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The impact of tax systems on economic growth in Europe

An overview

October 5, 2012

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In light of the currently rather modest outlook for economic growth in many European countries, reforms are called for to boost growth. Since the financial crisis, the countries of Europe have been faced with the difficult challenge of consolidating their budgets while at the same time promoting economic growth. One possible approach would be to reconsider the design of their respective tax systems.

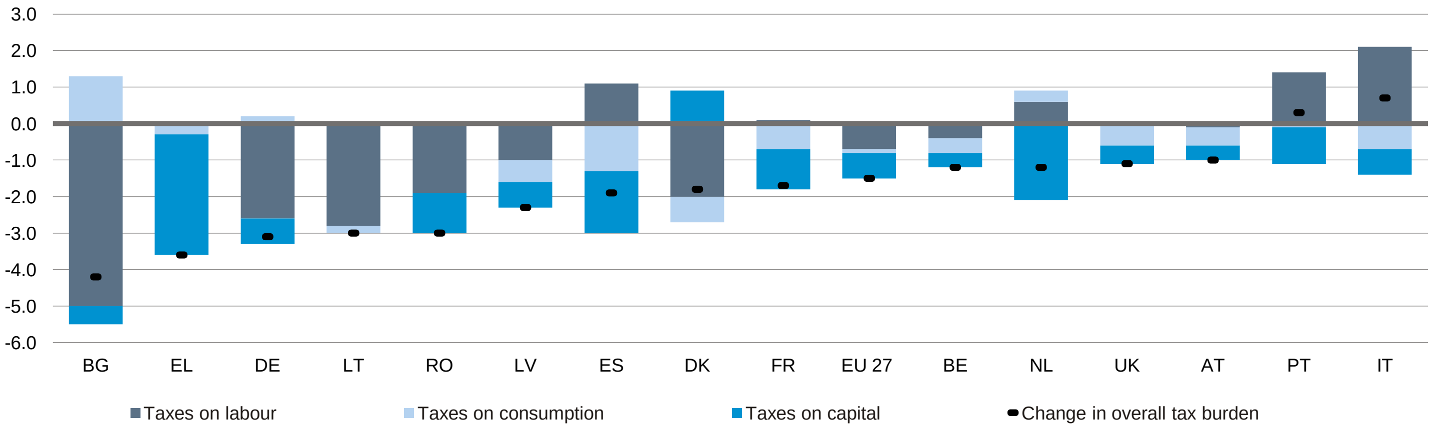
Raising consumption taxes while at the same time lowering taxes on labour and capital can stimulate an economy's growth forces. Taxation of labour and capital should be kept low as it distorts decisions by economic agents, which in turn negatively impacts the use of the growth factors labour, capital and technological progress. Taxation on consumption has less adverse effects in this respect.

Since the turn of the millennium Europe has witnessed a slight trend towards more growth-conducive tax systems. Tax systems have been redesigned mainly in the countries of northern and eastern Europe, whereas central Europe has seen little change.

The financial and economic crisis also has an impact on tax systems in the EU. It will make itself felt both in the short term and over a medium to longer-term horizon. For the short run, countries have attempted to stimulate demand via tax relief, reducing the effects on the real economy. In the medium to long term, fiscal consolidation will be given priority, which may also lead to tax hikes.

Changes in the tax burden in selected countries since 2000

2000-2010, %-points of GDP



Sources: DB Research, European Commission (2012)

What are the characteristics of a growth-conducive tax system? A brief theoretical overview

According to economic theory, growth in an economy is generated by three production factors – labour, capital and technological progress. These factors are related to each other via a production function. However, taxes may distort market participants' economic decisions regarding these factors and thus adversely affect economic growth. In the following, we discuss these effects by categorising taxes according to the economic factors labour, capital and consumption. A more in-depth explanation of the effects can be found in box 1 on page 4.

Taxation of labour

Tax burden on labour …

Taxation of the factor labour impacts three fundamental decisions made by economic agents. First, it may distort the decision to participate in the *labour market*, i.e. the number of working hours as well as the number of staff hired. Secondly, strongly progressive taxation on income can have the effect that fewer market participants decide to seek higher *levels of education*. Thirdly, this kind of taxation may lead to less *entrepreneurial activity* and – as a result – fewer innovations.

Taxation of capital

… and capital usually has adverse impact on growth forces

Taxation of the factor capital, for one thing, influences *household* decisions on investment and savings. This can lead to a situation where the savings ratio deviates from its optimum level regarding growth and thus distorts allocation of savings to the various asset classes.

Moreover, taxation of capital also influences decisions on the part of *companies*. Corporation tax, in particular, has an effect on the choice of location and the volume of investments as well considerations regarding the location of potential profits. This can lead to pronounced capital outflows from individual countries.

According to the statistical classification[1] used in the following, property and inheritance taxes also belong to this category. However, in economic theory these taxes – unlike those mentioned above – are considered particularly conducive to growth, as they have the least distorting impact on decisions regarding the supply of labour, level of education or technological progress.

Given the negative growth effect of taxes on labour and capital it can be expected that in a growth-conducive system the burden of taxes on these factors should be kept rather lower in relation to excise taxes.

Taxation of consumption

Impact of consumption taxes is less problematic …

Taxation of consumption is frequently considered to be more conducive to growth, as it distorts intertemporal decisions by market participants (such as decisions on saving, decisions between work and leisure) less strongly than the taxation of labour.[2] In many cases, though, taxing consumption does not yield optimum results either. However, in the case of most excise taxes the distorting effects are actually desired.

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1 The statistical classification used here is based on the categorisation according to economic factors, which is also used by the European Commission (EUROSTAT). Applying this classification makes sense particularly when discussing the effects of taxation on growth.

2 However, one must take into account that the findings of economic theory and above all their practical implications are not clear or that they hinge strongly on assumptions about preferences of economic agents.

Value added tax (VAT), which accounts for the lion's share of revenues from excise taxes in the EU, has undesired negative effects on consumption behaviour and the decision between work and leisure. These effects result among other things from the difficulty of taxing leisure.[3] Hence, more differentiation among tax rates (see Corlett-Hague rule) has been recommended for practical application in economic policy. But even these concepts are difficult to put into practice. For this reason, a uniform tax is proposed for all goods. The argument often put forward in political discussions, that reduced VAT rates should be maintained for reasons of redistribution and fairness[4], can be rebutted. Instead, low-income households should be relieved through transfer payments, which are considered to be more cost-efficient.

… and sometimes even desirable

Specific excise taxes, by contrast, are often levied in order to influence consumption choices of households or companies to the benefit of a healthy lifestyle or more environmentally-friendly production. Cases in point for the former are the quantitative taxes on *tobacco* and *alcohol*.

On the one hand, eco-taxes may yield double dividend …

Environmental taxes are designed as incentives for companies to make production more environmentally sound. However, assessing their usefulness is a double-edged sword. On the one hand, a quantitative tax on environmentally damaging production factors ensures that the costs of the factor rises, rendering its use unattractive. At the same time, revenues from eco-taxes can be used to reduce the tax burden on labour. In that respect eco taxes yield double dividends in terms of growth: they provide incentives to make production and innovations more environmentally-friendly and reduce the tax burden on the factor labour.

… on the other, their application may have undesired side effects

On the other hand, companies are able to pass on the tax burden to consumers, which means that eco-taxes lead to rising consumer prices. This will result in declining disposable household income – similar to an additional tax on labour. This effect is not compatible with a tax system's conduciveness to growth.

Probable ranking of taxes in growth theory

This cursory glance at the theoretical background shows that some taxes are more conducive to growth than others. Property taxes are seen as compatible with growth as they have the most negligible effect on decisions by economic agents regarding growth factors. The impact of excise taxes on intertemporal decisions is similarly small. By contrast, taxation of the factor labour should be seen as less growth-conducive, with strong progressivity of income tax rates regarded as particularly negative in this context. Theoretical and empirical studies suggest that corporate and capital taxes hamper growth most severely as these taxes lead to pronounced capital outflows and fewer innovations. From a growth theory point of view, there is therefore a lot to suggest that tax systems should be designed in such a way that the burden on the factors labour and capital is reduced while higher taxes should be levied on consumption[5].

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3 This is an important precondition for an optimum design of these systems in theoretical models.
4 See Zipfel (2009), page 7.
5 Mooij and Keen (2012) have confirmed the theory, for the euro area in particular, that the balance of trade can be improved by reducing non-wage labour costs while at the same time raising the VAT.

Effects of taxation by economic function | 1

The structure of a tax system can be described in many different ways. This paper uses the EUROSTAT definition to categorize tax burdens by economic function. This allows us to see tax burdens in their theoretical context and makes for better understanding on the part of our readers.

Taxation of labour:

This category includes all taxes and levies paid by the gainfully employed and self-employed. The tax base is defined by wages and household incomes. On top of that, there are social security contributions to be paid by both employers and employees. This form of taxation impacts the growth forces of an economy via three channels.

First, high taxation will reduce the supply *of and demand for labour*. This means that with a growing gap between gross and net wages, increasingly fewer workers will offer their labour or work fewer hours and also fewer jobs will be offered.

Secondly, progressive income tax rates may exert a negative effect on the creation of *human capital*. Progressive tax rates reduce the return on investment in higher levels of education, which tend to be linked to higher incomes.

Thirdly, a progressive tax rate exerts a negative influence on entrepreneurial activity, as the return on successful entrepreneurial activity (usually linked to higher incomes) is subject to higher taxes than the (lower) fixed wages or salaries earned in gainful employment. Expected returns resulting from risk-taking will thus decline.[6] Assuming that more entrepreneurial activity will also lead to more innovation, progressive income taxation slows down technological progress.

Taxation of capital:

This category includes taxes on capital gains and corporate earnings as well as taxes on investment income.

Apart from the decisions of households taxation of capital has a distorting effect in particular on decisions taken by internationally operating *companies*. In a worst-case scenario it will lead to large companies moving to other countries. Corporation tax is a decisive factor in the choice of both the location and the size of an investment project. Decisions on investment volumes are taken on the basis of effective marginal tax rates[7] and decisions on the location for investment on the basis of – among other things – effective average tax rates[8, 9].

Corporation tax rates play an important part for internationally operating companies when it comes to the location of profits. Hence, capital outflows may occur if a country imposes excessively high tax rates, which will negatively impact economic growth.

Taxation of consumption:

This includes VAT, taxes and tariffs on imported goods as well as excise taxes (e.g. on harmful emissions). It is particularly the negative effect of VAT on consumption decisions by market participants that is undesirable. There are various approaches in the relevant literature seeking to contain this effect. A case in point is the inverse elasticity rule[10]. It suggests that primarily those goods should be taxed for which a price increase of one percent would trigger a drop in demand of less than one percent. However, this result is based on strong assumptions that make realistic implementation impossible. More recent research suggests that relatively high taxes should be imposed on goods deemed complementary to leisure in order to reduce their attractiveness in relation to labour.[11] But this concept also raises doubts as to its realistic and appropriate implementation (in the sense of higher taxation of the “right” goods). Therefore a uniform rate of VAT is recommended in political practice.

Excise taxes are often levied with a view to influencing the behaviour of economic agents. In the course of the public debate on climate change, eco-taxes in particular have gained in importance. Besides the effects described above, eco taxes have the unwanted side effect of decreasing revenues. Eco-taxes are quantitative taxes, which implies that for each unit of the harmful production factor a fixed (euro) amount is levied as tax. As these amounts are not inflation-indexed, revenues from eco-taxes will fall over time. Furthermore, tax revenues will decline as increasingly resource-friendly production methods are developed. In terms of conduciveness to growth, however, the latter is to be considered positive as it promotes technological progress.

6 However, this negative effect on entrepreneurial activity is offset to a degree by the possibility of loss write-offs in corporate taxation (see. Myles (2009) and Prammer (2011)).

7 The effective marginal tax rate is calculated as the difference between the cost of capital (as the required pre-tax return of a project) and the real interest rate (i.e. return after taxation) divided by the cost of capital. If the marginal tax rate equals the tax rate of the relevant income bracket, the entrepreneur will see little difference between carrying out the project and investing the amount at the real interest rate. In other words: if the return to be achieved by an investment project is larger than or equals the cost of capital, the project will be carried out.

8 The effective average tax rate is calculated as the difference between an investment's pre-tax capital value and its after-tax value divided by the discounted return (see Lammersen, Lothar and Christoph Spengel (2001)).

9 Nicodème (2008) offers an overview of empirical results.

10 For a more detailed explanation see e.g. Homburg (2007), p. 158.

11 This concept is called the Corlett-Hague rule. For more in-depth information see Corlett and Hague (1953).

Tax systems in the European context

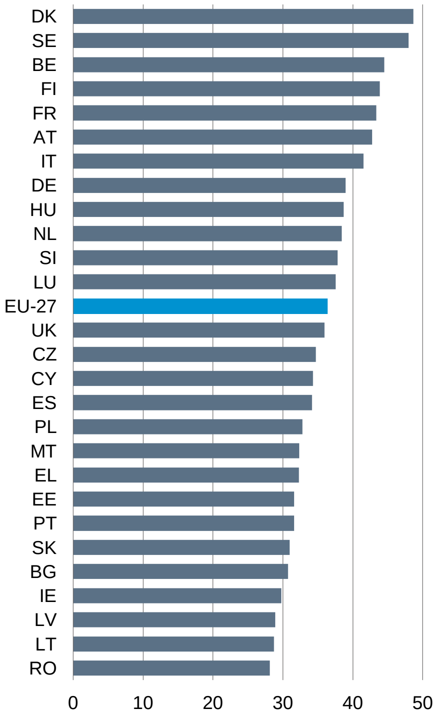
This chapter highlights the differences and peculiarities of Europe's tax systems. We then take a look at the development of tax systems with regard to their growth-conduciveness since the turn of the millennium.

In this analysis of European tax systems it should be noted that in theory one can arrive at a relatively clear-cut assessment of a system's conduciveness to growth. In an empirical analysis, however, there are several effects at work which make assertions more difficult. For instance, a report by the OECD[12], which uses the tax statistics of 21 OECD countries (1971-2004), arrives at the conclusion that taxation of labour will in general lead to lower growth than taxation of consumption. However, political recommendations should also be based on country-specific criteria such as the design of the tax system, social redistribution preferences and the overall volume of tax revenues.

Last but not least, empirical analysis is hampered by the fact that quite often structural and cyclical effects on the tax structure are hard to differentiate.

Average overall tax revenue 2

As % of GDP, mean 2000-2010, including social security contributions



Sources: DB Research, European Commission (2012)

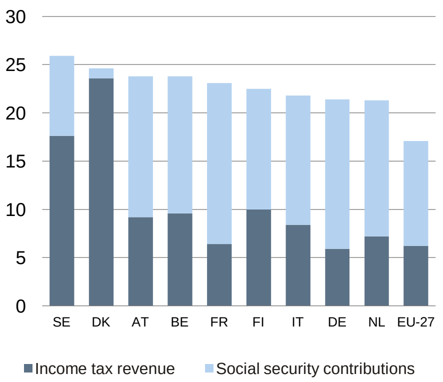
Differences in the overall tax burden and the structure of tax revenue

On the basis of the average overall tax burden in the years 2000 to 2010, the countries can be divided into roughly three groups (chart 2). 1) The *peripheral states*, which include both eastern and southern European countries, tend to have a lower overall tax burden. In the case of the countries that joined the European Union in 2004 or 2007, it should be noted that the related adjustment process awarded them the opportunity to redesign their tax systems according to the latest findings on growth-conduciveness. 2) The *countries of central Europe* all generate a share of more than 38% of GDP in tax revenues. These countries include e.g. Austria, Belgium, France, Germany, Italy and the Netherlands. 3) The *Nordic countries*, e.g. Denmark, Finland and Sweden, register the highest overall tax burden in an EU-wide comparison.

A comparison of these groups of countries reveals that the eastern European states generate a relatively high share of total revenues through excise taxes (chart 4).[13] In the northern and central European states, revenues come predominantly from labour taxes. This is the result of a relatively high burden on the factor labour (chart 3) − compared with the EU average. Especially in central European countries such as Germany, France and the Netherlands this is due to the large share of social security contributions. Denmark is a special case as social security revenues there only amount to 1% of GDP.

Tax burden on labour in 2010 3

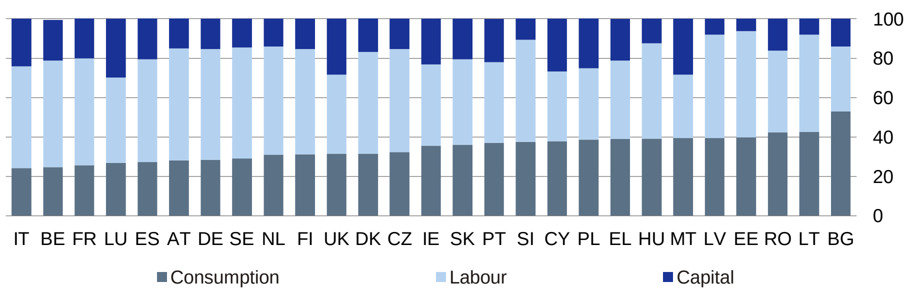
% of GDP



Sources: DB Research, European Commission (2012)

Share of taxes on consumption, labour and capital in total revenue, 2010 4

% of total tax revenue



Sources: DB Research, Euoprean Commission (2012)

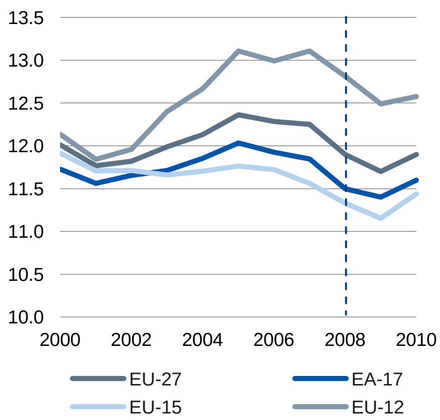
[12] See Arnold (2008).
[13] However, only in some countries does this result from an above-average absolute tax burden on consumption.

Developments since the turn of the millennium

2000 to 2008

Tax burden on consumption 5

% of GDP



Sources: European Commission (2012), DB Research

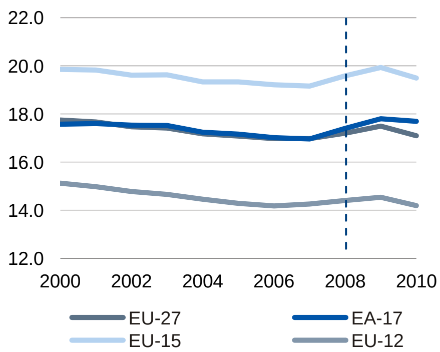
Between 2000 and 2008, a slight trend towards more growth-conducive tax systems was registered when looking at the average tax burden on the factors labour and consumption in the EU. Tax systems were revamped particularly in the countries of eastern and northern Europe. After 2005 this process stagnated and even opposite trends became visible.

In our analysis of the tax burden on consumption (chart 5) two aspects should be pointed out. First, the burden is higher on average in the “new member states“[14] (EU-12) than in the “old“ states (EU-15). Secondly, the share of revenues from taxes on consumption has been rising in the EU-12 countries since 2001, while the same share has been falling in the EU-15 countries.

Together with the slightly reduced burden on labour income (chart 6), a shift towards a more growth-conducive tax structure away from labour towards consumption can be noted at least in a few eastern European countries (EU-12) [15]. This also holds for Sweden and Denmark, which continue to hike their already above-average taxes on consumption to relieve the factor labour. As regards the group of central European countries, however, the picture is quite different. They reduced both the tax burden on labour income and on consumption.

Tax burden on labour 6

% of GDP



Sources: European Commission (2012), DB Research

This process is described in greater detail in charts 7 and 9, respectively. The horizontal axis shows the tax burden on consumption, while the vertical axis represents taxation of labour income. The points represent the relationship between the two tax burdens in selected countries.

Chart 7 provides an initial overview by showing the distribution of states in terms of their tax weight on labour and consumption at the end of the period monitored. It clearly depicts the three groups of countries with their different tax systems. Sweden and Denmark (northern European countries with green frames) are found in the upper right corner, reflecting the high tax burden on consumption and labour. The countries of central Europe (blue frames) post relatively moderate taxation of consumption, while the burden on labour income in these states exceeds that of the periphery (orange).

Charts 8 and 9 illustrate, in particular, the change in the tax burden between the years 2000, 2005 and 2008. Chart 8 shows the member states in northern and central Europe while chart 9 depicts those in eastern and southern Europe. Both charts reveal a shift in the tax burden away from labour towards consumption via a movement of the points towards the lower right corner. In these cases the shift is marked with a green arrow. Any movement in the opposite direction is represented by a red arrow.

Especially in the period 2000-2005, the countries of eastern Europe as well as Sweden, Finland and Denmark all restructured their tax systems with a view to boosting conduciveness to growth. Between 2005 and 2008, however, opposite trends emerged in most countries. During this period, Germany represented an exception as it raised its VAT rate by 3 percentage points(pp) to 19%, while at the same time lowering contributions to unemployment insurance.

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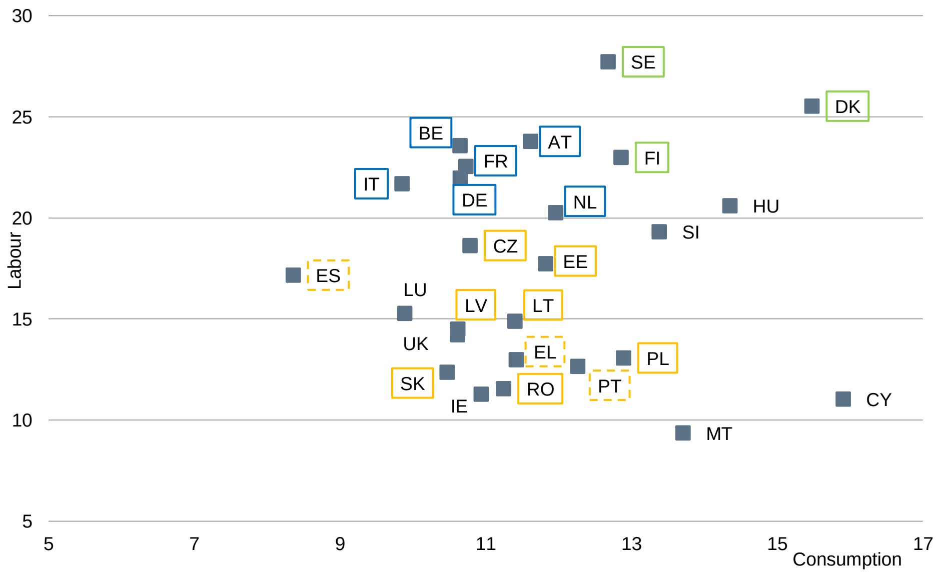
[14] "New" member states are those that joined the EU in 2004 (Czech Republic, Cyprus, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovakia and Slovenia) and in 2007 (Bulgaria and Romania).

[15] The heavier burden on consumption in the "new" member states is partly attributable to the necessary alignment of excise taxes on alcohol, tobacco and fuel to (higher) EU levels (minimum tax rates).

Relation between tax burden on consumption and on labour in 2008 **7**

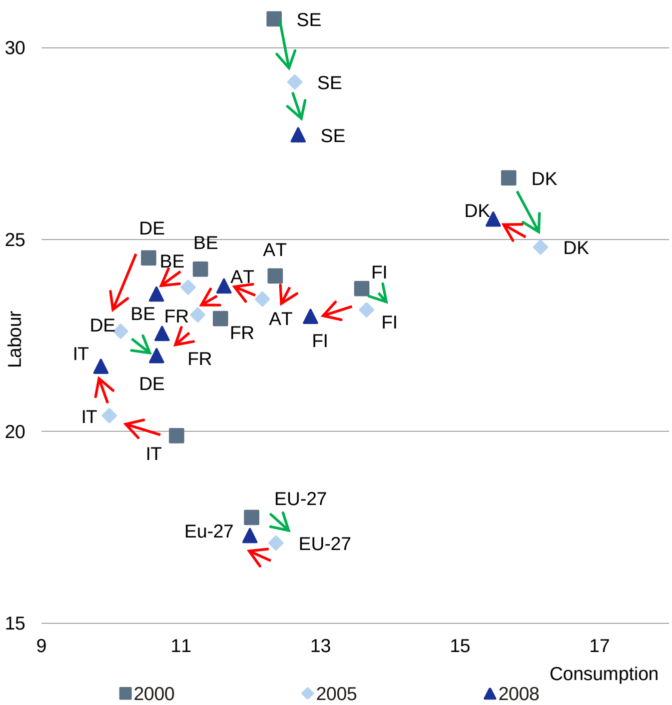
X-axis: Revenue from consumption taxation as % of GDP
Y-axis: Revenue from labour taxation as % of GDP



Sources: DB Research, European Commission (2011)

Shift in tax burden from labour to consumption
Northern and central European countries **8**

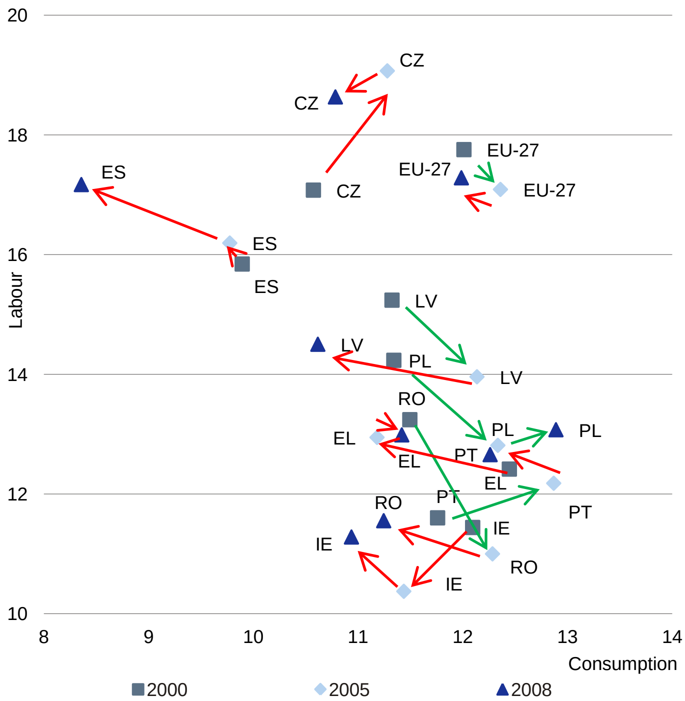
X-axis: Revenue from consumption taxation as % of GDP
Y-axis: Revenue from labour taxation as % of GDP



Sources: DB Research, European Commission (2011)

Shift in tax burden from labour to consumption
Eastern and southern European countries **9**

X-axis: Revenue from consumption taxation as % of GDP
Y-axis: Revenue from labour taxation as % of GDP

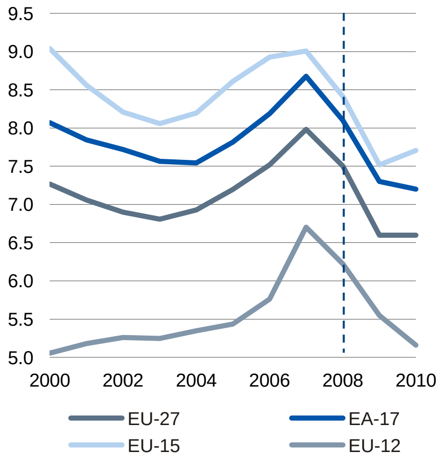


Sources: DB Research, European Commission (2011)

Between 2000 and
2005 (in EU-15 2000-2008), the tax burden on the factor capital was largely

Tax burden on capital 10

% of GDP



Sources: European Commission (2012), DB Research

smaller, which resulted mainly from reduced corporate taxes. Progress with the integration of the European Single Market meant that country-specific design of tax systems became an even more important factor in deciding where a company should be domiciled. To (continue to) provide an attractive location for internationally operating companies, corporation tax rates were cut and the tax base was widened ("tax-cut-cum-base-widening”). A case in point is Germany's reform of corporation tax in 2000. The tax rate was cut from 45% to 20%, while the scope for write-offs was reduced. In 2007 the corporation tax rate was lowered once again – to 15%.

When interpreting the tax burden on capital, however, one should also take into account the strong correlation between tax revenues and economic activity. For the post-2000 period, in particular, this means that declining revenue from capital taxation as a percentage of GDP is not attributable solely to a lower tax burden on the factor capital but also to markedly reduced corporate profits after the bursting of the dotcom bubble. Correspondingly, the rise in tax revenues from 2003 is only partially due to tax increases but also to improved business activity.

The outbreak of the financial crisis in 2008 led to a markedly changed structure of tax revenues in 2009 and 2010, with structural and cyclical effects hard to differentiate. Initially, the member states took policy measures designed to stimulate demand and thus contain the adverse effects on the real economy. Since 2009/10, budget consolidation has been the primary target, forcing many countries to carry out structural reforms.

Consequences of the crisis for tax systems

The economic crisis triggered a collapse in gross domestic product (GDP) across Europe. On average, euro area GDP only grew by 0.4% in 2008 and contracted by 4.3% in 2009. Moreover, the crisis highlighted the problems in connection with government debt in some member states. Especially the so-called PIIGS countries have been fighting against overindebtedness for more than three years now. As regards the tax system of an individual country this has two major consequences.

— On a short-term horizon, the governments seek to stimulate demand through temporary tax relief while at the same time containing the effects of the crisis on the real economy.

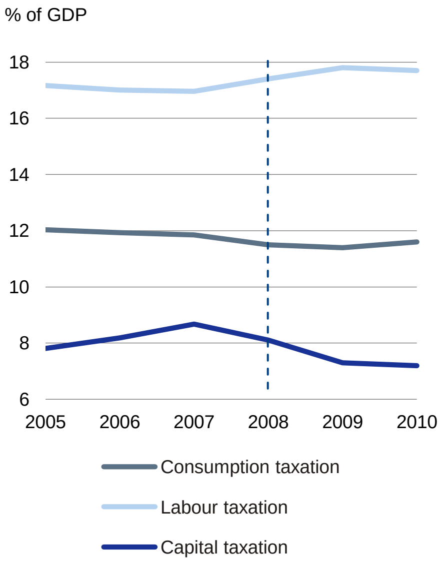
— In the medium to long run, budget consolidation is called for in many European countries, not only because of overindebtedness but also due to demographic change and the resulting rise in expenditures. Over the last two years, budget consolidation has gained in importance and has already triggered – or will trigger – tax reforms in most of the countries affected.

Short-term measures: Stimulating demand as a direct reaction to the crisis

Chart 11 shows the effect of the crisis on the structure of euro-area tax revenues. Revenue from consumption and capital taxation have been declining since 2007. This is due on the one hand to a smaller tax base – reduced consumption and markedly lower corporate earnings. On the other hand, it is attributable to policy measures to alleviate the burden on the economies.

For one thing, the tax burden on *consumption* was reduced via a VAT cut. Portugal, for instance, cut VAT by 1 pp, from 21% to 20%, in 2008. For another, the scope of the reduced VAT rates was expanded for instance in Belgium, Germany, France and Italy.

Euro area: Crisis has changed structure of tax revenues 11



Sources: DB Research, European Commission (2012)

To contain the effects of the crisis on the real economy, many European countries have taken steps to safeguard jobs. In Germany, for example, short-time working was made easier. Moreover, the bottom tax rate was cut from 15% to 14% in 2009 to ease the tax burden on low-income earners. In Finland, the government brought down indirect labour costs to stimulate demand for labour. Employer contributions to mandatory health insurance were discontinued initially in 2009 and abolished altogether in 2010. At first, these measured resulted in labour hoarding which meant virtually constant or only slightly lower revenues from labour taxation. The rise in revenues from taxes on the factor *labour* shown in chart 11 has statistical reasons. The measures described above only led to slightly lower revenues from labour taxation. GDP, as seen in the denominator of the indicator used in chart 11, dropped more strongly than tax revenues, however. Hence, the share of revenues from taxation of labour in GDP rose even though revenues were virtually unchanged or edged down somewhat. The effects of the crisis on the labour market and on revenues from labour taxation will only make themselves felt with a time lag.

Alleviating the burden on the factor *capital* can be achieved by cutting tax rates or shrinking the tax base. Spain introduced both these measures especially for small and medium-sized companies between 2009 and 2011. On the one hand, a reduced corporate tax rate of 20% (instead of 25%) was applied and the scope for write-offs was expanded during this period.

Medium to long-term measures: Budget consolidation

Budget consolidation recommended over medium to long term

The effect of budget consolidation on tax revenues can only be assessed qualitatively at this juncture, as data on tax structures are published with an 18-months lag. However, we expect a return to growth-conducive tax concepts.

Taxation of consumption

EU member states are using consumption taxation to raise revenues.

Between 2009 and 2012 more than half of all member states raised the standard rate of VAT by at least 1 pp. Particularly pronounced VAT hikes were carried out by Hungary (from 20% to 25%), Portugal (20% to 23%) and the UK (17.5% to 20%).

In addition, nearly all member states raised excise taxes on fossil fuels. In Ireland, for example, the tax on petrol and diesel fuel was hiked by 4 cents and 2 cents, respectively, in 2011. Additional revenue from this tax hike alone is expected to amount to EUR 160 m.

As a further source of revenue, some countries introduced new excise taxes. Since January 2011, Germany has levied a tax on airline tickets booked after September 1, 2010. In Finland, consumers pay tax on sweet goods – ice cream, soft drinks and sweets.

Taxation of labour

Taxation of labour has seen different developments for individual tax brackets. For one thing, some member states lowered the personal income tax especially for the low-income groups and at the same time shrank the tax base – for instance, by increasing tax credits and write-offs. For another, many member states had expanded the tax base and raised the top tax rate (e.g. Greece, Portugal, Luxembourg and the UK). On an EU-27 average, it is likely that the tax burden on labour will rise slightly.

Taxation of capital

Here, too, more differentiated analysis is called for. As regards corporate taxation, the trend towards lower corporation tax rates looks set to continue, albeit in markedly weaker form. Since the beginning of the crisis the top corporation tax rate has fallen by a mere 0.15 of a pp per year on an EU average, compared with an annual decline of in excess of 1 pp p.a. since the turn of the millennium.

By contrast, higher taxes are to be expected, especially in the financial sector. Between 2009 and 2011 Austria, Denmark, France, Hungary and the UK, for instance, introduced a bank levy. Germany, too, introduced a bank levy as of 2011 by passing the Bank Restructuring Act on December 9, 2010.

Conclusion and outlook

Optimum design of a tax system depends on numerous factors and differs from country to country. Besides the impact of taxation on growth factors, other aspects such as the degree to which a society seeks to redistribute wealth play an important part.

However, what is generally recommended is a *growth-conducive tax system* which minimises the distorting effects of taxation on the growth factors (labour, capital and technological progress). In economic theory, a tax system is considered conducive to growth if the tax burden on labour and capital is relatively light but heavier on consumption or property and inheritances.

Between 2000 and 2008 there was a slight trend to be witnessed in Europe towards a more growth-conducive redesign of tax systems. This was apparent in the countries of eastern and northern Europe, in particular, but only in a few central European states.

When the financial crisis broke out, European tax systems were affected in two ways. *On a short-term horizon*, the countries attempted to stimulate demand via tax relief, with a view to containing the effects on the real economy. *On a medium to long-term horizon*, most countries in Europe will be forced to consolidate their budgets. This is necessary, for one thing, because debt had mounted to unsustainable levels prior to the crisis. For another, the future will probably hold rising government expenditure and falling revenue, as Europe's population is getting increasingly older and the workforce increasingly smaller. A growth-conducive tax system offers an opportunity to generate income for the government while keeping the distorting effect on the growth factors as small as possible.

The tax reforms carried out within the EU to date suggest a positive development in this respect. In many countries, consumption taxes have been raised and the tax burden on capital – especially for companies − continues to decline. Only taxation of the factor labour seems to move in the opposite direction.

Increasing economic policy coordination within Europe could be a useful starting point towards further structural reform. The Europe 2020 strategy already contains the recommendation that budget consolidation should go hand in hand with a growth-conducive redesign of the tax system. The European Semester introduced in 2010 provides a concept to help member states pursue this target. For instance, the Council recommendation on national reform programmes for France and Spain already include the request that the tax burden be shifted from labour towards consumption.

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Secondary literature

Arnold, Jens (2008). Do Tax Structures Affect Aggregate Economic Growth? Empirical Evidence from a Panel of OECD Countries. OECD Economics Department Working Papers No. 643.

Corlett, William and D.C. Hague (1953). Complementarity and the Excess Burden of Taxation. Review of Economic Studies 21.

European Commission (2008). Taxation Trends in the European Union. Statistical Books.

European Commission (2009). Monitoring revenue trends and tax reforms in Member States 2008. Joint EC-EPC 2008 Report.

European Commission (2009). Taxation Trends in the European Union. Statistical Books.

European Commission (2010). Monitoring tax revenues and tax reforms in EU Member States 2010. Taxation paper No. 24.

European Commission (2011). Taxation Trends in the European Union. Statistical Books.

European Commission (2011a). Tax reforms in EU Member States. Taxation paper No. 28.

Homburg, Stefan (2007). Allgemeine Steuerlehre. Vahlen.

Lammersen, Lothar and Christoph Spengel (2001). Methoden zur Messung und zum Vergleich von internationalen Steuerbelastungen. Steuer und Wirtschaft pp. 222-238.

Mooij, Ruud de and Michael Keen (2012). “Fiscal Devaluation” and Fiscal Consolidation: The VAT in Troubled Times. IMF Working Paper 12/85.

Myles, Gareth (2009). Economic Growth and the Role of Taxation – Aggregate Data. OECD Economics Department Working Papers No. 714.

Nicodème, Gaetan (2008). Corporate income tax and economic distortions. CESifo Working Paper Series 2477. Munich.

OECD (2010). Tax Policy Reform and Economic Growth. Tax Policy Study No. 20.

Prammer, Doris (2011). Quality of taxation and the crisis: Tax shifts from a growth perspective, Taxation paper No. 29.

Zipfel, Frank (2007). One Europe, one tax? EU Monitor 49. Deutsche Bank Research. Frankfurt am Main.

Zipfel, Frank (2009). Mehrwertsteuer, ermäßigter Satz und Befreiung. Aktuelle Themen 462. Deutsche Bank Research. Frankfurt am Main.

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Printed by: HST Offsetdruck Schadt & Tetzlaff GbR, Dieburg

Print: ISSN 1612-0272 / Internet/E-mail: ISSN 1612-0280