



European Commission —  
Taxation and customs union

# Taxation trends in the European Union

Main results

2009 edition

## GLOSSARY

BE	Belgium
BG	Bulgaria
CZ	Czech Republic
DK	Denmark
DE	Germany
EE	Estonia
IE	Ireland
EL	Greece
ES	Spain
FR	France
IT	Italy
CY	Cyprus
LV	Latvia
LT	Lithuania
LU	Luxembourg
HU	Hungary
MT	Malta
NL	Netherlands
AT	Austria
PL	Poland
PT	Portugal
RO	Romania
SI	Slovenia
SK	Slovakia
FI	Finland
SE	Sweden
UK	United Kingdom
NO	Norway ( <i>not an EU Member State</i> )

EU	European Union
EU-15	European Union (15 Member States; membership 1.1.1995 – 30.4.2004)
EU-25	European Union (25 Member States; membership 1.5.2004 – 31.12.2006)
EU-27	European Union (27 Member States; membership as from 1.1.2007)
EA-16	Euro Area (16 member countries, membership as from 1.1.2009)

CIT	Corporate Income Tax
GDP	Gross Domestic Product
ITR	Implicit Tax Rate
PIT	Personal Income Tax
SSC	Social Security Contributions
VAT	Value Added Tax

## MAIN RESULTS

### Introduction

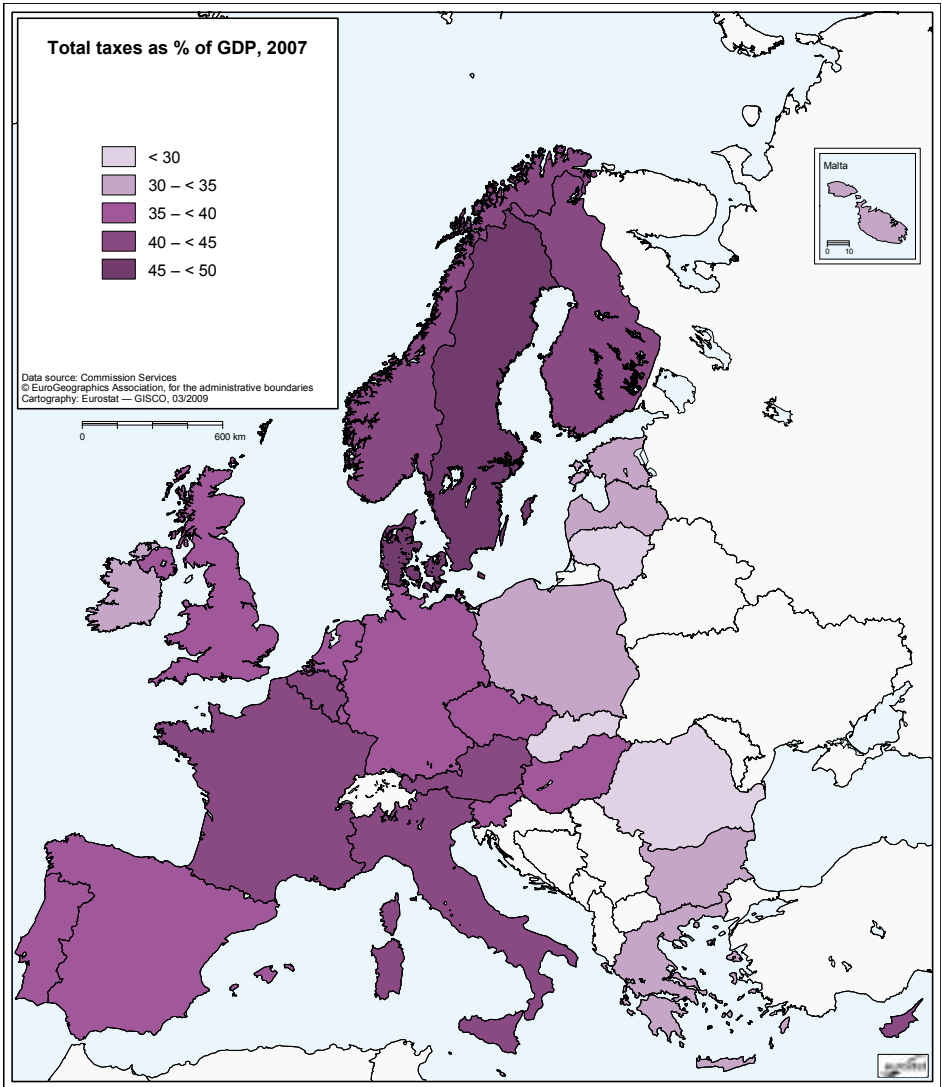
This year's edition of *Taxation trends in the European Union* appears at a time of upheaval. The effects of the global economic and financial crisis have hit the EU with increasing force from the second half of 2008. Given that the last year for which detailed data are available is 2007, this year's report cannot yet analyse the consequences of the recession on tax revenues. Nevertheless, the report takes stock of the tax policy measures taken by EU governments in response to the crisis up to spring 2009. These measures are described in detail in the full text of the report; in addition, an overview can be found in Annex A.

### The EU is a high tax area — on average

The European Union is, taken as a whole, a high tax area. In 2007, the last year for which detailed data are available, the overall tax ratio, i.e. the sum of taxes and social security contributions in the 27 Member States (EU-27) amounted to 39.8 % of GDP (in the weighted average); this value is about 12 percentage points above those recorded in the United States and Japan. The EU tax-to-GDP ratio is high not only compared with these two countries but in general; amongst the major non-European OECD members, only New Zealand has a ratio that exceeds 35 per cent of GDP<sup>1</sup>.

The high EU overall tax ratio is not new, dating back essentially to the last third of the 20th century. In those years, the role of the public sector became more extensive, leading to a strong upward trend in the tax ratio in the 1970s, and to a lesser extent also in the 1980s and early 1990s. In the late 1990s, first the Maastricht Treaty and then the Stability and Growth Pact encouraged EU Member States to adopt a series of fiscal consolidation packages. In some Member States, the consolidation process relied primarily on restricting or scaling back primary public expenditures, in others the focus was rather on increasing taxes (in some cases temporarily). At the end of that decade, a number of countries took advantage of buoyant tax revenues to reduce the tax burden, through cuts in the personal income tax, social contributions, but also in the corporate income tax.

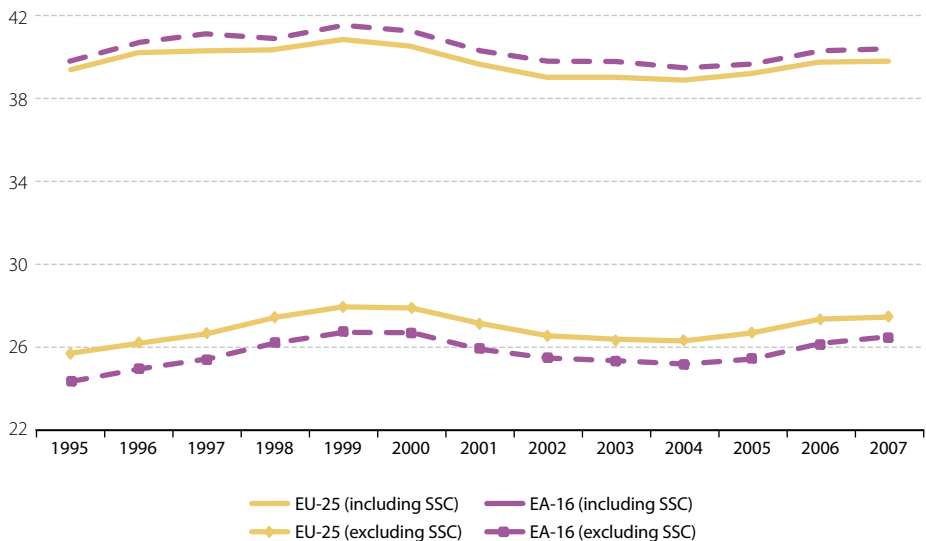
**Map 1:** Distribution of total tax burden



The overall tax burden decreased from 2000, but usually only for a couple of years. Efforts to reduce taxes permanently petered out gradually; reductions in tax ratios, fairly aggressive in 2001, lost importance in subsequent years and mostly stopped altogether in 2005 (see Graph 1). Cyclical factors contributed to this development; growth slowed in the years immediately after 2000, reducing tax revenue, whereas from 2004 onwards, growth in the EU accelerated again. In addition, the need, in several countries, to reduce the general government deficit also made it more difficult to cut taxes. The high general average by no means implies that every EU Member State displays a high tax ratio. As can be seen in Map 1, the geographically more peripheral countries, with the exception of the Nordic Member States and Cyprus, tend to show lower tax ratios, particularly in Eastern Europe. Ten Member States even displayed ratios below the 35 % mark in 2007. The map also displays two groups of high-tax countries, the Nordics (i.e. Denmark, Sweden and Finland), and a cluster of four Member States towards the centre of the EU, namely Belgium, France, Italy and Austria, all of which had a tax ratio in excess of 40 % in 2007.

On the whole, the differences in taxation levels across the Union are quite marked; the overall tax ratio ranges over almost twenty points of GDP, from 29.4 % in Romania to 48.7 % in Denmark (see Table A in Annex B). These differences do not only reflect social policy choices like public

**Graph 1:** Total tax revenue  
1995–2007, in % of GDP (GDP-weighted averages)



or private provision of services such as old age pensions and health insurance, but also technical factors: some Member States provide social or economic assistance via tax reductions rather than direct government spending, while social transfers are exempted from taxes and social contributions in some Member States but not in others. It should also be mentioned that the GDP value that constitutes the denominator of the overall tax ratio includes estimates of production by the informal sector (the 'grey' and 'black' economy); so that a low overall tax ratio may reflect not only low taxes, but also high tax evasion. As a general rule, tax-to-GDP ratios tend to be significantly higher in the 'old' EU-15 Member States than in the 12 new: the first seven positions in terms of overall tax ratio are indeed occupied by old Member States. There are exceptions, however; for example, Ireland's and Greece's tax ratios are amongst the lowest in the EU. The euro area (EA-16) shows a slightly higher overall tax ratio than the EU-27, which is not surprising given that it is mostly composed of old Member States.

Compared with 2000, the base year used in this publication, however, there has been a perceptible trend towards convergence: the ratio between the standard deviation and the mean of the overall tax ratios has been declining since 2001 and the value for 2007 is the lowest on record; also the gap between the highest and the lowest overall tax ratio, though still elevated, hit its minimum in 2007 at 19.3 %.

## Overall tax ratios rose markedly in 2007

Compared with the previous year, in 2007 the EU-27 overall tax ratio increased by a strong 0.5 percentage points in the arithmetic average. This is the third consecutive increase. In many countries, the increase of the last two years has been strong enough to push the ratio to above its 1999 peak, although earlier reductions in the tax level in some large economies offset this effect in the GDP-weighted average, which remains below 1999 levels.

The year 2007, like 2006, was characterised by a satisfactory growth level (in both years, GDP expanded by around 3 %), boosting tax revenue. As in the previous year, the 2007 increase in the tax ratio was not limited to a narrow majority of countries but was quite broad: only in nine Member States out of 27 did the tax ratio decline. The strongest declines took place in Denmark and Ireland, whereas the most sizeable increases in the tax ratio were recorded in Cyprus and Hungary. The euro area followed a similar trend as the EU as a whole.

Overall, despite a trend towards lower tax rates, particularly in the corporate income tax, the successive increases in the tax-to-GDP ratio recorded in the years after 2004 suggest that, despite

the rhetoric, in the majority of cases there is a limited appetite for a radical reduction in the overall burden of taxes and social contributions. Indeed, the most aggressive tax cuts took place in the Central and Eastern European new Member States in the 1990s, when the need to restructure these economies was particularly stringent; in the old Member States, the tax burden was not reduced significantly (see Table A in Annex B).

As for the tax ratio development after 2007, the European Commission's autumn 2008 economic forecasts for the EU-27 project general government revenue — a different but related measure — to keep declining until 2010 as a result of the global recession, with the ratio dropping most significantly in 2008, by some 0.6 points of GDP.

## Weight of direct taxation usually lower in the new Member States

Taxes are traditionally classified as direct or indirect; the first group as a rule allows greater redistribution as it is impractical to introduce progressivity in indirect taxes. Therefore, the recourse to direct taxes, which are more 'visible' to the electorate, tends to be greater in the countries where tax redistribution objectives are more pronounced; this usually results also in higher top personal income tax rates. Social security contributions (SSC) are, as a rule, directly linked with a right to benefits such as old age pensions or unemployment and health insurance; in theory, a strict application of actuarial equivalence would preclude redistribution, but in practice the modalities for calculating contributions and benefits allow considerable leeway in this respect and the situation is quite diversified among Member States.

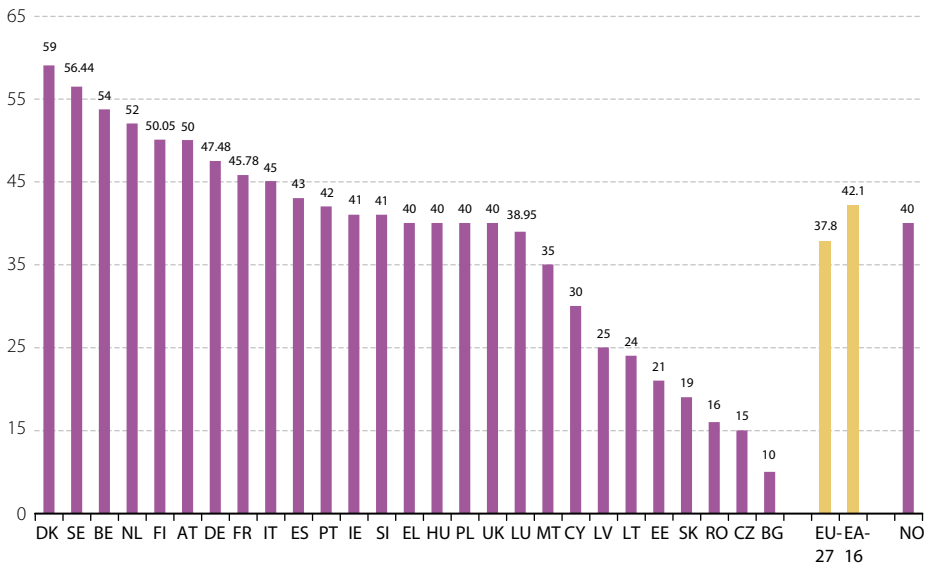
Generally, the new Member States have a different structure compared with the old Member States; in particular, while most old Member States raise roughly equal shares of revenues from direct taxes, indirect taxes, and social contributions, the new Member States often display a substantially lower share of direct taxes in the total. The lowest shares of direct taxes are recorded in Slovakia (only 20.8 % of the total), Bulgaria (20.9 %) and Romania (23.0 %). One of the reasons for the low direct tax revenue can be found in the generally more moderate tax rates applied in the new Member States to the corporate income tax and the personal income tax. Several of these countries have adopted flat rate systems, which typically induce a stronger reduction in direct than indirect tax rates.

Also among the old Member States (EU-15) there are some noticeable differences. The Nordic countries as well as the United Kingdom and Ireland have relatively high shares of direct taxes in total tax revenues. In Denmark and, to a lesser extent, also in Ireland and the United Kingdom the shares of social contributions to total tax revenues are low. There is a specific reason for the

extremely low share of social contributions in Denmark: most welfare spending is financed out of general taxation. This requires high direct tax levels and indeed the share of direct taxation to total tax revenues in Denmark is by far the highest in the Union. Among the old Member States, Germany's system represents in a sense the opposite of Denmark's; Germany shows the highest share of social contributions in the total tax revenues, while its share of direct tax revenues in the total is among the lowest in the EU-15.

Given the specific nature of social security contributions, *Taxation trends in the European Union* (Taxation Trends report) also contains data for total tax revenues excluding them (see Graph 1 and Table B in Annex B). Looking only at taxes in a narrow sense, the ranking of the tax burden changes noticeably: countries such as Germany, Hungary, the Netherlands and Slovenia lie above the EU-27 arithmetic average when including social contributions but fall to below the average when considering only taxes. Over time, the share of social security contributions on the total shows a slow decline, which could be linked with the reforms in pension systems that were implemented in several EU countries in recent years.

**Graph 2:** Top personal income tax rate  
2008 income, in %



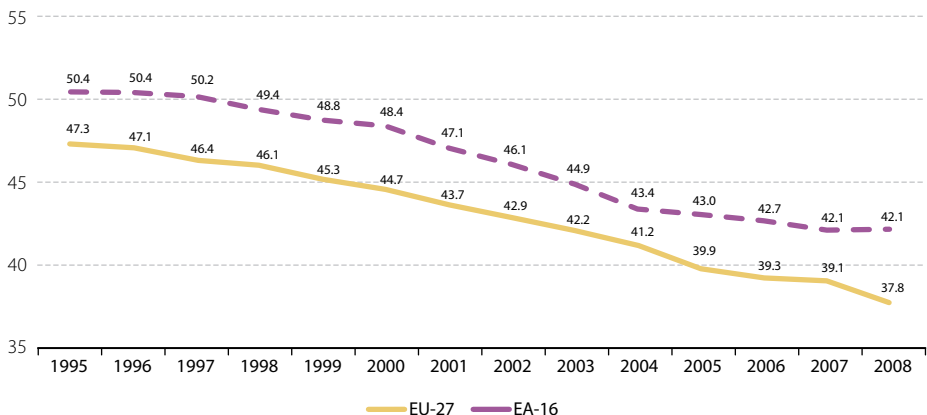
Note: Please refer to endnote 2 for details on the calculation of the rates.

## Clear downward trend in top personal income tax rates since 1995

Currently, the top personal income rate<sup>2</sup> amounts to 37.8 %, on average, in the EU. This rate varies very substantially within the Union, ranging from a minimum of 10 % in Bulgaria to a maximum of 59 % in Denmark (see Graph 2). As a rule, the new Member States display lower top rates, while the highest rates are typical of Member States with the most elevated overall tax ratios, such as the Nordic countries, although the Netherlands show the fourth highest top personal income tax rate while ranking 15th in terms of the tax ratio (excluding SSC). The lowest rates are found in Bulgaria and Cyprus, where the tax ratio (excluding SSCs) is respectively the lowest and the second lowest in the Union (see Table B in Annex B).

The *Taxation Trends* report for the first time this year presents data on the development of PIT top rates since 1995. Over this period, there has been a clear and very steady downward trend in the top rate, which became even stronger after the turn of the century (see Graph 3). Twenty-two EU Member States have cut the rate whereas only one country (Portugal) increased it slightly (see Table C in Annex B). In just four cases the rate never changed (in Austria, Latvia, Malta and the United Kingdom). Hence, the EU-27 average went down by 10.6 percentage points since 1995 and 7.3 percentage points since 2000. The reduction since 2000 is most noticeable in the Central and Eastern European countries, with the biggest cuts having taken place in four countries that adopted flat rate systems, Bulgaria (– 40.0 percentage points), the Czech Republic (– 28.0), Romania (– 24.0) and Slovakia (– 23.0). On average, these countries have reduced the top PIT rate by more than eleven percentage points since 2000, whereas the former EU-15 countries have reduced the top rate by a mere 3.5 points.

**Graph 3:** Development of top personal income tax rate  
1995–2008, in % (arithmetic averages)



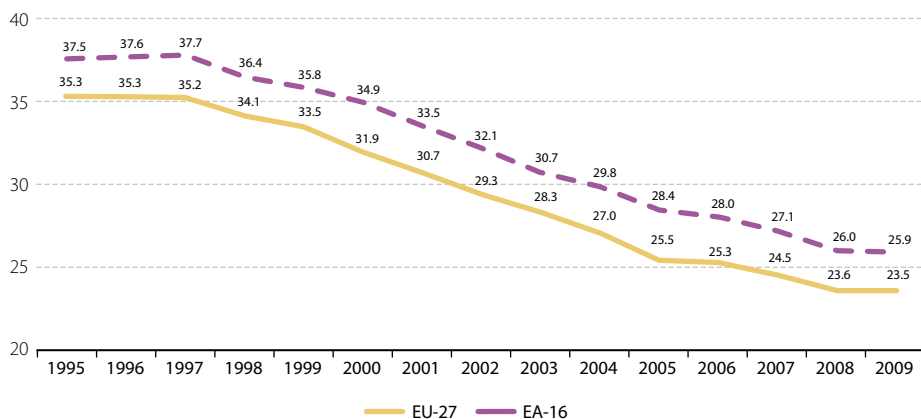
Lower PIT top rates do not necessarily imply a trend towards lower PIT revenues, because in systems with several tax brackets, the percentage of taxpayers taxed under the highest rate is typically quite limited. Several countries, however, have moved towards systems with fewer brackets, and flat rate systems, which have been adopted in several Central and Eastern European countries, are characterised by a single PIT rate, so that any reduction is immediately reflected in the tax revenue. Furthermore, cuts in the top PIT rate typically do not occur in isolation, but are part of balanced packages which include tax reductions for lower-income taxpayers. Indeed, in most Member States where large cuts in the top PIT rate were introduced, total PIT revenue declined perceptibly.

## Corporate income tax rates continue their rapid decline throughout the EU

Since the second half of the 1990s, corporate income tax (CIT) rates in Europe have been cut forcefully, from a 35.3 % average in 1995 to 23.5% now (see Graph 4). This trend has not stopped, as five Member States countries cut the rate in 2009, although a relatively sharp increase (5 percentage points) in Lithuania offset almost completely the impact of the cuts on the EU-27 average.

Although the downward trend has been quite general, CIT rates still vary substantially within the Union (see Graph 5). The adjusted statutory tax rate on corporate income<sup>3</sup> varies between a minimum of 10 % (in Bulgaria and Cyprus) to a maximum of 35.0 % in Malta, although the gap

**Graph 4:** Development of statutory tax rate on corporate income  
1995–2009, in % (arithmetic averages); adjusted



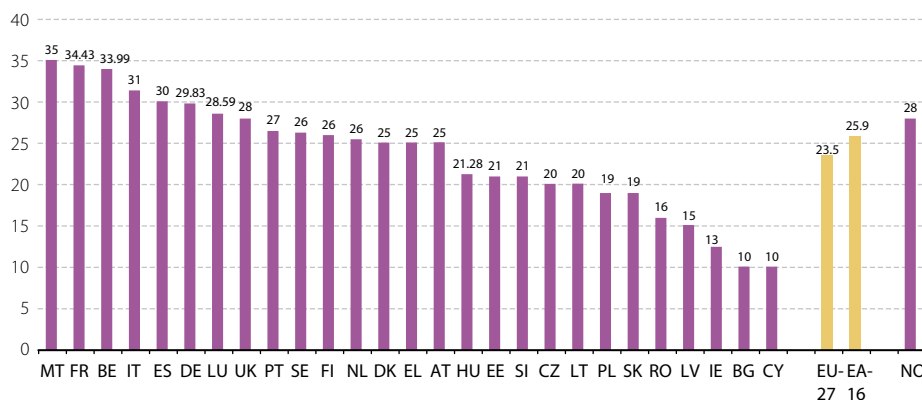
between the minimum and the maximum has shrunk since 1995 (see Table D in Annex B). As in the case of the personal income tax, the lowest rates are typical of countries with low overall tax ratios; consequently, the new Member States generally figure as having low rates (with the noteworthy exception of Malta, which is also the only Member State that has not changed its CIT rate since 1995). The reverse is, however, not true: unlike the case of the PIT, the two Member States with the highest tax burden, Denmark and Sweden, display CIT rates that are not much above the average. This is linked to the adoption by these countries of Dual Income Tax systems, which by design tax capital income at a moderate rate.

## Trend towards more funding to local and regional authorities continues, while social security receives a shrinking share of total revenue

In 2007, about 59 % of the ‘ultimately received’ aggregate tax revenue in the EU-27 (including SSC) was claimed by the central or federal government, roughly 29 % accrued to the social security funds, and around 11 % to local government. Less than 1 % of tax revenue is paid to the institutions of the European Union.

There are considerable differences in structure from one Member State to another; for instance, some Member States are federal or grant regions a very high degree of fiscal autonomy (Austria,

**Graph 5:** Statutory tax rate on corporate income  
2009 income, in %; adjusted



Note: Please refer to endnote 3 for details on the calculation of the rates.

Belgium, Germany, and Spain). In the United Kingdom and Malta, the social security system is not separate from the central government level from an accounting viewpoint, whereas in Denmark most social security is financed through general taxation.

The share of sub-federal revenue varies from less than 1 % to almost one third of the total. Sweden, Germany, Spain and Belgium in particular show high shares of total taxes received by the non-central authorities. At the other end, this share is just around 1 % in Greece and Cyprus, while in Malta local government does not receive directly any tax funds. As for the share of revenue accruing to social security funds, the highest values in the EU are reported by France and Slovakia. It should be stressed, however, that the amount of the ultimately received shares of revenue is a very imperfect indicator of fiscal autonomy, as a given government level may be assigned revenue streams which it has little legal authority to increase or decrease.

In several EU Member States decentralisation has been an important feature for several years already. Accordingly, data show that the share of total tax revenue accruing to state and local government have been gradually increased. In contrast, social security funds, possibly owing to pension system reforms or efforts made to shift the tax burden away from labour, have received a shrinking portion of revenue.

## The 'tax mix' receives renewed policy attention

The tax mix, or distribution of revenue by type of tax, is a structural variable that generally evolves only slowly. Nevertheless, it has been receiving renewed policy attention recently, in light of the worries that increased capital mobility and the accession to the EU of a group of low-tax countries might lead to even greater reliance on taxation of immobile factors (such as labour) than has been the case so far. Given that, owing to budgetary constraints, relatively few Member States have succeeded in decreasing rapidly the overall tax ratio, it has been argued that the only way to achieve quick reductions in the overall tax burden on labour is to shift the tax burden onto other bases, and in particular consumption. In fact, in the majority of countries, the tax burden on consumption has increased, although this has not generally been the case for the larger Member States. As for labour taxation, the trend towards a lower tax burden is slow and mainly concentrated in the Central and Eastern European Member States. As for capital taxation, the picture is not clear-cut; despite significantly lower corporate tax rates, partly influenced by cyclical factors, the revenues from taxes on capital have been growing again in importance during the years 2003–07, both in terms of GDP and as a share of total taxation.

## Consumption taxes: on the rise in most Member States

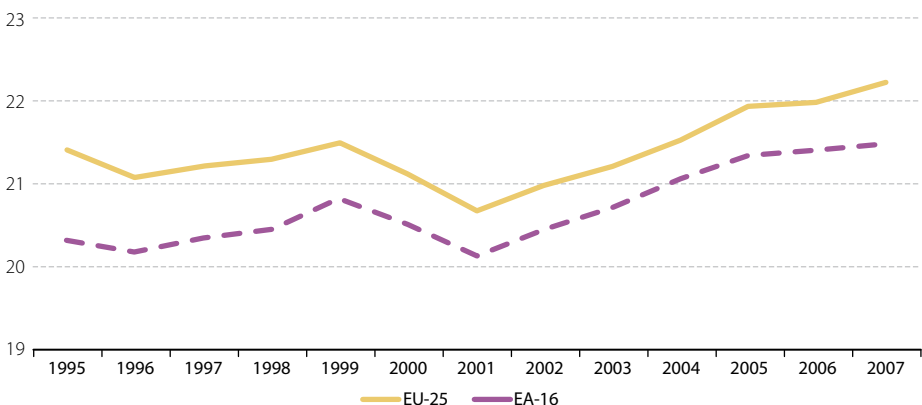
Data for the implicit tax rate (ITR) on consumption, our preferred measure of the effective tax burden<sup>4</sup>, show that, despite stagnant revenue, effective taxation of consumption is, in most EU countries, on an uptrend since 2001 (see Graph 6). The EU-27 arithmetic average went up by 1.8 percentage points since that year and by two tenths of a point in 2007.

The upward trend is quite broad; compared with the 2000 base year, the ITR has increased in 17 countries (see Table E in Annex B). Moreover, the only sizeable decline in the ITR took place in Finland (2.1 percentage points since 2000), while several Member States report increases of three percentage points or more. The new Member States have experienced the greatest increase.

A decomposition of the ITR on consumption in its constituent elements reveals that the role played by taxes other than VAT is usually quite important; taxes on energy (typically, excise duties on mineral oils) and on tobacco and alcohol together make up, on average, around one quarter of the revenue from consumption taxes. The differences in consumption of excisable goods are such that their revenue effects go well beyond the spread in tax rates: Bulgaria raises from alcohol and tobacco excises almost five times as much revenue as the Netherlands.

The comparison between the standard VAT rate and the VAT component of the ITR on consumption also highlights the significant differences amongst Member States in the extent of exemptions (either in the form of base reductions or of reduced rates) from VAT; in some Member States, their

**Graph 6:** Implicit tax rate on consumption  
1995–2009, in % (arithmetic averages)

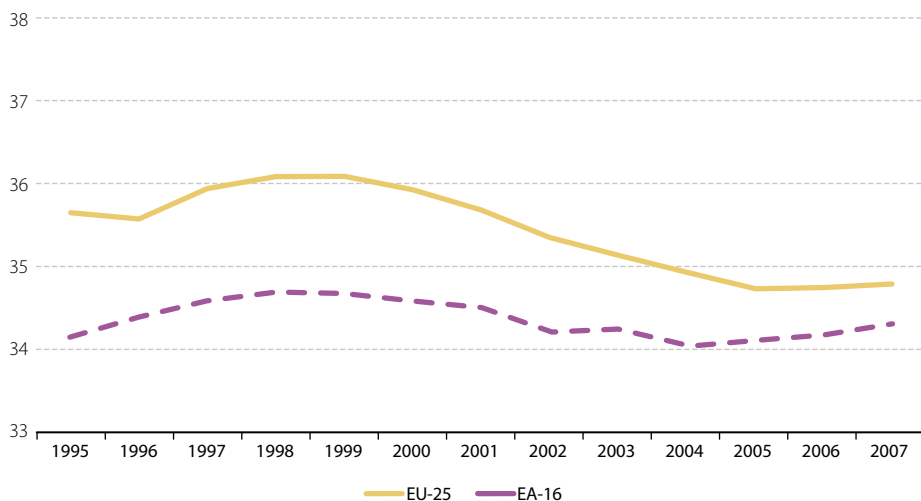


impact on the ITR is only equivalent to a couple of percentage points, but at the other extreme the impact reaches 10 percentage points.

## Labour taxes: slight decline since the turn of the century, but mostly concentrated in the new Member States

Despite a wide consensus on the desirability of lower taxes on labour, the levels of the ITR on labour<sup>5</sup> confirm the widespread difficulty in achieving this aim. Although the tax burden on labour is off the peaks reached around the turn of the century, the downward trend essentially came to a halt in the euro area as several countries witnessed increases in the last few years (see Graph 7). However, in the Central and Eastern European Member States, the decline in the ITR on labour is more pronounced; the average in these Member States has gone down by more than three percentage points since 2000, while the EU-27 average decreased by only 1.5 percentage points. The three Nordic Member States also reduced somewhat their ITRs on labour in 2007, albeit from rather high levels (see Table F in Annex B). The new Member States do not always display low ITRs on labour: in three of them the ratio lies above the EU-27 average. The lowest overall ITRs on labour are found in Malta and Cyprus; this might perhaps be linked to their historical ties to Britain, given that the United Kingdom, as well as Ireland, displays a markedly low ITR on labour. Nevertheless, despite

**Graph 7:** Implicit tax rate on labour  
1995–2007, in % (arithmetic averages)



the presence of a number of low taxing Member States, taxation on labour can be said to be much higher in the EU than in the main other industrialised economies.

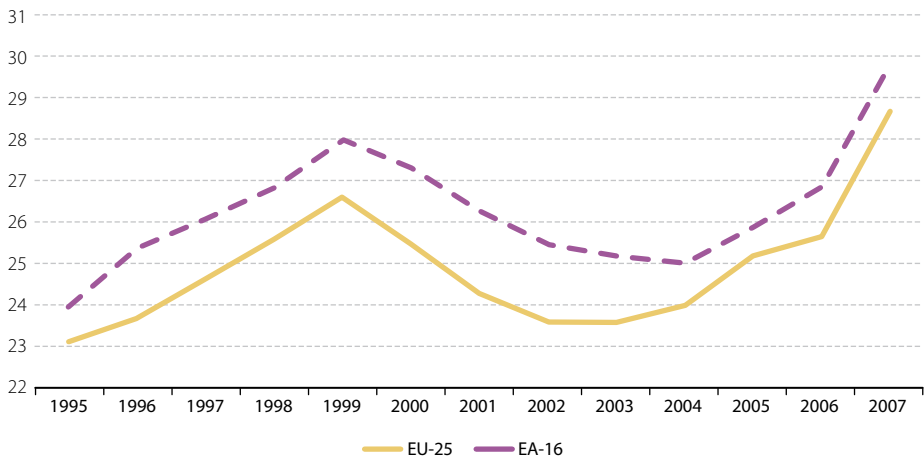
In most Member States, social contributions account for a greater share of labour taxes than the personal income tax. On average, about two thirds of the overall ITR on labour consists of non-wage labour costs paid by both employees and employers. Only in Denmark, Ireland and the United Kingdom do personal income taxes form a relatively large part of the total charges paid on labour income.

### Capital taxation: base broadening and cyclical factors have so far offset the impact on revenue from the cuts in corporate tax rates

Despite the sizeable cuts in rates, revenues from the corporate income tax, the most important tax on capital income, have been growing since 2003; a similar rebound is visible also in other related indicators such as revenue from taxes on capital and business income taxes. Also in a longer time frame, i.e. the comparison with 1995, the ITR on capital<sup>6</sup> does not show a decline, as would be expected given the cuts in the corporate tax rates (see Graph 8).

The timing of the pick-up in revenue suggests that cyclical effects, to which the ITR on capital is much more susceptible than the ITRs on consumption and labour, are playing an important

**Graph 8:** Implicit tax rate on capital  
1995–2007, in % (arithmetic averages)



role. The EU-25 ITR on capital reached a peak between 1999 and 2000, then declined, and picked up again, in line with the business cycle. Nevertheless, the extent by which the ITR has been diverging from the statutory rates suggests that the measures to broaden the corporate tax base, which have very frequently accompanied the rate cuts, have been playing an important role in sustaining the ITRs; the measures taken at EU level to limit harmful tax competition may also have resulted in less erosion of the base for capital taxes. Eventually, however, cyclical effects fade out (as they depend largely on the existence of carry-over provisions for losses incurred in previous years and on capital gains) and base broadening has its limits. Another possibility is that, stimulated by the steep fall in corporate tax rates, growing incorporation is deceptively boosting revenues at the expense of the personal income tax.

The absolute levels of the ITRs on capital differ widely within the EU (see Table G in Annex B), ranging from 50.5 % in Cyprus to a mere 10.3 % in Estonia. A breakdown of the ITR on capital shows that, in most cases, the ITRs on capital and business income cluster around 20 %; the variation in the tax burden on capital derives largely from wide differences in the taxation of capital stocks/wealth. Their revenue is very limited in some Member States, but contributes a significant amount of revenue in several others, depending not only on the tax rates but also on the size and profitability of the capital stock. In five Member States, taxation of capital stocks/wealth yielded in 2007 at least 3.5 % of GDP, i.e. as much as the average revenue from the corporate income tax. In France, taxation of capital stocks/wealth yields over 50 % more than the corporate income tax itself.

## Environmental taxes declining in the EU-15 but increasing in the newly acceded Member States

The development of environmental tax revenue is currently subject to opposite forces; on the one hand, policymakers give high priority to environmental protection, a trend which may grow even stronger as attention focuses on the threat from global warming; on the other, greater reliance on policy instruments other than taxes, such as emissions trading, and growing political pressure to accommodate the strong increases in the oil price recorded in the last few years by reducing taxation of energy.

Currently, roughly one euro out of every sixteen in revenue is raised from environmental taxes. Data, however, show that, as a percentage of GDP, environmental tax revenues have been on the decline, in the weighted average, since 1999, particularly in the euro area. This trend continued in 2007. In the 12 new Member States, which before accession to the EU typically levied low environmental taxes, revenues from this kind of tax have instead shown a strong progression over

time, so that by now there is practically no difference vis-à-vis the EU-15 in this respect; this was, however, not enough to offset the decline in the EU-15.

Equal revenue does not mean equal tax rates. Countries with higher energy intensity may display the same revenue although the tax rates are lower. This is, indeed, what happens in the domain of energy taxation, which contributes some three-quarters of revenues from environmental taxes. The ITR on energy<sup>7</sup> shows that wide differences in the tax revenue raised per unit of energy consumed persist (the highest taxing country levies over five times as much revenue per unit of energy than the least taxing Member State), and indicates that in the weighted average, once adjusted for inflation, taxation of energy has been gradually declining (see Tables H and I in Annex B).

The full text of the 2009 *Taxation Trends* report contains, for the first time, a breakdown of energy taxes. The data show that in the vast majority of cases, Member States raise little revenue from energy taxes on sources other than transport fuels, such as electricity.

## Member States introduce special tax measures to offset the effects of the global financial crisis

The statistics covered in the *Taxation Trends* report cover the years up to 2007, before the global economic and financial crisis spread to Europe. From the second half of 2008 onwards, governments have scrambled to introduce measures to support the economy or to consolidate public finances. A budgetary analysis of these measures lies outside the scope of this report, which aims instead at giving a broad picture of the variety of measures introduced in the tax domain. Besides the more detailed country-by-country description in the main report, the main tax measures adopted in 2008 and at the beginning of 2009 are listed in a synoptic box in Annex A. Although it is too early to undertake a full analysis of these measures, not least because some governments were still considering different options at the time of writing, some features stand out.

- The measures are quite diverse in form, scope, and budgetary impact, with some Member States introducing substantial reforms, others counting primarily on the automatic stabilisers to support economic activity although complementing this with some targeted actions.
- Although in the majority of cases the measures consist of discretionary tax cuts, some Member States have instead opted for revenue increasing measures, owing to the lack of budgetary room for manoeuvre.

- One of the most common types of measures was the direct support of household spending power by reductions in the personal income tax. This happened more often through increases in allowances than cuts in rates, because of equity considerations but also because an increase in allowances, having a proportionally higher impact on lower-income households, is expected to more directly boost private consumption. In a few cases, PIT rates were even increased, but this was typically limited to higher incomes. Some countries suffering from particularly pronounced drops in GDP decided to defer previously decided PIT rate cuts. This seems to point towards some increase in progressivity in the coming years.
- With the notable exception of the United Kingdom, Member States have generally not opted for temporary VAT rate cuts as a way to boost consumer spending in the short run; Finland decreased VAT on food, however. In contrast, a number of Member States hiked VAT rates, curtailed the scope of exemptions and reduced rates, or increased excise duties to help cover the budgetary shortfall generated by the slump.
- Likewise, measures to reduce the general corporate income tax rate were comparatively rare, presumably owing to the fact that such a measure, while boosting confidence in the long run, has no short-term impact on loss-making companies. Nevertheless, many Member States attempted to support business investment through measures such as more generous depreciation allowances or investment tax credits; in a few cases, the cuts were targeted towards SMEs. Several Member States have opted for granting these incentives for a limited period of time only, in order to give an immediate boost to capital spending.
- In general, as world prices decreased with the onset of the recession, Member States did not cut excise duties on energy products, although e.g. Italy cut excise duties on gas for industrial use and granted some tax and social contributions relief to road haulage operators.
- A wide variety of measures targeting individual sectors were introduced. In particular, several Member States tried to dampen the slump in the housing sector by granting tax reductions of various kinds; Cyprus and Malta took measures to reduce the tax burden on tourism; other measures aimed at supporting stock prices or reducing inheritance taxes.

## Concluding remarks

Given the fact that the EU is, in general, one of the most highly taxed areas in the world, one pressing issue is what lessons tax policy should learn from the global financial crisis. In theory, its well-developed welfare systems, made possible precisely by those high taxation levels, should have made Europe more resilient; in addition, heavy taxation is usually believed to take a higher toll on growth during cyclical upturns, when it contributes to factor scarcity and exacerbates inflation, rather than in a recession; yet, although the crisis originated in the United States, it spread quickly to the EU and resulted in a slump of comparable proportions. Does the crisis suggest that another fiscal policy model would have been preferable? The measures introduced varied considerably across Member States, but the substantial differences in the impact of the crisis and in Member States' budgetary and financial constraints justified a differentiated response. Nevertheless, the array of measures targeting individual sectors raise the question of whether industry-specific instruments represent an optimal response to an economy-wide slump, not to mention that such a patchwork of incentives risks being incoherent at European level.

A *prima facie* exam of the measures introduced seems to point to a continuation of the recent trend towards greater reliance on consumption rather than labour or capital taxes. This would be in line with the remarkable decline in CIT rates observed since the end of the 1980s and which the statistics in this report document to be ongoing, and with the markedly cyclical nature of capital tax revenue.

Another interesting question relates to what will be the future path of the overall tax ratio. Although the depth of the recession as well as the discretionary tax cuts introduced in many countries make it a safe bet that the tax-to-GDP ratio will decrease in the coming couple of years, further down the road a reduction in deficit levels will be inevitable, and the public debt accumulated during the downturn will have to be serviced. In addition, the baby boom generation will soon start to reach retirement age. Will this, in due course, lead to a tax burden on active workers that even exceeds the historic peaks of 1998–2000?

One effect of the crisis on the policy debate has been that demands for fairness have come more clearly to the forefront. This, together with the budgetary needs, has stimulated international cooperation on ensuring more effective taxation of portfolio investments held abroad. There is now visibly greater international consensus on information exchange, the final objective of the Savings Directive and of the Mutual Assistance Directive, which embody the EU approach in this area.

One interesting observation contained in the report is that the Member States with the highest tax ratios tend to show less short-term change in tax ratios than the others, as if high taxes somehow introduced elements of rigidity or, in other words, perpetuated themselves. Many tax-cutting programmes have been announced over the last ten years, but their results were generally modest, as highlighted by the limited decline in tax-to-GDP ratios. This has brought attention to the issue of whether economic growth could not be stimulated by raising the same or a similar amount of revenue but in different forms. A reflection is ongoing on whether offsetting cuts in direct taxes by raising consumption taxes would be beneficial. The data indeed show a trend, in most countries, towards a higher ITR on consumption since 2001, and indeed, some of the boldest measures taken in response to the crisis fit in this logic. It is, however, difficult to evaluate to what extent this process is intentional or the by-product of other factors, such as mere political expediency or, in the new Member States, the adaptation in excise duties to EU minima.

Finally, the evidence from our survey of environmental taxation deserves careful reflection, particularly in the current context of revenue shortfalls. Revenue from environmental taxes has been declining, as a percent of GDP, for several years. This may be justified by greater efforts done elsewhere, for example in emissions trading, by the trend decline in energy intensity, and by the fact that energy prices at the source have grown considerably; but is nevertheless at odds with the perceptions of the general public as well as with oft-stated policy objectives. Finally, the wide divergence of taxation per unit of energy raises the question of the optimal degree of differentiation between EU Member States that participate in the same Internal Market but have unequal industrial structures and climate conditions.

## Endnotes

- <sup>1</sup> See OECD (2008), *Revenue Statistics*, 2008 edition.
- <sup>2</sup> The top statutory personal income tax rate reflects the tax rate for the highest income bracket. The rates also include surcharges, state and local taxes. Adjustments have been carried for Belgium, Denmark, Germany, France, Hungary, Ireland, Luxembourg, Finland, Sweden and Norway. For details of the adjustment see the full text of the report. In most Member States the personal income tax contains several rates. However, a description of the entire rate structure goes beyond the scope of this booklet. The interested reader can find a complete description of the rate system and the brackets in force in the Member States in the 'Taxes in Europe' database on the EU website at the following url: <http://ec.europa.eu/taxtrends>. The database is accessible free of charge and updated annually.
- <sup>3</sup> Taxation of corporate income is not only conducted through the CIT, but, in some Member States, also through surcharges or even additional taxes levied on tax bases that are similar but often not identical to the CIT. In order to take these features into account, the simple CIT rate has been adjusted for comparison purposes: notably, if several rates exist, only the 'basic' (non-targeted) top rate is presented; existing surcharges and averages of local taxes are added to the standard rate. Adjustments have been carried out for Belgium, Germany, Estonia, France, Hungary, Italy, Lithuania, Luxembourg and Portugal. For details see the full text of the report.
- <sup>4</sup> Implicit tax rates in general measure the effective average tax burden on different types of economic income or activities, i.e. on labour, consumption and capital, as the ratio between revenue from the tax type under consideration and its (maximum possible) base. The ITR on consumption is the ratio between the revenue from all consumption taxes and the final consumption expenditure of households.
- <sup>5</sup> The ITR on labour is calculated as the ratio of taxes and social security contributions on employed labour income to total compensation of employees.
- <sup>6</sup> The ITR on capital is the ratio between taxes on capital and aggregate capital and savings income. Specifically it includes taxes levied on the income earned from savings and investments by households and corporations and taxes, related to stocks of capital stemming from savings and investment in previous periods. The denominator of the capital ITR is an approximation of world-wide capital and business income of residents for domestic tax purposes.
- <sup>7</sup> The real ITR on energy is calculated as the ratio between total energy tax revenues and final energy consumption, deflated with the cumulative % change in the final demand deflator.