducing the cost of labour (Local Employment Agency vouchers), or the supply of labour by encouraging the participation of women (child care costs).

(1) HCF (2002), "Avis sur les déductions à l'impôt des personnes physiques"/"Advies over de aftrekken bij de personenbelasting".

(2) This figure overestimates the budget cost since it takes no account of the taxes due at the end of the long-term savings contract.

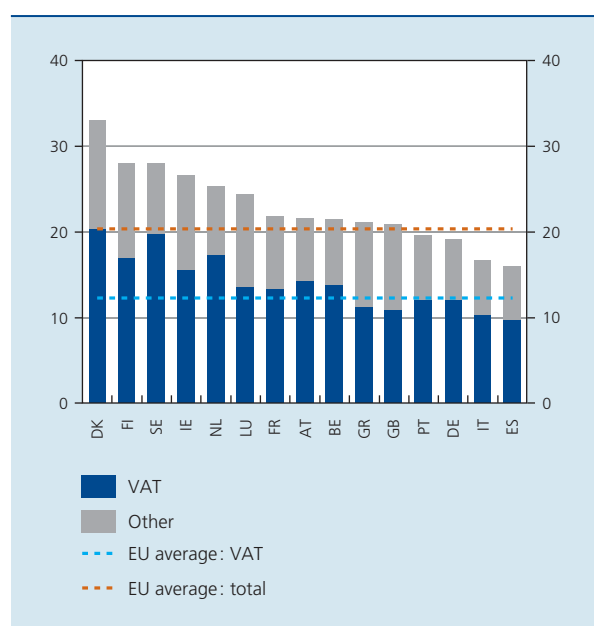
(3) C. Valenduc, (July-August 1999), "Les effets de répartition de la non-imposition des revenus de l'épargne", Bulletin de Documentation, Ministry of Finance.

4. Tax on consumption

International data concerning the tax burden on consumption are usually based on the ratio between the proceeds from consumption taxes and the tax base, generally confined to domestic consumption expenditure of households. The implicit rate thus obtained overestimates the real tax burden, since consumption taxes are normally also levied on other tax bases such as intermediate consumption and investment in fixed assets by general government, and investment in housing.

According to data published by the EC, there are wide variations in taxes on consumption between Member States. Consumption is most heavily taxed in the Scandinavian countries and in Ireland, whereas the tax burden is lowest in Italy and Spain. Belgium's position is very close to the EU average. In all Member States, VAT is the main tax on consumption. It is therefore treated separately here, before the other taxes on consumption.

CHART 6 IMPLICIT TAX RATE ON PRIVATE CONSUMPTION ⁽¹⁾
(Percentages, 2001)



Source: EC.

(1) Consumption taxes as percentages of household consumption expenditure.

4.1 VAT

VAT rates in the EU Member States are subject to European regulations. The aim is to combat harmful tax competition while keeping taxes on certain products at a low level, for economic or social reasons, i.e. to compensate to some extent for the regressive nature of the consumption tax or to encourage the consumption of these products. The EU has set a minimum rate of 15 p.c. as the standard rate of VAT. One or two reduced rates of 5 p.c. minimum are also available for certain goods and services, an option used by all Member States except Denmark. In addition, reduced rates are permitted in certain specific regions of a few Member States, and super-reduced rates or zero rates (e.g. on newspapers and periodicals, and – in Ireland and the United Kingdom – also on certain basic products such as food and medicines) which were in force before 1 January 1991 are still applied. Finally, reduced rates are also allowed provisionally for a number of labour-intensive services which are not subject to cross-border competition.

TABLE 2 MAIN RATES OF VAT IN THE EU MEMBER STATES
(Percentages, end 2003)

	Standard rate	Rate applicable to food
Denmark	25.0	25.0
Sweden	25.0	12.0
Finland	22.0	17.0
Belgium	21.0	6.0
Ireland	21.0	0.0
Italy	20.0	4.0
Austria	20.0	10.0
France	19.6	5.5
Netherlands	19.0	6.0
Portugal	19.0	5.0
Greece	18.0	8.0
United Kingdom	17.5	0.0
Germany	16.0	7.0
Spain	16.0	4.0
Luxembourg	15.0	3.0
EU	18.5	5.4
Difference BE – EU	+2.5	+0.6

Source: EC.

In Belgium, the implicit rate of VAT is 1.4 percentage points above the EU average. That is because of the standard rate of VAT which, at 21 p.c., was 2.5 percentage points above the EU average at the end of 2003. Conversely, in the case of the rate applicable to food, which is a major consumption item, the difference was just 0.6 percentage point. It is possible that, apart from the level of the nominal rates, other factors may explain the level of the implicit tax burden, estimated on the basis of the national accounts. For instance, the structure of private consumption or the size of the tax bases other than private consumption may vary from one Member State to another. Finally, the extent of tax evasion may be greater in one Member State than another. However, these factors are difficult to quantify.

4.2 Other taxes on consumption

In contrast to the implicit VAT rate, the implicit rate of other consumption taxes is slightly lower in Belgium than the EU average, namely by 0.3 percentage point. The main taxes in this category are excise duty and specific taxes on the purchase of motor vehicles.

Excise duties are levied mainly on mineral oils, tobacco products and alcoholic beverages. As in the case of VAT, the EU has set minimum rates for these taxes, either per unit of output (specific excise duty) or as a percentage of the purchase price (ad valorem duty).

TABLE 3 RATES OF EXCISE DUTY AND TAXES ON VARIOUS PRODUCTS

(End 2003, except for mineral oils: March 2004)

	Taxes (other than VAT) on mineral oils ⁽¹⁾			Duty on cigarettes ⁽³⁾	Duty on alcohol		Taxes (other than VAT) on the purchase of a car ⁽⁶⁾
	Eurosuper 95 ⁽²⁾	Diesel ⁽²⁾	Heating oil ⁽²⁾		Beer ⁽⁴⁾	Non-sparkling wine ⁽⁵⁾	
United Kingdom	703.6	703.6	63.0	233.4	7.8	252.8	0.0
Netherlands	664.5	380.8	202.9	86.6	1.7 ⁽⁷⁾	59.0	33.0
Germany	654.6	470.5	61.3	102.5	0.8	0.0	0.0
Finland	597.3	346.8	71.5	115.2	11.4	235.5	56.0
France	589.2	416.9	56.6	141.2	1.0	3.4	0.0
Italy	558.6	403.2	403.2	59.9	1.4	0.0	2.0
Denmark	546.5	369.3	282.0	108.7	3.3 ⁽⁷⁾	94.9	173.0
Belgium	536.2	321.8	18.5	95.8	1.7	47.1	2.0
Portugal	522.6	308.3	89.6	64.8	1.1 ⁽⁷⁾	0.0	49.0
Sweden	519.6	361.3	361.2	102.7	6.5	242.4	0.0
Ireland	442.7	368.0	52.1	189.4	7.9	273.0	51.0
Luxembourg	442.1	252.8	9.9	66.2	0.8	0.0	0.0
Austria	424.7	310.1	106.1	84.4	2.1	0.0	14.0
Spain	399.2	296.4	111.1	56.6	0.8	0.0	12.0
Greece	301.4	250.0	24.8	71.9	1.1	0.0	88.0
EU	593.4	418.8	96.6	120.5	2.7	64.1	10.5
Difference BE – EU (percentages)	-9.6	-23.2	-80.9	-20.5	-43.3	-26.5	-81.0
<i>p.m. Minimum duty</i>	287.0	245.0	18/5 ⁽⁸⁾	60/95 ⁽⁹⁾	0.7	0.0	

Source: EC.

(1) Calculated as all indirect taxes other than VAT, including taxes similar to excise duties.

(2) Euro per thousand litres.

(3) Euro per thousand cigarettes.

(4) Euro per degree Plato per hectolitre.

(5) Euro per hectolitre.

(6) Taxes (other than VAT) as a percentage of the price (before tax) of a typical vehicle with a cylinder capacity of 2001 cc.

(7) For a beer 11 degrees Plato.

(8) The minimum duty is 18 euro per 1000 litres, but Belgium and Luxembourg are exempt provided that they charge a "monitor charge" of at least 5 euro per 1000 litres on heating oil.

(9) Either 60 euro per 1000 cigarettes and 57 p.c. of the retail price, or 95 euro per 1000 cigarettes.

In comparison with other EU Member States, excise duties and similar taxes are on the low side in Belgium. The duties on petrol, diesel, cigarettes and alcoholic beverages are well below the average. The difference is very substantial in the case of heating oil, taxes other than VAT (namely the 5 euro monitor charge and the energy contribution of 13.4854 euro per 1000 litres) being negligible in Belgium compared to the EU average, at little more than the minimum rates for the EU.

The ranking of the Member States on the basis of excise duties varies greatly from one product category to another. However, it is noticeable that the United Kingdom charges very high duty on motor vehicle fuel, tobacco and alcohol, with only heating oil being taxed at a relatively modest rate. Conversely, in Luxembourg, excise duties on all the product categories considered are among the lowest in the EU. Apart from the United Kingdom, Germany also charges high rates of duty on motor vehicle fuel, whereas these rates are the lowest in Greece. Heating oil is particularly heavily taxed in Italy: consumption taxes (other than VAT) on this source of energy are four times higher than the average, and more than 20 times higher than the rates in Belgium. In regard to cigarettes, duties are clearly the highest in the English-speaking countries while they are lowest in the southern European countries and Luxembourg. Finally, beer and wine are subject to particularly heavy rates of duty in the English-speaking countries and in Scandinavia.

Motor vehicles are a specific source of consumption taxes. VAT is charged on purchase, and VAT and excise duty must be paid on the fuel, but in many Member States the purchase, possession and/or use of motor vehicles are also subject to additional consumption taxes.

Looking at taxes (other than VAT) on the purchase of a car, the rate applicable to a typical vehicle is 173 p.c. of the price (excluding tax) in Denmark. Taking account of the 25 p.c. VAT, the total tax on the purchase of a vehicle thus corresponds to practically double the price exclusive of taxes⁽¹⁾. Other countries such as the United Kingdom, Germany, France, Sweden and Luxembourg do not levy any special tax – apart from VAT – on the purchase of a car. The opposite applies in Belgium, where there is a registration tax, but this is well below the European average for a typical vehicle, and corresponds to only a fraction of the price.

(1) However, these taxes are not all borne by the consumer, as the price (excluding taxes) is particularly low in Denmark.

(2) S. Ederveen and R. de Mooij (2003), "To which tax rate does investment respond? A synthesis of empirical research on taxation and foreign direct investment", Banca d'Italia, Research Department, Public Finance Workshop on Tax Policy.

(3) I.e. 33 p.c. plus a crisis contribution of 3 p.c. on the tax payable.

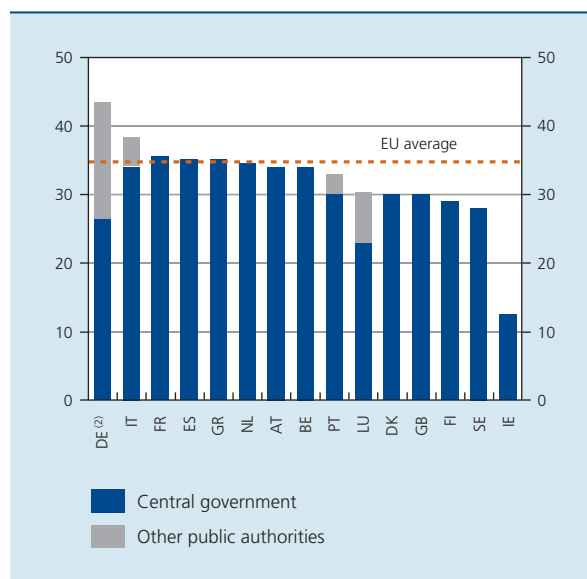
5. Tax on corporate profits

The effective tax rate on corporate profits is determined by the implicit rate of corporation tax, i.e. the tax due in proportion to the company's profits. That rate is influenced not only by the nominal rate but also by various tax allowances and special rules which make the "tax results" deviate from the economic results, as well as various preferential schemes. A recent study⁽²⁾ confirms that foreign direct investment is influenced more by this implicit rate than by the nominal rate. However, there is a possibility that the nominal rate may fulfil an important signalling function, and that high nominal rates – even if they are counterbalanced by substantial allowances or preferential schemes – are liable to discourage potential investors. The nominal rates in force in the EU Member States are therefore examined here first, before the analysis of the implicit rates.

5.1 Nominal rate

The cut in the nominal rate of tax in Belgium on 1 January 2003 is in line with the downward trend recorded for several years now in many European countries. In 2002 it was still the highest rate in the EU, but it is now, at 33.99 p.c.⁽³⁾, roughly 1 percentage point below the EU average. Most countries deviate little from this average, with the particular exception of Ireland – where the

CHART 7 NOMINAL RATES⁽¹⁾ OF CORPORATION TAX
(Percentages, 2003)



Source: OECD.

(1) Including additional levies, such as regional and local taxes, if any.

(2) Disregarding the one-off rate increase of 1.5 percentage points in 2003 (as a contribution towards the costs of the flooding).

rate was just 12.5 p.c. – and the Scandinavian countries which, like Belgium, have a high overall burden of fiscal and parafiscal levies, but which have opted to keep the nominal rates of corporation tax at a relatively low level.

5.2 Implicit rate

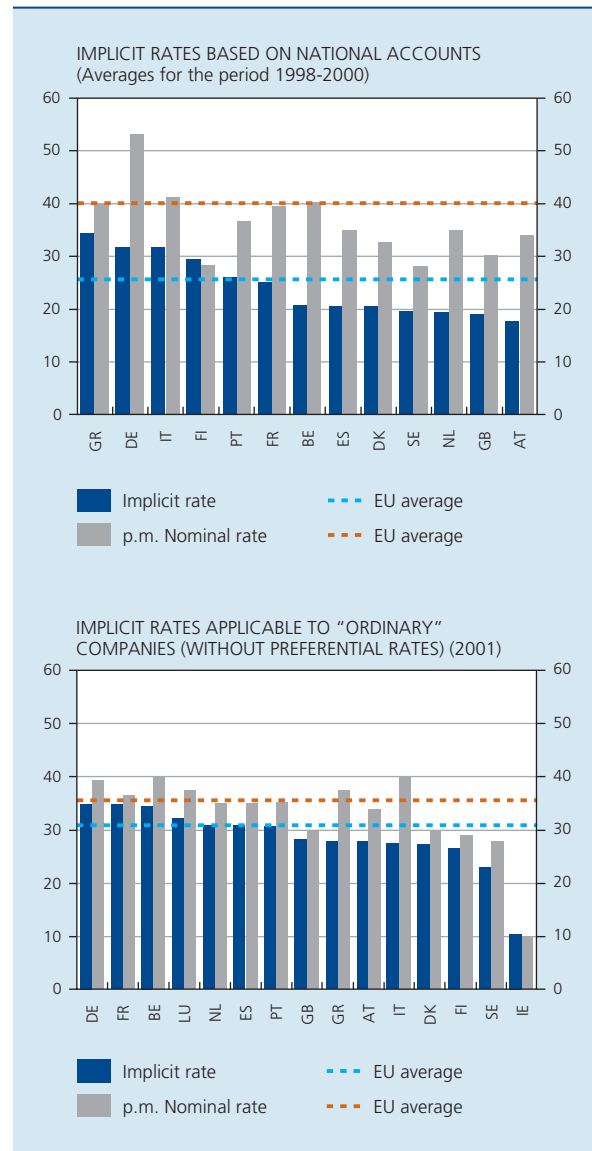
There are two different ways of calculating the implicit rate. One is to use the historical statistics on taxes and business profits (“backward looking” approach). The other is to determine the tax burden by assessing a specific investment decision in the light of the rules and parameters of the current legislation on companies (“forward looking” approach).

The results of empirical studies⁽¹⁾ adopting the first approach are fairly similar, despite major methodological differences. In the majority of countries, the implicit rate is well below the nominal rate owing to tax allowances and preferential schemes. However, in the late 1990s – the latest period for which figures are available – this difference was greater for Belgium than for the EU as a whole. This suggests that, for companies in general, the favourable impact of the tax allowances and/or preferential schemes was greater in Belgium than on average in the other Member States.

Empirical studies⁽²⁾ based on the other approach make it possible to refine these conclusions, as they reveal that the difference between the implicit rate and the nominal rate applicable to “ordinary” companies – not covered by any preferential scheme – differs little from the EU average in Belgium. The difference reported above between the nominal rate and the implicit rate for companies in general, which is above average in Belgium, therefore appears to be attributable purely to the nature and scale of the preferential tax schemes.

Preferential schemes for specific branches of activity exist in some countries, particularly for service centres, distribution and shipping. However, the most noteworthy measures concern the financial transactions of multinational groups. According to the OECD⁽³⁾ there are no specific provisions on this within the EU, except in Belgium (coordination centres), Ireland, the Netherlands, Luxembourg

CHART 8 IMPLICIT RATES OF CORPORATION TAX
(Percentages)



Source : EC.

and certain regions of Italy and Spain. An empirical study by Hespel and Mignolet⁽⁴⁾ shows that the tax advantage of these schemes can be particularly significant: the return required on a foreign investment falls from 5.9 p.c. for an investment in a company not covered by any preferential scheme to 3.5 p.c. under the Dutch preferential scheme, and actually drops to around 1.25 p.c. in the case of a Belgian coordination centre or a Luxembourg financial company eligible for a preferential scheme.

(1) Cf. for example EC (2003), “Structures of the taxation systems in the European Union” and G. Nicodème (2001), “Computing effective corporate tax rates: comparison and results”, *European Economy – economic papers*, 153.

(2) Cf. for example EC (2001), “Company taxation in the internal market”, Commission staff working paper.

(3) OECD (2004), “The OECD project on harmful tax practices: the 2004 progress report”.

(4) A. Hespel and M. Mignolet (2000), “Tax aided financial services companies and the cost of capital”, *Fiscal studies*.

Box – Tax treatment of research and development

The research and development effort is generally regarded as a key determinant of the economy's growth potential. However, the free operation of market forces often results in too low a level of this type of expenditure, since businesses base their investment decisions only on their private return, whereas such expenditure generally has substantial external benefits. The government can boost such investment in various ways. It can engage in research activities itself, use regulation (e.g. patent rights) to protect the advantages for the innovating business, or provide financial encouragement for such private investment via a specifically targeted policy of subsidies or tax concessions. The tax aspect is discussed in this box.

In many countries, the system of taxing companies incorporates specific incentives for research and development. These consist mainly of favourable rules on depreciation, whereby payment of tax is deferred, and tax allowances permitting part of the expenditure on research and development to be deducted from the basis of assessment (tax expenditure) or from the tax due (tax credit). Sometimes, this tax expenditure or tax credit concerns only expenditure on machinery or buildings; in general, however, the system is much more generous and, apart from the normal allowance for labour costs, an additional tax allowance also applies in respect of expenditure on labour costs relating to research. The allowance is calculated as a percentage of the level of, or the increase in, expenditure on research and development.

In Belgium, corporation tax essentially encourages research and development via three specific tax concessions⁽¹⁾. First, the enhanced investment allowance concerns assets used for this purpose. It is possible to opt for the single allowance (13.5 p.c. in 2003) or the staggered allowance (20.5 p.c. in 2003). However, the enhanced investment allowance is generally modest in comparison with that in other countries: the percentage deduction from the basis of assessment (and not from the tax due) is relatively small, and the scheme does not apply to labour costs. Second, machinery and equipment used for research and development can be depreciated at 33.33 p.c. per annum, a more favourable rate than the standard depreciation allowed by the tax authorities. Finally, businesses taking on an additional full-time worker for scientific research or to develop the technological potential of the business qualify for an annual allowance on their taxable profits of 11,800 euro (or even 23,600 euro for a highly skilled researcher).

An OECD study⁽²⁾ summarises the effect of tax concessions in a synthetic indicator, which measures the scale of the tax incentives for research and development. This is the B index, which shows, for an investment of 1 USD in research and development, the pre-tax return required in order not to sustain any loss after tax. The lower this B index (or, as in the chart, the higher $1 - B$) the greater the tax incentives in the tax system in question.

In the case of Belgium, the OECD study takes account of the first two concessions only, and leaves aside the allowance for the recruitment of additional personnel. The research and development incentives provided in the case of corporation tax are therefore slightly under-estimated in the synthetic indicator for Belgium.

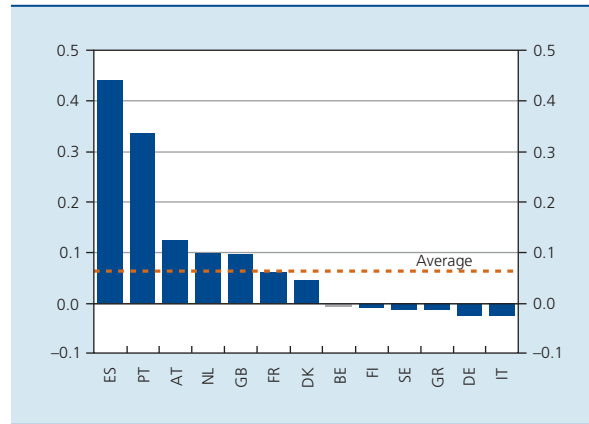
(1) Apart from the corporation tax provisions, a new measure came into force on 1 October 2003 concerning personal income tax, in order to encourage scientific research in colleges and universities. These institutions have to pass on to the State only 50 p.c. of the withholding tax on earned income, to be deducted at source from the pay of researchers, the rest remaining at their disposal. Researchers are entitled to state the whole of the withholding tax in their tax return, so that their net income remains unchanged. Thus, the Treasury levies less tax on individuals while the research institutions have more funds at their disposal. On 1 July 2004 this measure will be extended to the researchers of 72 scientific institutions, and in January 2005 to the researchers of private enterprises collaborating with one of those institutions.

(2) OECD (2002), "Tax incentives for research and development: trends and issues".



THE TAX TREATMENT OF RESEARCH AND DEVELOPMENT

(1 – B-index⁽¹⁾)



Source: OECD.

(1) The B index measures, for an investment of 1 USD in research and development, the return required before tax in order not to sustain any loss after tax.

On the basis of this indicator, Belgium – together with Finland, Sweden, Greece, Germany and Italy – is clearly among the EU countries with the smallest tax incentives during the period considered. Of all those countries, Belgium is the only one to offer a specific allowance for investment in research and development, but as pointed out above, this allowance is relatively meagre. The characteristic of countries in the intermediate group – Austria, the Netherlands, the United Kingdom, France and Denmark – is that this specific investment allowance is considerably larger (and also relates to labour costs, for example), high rates apply (sometimes over 100 p.c.) and the amounts can be deducted from the tax due (instead of from the basis of assessment). Finally, Spain and Portugal have the most favourable schemes.

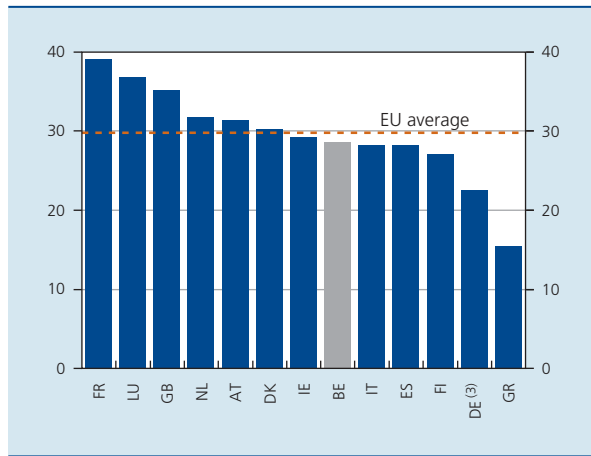
6. Capital tax

The compilation of internationally comparable figures for the tax burden on capital and capital incomes is hampered by a number of methodological problems. For instance, taxes on incomes from movable and immovable assets are not collected solely via specific levies (such as the withholding taxes on income from movable and immovable assets) the yield from which is known precisely, but in a good many cases this income (or part of it) is added to other income so that it is statistically difficult for the tax on this income from movable and immovable assets to be separated from that due on other incomes. Furthermore, mortgage loans and long-term savings often give rise to large reductions in personal income tax. However, there are few if any international statistics available on the scale of this tax expenditure, which should, in principle, be deducted from the tax on capital.

The European Commission study already mentioned,⁽¹⁾ in which all taxes are related to labour, consumption or capital, attempts to find a solution to these methodological problems, partly on the basis of confidential information obtained from the national tax authorities: the tax burden on capital is calculated as the taxes on capital (and capital income) in relation to capital incomes. However, the figures obtained must always be interpreted with caution, given the numerous methodological limitations.

(1) EC (2003), "Structures of the taxation systems in the European Union".

CHART 9 IMPLICIT RATE OF TAX ON CAPITAL ⁽¹⁾
(Percentages, 2001 ⁽²⁾)



Source : EC.

- (1) Tax on capital (and on capital incomes) as a percentage of income from capital.
 (2) For 2001, data relating to the implicit tax rate on capital were not available for Sweden (34.5 p.c. in 2000) and Portugal (30.7 p.c. in 1999).
 (3) The rate mentioned for Germany is depressed by the change in the legislation on distributed earnings of companies, which led to substantial one-off refunds of corporation tax in 2001.

That study was based on a very broad definition of taxes. It includes corporation tax, taxes and social security contributions paid by the self-employed⁽¹⁾, inheritance tax, gift tax, taxes on immovable property⁽²⁾, taxes on transactions in movable and immovable property⁽³⁾, taxes on interest and dividends received by individuals less capital formation allowances in personal income tax, and taxes on the net assets of individuals. During the year to which the study relates, only Luxembourg, Sweden, France, Spain and Finland levied such a tax. The yield on this form of tax is usually minimal because of the low rates and the exemptions for modest amounts of wealth or for certain types of assets.

According to this study, which is based on figures relating to 2001, capital is most heavily taxed in France, Luxembourg and the United Kingdom, whereas the tax treatment of capital is particularly generous in Greece. In Belgium, the implicit tax rate on capital (28.7 p.c.) is close to the average for EU Member States (29.8 p.c.).

- (1) Self-employed persons' incomes have two components: remuneration for the work done and remuneration for the capital employed. Since the available statistical information does not permit a breakdown between the two components, the European Commission decided to consider all income and all levies relating to self-employed persons as incomes from capital and taxes on those incomes.
 (2) In Belgium, these taxes are levied in the form of the withholding tax on incomes from immovable property, but also via personal income tax.
 (3) In Belgium, these are registration fees, mortgage and registry charges, the tax on stock market transactions and the tax on the material delivery of bearer securities.

7. Conclusions

Analysis of the structure of public revenues reveals that labour incomes are taxed relatively heavily in Belgium. In 2001, the latest year for which data are available at European level, the implicit burden of fiscal and parafiscal levies on labour was 6.8 percentage points above the EU average. On the other hand, the rates levied on consumption, corporate profits and income from capital are much closer to the European average.

In Belgium, the reductions in personal income tax and social security contributions already implemented or scheduled have reduced the levies on labour incomes in recent years, and that reduction will continue in the future. Conversely, certain indirect taxes such as the duty on tobacco and motor vehicle fuels, where the rates applied in Belgium are below the EU average, have increased and further rises are planned for the years ahead. Following the entry into force of these measures, the burden of fiscal and parafiscal levies will diminish, and shift slightly towards consumption, correcting to some extent the heavy concentration of this burden on labour. This will bring the structure of taxation closer to that for the EU.

The reduction in taxes on earned incomes, which is most marked in the case of low incomes, should have a favourable impact on employment, though only if it does not indirectly trigger an increase in wages. Application of the European directive guaranteeing the effective taxation of incomes from savings in the form of interest payments, together with the efforts to limit preferential schemes concerning corporation tax, may offer ways of redirecting public revenues in favour of employment.