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Company Taxation in the European Union

Abstract

This paper investigates different measures of corporate tax burden ranging from the most basic ones such as the statutory tax rate to the effective tax rates. Each of these measures has advantages and disadvantages and they may lead to different rankings of countries. One of the reasons lies the fact that they measure different things. The comparison of the statutory tax rates to the effective ones for the EU-27 during the period of 1998-2009 sometimes reveals very significant differences between these indicators. Taking this into consideration, the paper suggests that corporate tax burden analysis should not be limited to the most basic and readily available measure in the form of the statutory tax rate. Different measures are tailored to answer different research questions. Moreover, the article presents changes of company taxation for the EU-27 within 1998-2009.

1. Introduction

Comparing some tax systems is important for economic agents since taxes affect their decisions e.g. investment ones. However, there exists a large number of methodologies trying to measure the burden of corporate taxation. The objective of the article is to compare different measures of corporate taxation, taking into consideration both methodology and their values for the current European Union countries. The paper consists of four sections. Section 2 does

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not only present different measures of the corporate tax burden ranging from the most basic ones such as the statutory tax rate or tax quotas to more complicated tax measures – the effective tax rates but it also describes their advantages and disadvantages. Section 3 presents tax rates calculated under different methodologies for the EU-27 and compares them to one another. Section 4 is devoted to the conclusion of the paper.
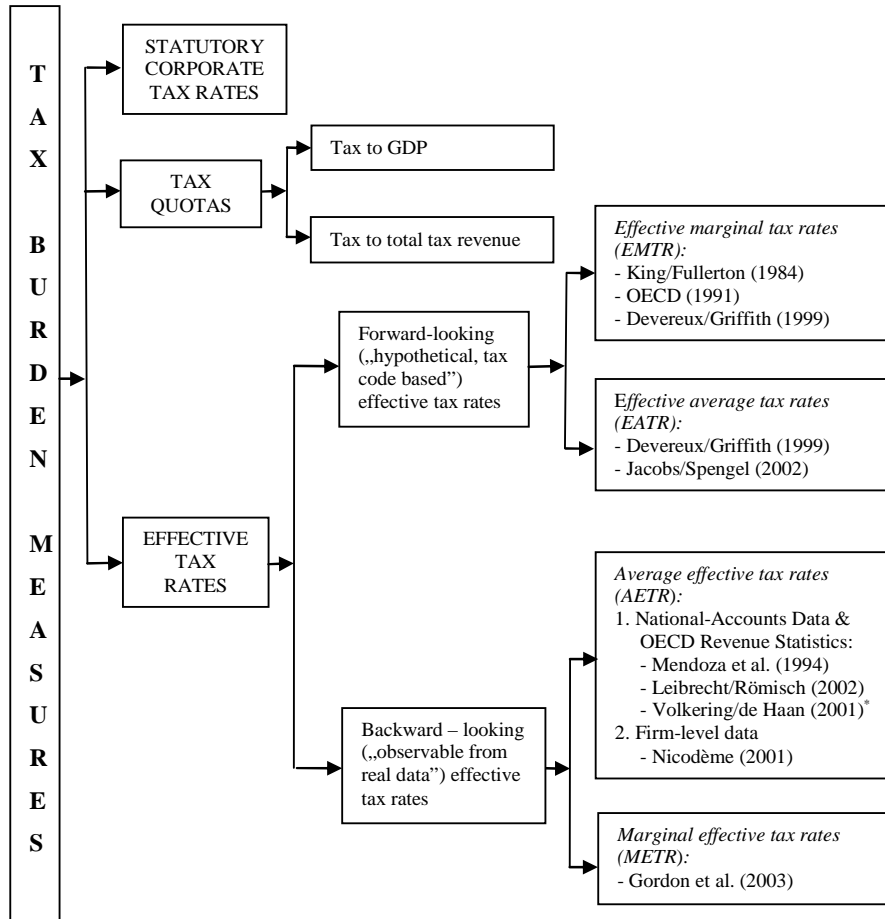
2. Tax burden measures

The most basic measure of corporate income taxation is the statutory tax rate (STR). This measure is widely used, however it does not give the proper picture of the real tax burden incurred by companies. The reason is the fact, that it does not take into account some tax laws pertaining to the tax base and the possibility of benefiting from tax incentives such as special exemptions, deductions or different depreciation schemes. It neither captures the effects of the home country tax laws, nor the international ones on the corporate tax burden. Therefore, the statutory corporate tax rate is not a satisfactory indicator for the international comparisons. However, its availability, both over time and across countries, constitutes its undeniable advantage.

Tax quotas are another readily available tax burden measure. These quotas are given by the ratio of the tax to GDP or to the total tax revenue. Unlike statutory tax rates they take the tax base into account but in an insufficient way (Bellak, Leibrecht, Römisch 2005, p. 30; Bellak, Leibrecht 2007, p. 16). Moreover, the tax-to-GDP ratio can be affected by many factors, which may vary across countries and therefore influence the comparability of results. "Tax expenditures" are one of them. They are defined as expenditures made through the tax system (OECD 2000, p. 28). The tax expenditure concept was developed in connection with the fact that the tax system could be used to achieve similar goals as public spending programmes. It means that, tax expenditures are an alternative to direct government expenditures. The difference between them comes down to the fact, that spending budget funds is composed of two steps: receiving the money and spending it. In case of tax expenditures the revenue is immediately consumed by the expenditure. Tax expenditures take many forms, such as: exemptions, tax credits and allowances, but also reduced rates and it means that they constitute the lost revenues. Countries that prefer tax expenditures to direct government expenditures will – while having all other things equal – have a lower tax-to-GDP ratio compared to countries opting for the direct spending programmes (OECD 2000, p. 28). Another factor that can influence the comparability of the discussed indicator is the measurement of

GDP. Firstly, the degree of accuracy with which GDP is measured by the statistical agencies of different countries may vary considerably. Secondly, differences in the tax-to-GDP ratios do not necessarily reflect differences in tax policies across countries (OECD 2000, p. 30). The share of GDP that is effectively subject to corporate income taxation may vary as the economy goes through the business cycle. Moreover, the build-up of corporate tax loss pools carried forward and used to offset corporate tax liabilities will differ both over time, and across countries at any given point in time. These differences will affect the tax-to-GDP ratio but will reflect more past policy decisions than the current tax policy priorities (OECD 2000, p. 30). The tax to total tax revenue ratio will also depend on other factors than the tax system for example the size of the corporate system and the relative size of corporate income in GDP, which varies considerably over the economic cycle and potentially across counties (Devereux, Griffith, Klemm 2002, p. 470). It needs to be undelied that some scholars call tax quotas the effective tax rates (see Blechová, Barteczková (2008); Jacobs, Spengel (1999)). However, not all researchers share the opinion (see Nicodème 2001, p. 4-5; Leibrecht, Römisch 2002, p. 3; Bellak, Leibrecht 2007, p. 16). In the paper the structuring of various tax measures is adopted from Bellak, Leibrecht (2007, p. 16; see fig. 1), so tax quotas are not classified as the effective tax rates.

Figure 1. Tax burden measures

Figure 1. Tax burden measures

TAX BURDEN MEASURES

- STATUTORY CORPORATE TAX RATES
- TAX QUOTAS
  - Tax to GDP
  - Tax to total tax revenue
- EFFECTIVE TAX RATES
  - Forward-looking („hypothetical, tax code based") effective tax rates
    - *Effective marginal tax rates (EMTR):*
      - King/Fullerton (1984)
      - OECD (1991)
      - Devereux/Griffith (1999)
    - *Effective average tax rates (EATR):*
      - Devereux/Griffith (1999)
      - Jacobs/Spengel (2002)
  - Backward – looking („observable from real data") effective tax rates
    - *Average effective tax rates (AETR):*
      1. National-Accounts Data & OECD Revenue Statistics:
         - Mendoza et al. (1994)
         - Leibrecht/Römisch (2002)
         - Volkering/de Haan (2001)[*]
      2. Firm-level data
         - Nicodème (2001)
    - *Marginal effective tax rates (METR):*
      - Gordon et al. (2003)

*- hereafter the title will be referred to as OECD (2001)

Source: Bellak, Leibrecht (2007, p. 16).

The effective tax rates were developed in order to overcome some of the shortcomings of the previously mentioned tax measures. They do not only take into account the statutory tax rates but also other aspects of the tax systems which determine the amount of tax paid. However, „ the effective tax rate" is not a homogenous indicator and it can be computed in various ways. Firstly, there are backward- and forward-looking tax rates. Secondly, one can distinguish the

marginal and the average tax rates. Finally, tax rates can be estimated using micro- or macroeconomic data.

Forward-looking approaches calculate the tax burden on a hypothetical investment project taking into account the existing tax rules. One can distinguish between the effective marginal (EMTR) and the effective average tax rates (EATR). Their common feature is combining in one measure both the statutory tax rate and the tax base. The main difference between them lies in the profitability of the considered project. EMTR is calculated for marginal investments i.e. an investment whose after-tax rate of return is zero. EATR offers the opportunity to compare some investment projects that earn positive returns. Hence, the two measures can be applied at two different stages of the investment decision process. The average tax rates are relevant for the location choice and enable investors to rank locations according to their post tax return. Having chosen the location, the size of investment depends on the EMTR (Devereux, Griffith 2003, p. 108). Based on the neoclassical investment theory, King and Fullerton (1984) developed the effective marginal tax rates. Their model became the commonly accepted framework. The approach was then extended by Devereux and Griffith (1999). They introduced the effective average tax rate (EATR), which in contrast to EMTR, measures the tax burden of profitable investment i.e. investments generating an economic rent. It reflects the distribution of the effective tax rates over a range of profitability, with the EMTR as a special case of marginal investment (Devereux, Griffith 2003, p. 113). Therefore, the EMTR and EATR can be computed within one consistent framework and the methodology is internationally accepted. The later part of the article focuses on Devereux/Griffith's methodology.

The calculations of EATR and EMTR utilize information on the existing tax code. However, the construction of these indicators also incorporates a number of assumptions concerning the real interest rate, inflation rate, the financing and asset structure of the firm, asset-specific depreciation rates and the pre-tax rate of return. The incentives generated by the tax system depend on the form of the investment project, including the type of asset purchased and the way it is financed. Therefore, despite the fact that the effective tax rates can be computed for different types of assets and financing methods, the derived tax burden measures as well as conclusions are valid only under the assumption of these models. Moreover, there is some limitation in the form of parameters of the various tax regimes which can be captured in the context of the analysis of a hypothetical investment. In practice it is not possible to account for all features and complexities of the tax system. Dealing only with the most important features of tax regimes without taking into account the whole complexity of the tax law is the most often criticized feature of the framework. For example, tax

planning activities cannot be addressed with those rates as well as tax enforcement. What is more, these indicators do not incorporate fiscal incentives to foreign investment that are specific to certain regions or spending categories (e.g. R&D) (Hajkova, Nicoletti, Vartia, Yoo 2006, p. 13, Yoo 2003, p. 9). Furthermore, the assumption of a one-period investment makes it impossible to look at the effects of tax holidays or temporarily reduced rates (Klemm 2008, p. 3). These measures can therefore isolate the influence of some factors on effective taxation, but cannot take into account all of them. The disadvantages of that approach also include the relatively high degree of complexity in the calculation of these rates and data requirements. Among advantages one could list the fact that the forward-looking effective tax rates distinguish between domestic and international investments (domestic vs. bilateral rates). They can be calculated for the profitable investment (EATR) as well as for the investment which just earns the cost of capital i.e. projects which just breaks even (EMTR). These measures are well suited for assessing the impact of taxation on investment decisions which are also "forward-looking". They permit to compare the international tax regimes and can illustrate the general structure of the incentives provided by the taxation systems. They can also identify the most important tax drivers influencing the effective tax rates.

It is worth mentioning that Devereux and Griffith's framework was later extended and used by many researchers.

As far as the effective backward-looking tax rates are concerned two methodologies can be distinguished: the macro backward-looking approach and the micro backward-looking approach.

Macro backward-looking measures use historic, aggregate data from national or international statistic institutes. They are calculated as ratios of taxes paid by corporations on the measure of the tax base which can be the corporate gross operating surplus, or the aggregate corporate profit (see e.g. Ederveen, de Mooij 2003, p. 330; EC 2001, p. 70; Nicodème 2001, p. 4; Jacobs, Spengel 1999, p. 4). Such indicators are called „ the implicit tax rates" (ITR) in order to distinguish the backward-looking approach from forward-looking average effective tax rates calculated on the basis of the tax code (EC 2006, p. 41). The well known and widely used method for calculating the effective average tax rates at the macro-level is the approach developed by Mendoza, Razin and Tesar (1994) (hereafter termed MRT) which calculates tax ratios on the basis of the OECD data. They defined the tax rate as the ratio of taxes on income, profits and capital gains of corporations, on the operating surplus of the corporate sector (equal to the total operating surplus of the overall economy, less the operating surplus of private unincorporated enterprises). As mentioned above, the MTR approach is widely used in its pure form or modified versions

by academics and international institutions. For instance, the European Commission publishes implicit tax rates using methodology conceptually equivalent to the MTR approach. On the other hand, the OECD (2001) published effective average tax rates based on the MTR approach as well as on an updated version.

The attractiveness of macro backward-looking approach lies in its simplicity. Aggregate data is easily available from most statistical institutes, and the ratios can be calculated in a convenient and quick way for different countries and years. Moreover, such tax rates implicitly take into account the entire tax code that is the combined effects of the statutory tax rates, tax deductions and the tax credits. They also include the effect on the tax base of tax planning (OECD 2001, p. 14) and the enforcement policy of a country. Nevertheless, these rates suffer from a number of shortcomings. They can give a proper picture of the current tax burden, but using it as a taxation measure of some future investment could be misleading. The reason lies in the fact that historic data is used to calculate the tax ratio and such data does not reflect the future tax code. Moreover, using aggregate data may lead to mismatching problems regarding the numerator and denominator of the ratio. The corporate operating surplus (potential denominator) may include interests, rents and royalties paid by corporations. However, taxes on these sources of income are paid by private owners and do not enter in the numerator (see Nicodème 2001, p. 5; OECD 2000, p. 35; Jacobs, Spengel 1999, p. 4). As Nicodème (2001, p. 5) points out the aggregate gross operating profit, on the other hand, usually includes revenues from agriculture and forestry, revenues from royalties or rentals and revenues from tax-exempt institutions, which blurs the results. Another issue is unincorporated enterprises. Their profits are recorded in the corporation sector in national accounts but their owners are taxed under the personal income tax scheme (the related tax payments are then recorded within the household sector in national accounts). Actually this means that tax revenues are booked in a different sector than the underlying business income (Blechová, Barteczková 2008, p. 3; Nicodème 2001, p. 5). There may be timing problems in the data collection as taxes are levied on the previous year profits, and tax receipts can be reduced by the loss carry-forwards and carry-backs, whereas these loss treatments do not affect companies profits from national accounts (Jacobs, Spengel 1999, p. 4-5). With the approach taken, it is not possible to distinguish the effect of taxes among sectors or industries. Finally, the tax rates based on macroeconomic data may show a cyclical evolution (EC 2001, p. 70; Briotti 2003, p. 480).

Some of the problems mentioned above can be solved by the use of detailed micro data. The micro backward-looking methodology enables to

compute the effective average tax rates on the basis of micro data taken from financial statements. These rates are calculated as the tax liability of the firm relative to some measure of the underlying income which is taxed (Devereux 2003, p. 4). Nicodème (2001) developed three versions of the indicator on the basis of BACH databank (Bank for the Accounts of Companies Harmonised):

- ratio of taxes paid on profit on ordinary activities before taxes adjusted for extraordinary activities,
- ratio of taxes paid on net turnover,
- ratio of taxes paid on gross operating profit.

First of the options would have been, according to Nicodème (2001, p. 18), the best one to compare effective rates with statutory rates. Unfortunately, because this item is the result of numerous additions and subtractions (from turnover to tax), and because of possible differences in accounting rules, the use of this ratio may be problematic for comparisons between countries. Taking into consideration the fact that the determination of profit differs from country to country a common denominator does not exist. The second alternative produces very small figures, which complicate comparisons. Moreover, the use of the turnover can lead to misinterpretations because the information on costs is lost. A small tax ratio does not necessarily imply low taxation as large turnover might be necessary to cover large costs. The last variant uses the gross operating profit in calculations. That is the profit before depreciation. As a result, a relatively homogeneous denominator is obtained as far as international comparisons are concerned. Embracing the depreciation would change this state of affairs because depreciation rules do not only differ on the linearity versus accelerated dimension but also on whether the historical value or the market value of the asset is taken into account.

One of the advantages of the micro backward-looking approach is covering all aspects of the tax systems which affect effective taxation, as it uses the real life data. Nevertheless, the need to utilize such data gives rise to certain problems. Firstly, the microeconomic data is not easily available. Secondly, if calculations of effective tax rates are based on the sample of companies doing business both nationally and abroad (not only national firms) then the tax liabilities are influenced by the national tax system as well as foreign tax systems (different parts of firms' revenues might be taxed under different systems). Tax rates computed in this way represent the tax burden of companies located in a specific country instead of the tax burden derived from the national tax system. Therefore, using such rates for international comparisons might lead to some incorrect conclusions. The advantages of the approach include the possibility to calculate the tax burden considering the firm size, sector or

industry as well as the feasibility to identify the items of the balance sheet that have a significant influence on the effective tax rates. However, as the calculations are based on past data they can give a proper picture of the tax burden of the already existing capital but they say nothing about the investment incentives of the tax system or future tax reforms. The micro backward-looking tax rates share this shortcoming with the macroeconomic rates. Moreover, the methodology does not allow to investigate the influence of the isolated features of the tax system on the considered indicator. Furthermore, the data sometimes tends to show significant yearly fluctuations depending on the business cycle (EC 2001, p. 69).

Recently, Gordon, Kalambokidis and Slemrod (2003) proposed a new effective tax rate measure (hereafter termed GKS) claiming that it should be added to "the pantheon of existing measures". It combines two different approaches. The conceptual basis of the measure is the same that underlies the calculation of the effective tax rates on a hypothetical investment project taking into account the existing tax rules. However, in calculations historic data is used, instead of the assumptions regarding the actual tax code. As Becker and Fuest (2004, p. 1) mention the difference between the King and Fullerton's (1984) forward-looking approach based on neoclassical investment theory and the GKS measure, is the fact that the latter is a backward-looking concept. It has, previously described, advantages resulting from the use of the real life data. Such data reflects the full complexity of the tax system, that cannot be captured in theoretical models. Nevertheless, like in case of all backward-looking indicators, the use of ex-post data makes it impossible for the measure to assess the effects of proposed changes in the existing law and to reflect recently changed law accurately. The GKS assumes that the tax law remains stable and that the investment growth rate equals the nominal interest rate. In reality, however, the tax law changes and as Becker and Fuest[1] (2004, p. 5) underline there is no reason why the investment growth rate should be equal to the nominal interest rate. Moreover, Gravelle (2007, p. 40) argues that the GKS measure is unreliable if there are discrepancies between the growth rate and the discount rate. She also underscores that it relies on an accurate measure of the capital stock. Diamond (2008, p. 338) shares the concerns and adds that the discussed indicator is also sensitive to business-cycle effects. However, according to Slemrod (2007, p. 14), who is one of the measure's authors, adjustment can be made to approximately reflect business-cycle effects and recently changed tax law.

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[1] Becker and Fuest (2004) explore the consequences of relaxing some of the assumptions made by GKS (2003). They also develop a modified GKS measure.

3. Comparison of the level of the company tax burden for the European Union countries

In order to compare the company taxation in the enlarged European Union countries three out of previously described tax burden measures will be used: the adjusted top statutory tax rate[2] and the forward-looking effective tax rates - average (EATR) and marginal (EMTR)[3].

In the period of 1998-2009 clear downward trend of corporate taxation was observed, measured by both statutory rates and effective ones (figures 2-4). The new member states were characterized, for the whole period considered, by lower tax rates than the EU-27 average whereas the EU-15 countries noted higher values than the average one. Moreover, the reported falls were higher in NMS. To give an example, the statutory tax rates were reduced in NMS by 11,9 percentage points (pp) (the EU-15 by 9,5 pp), the effective average tax rates by 10,4 pp (the EU-15 by 5,7 pp), and the effective marginal tax rates by 8,5 pp. (the EU-15 by 4,6 pp). The most considerable differences in falls of the tax rates between old and new member states did not concern however the statutory tax rates but the effective measures. The disparity in the statutory tax rates between the EU-15 and NMS increased from 5,9 percentage points in 1998 to 8,3 percentage points in 2009, in EATR from 3,3 pp to as many as 8,1 pp, whereas in EMTR from 3,3 pp to 7,1 pp. According to tables 1-2, during the years 1998-2009, the highest statutory rates reductions in the EU-27 countries took place in[4]: Bulgaria, Germany, Romania, Slovakia, Ireland, Poland, Cyprus, Czech Republic and Greece. EATR decreased in Bulgaria, Slovakia, Romania, Cyprus, Poland and Germany most, whereas EMTR in Belgium, Slovakia, Germany, Bulgaria, Cyprus and Romania. In this way Bulgaria, from the country with relatively high corporate taxation, became one of the countries with the lowest tax rates in the EU-27 both statutory and effective ones (see rankings in tables 1-2). Romania experienced similar changes. Cyprus remained one of the countries with the lowest statutory tax rates but it lowered considerably the effective tax rates – EATR and EMTR. As far as Germany is concerned, in the period considered,

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[2] Adjusted top statutory tax rate on corporate income takes into account corporate income tax (CIT) and, if they exist, surcharges, local taxes, or even additional taxes levied on tax bases that are similar but often not identical to the CIT.

[3] Devereux and Griffith's methodology is used for calculations of effective tax rates. Basic model assumptions are: inflation rate - 2%; real interest rate - 5%; pre-tax real rate of return – 20%; assets (at equal weights) – industrial buildings, intangibles, machinery, financial assets, inventory; sources of finance (at equal weights) – retained earnings, new equity, debt; economic depreciation rates: industrial buildings – 3,1%, intangibles – 15,35%, machinery – 17,5%.

[4] Countries listed by the highest fall in the tax rates.

a very significant reduction of differences between the different measures of tax burden was observed. In 1998 the disparity between the statutory tax rate and EATR (EMTR) accounted for 14,8 percentage points (18,1 pp) while in 2009 it decreased to 1,8 pp (8,1 pp). Nevertheless, the company taxation still exceeds the EU-27 average. In 2009 Bulgaria, Cyprus, Ireland, Latvia and Romania experienced the lowest corporate taxation in the European Union (four top ranking positions in case of the statutory rate and EATR- see table 2).

It is worth mentioning that large differences in the statutory tax rates do not necessarily imply large differences in the effective taxation. Comparing the statutory and effective tax rates gives an idea of tax incentives given by authorities. The comparison of effective tax rates across countries gives, on the other hand, indications whether there are substantially different tax treatments of companies with the same characteristics but located in different countries.

Figure 2. Adjusted top statutory tax rate (in %)
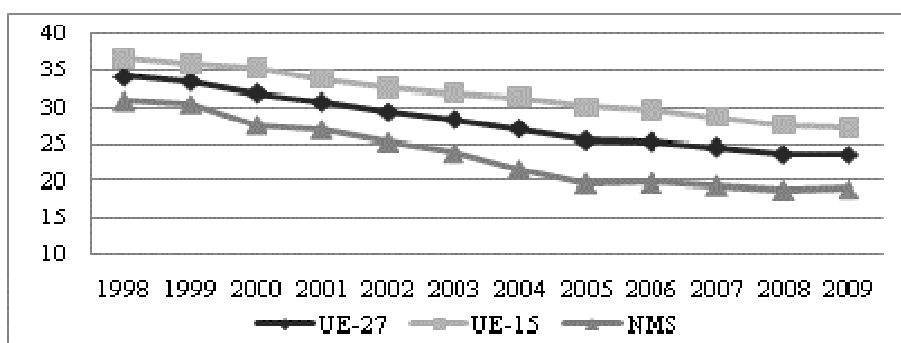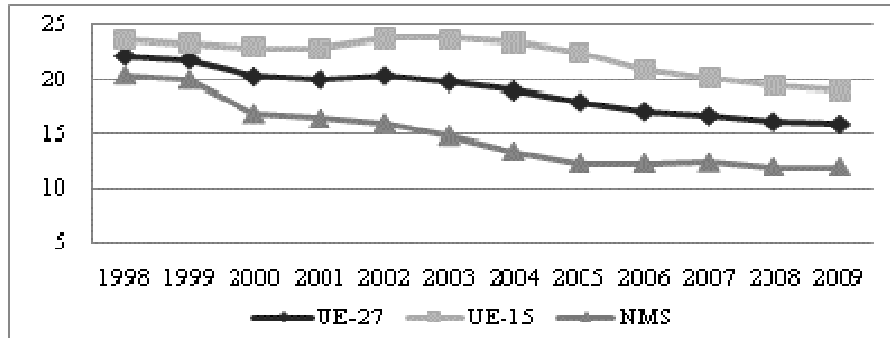

Source: own calculations based on: *Trends in the European Union,* European Commission, Eurostat 2010, p. 136.

Figure 3. Effective average tax rate (in %)
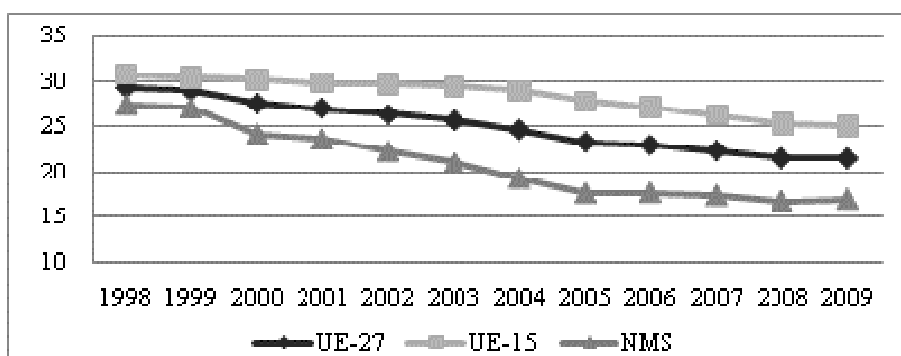
Source: own calculations based on: Devereux at al. 2009, pp. c1-c420.

Figure 4. Effective marginal tax rate (in %)

Source: see Figure 3.

For most countries the EATR is slightly below the statutory tax rates. However, in some countries, the EATR exceeds the statutory rate. For instance, in 2009 Ireland, France, Cyprus, Spain and United Kingdom were characterised by such a situation. The reasons of that fact were different - France, for example levied a business tax (*taxe professionnelle*) on fixed assets while in Ireland corporations pay the real estate taxes which are particularly high compared to the profit taxes.

According to the rankings presented below, the position of countries by their company taxation, in most cases, does not change significantly regardless of whether the statutory tax rate or effective tax rates are taken into account. Nevertheless, the rates level might differ considerably. The highest disparities are observed between the statutory tax rates and the effective tax rates measured by EMTR. In 2009 Belgium was the country with the highest difference between statutory tax rate and both effective measures while in 1998 these were Ireland and Germany. It is worth adding however, that in 1998 the disparity between the statutory tax rate and both effective measures exceeding 10 percentage points was reported only for the two countries mentioned above. As far as the divergence between the statutory tax rate and EMTR is concerned such big differences were observed for as many as 17 countries. Till 2009 the number of such countries dropped from 17 to 6. Nevertheless, the differences, smaller though, still exist. This leads to the conclusion that one should not ignore the differentiation between the statutory and effective tax rates. Using the statutory rate which do not take into account the tax base as the sole indicator may be misleading.

Table 1. Statutory and effective corporate tax rates in 1998

Country	Adjusted top statutory tax rate	Ranking position[*]	Effective average tax rate (EATR)	Ranking position	Effective marginal tax rate (EMTR)	Ranking position
Austria	34	8	29,7	8	20,2	7
Belgium	40,2	13	34,5	11	22,7	9
Bulgaria	37	11	32	9	21,2	8
Cyprus	25	2	27,5	7	24,4	10
Czech Republic	35	9	26,4	6	23,0	9
Denmark	34	8	30	8	21,5	8
Estonia	26	3	22,4	4	13,4	4
Finland	28	4	25,9	6	21,5	8
France	41,7	14	39,8	13	36,8	15
Germany	56	15	41,2	14	37,9	16
Greece	40	13	30,4	8	20,5	7
Hungary	19,6	1	19	2	18,7	6
Ireland	32	7	9,4	1	7,8	2
Italy	41,3	14	32	9	9,7	3
Latvia	25	2	22,7	4	17,5	5
Lithuania	29	5	23	4	6,7	1
Luxemburg	37,5	11	32,6	9	22,4	9
Malta	35	9	32,2	9	26,9	12
Netherlands	35	9	32,3	9	27,2	12
Poland	36	10	32,4	9	25,3	10
Portugal	37,4	11	33,4	10	25,5	11
Romania	38	12	34	10	26,0	11
Slovakia	40	13	36,7	12	30,8	13
Slovenia	25	2	20,9	3	10,5	3
Spain	35	9	36,5	12	35,4	14
Sweden	28	4	23,8	5	17,9	5
United Kingdom	31	6	29,7	8	27,3	12

* 1 denotes a country with the lowest tax rate; if the difference in tax rates between countries is lower than one percentage point the same ranking position is granted.

Source: *Taxation trends in the European Union,* European Commission, Eurostat 2010, p. 136; Devereux at al. 2009, pp. c1-c420 and own calculations.

Table 2. Statutory and effective corporate tax rates in 2009

Country	Adjusted top statutory tax rate	Ranking position*	Effective average tax rate (EATR)	Ranking position	Effective marginal tax rate (EMTR)	Ranking position
Austria	25	8	22,7	8	17,4	11
Belgium	34	13	24,7	10	-5,1	1
Bulgaria	10	1	8,8	1	5,5	3
Cyprus	10	1	10,6	2	9,5	5
Czech Republic	20	6	17,5	6	11,2	6
Denmark	25	8	22,5	8	16,7	11
Estonia	21	7	16,5	5	3,6	2
Finland	26	9	23,6	9	18,1	12
France	34,4	13	34,6	13	34,9	18
Germany	29,8	11	28	11	21,7	14
Greece	25	8	21,8	8	14,1	8
Hungary	21,3	7	19,5	7	15,5	10
Ireland	12,5	2	14,4	3	13,3	8
Italy	31,4	12	27,4	11	20,8	14
Latvia	15	3	13,8	3	10,8	6
Lithuania	20	6	16,8	5	8,3	4
Luxemburg	28,6	10	25	10	16,5	11
Malta	35	14	32,2	12	26,9	15
Netherlands	25,5	8	23,7	9	19,6	13
Poland	19	5	17,5	6	13,7	8
Portugal	26,5	9	23,7	9	17,1	11
Romania	16	4	14,8	4	11,9	7
Slovakia	19	5	16,8	5	11,3	6
Slovenia	21	7	19,1	7	14,5	9
Spain	30	11	32,8	12	33,4	17
Sweden	26,3	9	23,2	9	17,4	11
United Kingdom	28	10	28,3	11	28,9	16

* 1 denotes a country with the lowest tax rate; if the difference in tax rates between countries is lower than one percentage point the same ranking position is granted.

Source: see Table 1.

4. Conclusion

Company tax burden can be measured by many different methods. The existence of different indicators reflects the fact that each of them measures different things. That means that different indicators can be more or less appropriate to answer different research questions. When the objective is the analysis of the impact of taxation on the investment behaviour then forward-looking measures are the best indicators. The reason lies in the fact that investment decisions are forward-looking *per se* and are based on the future tax burden underling certain decisions. These measures enable to isolate the structure of incentives provided by the different taxation systems. They permit to compare international tax regimes and they also identify the most important tax drivers influencing the effective tax rates. According to Devereux and Griffith (2003, p. 108) EATR is an appropriate measure to investigate the impact of taxation on the location choice, ranking the investment by the profitability in different locations. EMTR, on the other hand, explains the optimal scaling of a new or existing investment "conditional on the choice of location". Forward-looking indicators are also a useful tool when competitiveness is concerned.

The backward-looking tax measures are particularly useful in analysis concerning the distribution of the tax burden (e.g. by sector or industry). They also permit a better understanding of the sensitivity of tax revenues to the economic cycle. However, besides a number of shortcomings, these indicators are not suited to evaluate the effects of taxation on business decision-making and they cannot give information on the impact of taxation on future competitiveness of firms.

The analysis of corporate taxation should not be restricted to the readily available indicator in the form of the statutory tax rate. The real tax burden of companies is influenced by many factors, which are better or worse captured by more complicated tax measures. The comparison of the statutory tax rates to effective indicators for the EU-27 countries reveals the existence of, in some cases, very high differences between the measures considered.

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Streszczenie

**OPODATKOWANIE PRZEDSIĘBIORSTW W KRAJACH
UNII EUROPEJSKIEJ**

W artykule dokonano przeglądu miar obciążenia podatkowego przedsiębiorstw. Rozpoczynając od wielkości najprostszych, jak stopa nominalna, a kończąc na miarach efektywnych. Każdy ze wskaźników ma wady i zalety, a jego wykorzystanie może prowadzić do różnego uszeregowania państw ze względu na poziom opodatkowania. Jedną z przyczyn jest fakt, iż wielkości te mierzą inne rzeczy. Porównanie stóp nominalnych i efektywnych w krajach UE-27, w latach 1998-2009, wskazuje na istnienie niekiedy bardzo istotnych różnic pomiędzy analizowanymi wskaźnikami. W związku z tym artykuł sugeruje, iż nie należy ograniczać analiz opodatkowania przedsiębiorstw, do najprostszego i najłatwiej dostępnego wskaźnika w postaci ustawowej stopy podatkowej a rozszerzyć je o miary efektywne. Wielkości te, stanowiące lepszy instrument do porównań międzynarodowych, umożliwiają przeprowadzenie wszechstronnych badań.