European Commission —
Taxation and customs union

Taxation trends in the European Union

Focus on the crisis:
The main impacts on EU tax systems

2011 edition

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This booklet provides an overview of the way in which the recession that started in 2008 affected the tax systems of the 27 EU Member States. It is based on the 2011 report "Taxation trends in the European Union" issued by the European Commission Directorate-General for Taxation and Customs Union and Eurostat, the Statistical Office of the European Communities. All tables and calculations are taken from this source. The full text of the report can be purchased from the Publication Office of the European Communities or be downloaded free of charge from the websites of the Directorate-General for Taxation and Customs Union or Eurostat:

http://publications.europa.eu/index_en.htm
http://ec.europa.eu/taxtrends
http://ec.europa.eu/eurostat

Readers interested in taxation may also find detailed information on the taxes currently in force in the Member States of the European Union in the 'Taxes in Europe' Database at the following url:

http://ec.europa.eu/tedb

Cataloguing data can be found at the end of this publication.

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GLOSSARY

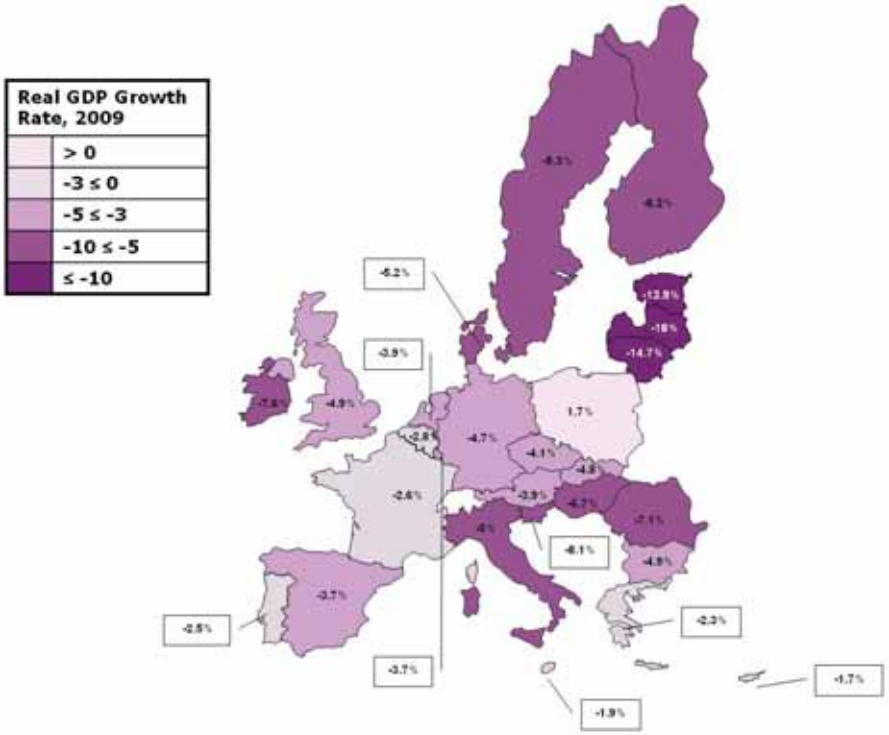
BE	Belgium
BG	Bulgaria
CZ	Czech Republic
DK	Denmark
DE	Germany
EE	Estonia
IE	Ireland
EL/GR	Greece
ES	Spain
FR	France
IT	Italy
CY	Cyprus
LV	Latvia
LT	Lithuania
LU	Luxembourg
HU	Hungary
MT	Malta
NL	Netherlands
AT	Austria
PL	Poland
PT	Portugal
RO	Romania
SI	Slovenia
SK	Slovakia
FI	Finland
SE	Sweden
UK	United Kingdom
IS	Iceland (*not an EU Member State*)
NO	Norway (*not an EU Member State*)
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-17	Euro Area (17 member countries, membership as from 1.1.2011)
CIT	Corporate Income Tax
GDP	Gross Domestic Product
ITR	Implicit Tax Rate
PIT	Personal Income Tax
SSC	Social Security Contributions
VAT	Value Added Tax
:	Not available
n.a.	Not applicable

FOCUS ON THE CRISIS: THE MAIN IMPACTS ON EU TAX SYSTEMS

The impact on growth and its timing has differed considerably among Member States

The economic and financial crisis that started in 2008 has affected all of the EU. In 2009, the peak year of the crisis, all Member States but one saw their GDP shrink (see Map 1); EU-27 GDP contracted by 4.2 %. However, the depth of the slump differed considerably among Member States – the GDP performance in 2009 ranged from -18.0 % in Latvia, which suffered the world's deepest decline, to +1.7 % in Poland.

Map 1: Real GDP growth in the EU, 2009



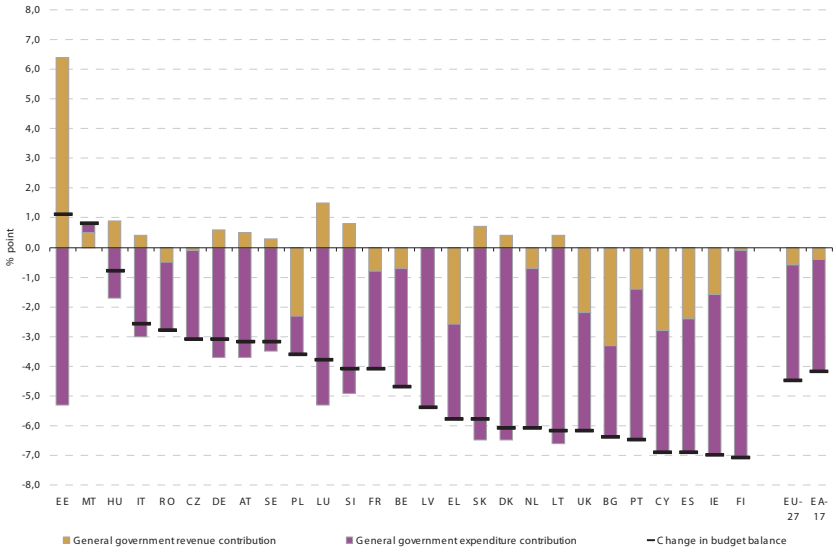
The timing of the crisis varied, too: one quarter of Member States recorded a contraction in GDP already in 2008, but that same year saw average growth at 2.5 % or above in almost one

third of the Union. Because of this, in cumulative terms the growth differential is therefore even greater, ranging from -22.2 % to +6.8 %. Over the 2008-2009 period the western continental European countries, notably France, Germany and Spain and most of the surrounding countries, tended to do better than average in GDP terms, as did south-eastern Europe, whereas the hardest hit countries were in the area surrounding the Baltic sea (including Finland and Sweden, but excluding Poland), as well as Ireland and the UK.

Budgets were more affected on the expenditure than on the revenue side

The impact of the crisis on public finances was stronger on the expenditure than on the revenue side. On average, from 2008 to 2009, revenue contraction contributed only about half a point to the worsening of the public deficit (see Graph 1).

Graph 1: Change in net lending/net borrowing, 2009



Source: Commission services

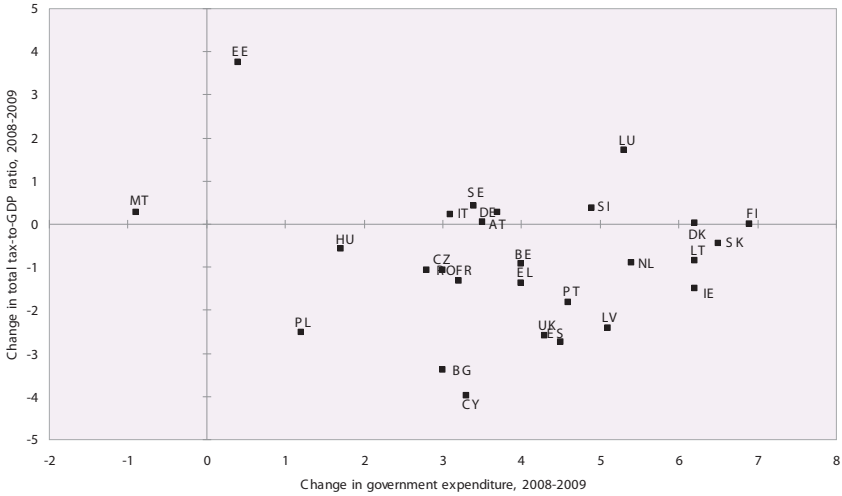
Expenditure, in contrast, went up much more, by around four points of GDP. Furthermore, while the expenditure-to-GDP ratio increased significantly in almost all countries, the picture on the revenue side was much more contrasted: in about one fourth of countries, the drop of revenue was significant, approaching 2 % of GDP or more, whereas more than one third of countries actually increased revenues, as a share of GDP ([1]). This shows that, although the exit strategy for the crisis had foreseen that consolidation would, as a rule, start

only in 2010, not all countries waited until that year to start consolidating on the revenue side.

The countries where expenditure grew most tended to limit tax relief and vice-versa

The countries that increased the tax ratio (taxes as a percentage of GDP) most notably in 2009 had typically suffered a greater than average increase in the expenditure to GDP ratio that year (Luxembourg, Slovenia, Slovakia) or were facing urgent budgetary consolidation needs (Estonia, Hungary).

Graph 2: Changes in government expenditure and in total tax ratio, 2009



Source: Commission services

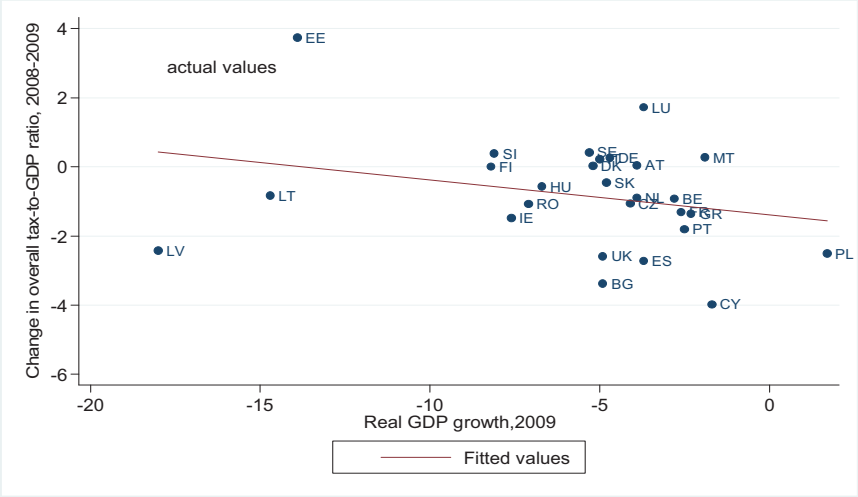
Graph 2 seems to confirm a trade-off between expenditure trends and changes in the overall tax ratio. The countries that increased expenditure most in 2009, on the right hand in the graph, are placed higher up than those of other Member States which had not increased expenditure so much, which are placed towards the centre of the graph. It is reasonable to assume that countries chose to avoid incurring a strong deterioration on both the revenue and the expenditure side. At the left-hand side of the graph, a small number of countries with limited or negative expenditure growth nevertheless maintained a cautious stance on the revenue side, usually because of particularly pressing consolidation needs (e.g. Hungary and Estonia, which in that period have had recourse to EU and IMF loan programmes).

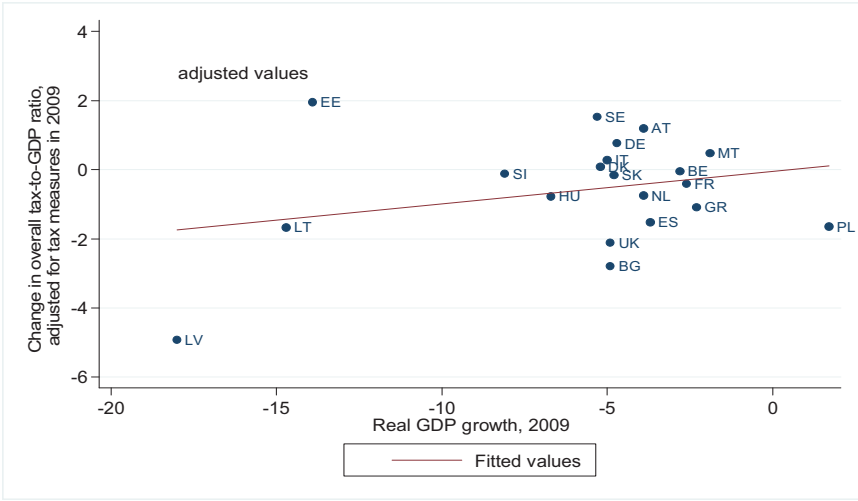
Owing to consolidation measures, tax ratios tended to decline less in countries suffering a deeper slump

One might expect that the countries that experienced the deepest contraction in GDP were those with the strongest fall in the overall tax ratio. In actual fact, at the beginning of the recession, in 2008, the decline in the tax ratio, where it took place, was independent from the depth of the recession; whereas in 2009, when the economy reached the bottom of the recession, the opposite happened: in countries suffering the deepest slump in GDP, tax ratios tended to decline slightly less. The following graph shows the 2009 development.

The explanation for this trend may be due to the fact that countries facing an extraordinarily deep slump decided that, given the budgetary situation, they could not let automatic fiscal stabilisers work. In fact, if we correct for the estimated effect on tax revenues of measures taken in 2009, judging from the slope on the fitted line, the tax ratio appears to deteriorate more for countries facing a deeper slump, as one would expect given the progressive elements of the tax system (see Graph 3) ([2]). Another explanation is linked to the contractionary effects of a tightening of the tax policy stance – countries increasing taxes may have, as a result, recorded lower growth. At any rate, data appear rather scattered, so the depth of the recession does not seem to have been a key factor in the development of the tax to GDP ratio.

Graph 3: GDP growth and change in total tax ratio, actual and adjusted for discretionary tax measures, 2009



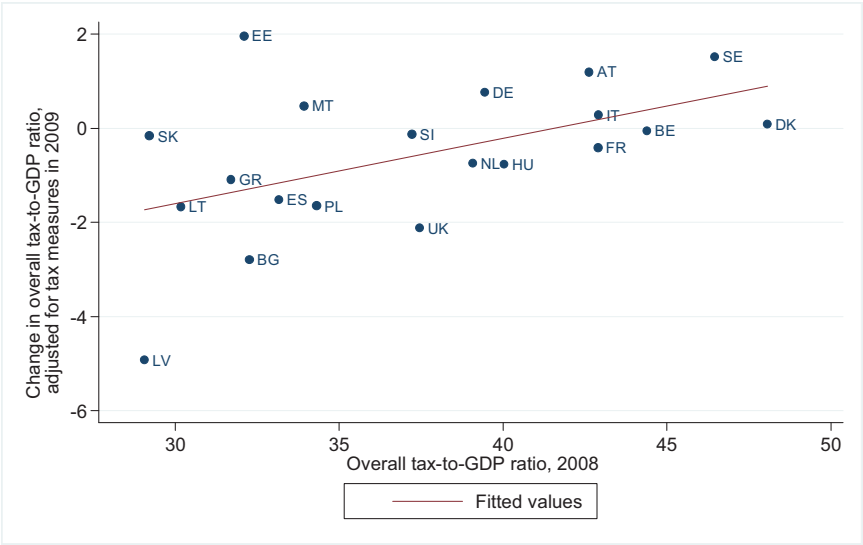


Source: Commission services

Greater variation of tax ratios for lower-taxing countries

The next graph highlights how tax ratios have varied most – both upwards and downwards - in low-tax countries.

Graph 4: Initial level of total tax ratio and its 2008-2009 variation, adjusted for tax measures, % of GDP



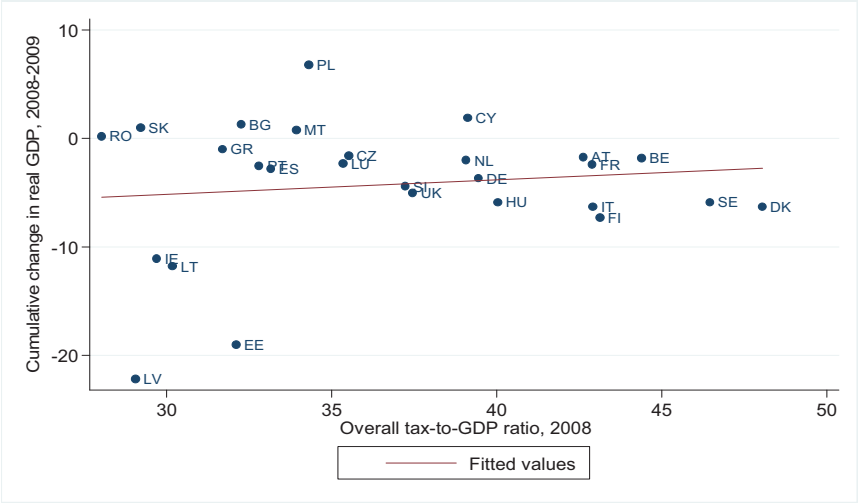
Source: Commission services

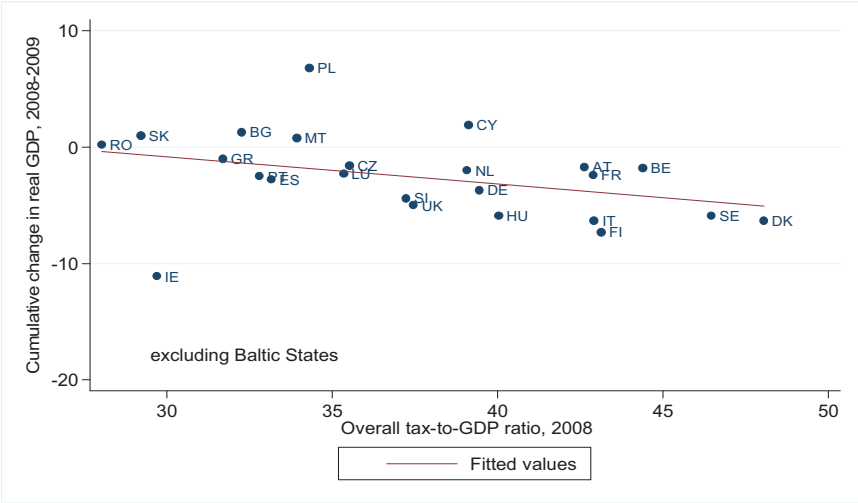
This observation is coherent with the pattern that we have been witnessing for several years (see 2010 issue of the main report), as if at the higher end, European tax systems are more rigid, in both directions. Other explanations are possible too: for example, a higher State share may result in a lesser short-term cyclical impact of the crisis on GDP, because of the greater share of autonomous spending in the economy. This might also explain why, net of the discretionary tax measures, countries with lower tax levels tended to show declines in tax ratios, whereas tax ratios rather tended to increase slightly at the upper end.

Were higher tax ratios associated with a lower intensity of the recession?

Higher initial levels of the tax ratio indeed correlated, albeit not strongly, with a lower depth of the slump, apparently giving some support to the hypothesis that a higher State share can act to dampen fluctuations.

Graph 5: Initial total tax ratio (2008) and GDP growth (2009) by country





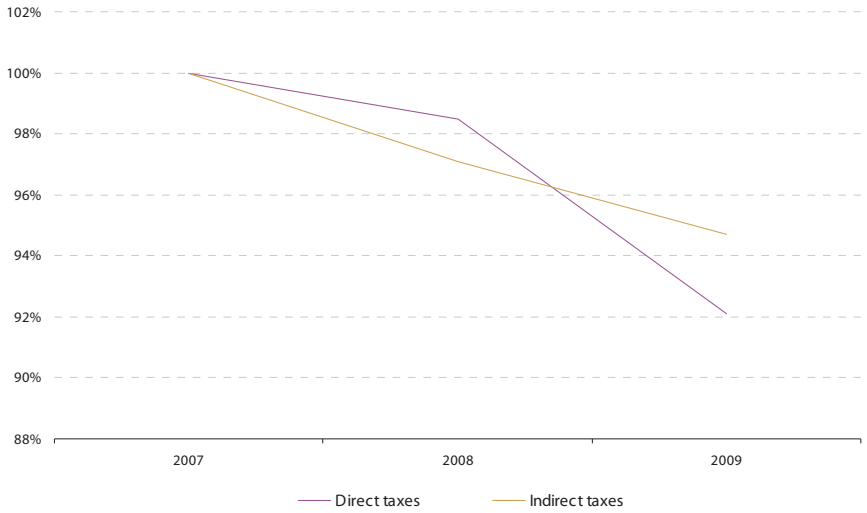
Source: Commission services

However, if we remove the Baltic States from the sample, the graphs show the opposite correlation – countries with a higher tax ratio, on average, witnessed a slightly deeper slump (see Graph 5). Removing outliers is always, however, debatable, and other factors may well be at work. All in all, there seems to be no clear link between the overall tax ratio and the depth of the recession.

Performance by type of tax

Direct tax revenues, generally considered more sensitive to the cycle, unsurprisingly fell more than indirect tax revenue in 2009. The decline in the average share of direct tax revenues on GDP amounted to 0.8 points or 6.5 %, compared with 0.3 points, or 2.5 %, for indirect taxes.

Graph 6: Development of direct and indirect tax revenue in EU-27, 2007 = 100



Note: unweighted averages of the share of direct and indirect taxes (in % of GDP)

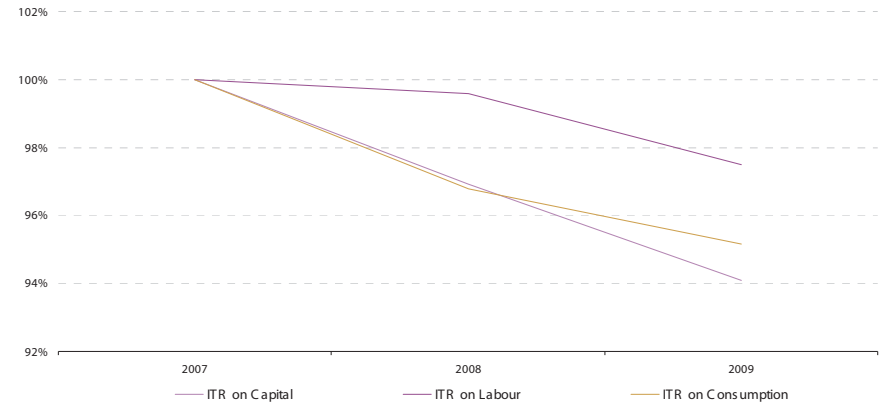
Source: Commission services

The difference in the performance of the two tax types, however, narrows considerably taking 2008 and 2009 together (-7.9 % compared with -5.3 %). This is partly because in several countries indirect taxes performed surprisingly badly, in revenue terms, in 2008, and partly because several countries introduced revenue-raising measures in 2009 that were predominantly based on indirect taxes, as will be detailed below. Revenue-raising measures based on direct taxes were, on the contrary, quite rare.

The impact of the crisis on the implicit tax rates (ITRs) on consumption, labour and capital

One might expect the revenue impact of the crisis to differ by type of tax. Two effects may be distinguished, one linked to the size of the tax base, and the other to the progressivity of the tax itself. The first effect is straightforward: a deep recession will typically affect some tax bases more than others; revenues from taxes based on profits, such as the corporate income tax, should fall substantially as many firms become loss making; transaction taxes may also suffer from reduced economic activity, whereas taxes levied on essential consumption items will normally see a modest reduction in revenue. This is broadly consistent with the patterns seen above for direct and indirect taxes.

Graph 7: Development of ITRs by type, 2007=100



Source: Commission services

In addition to this, there is a difference between taxes that are essentially proportional to the tax base, such as the VAT, excise duties, transaction taxes and even the CIT, on the one hand, and taxes that include some elements of progressivity on the other, such as the PIT; in the latter case, revenue should decelerate more than proportionately to the tax base in times of recession.

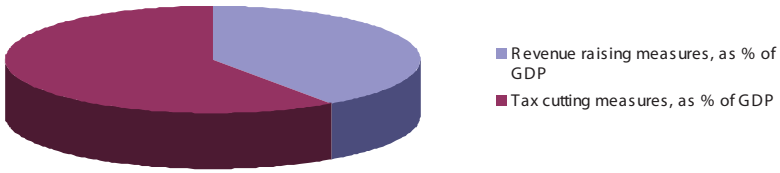
The main report contains indicators, the ITRs or implicit tax rates, that relate directly the size of the tax base (or a proxy for it) with its revenue, giving a measure of this effect. A perfectly proportionate link between the tax base and the revenue would result in an ITR being relatively insensitive with regard to the cyclical position. In actual fact, ITRs showed a relatively marked sensitivity to the cycle, indicating that the drops in revenue exceeded the contraction of their tax bases. Graph 7 indeed shows a clear contraction in all ITRs in 2008-2009 compared to their 2007 level.

While the drop in the ITRs for labour and capital are consistent with the nature of the taxes, the drop of the ITR on consumption is surprisingly sharp given the proportional nature of indirect taxes, mirroring the weakness in VAT revenues recorded in the recession. The drop is even more surprising considering that several countries increased consumption tax rates in 2009, which should provide a boost to the ITR on consumption. This phenomenon can nevertheless be explained by a combination of factors. First, the depth of the recession is likely to have shifted consumption patterns towards primary goods, which are normally subject to lower VAT rates. Second, because of data issues, the ITR on consumption is affected by the decline in construction activity, which was particularly marked in this recession. In addition, inventories involuntarily accumulated by businesses during the recession reduce the amount of VAT paid, as do rising bankruptcies ([3]). The time lags with which tax revenues are recorded may also be affecting the result: time lags on indirect taxes tend to be shorter than for direct taxes, which may lead, statistically, to a faster drop for indirect taxes. ([4]) Last but not least, many countries have introduced measures aimed at granting companies the possibility to defer tax payments, including VAT.

THE POLICY REACTION

The 2010 edition of the main report contains a list of tax policy measures taken by Member States in response to the economic and financial crisis. For the vast majority of countries, the list includes estimates of the budgetary effects of these measures for 2009, allowing us to analyse more precisely their impact.

Graph 8: Overall budgetary effect of tax measures, 2009



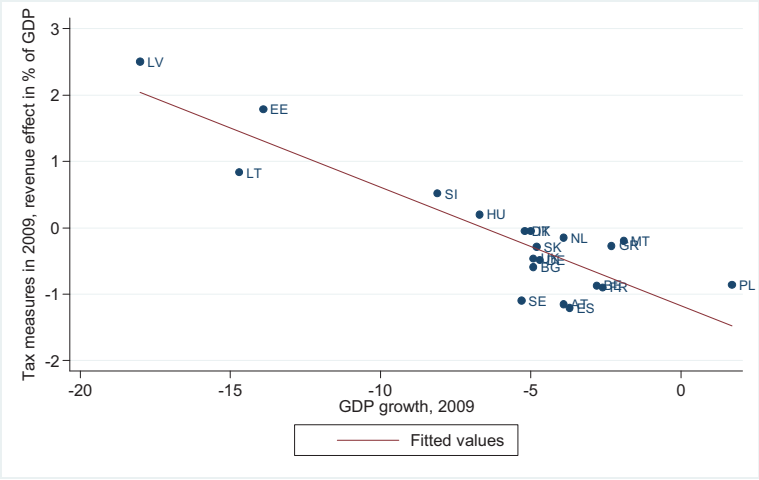
Source: Commission services; See endnote 2

For 2009, the trough of the recession, we possess quantified data for 20 countries. Tax cuts clearly predominated: only in one quarter of cases did Member states introduce revenue-raising measures. The measures increasing taxes, however, had on average a slightly larger budgetary impact (see Graph 8), so that they represented more than one quarter of the total revenue effect.

Effects of GDP growth on the decision to cut or raise taxes

Graph 9 plots 2009 real GDP growth with the total budgetary amount of measures introduced in 2009. The graph clearly shows a negative correlation between the growth situation and the budgetary volume of tax measures adopted. In other words, the countries that introduced tax increases were those that had the most negative growth performance in 2009, and conversely, that countries that managed to limit the contraction in real GDP to 4 % percent or less were generally able to cut taxes. Not only the sign, also the volume of the measure seems to correlate well with the contraction in GDP.

Graph 9: Budgetary impact of tax measures adopted and real GDP growth, 2009



Source: Commission services

This correlation may be interpreted in two ways: one is that, quite simply, countries facing a very deep slump were compelled to raise taxes; alternatively, it can be argued that cutting taxes contributed to a better growth performance in 2009 and vice versa .

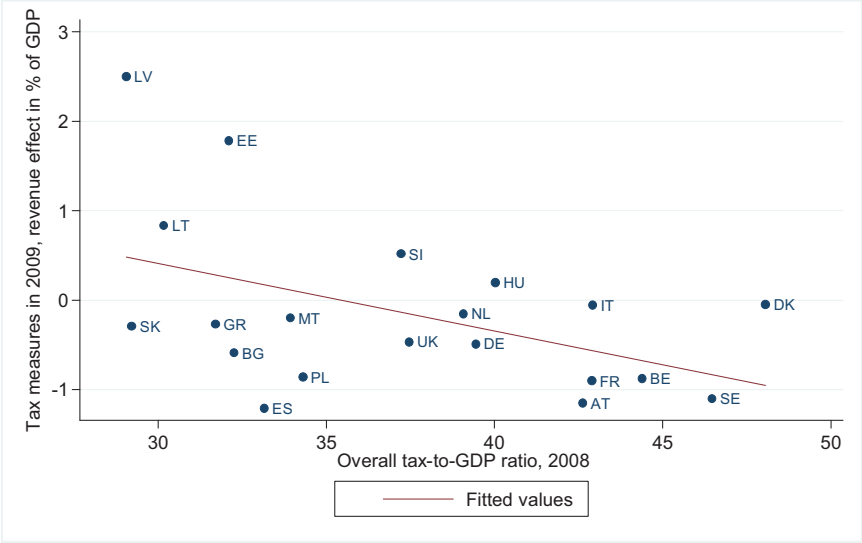
Effects of the starting level of taxation on the size and composition of consolidation measures

Another interesting question is whether high-taxing countries reacted differently from low-taxing countries in terms of the choice whether to tighten the tax stance already in 2009 or do it later. One might expect that low-taxing countries have more leeway to raise taxes if consolidation is needed; in addition several of the lowest taxing countries in Europe are the Baltics, which were particularly hard hit by the recession and had pressing budgetary consolidation needs.

Volume of measures and level of taxation

The overall volume of measures is somewhat negatively correlated with the initial level of taxation, as countries with a higher overall tax ratio tended to take larger tax-cutting measures (see Graph 10).

Graph 10: Budgetary impact of tax measures (2009) and initial tax ratio (2008)



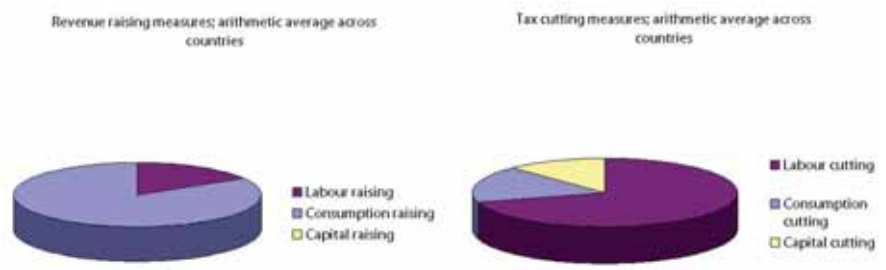
Source: Commission services

However, this result is strongly dependent on the significant tax increases that took place in the Baltic States; excluding them from the sample results in a weak correlation between initial tax ratio and volume of measures. In other words, in the 15 countries out of 20 that decided to cut taxes, the volume of cuts was not clearly linked with the starting level of the overall tax ratio. The choice of tax on which to concentrate the revenue effort also was by and large unrelated to the initial level of the tax ratio.

Composition of measures

The type of measures adopted differed markedly in nature depending on whether they aimed at raising revenue or cutting taxes. The budgetary resources invested in tax cuts were overwhelmingly directed at cutting labour taxes; less than one quarter of the relief went to cut consumption taxes, and a similar low share was allocated to cutting capital taxes. Tax raising measures were instead heavily concentrated on consumption taxes, accounting for more than three quarters of the total.

Graph 11: Budgetary impact of tax measures by type of measure, 2009



Source: Commission services

Did the tax policy choices take into account the existing level of taxation?

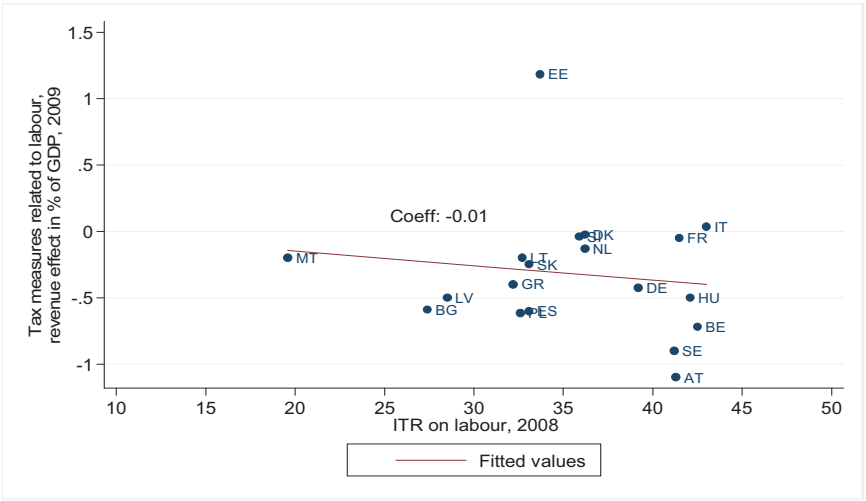
The crisis has resulted in the adoption of a large number of measures. An interesting question is whether Member States have utilised this opportunity to adjust their relative tax burden, depending on whether some bases were more or less taxed than in other EU countries. The composition of the tax measures taken suggests that indeed, Member States have tended to introduce somewhat more generous tax cuts on those tax bases that were taxed highly compared to the EU average, while revenue increases were higher when the tax base was comparatively little taxed, although the effect was not very strong. The following graphs illustrate this by plotting the budgetary implications of the measures adopted in 2009 with the average level of taxation of the base.

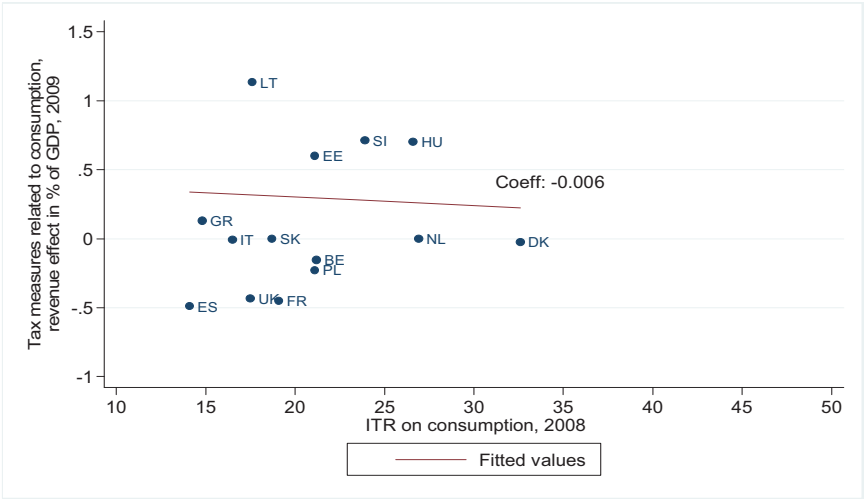
The link between the initial level of taxation and the rebalancing effort was somewhat stronger on labour taxation. This is suggested by the higher negative slope coefficient of the fitted values line in Graph 12, which plots the budgetary implications of measures against the initial (2008) level of the ITR on labour, a broad measure of the tax burden.

A similar trend applies to consumption taxation. As shown by the negative coefficient in the lower panel of Graph 12, Member States tended to increase consumption taxes more in those countries where the tax burden on consumption was below-average and vice-versa. The correlation would be stronger if one excludes from the sample the UK cut in the VAT rate, which was explicitly intended to be only temporary([5]).

As for capital taxation, the impact of the initial ITR went in the same direction, but was weaker. This result is, prima facie, surprising given the high mobility of this tax base. It could be explained by the fact that the ITR on capital represents a particularly broad measure of taxation. In fact, replacing the ITR measure with the statutory corporate tax rate yields a clearer correlation (see Graph 13).

Graph 12: Revenue effect of tax measures (2009) and initial level of ITR (2008), labour and consumption

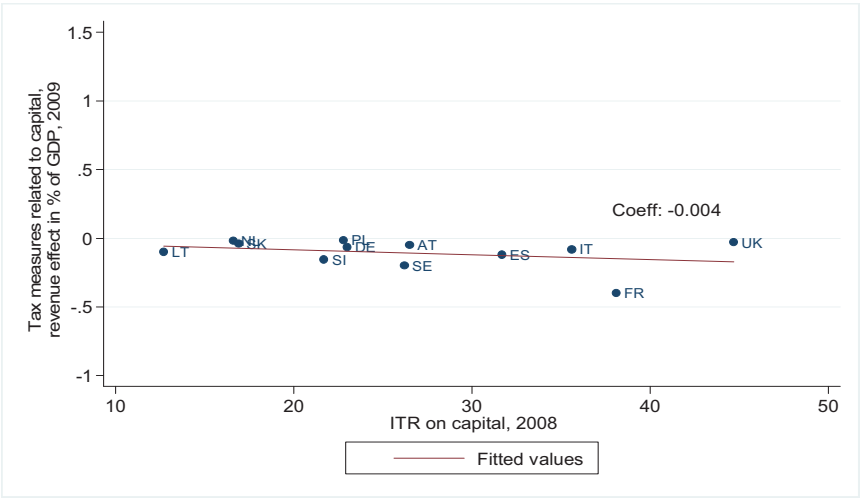


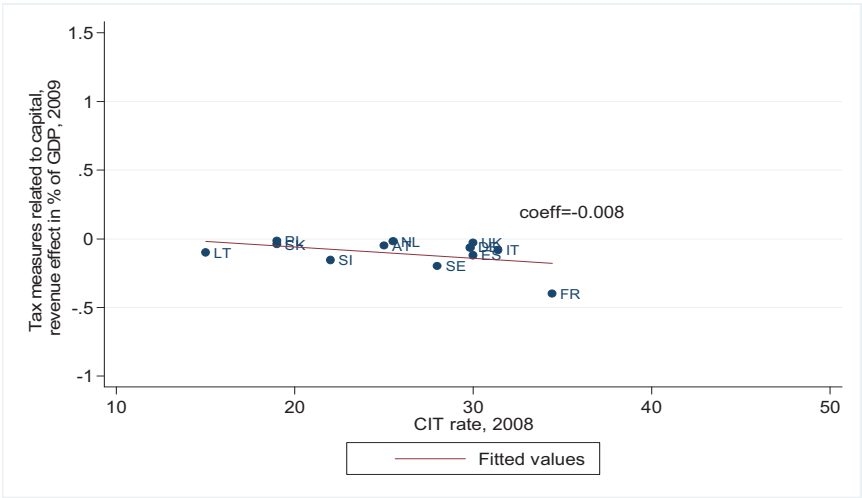


Note: Lower panel: LV off scale at (17.4; 3.0), but taken into account for fitted values line.

Source: Commission services

Graph 13: Revenue effect of tax measures on capital (2009) and initial level of ITR (2008) and corporate income tax rate (2008)



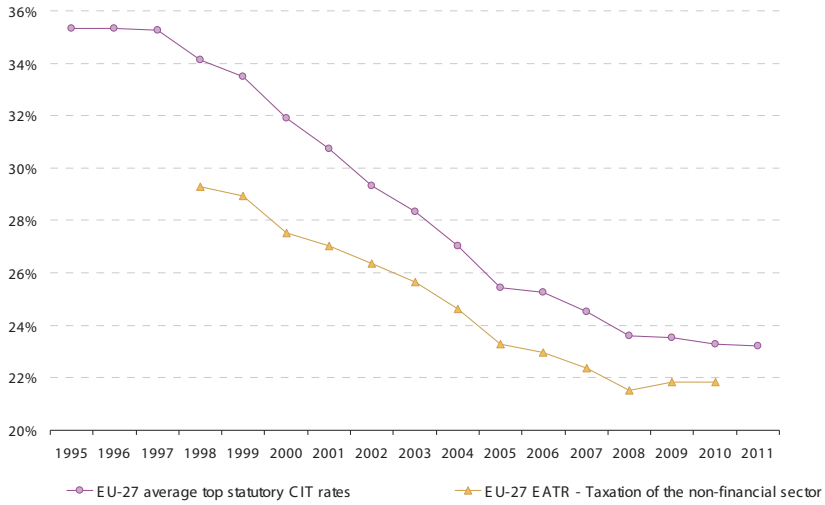


Source: Commission services

The crisis has not reversed, but seems to have slowed, the 'race to the bottom' in corporate taxes

The economic and financial crisis has created hardship for the population in many Member States; this could have given rise to demands to increase taxes on the wealthy or on companies. It is therefore interesting to see whether the tax measures taken in this period have been oriented towards higher top PIT ([6]) or CIT ([7]) rates.

Graph 14: Corporate Income Tax rates and Average Effective Taxation indicators, EU-27, 1995-2011



Source: Commission services

Looking at corporate taxes, already since the late 1990s the EU has seen a strong trend towards cutting CIT rates, first in the Central and Eastern European Member States, then in all of the Union. This trend seemed to slow down slightly in 2005-2008, possibly also because the low level of rates was already starting to limit the scope for new cuts. Since the onset of the crisis, the pace of rate cuts has slowed down further, coming almost to a halt. There is also some indication that Member States have been widening the corporate tax base: the EATR for non-financial enterprises has inched up from 2008 to 2010 (see Graph 14) and, even though many governments have introduced tax breaks to support business in the crisis, a number of measures have gone in the direction of limiting opportunities for cost deduction([8]). The near standstill in tax cuts does not necessarily derive from distributional imperatives; it may reflect the desire to focus the available resources on those tax cuts that

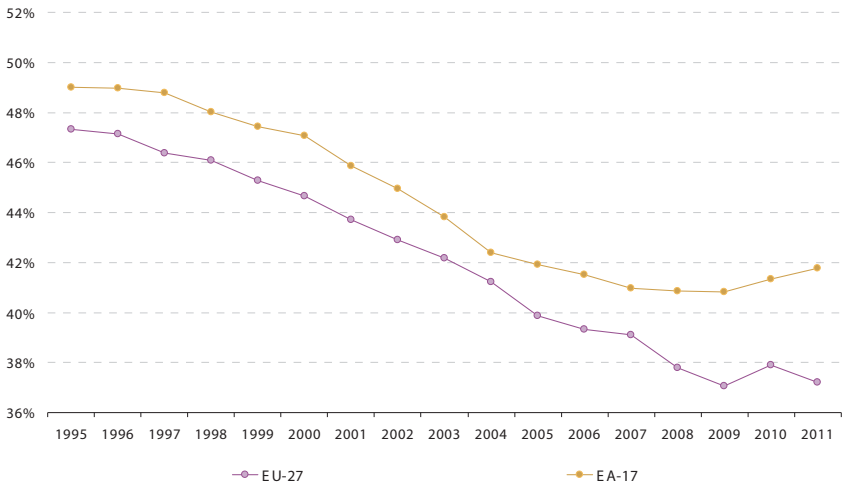
might have better prospects to translate immediately into higher spending by economic agents than a reduction in the CIT.

Broad trend to increase top PIT rates, particularly in the euro area, offset by a few large cuts

Since the beginning of the crisis there has been a broad trend to increase top PIT rates. Six euro area countries (Spain, France, Italy, Luxembourg, Portugal and Finland) did so in 2011, whereas Greece had hiked the top rate by 5 points in 2010. There was also a notable increase in the UK in 2010, to 50 %. Also comparing with 2008 increases are more frequent than cuts. A plausible explanation for this trend could be that the crisis has fuelled demands for greater redistribution.

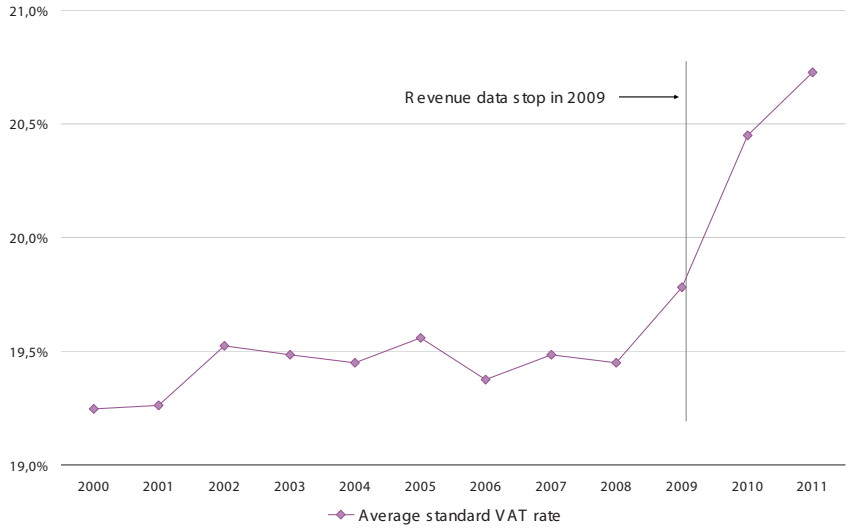
However, no such trend is visible in the Eastern Member States. On the contrary, some large cuts in top PIT rates there offset the more numerous rate increases, so that the average for the EU shows no significant change from its 2009 trough (see Graph 15). In particular, Hungary cut its top rate from 40 % to 16 % in 2011, while Latvia had cut its top rate by 12 points between 2007 and 2009.

Graph 15: Top Personal Income Tax rates, EU-27 and euro area



Source: Commission services

Graph 16: Development of average standard VAT rate, EU-27



Source: Commission services

VAT rates have grown strongly as a result of the crisis

One area were the onset of the economic and financial crisis has clearly had an impact was consumption taxation. Stagnant since 2002, VAT standard rates have often changed from 2009 onwards, in the vast majority of cases upwards. The average has risen strongly (see Graph 16). The speed and extent of the growth is impressive, 2½ percentage points on average in just three years.

Another remarkable aspect of this trend is its rapid spread to a large group of countries (see Table 1). Only one country changed the VAT rate in 2008, cutting it, but six did in 2009 and nine the following year. The trend continues in 2011.

Table 1: Changes in VAT standard rates by country, in % points

2008	2009	2010	2011
PT (-1)	EE (+ 2) IE (+ 0.5) LV (+ 3) LT (+ 1) HU (+ 5) UK (- 2.5)	CZ (+ 1) IE (- 0.5) GR (+ 4) ES (+ 2) LT (+ 2) PT (+ 1) RO (+ 5) FI (+ 1) UK (+ 2.5)	LV (+ 1) PL (+ 1) PT (+ 2) SK (+ 1) UK (+ 2.5)

Source: Commission services

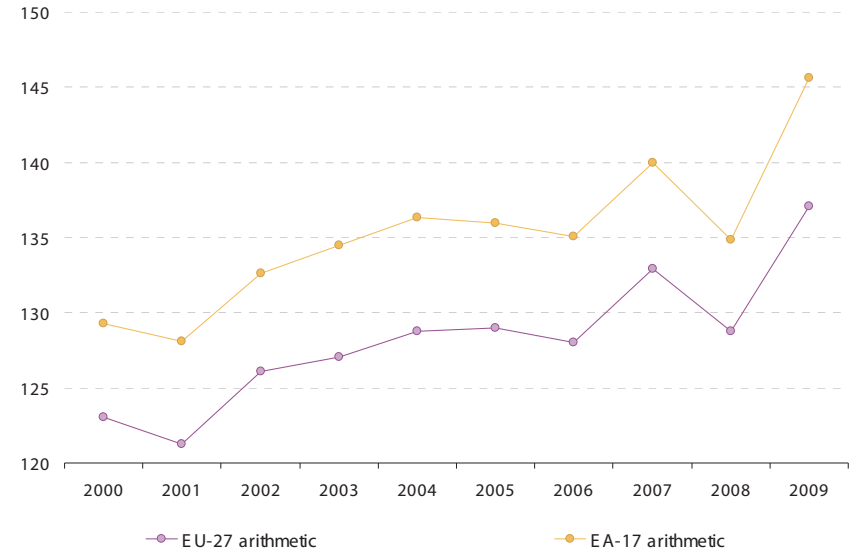
Similarly, a clear increasing trend was visible for the other main class of consumption taxes, excise duties. Table 2 highlights that increases took place in several countries and for significant amounts, up to 1.5 % of GDP.

Table 2: Key changes in excise duties

	Excise Duties		
	Energy products	Tobacco & alcohol	Budgetary impact (% of GDP)
	2009		
Increase	EE, GR, HU, LV, LT (2009-2011), RO, SI, ES	FI, HU, LV, LT (2009-2011), RO, SI, ES	EE: 0.1; GR: 0.13; HU: 0.1; LV: 0.9; LT: 0.7 (2009-2011); SI: 0.71; ES: 0.05 (2009), 0.04 (2010)
Decrease	IT, LT (2009-2011)		
	2010 -		
Increase	BG, CZ, DK, EE, GR, HU, LV, SI	BG, CY, CZ, DK, EE, FI, GR, HU, LV, PL, SI	BG: 0.34; DK: 0.4; EE: 0.8 (2010), 0.02 (2011); GR: 1.5; HU: 0.3; LV: 0.09
Decrease	PL, SK		PL: -0.07; SK: -0.02

Source: Calculations based on European Commission, 2010b (see Endnote 2)

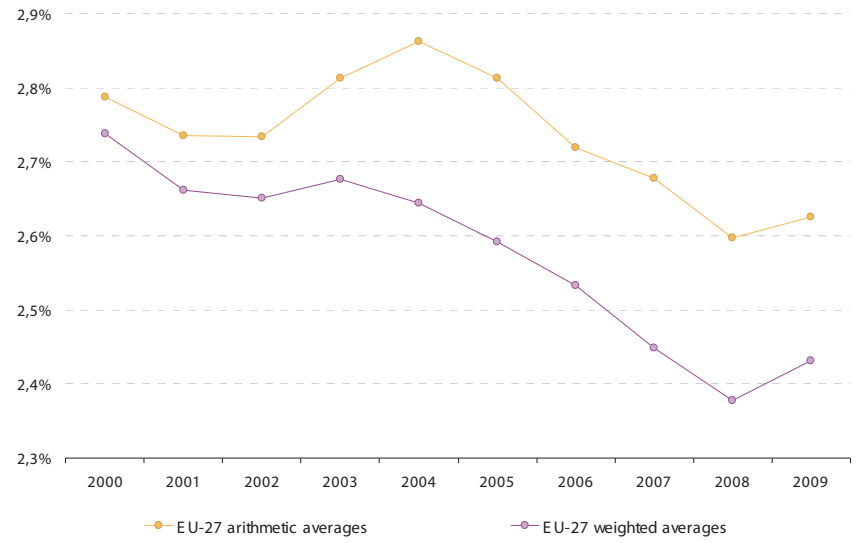
Graph 17: Tax revenue per unit of energy used, deflated (ITR on Energy), 2000-2009



Source: Commission services

The increases in excise duties resulted in a visible uptick in the real ITR on energy (the average unit amount of taxes on energy consumed in the economy), which for several years had grown only marginally, once adjusted for inflation.

Graph 18: Environmental tax revenues, % of GDP



Source: Commission services

The 2009 increase was sharp enough to interrupt the long slide in revenue from environmental taxes, that had been determined by the trend decline in the energy needed to produce each unit of GDP (see Graph 17).

Longer-term perspectives

The overall level of taxation in the EU seems likely to increase in the medium term. Budgetary consolidation is needed to bring government deficits down to sustainable levels, and this consolidation is likely to be carried out not only through cuts in public expenditure but also by increasing taxation. Accordingly, the latest EU Commission forecasts (European Commission, 2011), based on the Excessive Deficit Procedure, point towards an increase of the share of general government revenue on GDP.

The Spring 2011 Commission forecasts project that indirect tax revenue for the EU-27 as a whole will rise by 0.5 % of GDP from 2009 to 2012, while the increase in direct taxes is projected to amount to a more limited 0.2 % of GDP ([9]). In some cases, however, the increase is much more substantial – for example, the share of indirect taxes on GDP is projected to grow by about one quarter in Greece (2.6 points). However, it is difficult to predict exactly by how much tax levels will rise eventually, as this will crucially depend on the success of expenditure cuts and on the level of growth that the EU economy will be able

to generate in coming years. The crisis affected the various tax bases differently; they will also recover at different speeds. The incipient recovery will tend to naturally increase the tax-to-GDP ratio, as revenue from highly cyclical taxes, such as the CIT, will grow faster than GDP during the recovery; but this 'natural recovery' on its own generally does not result in substantial increases of the tax-to-GDP ratio.

Another interesting aspect is that a number of countries that have been more severely affected by the crisis or who have experienced tension on the financial markets tended to have below-average overall tax ratios. This applies, for example, to Greece, Portugal, Ireland, the Baltic States, Spain. The UK, too has embarked on an ambitious consolidation programme. Looking forward, these countries might increase taxes more than the others; if effectively realised, this might well result in a certain convergence of overall tax ratios at a higher average level. The European Commission Spring 2011 forecasts indeed show a reduction in the dispersion of tax-to-GDP ratios from 2009 to 2011.

This raises the question of how any additional tax increases might be structured.

While revenue shares may change in the future as some tax bases recover faster than others, the measures adopted in 2008-2010 provide some clear pointers on the type of tax strategy that Member States are more likely to follow. There has been a clear trend towards increasing indirect tax rates, involving both the VAT and excise duties. Our data on revenue stop at 2009, but many additional rate hikes took place in 2010 or 2011, so it seems likely that the share of indirect taxes on total revenue is set to increase in the coming years for many countries. As for direct taxes, some rebound of the tax ratios from the current low levels could be expected; wage tax revenue is typically fairly cyclical, like revenue from corporate taxation.

The fact that the revenue increases in taxes were mostly done on consumption taxes, while the tax cuts mostly took place on labour taxation, was not always linked to long-term considerations. We have shown that the countries that chose to increase taxes were usually those that faced a particularly deep recession, and those that faced an immediate need to reduce the budgetary shortfall, which ruled out, for example, recourse to profit-linked taxes; those that cut taxes instead had a longer-term horizon, where they might hope to reap the employment benefits of lower labour taxes. The fact that few corporate tax rate cuts were announced suggest that there was a belief that, given the weakness of aggregate demand, they would have been ineffective to bolster investment in the short run.

The hikes in top PIT rates witnessed in 2010-2011 in several countries raise the question of whether the rebalancing of taxation away from labour and towards consumption may be reversed. Hikes in top PIT rates represent an important political signal but, by themselves, usually raise little revenue – the bulk of PIT tax revenue comes from the labour income of the average taxpayer, not from the wealthy. In 2009, as we have seen, the tax measures have, on balance, cut labour taxation, not increased it. It remains to be seen what impact exactly the latest PIT hikes will have on the tax burden on labour; given the fact that the tax burden on labour is still high in the EU, for the future it will be important to reconcile redistributive objectives with maintaining work incentives.

Overall, this pattern of tax measures, based predominantly on indirect tax increases, seems likely to persist in the near future for the majority of countries. Little has been done, for example, to increase housing taxes, even though research shows that they are amongst the most growth-friendly and despite the fact that housing boom-and-bust episodes have been one of the root causes of the latest recession and of numerous bank failure cases in the past. At the time of writing, it is still unclear whether and to what extent the introduction of new financial taxes as significant fund raisers could alter this picture([10]).

An increase of the indirect tax share in the economy has a number of important implications. As recent research shows, indirect taxes typically are less of a drag on growth because they are less distortionary: owing to the exemption of savings and its lesser progressivity, a tax system based on indirect taxes is friendlier towards capital accumulation (including human capital accumulation); moreover, indirect taxes like the VAT, unlike direct taxes, do not have a direct impact on foreign competitiveness. The other side of the coin is that systems based on indirect taxes allow comparatively more limited possibilities for redistributive policies than direct taxes, hence the tax system may lose something in this respect; however, research shows that there generally are cost-efficient ways of correcting for the distributional implications of shifts toward indirect taxes. ([11])

Implications for EU Policies

The growing importance of indirect taxes has direct implications for the EU because most indirect taxes, owing to their immediate impact on the functioning of the Single Market, are harmonised, unlike direct taxes. Increasing VAT rates make the fight against fraud more pressing and reinforce the need for addressing the distortions in the VAT regime. The review of the VAT regime that has started in December 2010 with the presentation of the Commission Green Paper on the future of VAT therefore comes at the right moment.

Excise duties, too are for the most part harmonised. The increases recorded in energy excises have beneficial implications in terms of EU climate change policies, but are rather small – they are as yet insufficient to bring the ITR on energy, deflated for inflation, back to its 2000 levels. Furthermore, the latest data show a slight increase in divergence between energy tax levels, which are detrimental in terms of the Single Market, although divergence still remains at much lower levels than in the 1990s. A better alignment of energy tax rates with their CO2 content, however, as put forward in the Commission's proposed revision of the Energy Tax Directive in April 2011, would provide a stronger disincentive to emissions even at unchanged revenue levels. Extension of a CO2 tax to other, currently untaxed or undertaxed sectors, as proposed by the Commission, would instead gradually boost environmental tax revenues ([12]) .

As for direct taxes, the implications on EU Policies are less direct because of the fact that they are not harmonised. The fact that during the crisis countries seemed to concentrate tax cuts on labour is positive, as in several countries high labour tax rates coincide with poor employment figures; given the Europe 2020 objective to raise employment rates to 75 %, a reduction in labour taxation is welcome.

Endnotes

(1) Note that the change in the general government revenue, shown in Graph 1, is not exactly the same as the change in the tax ratio which is the focus of our discussion. Nevertheless, the two statistics are closely related and generally follow a similar trend.

(2) The tax ratio for each country was corrected by the estimated budgetary impact in 2009 of discretionary tax measures, basing on European Commission 2010b (pages 30-48). The estimates of the budgetary impact contained there derive from ex-ante analyses impact conducted by Member States within their budgetary process, using their own methodologies. These ex-ante estimates are intrinsically subject to a potentially significant margin of error. In addition, to carry out the analysis it has been necessary to adopt a number of simplifying assumptions to attribute the revenue effects. No data were available for CZ, FI, IE, LU, PT, and RO.

(3) National accounts data indicate, however, that inventories were run down in 2009.

(4) In theory, this should not be the case for national accounts data, as tax revenue data are in principle attributed to the year for which they are levied (accrual accounting). However, where accrual accounting comes down to a simple shift of cash receipts ('time-shifted cash' method) , it can take up to 2 years before all PIT assessments with respect to income year Y are reflected in the recorded data. Conversely, most of PIT on income Y is already recorded in the national account of year Y thanks to withholding taxes and advanced payments. Time lags might also differ between gross VAT receipts and VAT refunds: this difference is not taken into account e.g. in the Belgian national accounts, since only a one-month shift of net VAT receipts is taken on board.

(5) Subsequently, the UK, which had below-average consumption taxation in 2009, not only reversed the VAT cut but even increased it by 2 ½ points in 2011.

(6) 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.

(7) 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.

(8) See the 2010 edition of the main report, pp. 23-29.

(9) These figures refer to the GDP-weighted average.

(10) It is also not sure how the introduction of financial sector taxes would change the balance between direct and indirect and capital and labour taxation – financial transaction taxes are akin to existing indirect taxes in their effects whereas other types of levies on the financial sector can target employees' labour income, or profits and other capital income. There is currently substantial divergence of views on the scope of revenue that could be raised from financial sector taxation without undermining international competitiveness.

(11) For instance, the Mirrlees Review reports that in the UK that it would be possible to abolish reduced rates for the lowest three deciles in the income distribution, more than offset the negative distributional implications and still gain net tax revenue for GBP 11 billion. Studies for Germany also find limited redistributional impacts from abolition of reduced rates (e.g Boeters et al., "Economic effects of VAT reform in Germany", ZEW Discussion Paper 06-030, ZEW, Mannheim, 2006; German Ministry of Finance, "Analyse und Bewertung der Strukturen von Regel- und ermäßigten Sätzen bei der Umsatzbesteuerung unter sozial-, wirtschafts-, steuer- und haushaltspolitischen Gesichtspunkten, 2010".

(12) On the other hand, depending on the design, a shift to road pricing could provoke a shift from (excise and/or car) taxes to non-tax revenues.

Annexes

Table 1: Total tax revenue (including social security contributions)

1995-2009, in % of GDP

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
BE	43.9	44.4	45.0	45.5	45.5	45.2	45.2	45.3	44.8	44.9	44.9	44.5	44.0	44.4	43.5
BG	30.8	28.6	27.6	32.1	30.8	31.5	30.8	28.5	31.0	32.5	31.3	30.7	33.3	32.3	28.9
CZ	36.2	34.7	35.0	33.3	34.0	33.8	34.0	34.8	35.7	37.4	37.1	36.7	37.2	35.5	34.5
DK	48.8	49.2	48.9	49.3	50.1	49.4	48.5	47.9	48.0	49.0	50.8	49.6	48.9	48.1	48.1
DE	39.8	40.7	40.7	40.9	41.7	41.9	40.0	39.5	39.6	38.7	38.8	39.1	39.3	39.4	39.7
EE	34.8	33.5	34.4	34.3	32.5	31.0	30.2	31.0	30.8	30.6	30.6	30.7	31.9	32.1	35.9
IE	33.1	33.1	32.4	31.7	31.9	31.5	29.7	28.4	28.9	30.2	30.7	32.2	31.4	29.7	28.2
EL	29.1	29.4	30.6	32.5	33.4	34.6	33.2	33.7	32.1	31.3	31.9	31.5	32.1	31.7	30.3
ES	32.7	33.1	33.2	33.0	33.6	33.9	33.5	33.9	33.9	34.5	35.6	36.4	37.1	33.2	30.4
FR	42.7	43.9	44.1	44.0	44.9	44.1	43.8	43.1	42.9	43.2	43.6	43.9	43.2	42.9	41.6
IT	40.1	41.8	43.7	42.5	42.5	41.8	41.5	40.9	41.3	40.6	40.4	42.0	43.0	42.9	43.1
CY	26.7	26.2	25.6	27.7	28.0	30.0	30.9	31.2	33.0	33.4	35.5	36.5	40.9	39.1	35.1
LV	33.2	30.8	32.1	33.7	32.0	29.5	28.5	28.3	28.5	28.5	29.0	30.4	30.5	29.1	26.6
LT	27.5	27.1	30.6	31.7	31.7	30.1	28.6	28.4	28.1	28.3	28.5	29.4	29.7	30.2	29.3
LU	37.1	37.6	39.3	39.4	38.3	39.1	39.8	39.3	38.1	37.3	37.6	35.9	35.7	35.3	37.1
HU	40.8	39.3	37.8	37.6	38.3	39.0	38.2	37.8	37.8	37.4	37.5	37.3	39.9	40.0	39.5
MT	26.8	25.4	27.5	25.6	27.3	28.2	30.4	31.5	31.4	32.9	33.7	33.4	34.3	33.9	34.2
NL	40.2	40.2	39.7	39.4	40.4	39.9	38.3	37.7	37.4	37.5	37.6	39.0	38.7	39.1	38.2
AT	41.4	42.9	44.4	44.4	44.0	43.2	45.3	43.9	43.8	43.4	42.3	41.8	42.0	42.6	42.7
PL	37.1	37.2	36.5	35.4	34.9	32.6	32.2	32.7	32.2	31.5	32.8	33.8	34.8	34.3	31.8
PT	29.5	30.2	30.2	30.3	31.0	31.1	30.9	31.5	31.7	30.6	31.5	32.3	32.9	32.8	31.0
RO	27.5	25.9	26.4	29.0	31.0	30.2	28.6	28.1	27.7	27.2	27.8	28.5	29.0	28.0	27.0
SI	39.2	38.1	37.0	37.8	38.2	37.5	37.7	38.0	38.2	38.3	38.6	38.3	37.8	37.2	37.6
SK	40.3	39.4	37.3	36.7	35.4	34.1	33.1	33.0	32.9	31.5	31.3	29.2	29.3	29.2	28.8
FI	45.7	47.1	46.4	46.3	45.9	47.2	44.8	44.7	44.1	43.5	43.9	43.8	43.0	43.1	43.1
SE	47.9	50.3	50.7	51.2	51.5	51.5	49.5	47.5	47.8	48.1	48.9	48.3	47.3	46.5	46.9
UK	34.7	34.4	34.8	35.9	36.2	36.7	36.4	34.9	34.7	35.1	36.0	36.7	36.3	37.5	34.9
NO	*42.0*	*42.4*	*42.2*	*42.0*	*42.3*	*42.6*	*42.9*	*43.1*	*42.3*	*43.3*	*43.5*	*44.0*	*43.8*	*43.0*	*41.4*
IS	*33.3*	*34.3*	*34.6*	*34.4*	*36.8*	*37.1*	*35.3*	*35.2*	*36.7*	*37.9*	*40.6*	*41.4*	*40.5*	*36.7*	*33.7*
EU-27 average															
GDP-weighted	39.4	40.1	40.3	40.3	40.8	40.5	39.6	39.0	39.0	38.8	39.1	39.6	39.6	39.3	38.4
arithmetic	36.6	36.5	36.7	37.1	37.2	37.0	36.4	36.1	36.2	36.2	36.6	36.7	37.2	36.7	35.8
EA-17 average															
GDP-weighted	39.8	40.7	41.1	40.9	41.4	41.1	40.2	39.8	39.7	39.4	39.6	40.1	40.2	39.7	39.1
arithmetic	36.7	36.9	37.1	37.2	37.3	37.3	37.0	36.9	36.8	36.6	37.0	37.1	37.4	37.0	36.5

Table 2: Total tax revenue (excluding social security contributions)

1995-2009, in % of GDP

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
BE	29.5	30.1	30.7	31.3	31.2	31.2	31.0	30.9	30.5	30.9	31.2	30.9	30.3	30.4	29.0
BG	21.2	20.4	19.5	22.9	20.9	20.7	21.0	18.9	20.7	22.3	21.5	22.4	25.2	24.5	21.2
CZ	21.8	20.5	20.4	19.3	20.0	19.6	19.8	19.9	20.7	21.4	21.0	20.4	21.0	19.3	19.1
DK	47.7	48.1	47.9	48.3	48.5	47.6	46.7	46.7	46.8	47.9	49.7	48.6	47.9	47.1	47.1
DE	22.9	23.3	23.0	23.5	24.5	25.0	23.3	22.8	22.8	22.2	22.5	23.3	24.2	24.3	24.0
EE	23.0	22.1	23.0	23.0	21.5	20.1	19.6	20.0	20.2	20.2	20.4	20.6	21.3	20.4	22.7
IE	28.1	28.5	28.1	27.6	27.6	27.1	25.2	24.0	24.5	25.6	26.0	27.4	26.5	24.3	22.4
EL	19.8	19.8	20.6	22.2	23.2	24.1	22.6	22.1	20.4	20.1	20.7	20.8	21.0	20.7	20.0
ES	20.9	21.1	21.2	21.1	21.7	21.9	21.3	21.8	21.7	22.3	23.5	24.3	24.9	20.9	18.0
FR	24.2	25.3	26.0	27.9	28.6	28.0	27.7	27.0	26.5	27.0	27.3	27.5	27.0	26.7	25.0
IT	27.4	27.6	29.2	30.3	30.3	29.7	29.5	28.8	29.0	28.2	27.9	29.5	30.1	29.4	29.3
CY	20.2	19.5	18.8	20.8	21.3	23.4	24.1	24.5	26.0	25.7	27.3	28.6	33.4	31.4	26.5
LV	21.2	20.0	21.4	23.0	21.3	19.6	19.3	19.0	19.7	19.8	20.6	21.7	21.8	20.8	18.1
LT	20.4	19.5	22.2	22.7	22.5	20.7	19.7	19.7	19.6	19.9	20.4	21.0	21.1	21.2	17.7
LU	27.3	27.7	29.3	29.2	28.2	29.1	28.8	28.4	27.4	26.6	27.1	25.9	25.8	25.3	25.9
HU	26.1	25.7	23.9	24.0	25.3	26.0	25.4	25.0	25.3	25.2	25.0	24.7	26.3	26.4	26.5
MT	20.6	19.1	20.7	19.4	21.2	21.8	23.4	25.0	24.9	26.3	27.3	27.3	28.5	27.9	28.2
NL	24.3	25.0	24.6	24.5	24.8	24.5	24.7	24.5	23.6	23.6	24.6	25.0	25.2	24.6	24.4
AT	26.5	27.9	29.2	29.3	29.0	28.4	30.4	29.3	29.0	28.6	27.7	27.4	27.8	28.3	27.7
PL	25.8	25.6	24.7	23.7	21.2	19.6	18.8	19.8	19.4	19.1	20.5	21.6	22.9	23.0	20.5
PT	21.8	22.6	22.4	22.5	23.2	23.1	22.6	23.1	23.1	22.3	23.1	23.8	24.3	24.1	22.0
RO	19.9	18.6	19.4	19.7	20.0	19.1	17.7	17.4	18.2	18.1	18.2	18.8	19.3	18.7	17.5
SI	22.4	23.1	22.7	23.5	24.0	23.2	23.2	23.7	24.0	24.1	24.4	24.3	24.1	23.2	22.7
SK	25.3	23.5	22.3	21.8	21.4	19.9	18.8	18.4	19.1	18.4	18.6	17.5	17.6	17.2	16.1
FI	31.6	33.5	33.6	33.7	33.3	35.3	32.7	32.8	32.3	31.8	31.9	31.6	31.1	31.0	30.3
SE	35.7	37.1	37.7	38.3	40.1	39.0	37.2	36.2	36.9	37.4	38.6	39.0	38.0	38.0	38.7
UK	28.6	28.4	28.7	29.9	30.1	30.5	30.3	29.0	28.4	28.6	29.3	30.0	29.7	30.7	28.1
NO	*32.2*	*32.8*	*32.6*	*31.8*	*32.2*	*33.7*	*33.6*	*33.2*	*32.5*	*33.9*	*34.6*	*35.2*	*34.7*	*34.1*	*31.5*
IS	*30.8*	*31.6*	*31.9*	*31.7*	*34.0*	*34.2*	*32.5*	*32.4*	*33.6*	*34.8*	*37.4*	*38.1*	*37.5*	*33.9*	*30.6*
EU-27 average															
GDP-weighted	39.4	40.1	40.3	40.3	40.8	40.5	39.6	39.0	39.0	38.8	39.1	39.6	39.6	39.3	38.4
arithmetic	36.6	36.5	36.7	37.1	37.2	37.0	36.4	36.1	36.2	36.2	36.6	36.7	37.2	36.7	35.8
EA-17 average															
GDP-weighted	39.8	40.7	41.1	40.9	41.4	41.1	40.2	39.8	39.7	39.4	39.6	40.1	40.2	39.7	39.1
arithmetic	36.7	36.9	37.1	37.2	37.3	37.3	37.0	36.9	36.8	36.6	37.0	37.1	37.4	37.0	36.5

Table 3: Top statutory tax rate on personal income

1995-2011, in %

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
BE	60.6	60.6	60.6	60.6	60.6	60.6	60.1	56.4	53.7	53.7	53.7	53.7	53.7	53.7	53.7	53.7	53.7
BG	50.0	50.0	40.0	40.0	40.0	40.0	38.0	29.0	29.0	29.0	24.0	24.0	24.0	*10.0*	*10.0*	*10.0*	*10.0*
CZ	43.0	40.0	40.0	40.0	40.0	32.0	32.0	32.0	32.0	32.0	32.0	32.0	32.0	*15.0*	*15.0*	*15.0*	*15.0*
DK	63.5	62.0	62.9	61.4	61.1	59.7	59.6	59.8	59.8	59.0	59.0	59.0	59.0	59.0	59.0	51.5	51.5
DE	57.0	57.0	57.0	55.9	55.9	53.8	51.2	51.2	51.2	47.5	44.3	44.3	47.5	47.5	47.5	47.5	47.5
EE	*26.0*	*26.0*	*26.0*	*26.0*	*26.0*	*26.0*	*26.0*	*26.0*	*26.0*	*26.0*	*24.0*	*23.0*	*22.0*	*21.0*	*21.0*	*21.0*	*21.0*
IE	48.0	48.0	48.0	46.0	46.0	44.0	42.0	42.0	42.0	42.0	42.0	42.0	41.0	41.0	41.0	41.0	41.0
EL	45.0	45.0	45.0	45.0	45.0	45.0	42.5	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	45.0	45.0
ES	56.0	56.0	56.0	56.0	48.0	48.0	48.0	48.0	45.0	45.0	45.0	45.0	43.0	43.0	43.0	43.0	45.0
FR	59.1	59.6	57.7	59.0	59.0	59.0	58.3	57.8	54.8	53.4	53.5	45.8	45.8	45.8	45.8	45.8	46.7
IT	51.0	51.0	51.0	46.0	46.0	45.9	45.9	46.1	46.1	46.1	44.1	44.1	44.9	44.9	44.9	45.2	45.6
CY	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0
LV	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	*23.0*	*26.0*	*25.0*
LT	33.0	*33.0*	*33.0*	*33.0*	*33.0*	*33.0*	*33.0*	*33.0*	*33.0*	*33.0*	*33.0*	*27.0*	*27.0*	*24.0*	*15.0*	*15.0*	*15.0*
LU	51.3	51.3	51.3	47.2	47.2	47.2	43.1	39.0	39.0	39.0	39.0	39.0	39.0	39.0	39.0	39.0	42.1
HU	44.0	44.0	44.0	44.0	44.0	44.0	40.0	40.0	40.0	38.0	38.0	36.0	40.0	40.0	40.0	40.6	*20.3*
MT	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0
NL	60.0	60.0	60.0	60.0	60.0	60.0	52.0	52.0	52.0	52.0	52.0	52.0	52.0	52.0	52.0	52.0	52.0
AT	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0
PL	45.0	45.0	44.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	32.0	32.0	32.0
PT	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	42.0	42.0	42.0	42.0	45.9	46.5
RO	40.0	40.0	40.0	48.0	40.0	40.0	40.0	40.0	40.0	40.0	*16.0*	*16.0*	*16.0*	*16.0*	*16.0*	*16.0*	*16.0*
SI	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	41.0	41.0	41.0	41.0	41.0
SK	42.0	42.0	42.0	42.0	42.0	42.0	42.0	38.0	38.0	*19.0*	*19.0*	*19.0*	*19.0*	*19.0*	*19.0*	*19.0*	*19.0*
FI	62.2	61.2	59.5	57.8	55.6	54.0	53.5	52.5	52.2	52.1	51.0	50.9	50.5	50.1	49.1	49.0	49.2
SE	61.3	61.4	54.4	56.7	53.6	51.5	53.1	55.5	54.7	56.5	56.6	56.6	56.6	56.4	56.4	56.4	56.4
UK	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	50.0	50.0
NO	41.7	41.7	41.7	41.7	41.5	47.5	47.5	47.5	47.5	47.5	43.5	40.0	40.0	40.0	40.0	40.0	40.0
IS	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	46.1	46.1
EU-27	47.3	47.1	46.4	46.1	45.3	44.7	43.7	42.9	42.2	41.2	39.9	39.3	39.1	37.8	37.1	37.6	37.1
EA-17	49.0	49.0	48.8	48.0	47.4	47.1	45.9	44.9	43.8	42.4	41.9	41.5	41.0	40.9	40.8	41.4	41.8

Note: Figures in *italics* represent flat-rate tax; Please refer to endnote 6 for details on the calculation of the rates.

Table 4: Adjusted top statutory tax rate on corporate income

1995-2011, in %

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
BE	40.2	40.2	40.2	40.2	40.2	40.2	40.2	40.2	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0
BG	40.0	40.0	40.2	37.0	34.3	32.5	28.0	23.5	23.5	19.5	15.0	15.0	10.0	10.0	10.0	10.0	10.0
CZ	41.0	39.0	39.0	35.0	35.0	31.0	31.0	31.0	31.0	28.0	26.0	24.0	24.0	21.0	20.0	19.0	19.0
DK	34.0	34.0	34.0	34.0	32.0	32.0	30.0	30.0	30.0	30.0	28.0	28.0	25.0	25.0	25.0	25.0	25.0
DE	56.8	56.7	56.7	56.0	51.6	51.6	38.3	38.3	39.6	38.3	38.7	38.7	38.7	29.8	29.8	29.8	29.8
EE	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	24.0	23.0	22.0	21.0	21.0	21.0	21.0
IE	40.0	38.0	36.0	32.0	28.0	24.0	20.0	16.0	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5
EL	40.0	40.0	40.0	40.0	40.0	40.0	37.5	35.0	35.0	35.0	32.0	29.0	25.0	25.0	25.0	24.0	20.0
ES	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	32.5	30.0	30.0	30.0	30.0
FR	36.7	36.7	41.7	41.7	40.0	37.8	36.4	35.4	35.4	35.4	35.0	34.4	34.4	34.4	34.4	34.4	34.4
IT	52.2	53.2	53.2	41.3	41.3	41.3	40.3	40.3	38.3	37.3	37.3	37.3	37.3	31.4	31.4	31.4	31.4
CY	25.0	25.0	25.0	25.0	25.0	29.0	28.0	28.0	15.0	15.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
LV	25.0	25.0	25.0	25.0	25.0	25.0	25.0	22.0	19.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
LT	29.0	29.0	29.0	29.0	29.0	24.0	24.0	15.0	15.0	15.0	15.0	19.0	18.0	15.0	20.0	15.0	15.0
LU	40.9	40.9	39.3	37.5	37.5	37.5	37.5	30.4	30.4	30.4	30.4	29.6	29.6	29.6	28.6	28.6	28.8
HU	19.6	19.6	19.6	19.6	19.6	19.6	19.6	19.6	19.6	17.6	17.5	17.5	21.3	21.3	21.3	20.6	20.6
MT	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0
NL	35.0	35.0	35.0	35.0	35.0	35.0	35.0	34.5	34.5	34.5	31.5	29.6	25.5	25.5	25.5	25.5	25.0
AT	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0
PL	40.0	40.0	38.0	36.0	34.0	30.0	28.0	28.0	27.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0
PT	39.6	39.6	39.6	37.4	37.4	35.2	35.2	33.0	33.0	27.5	27.5	27.5	26.5	26.5	26.5	29.0	29.0
RO	38.0	38.0	38.0	38.0	38.0	25.0	25.0	25.0	25.0	25.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0
SI	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	23.0	22.0	21.0	20.0	20.0
SK	40.0	40.0	40.0	40.0	40.0	29.0	29.0	25.0	25.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0
FI	25.0	28.0	28.0	28.0	28.0	29.0	29.0	29.0	29.0	29.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0
SE	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	26.3	26.3	26.3
UK	33.0	33.0	31.0	31.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	28.0	28.0	27.0
EU-27	35.3	35.3	35.2	34.1	33.5	31.9	30.7	29.3	28.3	27.0	25.5	25.3	24.5	23.6	23.5	23.3	23.1
EA-17	36.8	37.0	37.0	35.8	35.2	34.4	33.0	31.8	30.4	29.6	28.1	27.7	26.8	25.7	25.6	25.6	25.3
Non-EU countries																	
OECD-7	37.0	37.4	37.4	37.2	36.0	34.5	33.6	31.3	31.0	30.7	30.3	30.3	30.3	30.0	30.0	30.3	30.4
AU	33.0	36.0	36.0	36.0	36.0	34.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0
CA	44.6	44.6	44.6	44.6	44.6	44.6	42.1	38.6	36.6	36.1	36.1	36.1	36.1	34.6	34.6	34.0	32.5
CH	28.5	28.5	28.5	27.5	25.1	24.9	24.7	24.4	24.1	24.1	21.3	21.3	21.3	21.3	21.3	21.3	21.3
JP	51.6	51.6	51.6	51.6	48.0	40.9	40.9	40.9	40.9	39.5	39.5	39.5	39.5	42.0	42.0	42.0	42.0
IS	33.0	33.0	33.0	33.0	30.0	30.0	30.0	18.0	18.0	18.0	18.0	18.0	18.0	15.0	15.0	18.0	20.0
NO	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0
US	40.0	40.0	40.0	40.0	40.0	39.3	39.3	39.3	39.3	39.3	39.3	39.3	39.3	39.0	39.0	39.0	39.0
BRIC	38.9	34.9	34.9	34.9	34.0	35.9	35.4	31.7	31.9	31.7	31.9	31.2	31.2	29.2	28.2	28.2	28.1
BR	47.7	31.5	31.5	31.5	33.0	37.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0
RU	35.0	35.0	35.0	35.0	35.0	35.0	35.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	20.0	20.0	20.0
IN	40.0	40.0	40.0	40.0	35.0	38.5	39.6	35.7	36.8	35.9	36.6	33.7	34.0	34.0	34.0	34.0	33.2
CN	33.0	33.0	33.0	33.0	33.0	33.0	33.0	33.0	33.0	33.0	33.0	33.0	33.0	25.0	25.0	25.0	25.0

Note: Please refer to endnote 7 for details on the calculation of the rates.

Table 5: Implicit tax rates on consumption in the European Union

1995-2009, in %

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
BE	20.5	21.1	21.3	21.1	22.1	21.8	20.9	21.4	21.4	22.1	22.3	22.4	22.0	21.2	20.9
BG	17.3	14.5	13.9	19.8	17.4	18.5	17.7	16.6	19.5	22.0	22.8	23.6	22.9	24.9	21.4
CZ	22.1	21.2	19.4	18.6	19.7	19.4	18.9	19.3	19.6	21.8	22.2	21.2	22.0	21.1	21.6
DK	30.5	31.6	31.9	32.7	33.7	33.4	33.5	33.7	33.3	33.3	33.9	34.2	33.9	32.6	31.5
DE	18.8	18.3	18.1	18.3	19.0	18.9	18.5	18.5	18.6	18.2	18.1	18.2	19.7	19.7	19.8
EE	20.3	19.2	20.5	18.7	17.8	19.5	19.6	19.9	19.8	19.6	21.9	22.7	23.7	21.1	27.6
IE	24.8	24.6	25.1	25.3	25.6	25.5	23.7	24.5	24.4	25.5	26.1	26.3	25.1	23.3	21.6
EL	:	:	:	:	:	16.5	16.7	16.1	15.5	15.3	14.8	15.1	15.5	14.8	14.0
ES	14.2	14.4	14.6	15.3	15.9	15.7	15.2	15.4	15.8	16.0	16.3	16.3	15.9	14.1	12.3
FR	21.5	22.1	22.2	22.0	22.1	20.9	20.3	20.3	20.0	20.1	20.1	19.9	19.5	19.1	18.5
IT	17.4	17.1	17.3	17.8	18.0	17.9	17.3	17.1	16.6	16.8	16.7	17.3	17.2	16.5	16.3
CY	12.6	12.3	11.3	11.5	11.3	12.7	14.3	15.4	18.9	20.0	20.0	20.4	21.0	20.8	17.9
LV	19.4	17.9	18.9	21.1	19.4	18.7	17.5	17.4	18.6	18.3	20.1	20.0	19.6	17.4	16.9
LT	17.7	16.4	20.4	20.7	19.2	17.9	17.5	17.9	17.0	16.1	16.6	16.7	17.9	17.6	16.5
LU	21.0	20.8	21.5	21.5	22.4	23.0	22.6	22.6	23.8	25.4	26.3	26.4	27.1	27.3	27.3
HU	29.6	28.6	26.4	26.8	27.1	27.5	25.6	25.3	26.0	27.4	26.3	25.6	27.0	26.6	28.2
MT	14.8	14.0	14.8	13.8	14.8	15.9	16.5	18.1	16.5	17.3	19.2	19.5	19.8	19.3	19.5
NL	23.3	23.4	23.6	23.5	23.9	23.8	24.4	23.9	24.2	24.8	25.0	26.5	26.7	26.9	26.2
AT	20.5	21.1	22.1	22.3	22.8	22.1	22.1	22.5	22.2	22.1	21.7	21.3	21.6	21.6	21.7
PL	20.7	20.7	19.7	18.9	19.5	17.8	17.2	17.9	18.3	18.4	19.7	20.4	21.4	21.1	19.0
PT	18.1	18.6	18.3	19.0	19.0	18.2	18.2	18.7	18.8	18.7	19.6	19.9	19.0	18.0	16.2
RO	:	11.7	12.4	14.2	16.3	17.0	15.6	16.2	17.7	16.4	17.9	17.8	18.0	17.7	16.9
SI	24.6	24.1	22.9	24.4	25.1	23.5	23.0	23.9	24.0	23.9	23.6	23.8	23.8	23.9	24.2
SK	26.4	24.6	23.6	23.0	21.4	21.7	18.8	19.0	20.7	21.1	21.8	19.9	20.2	18.7	17.3
FI	27.6	27.4	29.2	29.0	29.3	28.5	27.6	27.7	28.1	27.7	27.6	27.2	26.5	26.0	25.7
SE	27.8	27.0	26.8	27.3	27.0	26.3	26.5	26.8	26.9	26.8	27.2	27.1	27.4	27.8	27.6
UK	19.6	19.6	19.5	19.2	19.4	18.9	18.7	18.5	18.8	18.6	18.2	18.0	18.0	17.5	16.8
NO	*31.0*	*31.1*	*31.9*	*31.6*	*31.4*	*31.2*	*30.6*	*29.7*	*28.4*	*28.9*	*29.6*	*30.9*	*31.4*	*29.4*	*28.9*
IS	*28.2*	*28.5*	*28.2*	*27.5*	*28.6*	*27.1*	*25.0*	*25.8*	*26.3*	*27.9*	*29.3*	*30.6*	*29.1*	*26.2*	*24.3*
EU-27 average (adj.)															
GDP-weighted	39.4	40.1	40.3	40.3	40.8	40.5	39.6	39.0	39.0	38.8	39.1	39.6	39.6	39.3	38.4
arithmetic	36.6	36.5	36.7	37.1	37.2	37.0	36.4	36.1	36.2	36.2	36.6	36.7	37.2	36.7	35.8
EA-17 average (adj.)															
GDP-weighted	39.8	40.7	41.1	40.9	41.4	41.1	40.2	39.8	39.7	39.4	39.6	40.1	40.2	39.7	39.1
arithmetic	36.7	36.9	37.1	37.2	37.3	37.3	37.0	36.9	36.8	36.6	37.0	37.1	37.4	37.0	36.5

Note: EU averages are adjusted for missing data. For more details see Annex A and B of the *Taxation Trends* report.

Table 6: Implicit tax rates on labour in the European Union

1995-2009, in %

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
BE	43.6	43.2	43.7	44.0	43.4	43.6	43.3	43.3	43.1	43.8	43.6	42.5	42.4	42.5	41.5
BG	30.8	31.6	34.3	33.5	34.7	38.1	33.9	33.4	35.5	35.7	33.2	29.6	30.4	27.4	25.5
CZ	40.5	39.5	40.3	40.7	40.5	40.7	40.3	41.2	41.4	41.8	41.7	41.2	41.5	39.2	36.4
DK	40.2	40.2	40.7	38.9	40.2	41.0	40.8	38.8	38.1	37.5	37.2	36.9	36.6	36.2	35.0
DE	39.4	39.6	40.6	40.6	40.4	40.7	40.5	40.4	40.4	39.2	38.8	38.9	38.7	39.2	38.8
EE	36.9	36.9	37.8	39.2	39.3	37.8	37.3	37.8	36.9	35.8	33.8	33.6	34.0	33.7	35.0
IE	29.7	29.3	29.3	28.5	28.7	28.5	27.4	26.0	25.0	26.3	25.3	25.3	25.7	25.3	25.5
EL	:	:	:	:	:	34.5	34.6	34.4	35.0	33.6	34.0	32.5	33.0	32.2	29.7
ES	31.0	31.6	30.5	30.3	30.0	30.5	31.4	31.8	31.8	31.9	32.3	32.8	33.7	33.1	31.8
FR	41.2	41.4	41.7	42.2	42.4	42.0	41.6	41.2	41.5	41.4	41.9	41.8	41.4	41.5	41.1
IT	38.2	41.8	43.5	43.3	42.7	42.2	42.1	42.0	41.9	41.6	41.3	41.1	42.4	43.0	42.6
CY	22.1	20.8	21.1	22.5	21.8	21.5	22.8	22.2	22.7	22.7	24.5	24.1	24.0	24.7	26.1
LV	39.2	34.6	36.1	37.2	36.7	36.6	36.5	37.8	36.6	36.4	33.0	33.0	31.1	28.5	28.7
LT	34.5	35.0	38.4	38.3	38.8	41.2	40.3	38.1	36.9	36.1	34.9	33.7	33.2	32.7	33.1
LU	29.3	29.6	29.3	28.8	29.6	29.9	29.6	28.4	29.2	28.9	30.0	30.4	31.2	31.7	31.7
HU	42.3	42.1	42.5	41.8	41.9	41.4	40.9	41.2	39.3	38.3	38.4	38.8	41.0	42.1	41.0
MT	19.0	17.8	19.9	18.2	19.2	20.6	21.4	20.8	20.4	20.4	20.8	20.7	20.5	19.6	20.2
NL	34.6	33.6	32.8	33.2	34.1	34.5	30.6	30.9	31.5	31.4	31.6	34.4	35.1	36.2	35.5
AT	38.5	39.4	40.7	40.3	40.5	40.1	40.6	40.8	40.8	41.0	40.8	40.8	41.0	41.3	40.3
PL	36.8	36.3	35.9	35.6	35.8	33.5	33.2	32.4	32.7	32.7	33.8	35.3	34.1	32.6	30.7
PT	22.3	21.9	21.8	21.6	22.0	22.3	22.8	22.8	22.9	22.3	22.4	23.1	23.7	23.3	23.1
RO	31.4	29.8	31.4	31.6	37.3	33.5	31.0	31.2	29.6	29.0	28.1	30.1	30.2	27.3	24.3
SI	38.5	36.7	36.9	37.5	37.8	37.7	37.5	37.6	37.7	37.5	37.5	37.3	35.9	35.9	34.9
SK	38.5	39.4	38.3	38.0	37.4	36.3	37.1	36.7	36.1	34.5	32.9	30.4	31.0	33.1	31.2
FI	44.2	45.3	43.5	43.8	43.3	44.0	44.1	43.8	42.5	41.6	41.6	41.6	41.3	41.4	40.4
SE	46.8	48.0	48.4	49.3	48.5	46.8	45.5	43.8	43.6	43.6	43.7	43.0	41.3	41.2	39.4
UK	25.7	24.8	24.4	25.0	25.2	25.6	25.3	24.3	24.7	25.2	26.1	26.3	26.5	26.4	25.1
NO	*38.0*	*38.2*	*38.5*	*38.5*	*38.3*	*38.3*	*38.4*	*38.7*	*39.0*	*39.2*	*38.5*	*37.9*	*37.4*	*37.1*	*37.6*
IS	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
EU-27 average (adj.)															
GDP-weighted	37.0	37.4	37.4	37.4	37.3	37.0	36.7	36.3	36.4	36.1	36.2	36.3	36.4	36.7	36.0
arithmetic	35.2	35.0	35.5	35.5	35.8	35.7	35.3	34.9	34.7	34.5	34.2	34.0	34.1	33.8	32.9
EA-17 average (adj.)															
GDP-weighted	38.3	39.0	39.5	39.6	39.4	39.3	38.9	38.7	38.7	38.3	38.2	38.3	38.5	38.8	38.2
arithmetic	34.2	34.3	34.5	34.5	34.5	34.5	34.4	34.2	34.1	33.8	33.7	33.6	33.8	34.0	33.5

Note: EU averages are adjusted for missing data. For more details see Annex A and B of the *Taxation Trends* report.

Table 7: Implicit tax rates on capital in the European Union

1995-2009, in %

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
BE	25.6	27.0	28.3	30.4	31.3	29.6	29.5	30.7	31.6	32.7	32.7	33.0	31.5	32.6	30.9
BG	:	:	:	:	:	:	:	:	:	11.9	:	11.7	20.7	:	:
CZ	26.3	22.3	23.9	20.1	21.3	20.9	22.3	23.7	24.8	24.1	22.0	21.8	22.2	19.8	19.3
DK	29.9	30.9	31.7	38.7	38.6	36.0	31.0	30.8	36.9	45.9	49.9	44.5	47.2	43.4	43.8
DE	21.8	24.9	23.8	25.1	28.3	28.4	21.9	20.3	20.3	20.5	21.5	23.2	24.2	23.0	22.1
EE	14.1	9.3	10.5	11.6	9.1	6.0	4.9	6.4	7.8	8.1	7.7	7.9	8.8	10.5	14.0
IE	:	:	:	:	:	:	:	14.9	16.8	18.0	19.6	21.2	19.1	16.3	14.9
EL	:	:	:	:	:	19.9	17.0	17.8	16.7	16.3	17.5	:	:	:	:
ES	:	:	:	:	:	29.9	28.3	29.9	30.3	32.7	36.4	40.6	43.3	31.7	27.2
FR	32.5	35.5	36.2	36.3	38.8	38.4	38.8	37.4	36.5	38.0	39.3	41.1	39.1	38.1	35.6
IT	27.4	27.8	31.4	28.8	30.5	29.5	29.0	29.1	31.5	29.8	29.5	33.8	35.9	35.6	39.1
CY	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
LV	20.5	15.7	17.6	22.2	18.9	11.2	11.5	9.6	8.2	8.3	9.5	10.9	14.5	17.0	10.3
LT	12.7	10.5	10.3	10.1	9.5	7.2	5.9	5.7	7.1	8.5	9.1	11.6	11.3	12.7	10.9
LU	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
HU	14.8	14.7	13.4	14.0	15.2	17.1	17.4	16.8	17.7	16.8	17.4	16.7	18.7	18.6	18.8
MT	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
NL	21.4	23.5	22.6	22.7	22.9	20.7	22.4	24.2	20.9	20.3	18.2	17.1	15.5	16.6	15.4
AT	27.1	30.0	30.0	30.3	28.7	27.7	36.2	29.6	28.6	27.6	24.7	24.6	25.7	26.5	27.0
PL	20.9	21.3	21.7	20.3	21.8	20.5	20.7	22.4	20.7	19.1	20.7	21.2	23.4	22.8	20.5
PT	21.3	23.8	26.1	26.5	28.7	31.3	30.0	32.2	31.8	27.5	29.1	31.0	33.7	37.5	33.8
RO	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
SI	12.7	15.5	15.0	15.8	15.3	15.7	17.5	17.4	17.0	19.0	22.1	21.9	23.6	21.7	21.0
SK	35.0	33.0	28.1	27.8	26.3	22.9	21.6	22.4	22.3	18.4	19.4	18.1	17.5	16.9	17.1
FI	27.1	29.9	31.0	33.0	32.6	36.4	26.0	28.3	26.9	27.1	27.5	25.0	26.6	28.0	29.9
SE	20.0	27.0	29.6	30.0	35.6	42.8	33.6	29.2	29.0	27.8	33.6	28.9	33.6	26.2	33.5
UK	34.6	34.2	36.1	38.4	41.3	44.0	45.1	40.9	36.4	37.6	40.1	42.8	42.3	44.7	38.9
NO	*37.1*	*37.9*	*36.1*	*33.1*	*37.7*	*41.1*	*41.6*	*41.6*	*38.1*	*40.6*	*41.0*	*42.6*	*42.1*	*43.6*	*37.8*
IS	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
EU-25 average (adj.)															
GDP-weighted	26.8	28.7	29.5	30.2	32.3	32.7	30.9	29.7	29.0	29.5	30.8	32.6	33.0	31.4	29.9
arithmetic	23.2	23.7	24.2	24.8	25.4	25.0	23.9	23.6	23.6	23.8	24.9	25.2	26.1	25.3	24.6
EA-17 average (adj.)															
GDP-weighted	38.3	39.0	39.5	39.6	39.4	39.3	38.9	38.7	38.7	38.3	38.2	38.3	38.5	38.8	38.2
arithmetic	34.2	34.3	34.5	34.5	34.5	34.5	34.4	34.2	34.1	33.8	33.7	33.6	33.8	34.0	33.5

Note: EU averages are adjusted for missing data. For more details see Annex A and B of the *Taxation Trends* report.

Table 8: Nominal implicit tax rate on energy (energy tax revenues in relation to final energy consumption)

1995-2009, Euro per tons of oil equivalent

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
BE	92	91	91	91	92	92	92	97	97	109	116	115	128	115	119
BG	15	6	13	25	32	41	43	40	50	62	63	66	93	110	108
CZ	39	41	42	46	52	55	65	74	72	81	96	103	114	133	131
DK	200	213	218	249	284	301	316	326	326	324	316	311	311	317	331
DE	168	152	150	150	177	193	200	212	221	214	209	207	210	204	215
EE	6	13	18	30	30	32	43	46	50	62	75	84	94	105	128
IE	112	121	139	140	145	141	127	150	155	172	171	171	189	175	199
EL	158	161	157	139	132	117	118	111	111	115	116	115	125	126	136
ES	128	134	129	139	144	138	135	143	142	141	140	147	148	149	158
FR	170	167	170	171	177	174	159	178	173	178	176	180	181	177	182
IT	236	259	270	258	262	246	240	236	242	230	229	237	236	233	260
CY	26	27	26	29	32	43	61	65	125	145	146	147	147	138	142
LV	10	18	27	45	41	48	43	48	52	60	72	76	83	92	97
LT	12	16	25	39	54	58	65	76	80	78	82	83	93	103	116
LU	141	139	143	151	159	164	164	170	174	186	194	195	203	212	210
HU	59	53	62	77	79	80	82	93	97	97	101	104	119	122	:
MT	68	82	101	181	193	181	161	163	122	114	136	154	221	176	202
NL	110	109	124	130	144	153	159	162	168	179	198	214	207	225	230
AT	123	117	136	130	135	142	146	151	152	163	156	155	165	171	172
PL	21	26	28	38	48	59	67	77	72	75	96	101	116	129	107
PT	165	163	152	159	151	112	133	158	168	167	168	172	178	175	:
RO	15	14	25	36	56	58	38	37	44	51	59	67	88	79	86
SI	126	126	139	178	155	119	136	145	142	146	145	148	166	168	227
SK	30	29	32	32	33	42	37	44	59	70	77	83	96	108	101
FI	97	96	107	105	110	109	112	113	112	113	115	111	111	124	130
SE	134	163	163	167	171	180	176	191	203	208	211	219	220	219	210
UK	143	148	186	208	222	246	237	244	226	235	234	238	253	219	221
NO	*151*	*152*	*170*	*149*	*157*	*176*	*178*	*187*	*181*	*165*	*184*	*195*	*200*	*197*	*:*
IS	*43*	*44*	*46*	*45*	*46*	*49*	*40*	*39*	*39*	*43*	*61*	*70*	*:*	*:*	*:*
EU-27 average (adj.)															
GDP-weighted	158	159	167	170	183	188	185	193	192	193	192	195	199	191	199
base-weighted	139	139	148	154	166	171	169	177	177	179	180	183	188	184	191
arithmetic	96	100	106	116	123	123	124	131	135	140	144	148	159	159	167
EA-17 average (adj.)															
GDP-weighted	165	165	168	167	179	179	177	185	188	187	185	188	190	188	199
base-weighted	160	158	161	161	173	173	171	180	183	182	182	185	187	186	197
arithmetic	115	117	123	130	134	129	131	138	142	147	151	155	165	164	176

Note: EU averages are adjusted for missing data. For more details see Annex A and B of the *Taxation Trends* report.

Table 9: Real implicit tax rate on energy (energy tax revenues in relation to final energy consumption)

1995-2009, Euro per tons of oil equivalent, deflated with cumulative % change in final demand deflator (2000=100)

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
BE	98	97	96	96	96	92	91	95	94	104	107	103	112	96	103
BG	430	87	17	28	34	41	41	38	47	55	52	50	66	72	72
CZ	50	50	47	49	54	55	64	74	72	78	93	99	108	127	125
DK	219	230	230	262	296	301	309	316	314	307	290	279	272	267	286
DE	172	155	151	152	180	193	198	208	217	209	202	198	198	191	203
EE	10	17	21	33	32	32	41	43	46	55	64	67	69	72	90
IE	136	146	163	156	155	141	120	140	145	158	154	150	164	152	176
EL	206	197	181	152	142	117	114	105	102	103	100	96	102	99	106
ES	147	150	141	149	151	138	131	135	130	125	119	120	118	115	123
FR	178	173	173	175	181	174	157	174	167	170	164	163	161	153	158
IT	269	285	289	272	271	246	234	224	225	208	202	203	197	187	208
CY	31	30	29	31	33	43	60	62	118	133	129	127	123	110	114
LV	14	21	29	47	43	48	43	46	47	51	55	53	50	49	52
LT	15	18	25	39	56	58	65	77	83	80	78	75	77	78	95
LU	174	165	166	173	173	164	167	172	176	177	174	162	161	166	166
HU	112	83	83	91	88	80	77	85	85	83	85	83	93	93	:
MT	79	94	114	201	212	181	163	163	121	111	128	139	189	147	170
NL	121	118	131	137	151	153	154	156	159	168	182	193	184	193	202
AT	129	121	141	133	138	142	144	148	147	156	146	142	148	149	150
PL	35	38	35	43	51	59	65	73	67	67	84	88	98	105	84
PT	191	186	167	171	159	112	130	150	157	153	149	148	150	144	:
RO	160	98	77	77	79	58	28	22	22	23	25	26	32	25	27
SI	180	162	166	202	168	119	126	127	119	118	115	114	124	121	163
SK	40	37	38	37	37	42	35	41	53	60	65	67	77	84	80
FI	103	102	112	108	114	109	111	111	110	110	111	104	102	112	118
SE	140	172	168	172	175	180	171	184	194	197	197	199	196	189	179
UK	152	154	192	215	226	246	233	236	213	218	211	209	217	179	177
NO	*188*	*184*	*202*	*176*	*178*	*176*	*176*	*189*	*178*	*154*	*161*	*159*	*159*	*144*	*:*
IS	*50*	*50*	*51*	*48*	*48*	*49*	*36*	*34*	*34*	*37*	*51*	*53*	*:*	*:*	*:*
EU-27 average (adj.)															
GDP-weighted	171	169	174	177	188	188	181	187	183	181	175	174	174	162	169
base-weighted	160	152	156	161	172	171	166	171	169	167	164	163	164	155	161
arithmetic	133	118	118	126	129	123	121	126	127	129	129	128	133	129	136
EA-17 average (adj.)															
GDP-weighted	178	175	176	173	184	179	174	179	180	176	171	169	168	162	172
base-weighted	174	169	169	168	178	173	168	174	175	172	167	166	165	160	170
arithmetic	133	131	134	140	141	129	128	133	134	136	136	135	140	135	146

Note: EU averages are adjusted for missing data. For more details see Annex A and B of the *Taxation Trends* report.

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