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Why the EU-15 Maintains Higher CIT Rates than the New Member States?

Abstract

The European Union is not a homogenous area. This lack of homogeneity extends to taxes, which vary across jurisdictions. On average, Western Europe imposes significantly higher taxes on capital than New Member States, which joined the Community in 2004 and 2007. Often this fact is simply taken for granted. However, there are several arguments that can explain this variance. Although several of these arguments are well known and have been researched, they have not been assessed in combination, or used in a comparative analysis of corporate income tax (CIT) rates between EU member states. Because of interest in harmonizing CIT throughout the EU, the roots of divergent CIT is of particular and timely value. Therefore, this article we attempts to demonstrate the differences in CIT rates in the EU-15 and New Member States. In so doing the general characteristics of these country grouping is identified, and then discussed in the context of the taxation theory.

Keywords: macroeconomic policy, fiscal policy, tax, corporate income tax
JEL: E62, H25

Introduction

The theory of taxation posits that a tax should cause as minimal a distortion as possible. Otherwise stated, in an ideal market all projects would be tax neutral to help assure the decisions of economic agents are driven by market forces, not taxes. However, this is not possible, as tax revenues are needed by local governments to pay for public goods, which are accessible to all free of charge. A compromise position between these two positions

suggests low tax rates. The theory of taxation has in recent decades significantly impacted taxation systems of the world economy. This impact is also apparent in the EU with respect to CIT, where Member States have recently reduced their tax rates.

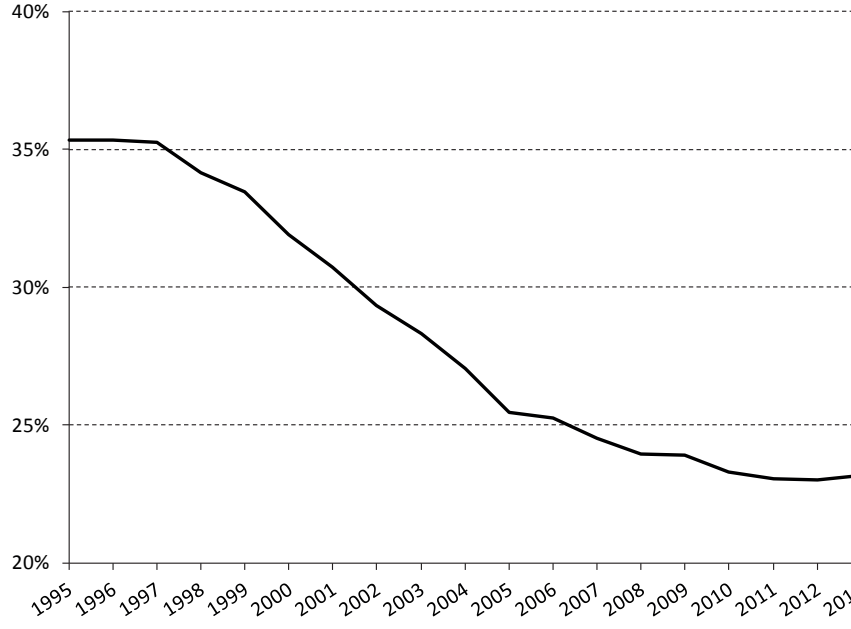
Genschel et al. argue that CIT competition in the EU is driven by several specific institutional mechanisms that are important for the region [Genschel, Kemmerling, Seils, 2011]. One is market integration, in which lower cross-border economic barriers implies a high mobility of capital within the EU. This mechanism drives a tax arbitrage in which Member Countries seek to cut their CIT rates to discourage in country capital from being withdrawn, and to lure new capital investments in domestic markets.

Secondly, an enlarged EU increased the size and heterogeneity of the European market, which also stimulates the tax competition. The more states participate in the common market, the higher the potential that these will seek a competitive advantage through tax competition, which takes the form of new, ever lower, CIT rates within the EU. Moreover, as additional countries join, each Member State economy enjoys a relatively smaller share of the total EU economy, and concomitant decline in importance in the Community. The numerical enlargement of the EU itself has the natural tendency to increase tax competition [Hoyt, 1991]. As do differences in the affluence of members, where peripheral, poorer countries are determined to acquire more capital but cannot offer investors agglomeration benefits. They are instead forced to decrease CIT rates [Franzese, Hays, 2007].

The equal treatment of economic agents on the European single market is supported by the European Court of Justice (ECJ), which is responsible, inter alia, for tax jurisprudence. This is accomplished through the ECJ's efforts to encourage national tax regulation that is compatible with the general principles of the common market. As applied to CIT rates, these efforts can either enhance tax competition or curb it (if the ECJ prioritizes national public interest). In general, though the case law of the ECJ suggests that this body has an overall positive effect on market integration that indirectly supports tax competition among Member Countries.

In light of the foregoing, tax competition within the EU should be higher than among non-EU countries. Indeed, Genschel et al. point out that since the 1990s CIT rates in the EU have fallen faster than in other parts of the world [Genschel, Kemmerling, Seils, 2011]. Figure 1 presents the average top statutory CIT rates in the EU-27 countries.

FIGURE 1. Average top CIT rates of the EU-27 Member States



Source: Based on Taxation Trends in the European Union 2013.

The process of CIT rate reductions in the EU began in the in the mid-1980s, when the UK significantly decreased its statutory CIT rates. In the early 1990s, Scandinavian countries introduced a dual-tax system and decreased the CIT rates considerably below prevailing PIT rates. During this same period Eastern European countries became more attractive to foreign capital, in part, due to CIT rates that, on average, were there lower than in Western Europe. Once ignited, tax competition between countries contributed to further declines of statutory rates among EU countries.

Over the last 15 years the process of CIT competition has accelerated. This may have been caused by the increasing mobility of capital coupled with the economic slowdown of 2001, which triggered higher demand for capital and precipitated a more rapid accession of Central European countries to the EU. On the eve of EU enlargement in 2004, CIT rates in the New Member States were, on average, almost 10 percentage points lower than in the EU-15, and effective tax rates were estimated to be around the half of the EU-15-average [Jacobs, Spengel, Finkenzeller, Roche, 2003]. The resulting shift capital to New Member States motivated the EU-15 to again compete with one another to make their CIT systems more attractive to investors.

The impact of this competitive process is striking. Between 1995 and 2013, statutory CIT rates[1] in the current EU-27 countries steadily declined, on average, from 35.3 to 23.2 percent. However, the rate of decline has not been uniform, possibly in reaction to the financial crisis that began in 2008. Increasing public deficits may have discouraged

governments from seeking the medium-term benefits of tax competiveness for the short--term loss of tax revenues inherent in reduced CIT rates, and encouraged others – namely, France, Portugal, Greece, Luxembourg and Slovakia – to increase CIT rates form 0.6 (Luxembourg) to 6 percentage points (Greece) during the crisis. It bears mention that only euro-area countries chose this course and two of them – Greece and Portugal – were particularly hard hit by the economic crisis, and therefore strongly motivated to immediate budget inflows.

Even with these modest CIT rate increases by selected members, the EU is more prone to tax competition than other countries of the world, and that competition is more or less fierce by country. The key competitive drivers, by region and in terms of CIT rate level, are discussed below.

CIT Rates as Investment Incentive

Globalization has dramatically increased the ability of international firms to shift taxable profits between countries, facilitating investment abroad. Unsurprisingly, this has also made tax competition between states more fierce.

Broadly defined, tax competition is noncooperation with respect to taxes between independent states. Wilson and Wildasin define tax competition more narrowly as a "non-cooperative tax setting by independent governments, under which each government's policy choices influence the allocation of a mobile tax base among 'regions' represented by these governments", in which "regions" are either states, countries, or localities – depending on the context [Wilson, Wildasin, 2004]. This narrow definition is employed in this analysis.

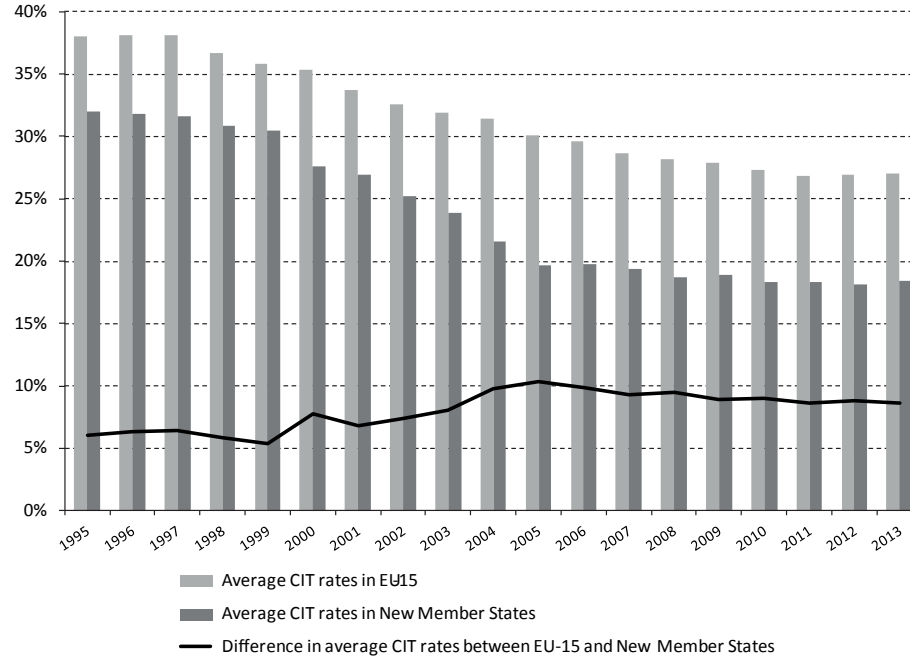
In theory, mobile capital will flow to a country with the lower tax burden, which offers higher after tax returns on the funds invested. Thus, different tax rates imposed on capital trigger capital flows between states. If country A reduces its tax rate to the level below that observed in country B, this produces a negative fiscal externality in country B as capital moves to country A. Faced with a reduced tax base, the government of country B, responds by cutting its tax rates to avoid a further erosion of the tax base. This process is repeated several times until both countries end up with sub-optimal tax rates and an under provision of public goods [Zodrow, Mieszkowski, 1986]. For this reason, most of the literature claims that tax competition leads to inefficiently low taxes [Wilson, 1999].

Logic dictates that the more mobile capital becomes, the lower tax rates will be in countries seeking to attract that capital. In that landscape, capital income taxes are particularly well-suited to serve as competitive instruments. This is due to the fact that other taxation objects, including a country's labor force (subject to payroll taxes), goods and services (subject to sales or value added tax), and land (subject to real estate tax) are less mobile, immobile, or largely unresponsive to tax rate changes. For example, studies show that workers primarily migrate in search of better jobs and higher wages, and only rarely

do so due to lower taxation. While goods or services can – in theory – be bought by the resident of one country in the other country, depending on which country imposes smaller tax on consumption, the literature shows that this opportunity depends upon the physical distance involved. And land, of course, is immobile.

The use of lower CIT rates to attract foreign investment is more or less intense, by region. As noted above, the EU-15 significantly cut their CIT rates. But the New Member States have decreased their corporate income tax rates even more, forcing the EU-15 to further tax rate reductions. These different on average CIT rate cuts in the EU-15 and New Member States is depicted below.

FIGURE 2. Difference between average top CIT rates in the EU-15 and New Member States



Source: Based on Taxation trends in the European Union 2013.

In the period 1995–2005 the disparity between the CIT rates in New Member States and the EU-15 countries widened from 6 to over 10 percentage points. However, this process was reversed in 2006, when this regional disparity shrank by ca. 1.5 percentage points to 2013. Currently, eight EU countries have CIT rates below 20%. Seven of them are New Member States, leaving Ireland (famous for its low corporate taxation) as the

sole representative of the EU-15. Of the six states EU states with CIT rates above 30%, five belong to the EU-15. Malta, which joined the EU in 2004, is the only EU country that has not changed its CIT rate during the examined period but the implicit CIT rate there is much lower than the statutory one.

This comparison suggests that New Member States desired – and even required – foreign investment more than the EU-15, where capital was already installed. During transition, capital in Central (unlike Western) Europe was scarce, and lower taxation rates were used to attract investment. Huizinga and Nicodeme estimate that a one percentage point increase in foreign ownership of companies increases the average CIT rate between a half and one percent [Huizinga, Nicodeme, 2003]. The relative abundance of multinational foreign owned firms in the EU-15 may therefore partially explain lower CIT rates among New Member States.

Tax policy literature also confirms that tax system structures largely depend on the host country's development [Becker, Elsayyad, 2009]. These studies also suggest that tax competition becomes less fierce with distance. In other words, neighboring countries compete with each more than they compete with distant countries. From this perspective, New Member Countries and the EU-15 can be seen as two geographically separate areas, between whom CIT rate competition was less fierce.

Differences in CIT rates between the old and new EU cannot, however, be explained solely by somewhat different attitudes, by country and region, of member states towards CIT competition.

Differences in Size of Economies

Lower CIT rates in the New Member States, and their more rapid percentage decline (in comparison to the EU-15 countries) is also a function of size differences. New Member States are, on average, smaller; if not always in terms of population or territory, then at least as measured by the size of the their economies – i.e., GDP.

One may argue that independent tax jurisdictions share a mobile CIT base by competing for scarce capital. Thus, through tax competition, the CIT rate becomes adversely proportional to the CIT base. Classic economic models claim that, assuming perfect capital mobility, the optimal CIT rate for a small open economy is zero [Diamond, Mirrlees, 1971; Gordon, 1986; Zodrow, Mieszkowski, 1986; Wilson, 1986]. Small countries are more affected by a steady increase in capital mobility than large economies, because capital outflows impact small economies more severely.

Some economists, like Gordon and Varian, conclude that bigger countries may have more market power in the world capital market, which supports taxation of capital [Gordon, Varian, 1989]. Large jurisdictions, which have some monopsony power, are

able to "export" part of their tax burden to non-residents in the form of reduced after-tax returns on capital [Zodrow, Mieszkowski, 1983]. Thus, logic suggests that small countries, like the EU-12, could improve their national welfare by cutting CIT rates more than big countries, because the response from capital owners in small countries would be there higher. It seems that indeed New Member States follow this conclusion.

On the other hand Bucovetsky and Wilson contend that small countries should tax only labor, which supply elasticity, unlike capital, is finite [Bucovetsky, Wilson, 1991]. Large regions on the other hand, which can influence the equilibrium of after-tax returns on capital, can tax capital on a source-basis. Consequently, small countries, which are highly integrated with the world economy and therefore more prone to capital mobility, might in real life impose taxes on capital that are too high and, hence, inefficient.

Theory is also reflected in practice. For example, Winner, who used population as a proxy for country size, estimated that one percentage point increase in the population (measured as population of a country relative to the US population) is associated with a 0.017 percentage point increase in the CIT burden [Winner, 2005].

These works indicate that small countries should levy low CIT burdens. Sizeable economies, conversely, are able to provide investors with increased pre-tax rate of return. Therefore, countries belonging to the EU-15 can impose higher CIT rates as the after-tax return is comparable there to that earned by capital in smaller countries.

Legal Tax Base

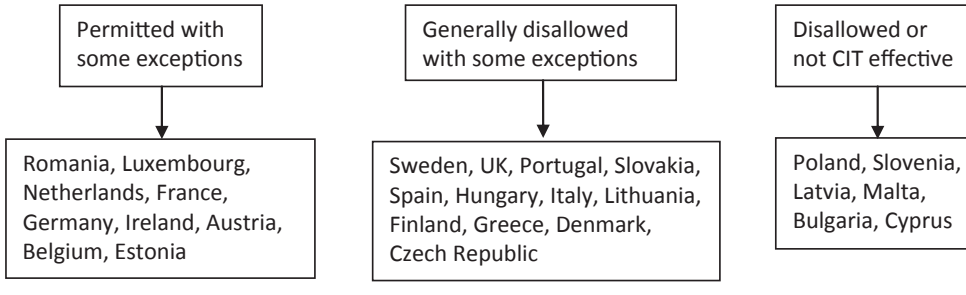
The second after interest rate feature determined by tax law is the legally determined tax base. Generally speaking, the narrower the legal tax base, the greater need for a higher tax rate to offset the effect of this narrow tax base. This simple mechanism is observable in the EU.

The object of a CIT is income. Legal provisions defining taxable income often vary from accounting concepts. All Member States determine the legal CIT base by adjustments to accounting principles set forth in IFRS or national GAAP. The differences primarily concern depreciation deductions. In addition to these differences, the tax laws also provide specific incentives for certain types of investment, e.g., in new technologies. On the other hand some expenses are treated as non-tax deductible. These relate mostly to expenses not connected directly with revenues.

An important difference to calculation of tax and accounting income are provisions. In most cases they are recognized for accounting purposes only. Nine Member States allow for recognition of provisions for tax purposes, twelve permit their recognition just in exceptional cases, and in the remaining countries recognition of all provisions is disallowed [Spengel, 2008]. In general New Member States have a much stricter approach

in this respect. It can be concluded that excluding recognition of the provisions from the tax base calculation transforms into a broader tax base. Since most EU-15 countries allow recognizing at least some provisions for tax purposes if certain requirements are met, then they should have narrower tax base than the New Member States. This partially explains the need of EU-15 to maintain higher CIT rates in order to compensate for the narrower legal tax base. Depicted below is a breakdown of EU countries with respect to possibilities of recognizing provisions.

FIGURE 3. Possibility to recognize provisions in various Member States

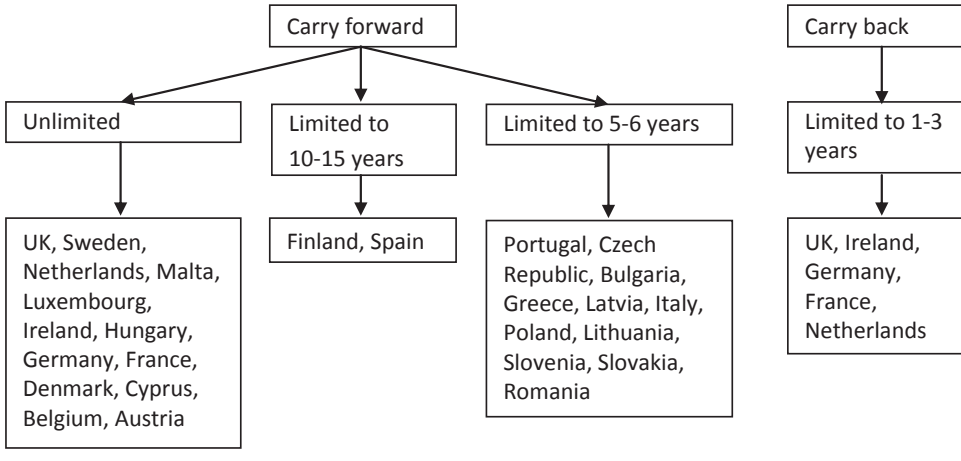


S o u r c e : Based on Spengel (2008).

The treatment of capital gains on shares and sale of other assets often differs from a tax and accounting perspective. Most Member States exempt capital gains arising from shares from CIT. However, some low tax countries (mostly New Member States) do not grant relief for such income. Half of the EU states do not grant any relief also from all other capital gains and, again, differences follow predictable lines. Recognition of capital gains for tax purposes broaden the legal tax base, which is increased when more capital gains are realized and taxed by the taxpayers. Thus, the tax base in this respect is narrower in EU-15, so these countries need to levy higher CIT rates to balance this effect.

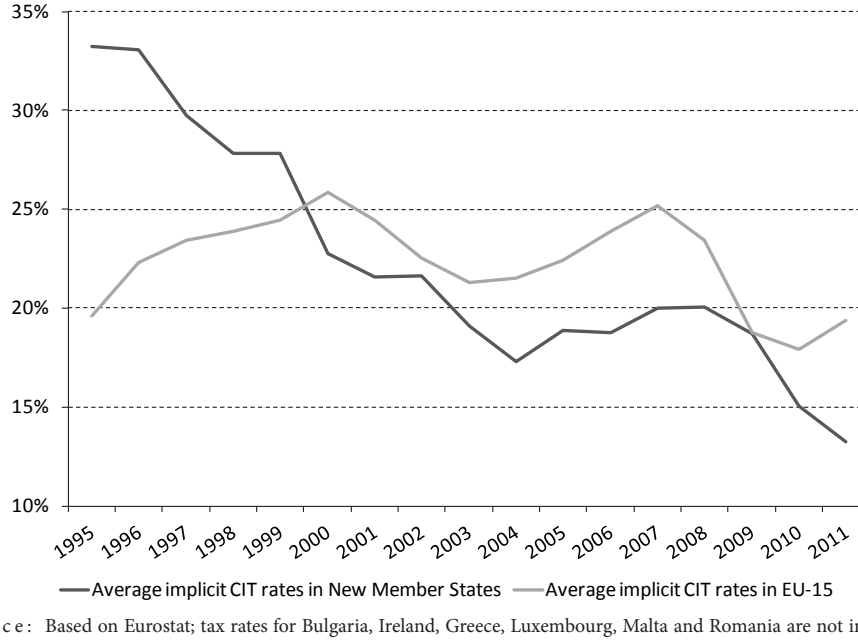
All Member States allow tax losses from one period to be offset against profits from following periods. Roughly half of the EU countries limit the carry forward of losses for a 5 to 15 year period, with 5 years being the most popular. Not surprisingly, strict carry forward rules are most common among the New Member States. Some countries also allow the carry back of the tax losses. However, these are only states from the EU-15. Below is the breakdown of Member States with respect to possibilities of tax loss offsetting.

FIGURE 4. Recognition of tax losses in various Member States



Source: Based on Spengel (2008).

FIGURE 5. Average implicit CIT rates in the EU-15 and among the New Member States



Source: Based on Eurostat; tax rates for Bulgaria, Ireland, Greece, Luxembourg, Malta and Romania are not included in the graph because of lack of data.

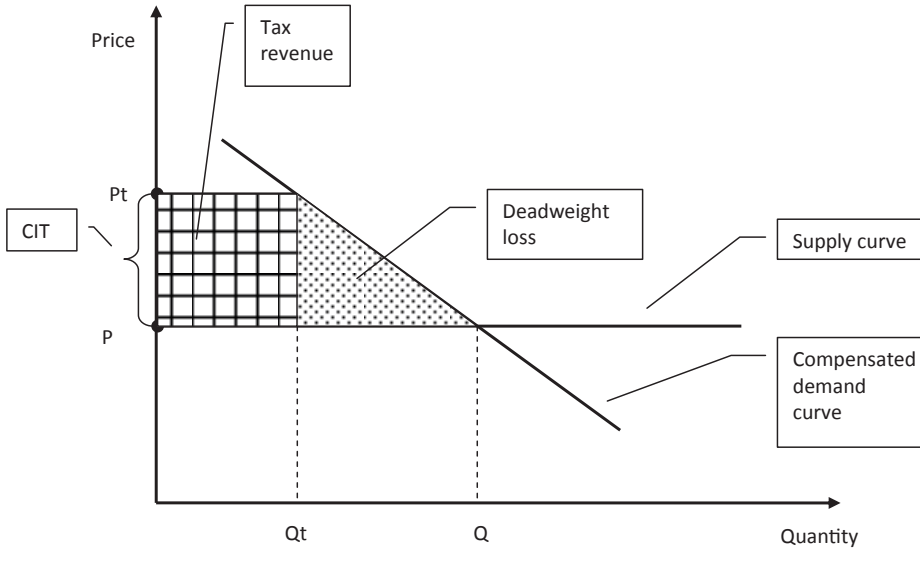
Countries in general broaden their legal tax base by, inter alia, limiting tax incentives, reducing accelerated depreciation deductions, restricting interest deductibility, excluding some categories of expenditures from being tax deductible costs, and by limiting the period of tax loss from previous years available for future offset. The tax base broadening process has been taking place for the last 30 years in the EU countries. However, in general the tax bases in the EU-15 countries are still narrower than those in the New Member States [Schratzenstaller, 2007]. This can also be explained by comparing implicit CIT rates in those two country groups. It should be noted that an effective CIT rate assumes not only the statutory rates but also the legal tax base. Figure 5 presents the development of implicit tax rates over the last years.

Based on the above graph, it seems that the falling implicit CIT rates, which include information on the size of the legal tax base, are relevant but do not fully explain the CIT rate difference between EU-15 countries and New Member States. Additional reasons for this difference are discussed below.

Comparison of Demand Elasticities

This article began with the observation that an optimal tax should produce no, or minimal, deadweight loss. However, this is seldom realized. Tax revenues are represented on the below macroeconomic figure.

FIGURE 6. Tax revenues after introduction of CIT

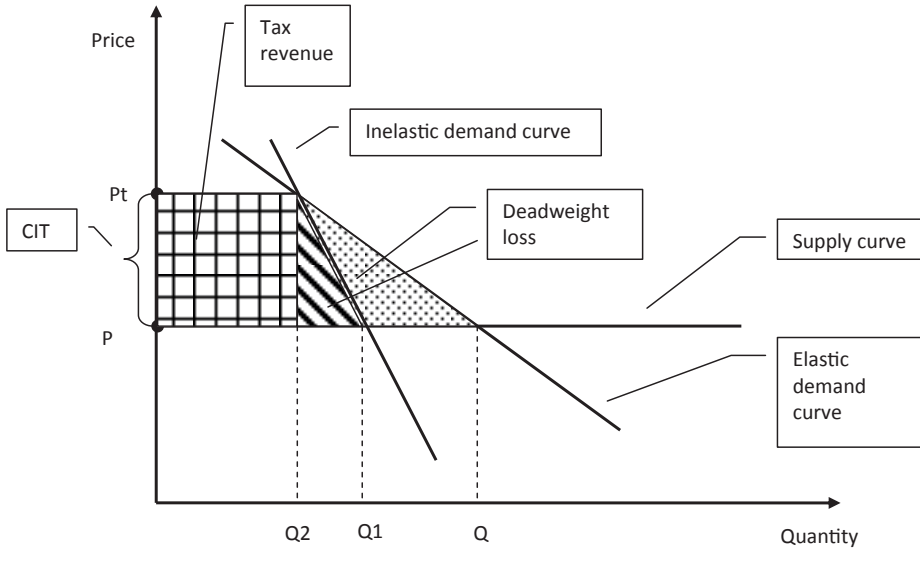


Source: own elaboration.

This graph indicates that if there was no CIT, consumers would buy Q goods. However, that situation would produce no tax revenues. Therefore, all EU countries decided to tax capital. Unfortunately, CIT, like other taxes, makes goods more expensive for consumers. Therefore, as consumers move along the downward sloping compensated demand curve (presented above), they would not buy Q but would instead buy Qt goods, due to expense. The resulting tax revenues are depicted by the gridded field. The deadweight loss produced by CIT is depicted by the dotted field, which results from a partial withdrawal of consumers from spending.

Notably, the less elastic the demand curve, the smaller the deadweight loss. This is presented in Figure 7.

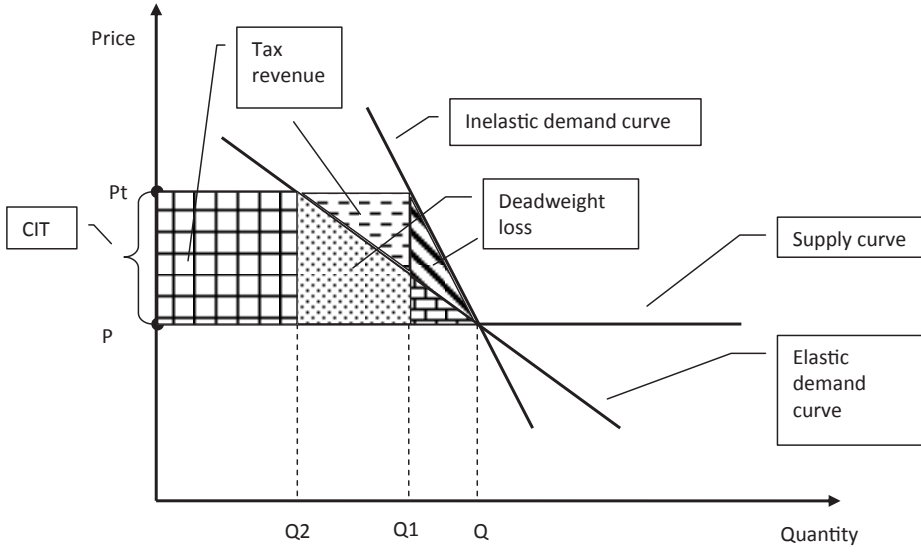
FIGURE 7. Tax revenues under different demand elasticities



Source: own elaboration.

This graph illustrates that when there is less elastic demand curve, the deadweight loss (striped triangle) is lower than in the case of elastic demand (see striped triangle plus grey triangle). In the extreme scenario of inelastic demand, there would be no deadweight loss. This seems reasonable, as price increases of a good due to taxation, assuming that demand for it is non-elastic, would not influence the quantity of goods consumer wish to buy. The above model can be also presented with greater focus on tax revenues rather than on deadweight loss, which is shown in Figure 8.

FIGURE 8. Tax revenues under different demand elasticities – focus on deadweight loss



Source: own elaboration.

The model suggests that CIT revenues depend on the elasticity of the demand curve. Assuming no CIT, consumers buy Q goods. If the demand for that good is elastic, when CIT is introduced demand falls to Q2. CIT revenues equal the gridded field and the deadweight loss is equal to the sum of the grey and bricked fields. However, if the demand is less elastic, after introduction of CIT it will only fall to Q1. The CIT revenues are then equal to the gridded field plus grey and dashed field. Consequently, in our simple model the more steep the demand curve is, the higher CIT revenues are.

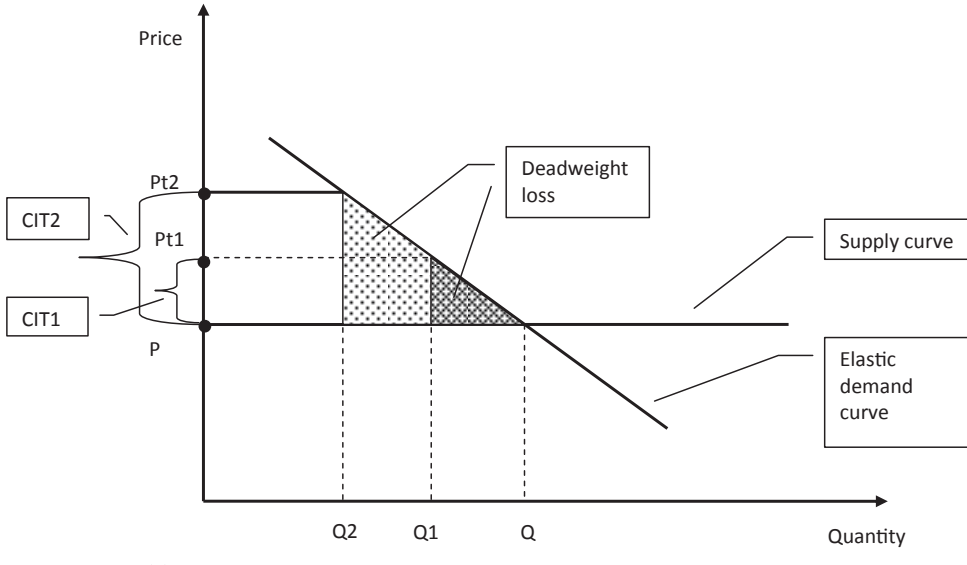
To maximize CIT revenues, governments may be tempted to impose different CIT rates on different sectors of the economy. However, demand elasticity is usually lower for primary goods. Therefore, a differentiation of CIT rates would affect the worse off most and such taxation would have negative consequences inconsistent with what is widely considered a just tax system. Moreover, this would lead to distortions in the allocation of resources. The differentiation of CIT burden does, however, happen – albeit less on a sectoral level of the economy and more among different countries that maintain different CIT rates. This approach of governments can be explained based on the above macroeconomic model.

Assume that capital is mobile and the investor can decide where to invest. Particular countries offer the investor two immobile factors, i.e., land and work force. Business conditions, and the demand elasticity of investors for land and work force in those countries, differ. In countries where the business environment is better the demand curve of investors is less elastic than in the countries where worse conditions for business exist.

In practice the elasticity differences are supported by the fact that many countries feature lower quality business conditions, and relatively few countries offer good externalities. Consequently, developed countries are able to impose higher CIT rates on investors than developing countries without the risk of high deadweight loss. In other words, assuming the same amount of deadweight loss, CIT revenues in countries with better business conditions would be higher than in the periphery countries. This conclusion corresponds with the current economic reality in the EU, where the core EU-15 countries impose high CIT rates, whereas the periphery countries like New Member States have lower corporate taxation rates.

Interestingly, deadweight loss rises disproportionally fast to increased tax rates. This can be well observed in Figure 9.

FIGURE 9. Size of deadweight loss under different tax rates



Source: own elaboration.

Imposing a low CIT1 rate produces a deadweight loss equal to the dark grey triangle. However, two times the higher CIT2 rate produces a deadweight loss equal to the whole triangle, which seems four times larger. Finally, if the tax is raised above CIT2, the deadweight loss would rise further and government tax revenues would start to decline. Therefore, it appears that high tax rates are particularly distortive. This also supports the claim that developed countries (i.e., generally EU-15) are able to tax capital with higher CIT rates than developing countries (mostly New Member States).

To estimate the deadweight loss we calculate the triangle field. The vertical edge of the triangle is the amount of CIT, which we will denote as t. The horizontal edge is equal to the change in quantity of acquired goods. That change depends on the demand elasticity for a good. Elasticity is calculated as the increase in quantity divided by the increase in price.

$$n = \frac{\Delta q/q}{\Delta p/p}$$

Transforming the above equation, we get:

$$\Delta q = \frac{\Delta p}{p} qn$$

This equation shows that the change in quantity Q is higher (i) the bigger the change in price and (ii) the more elastic the demand curve. Because in the model the change in price is equal to tax t, we get:

$$\Delta q = \frac{t}{p} qn$$

Thus, the triangle field is equal to:

$$\frac{1}{2}\Delta qt = \frac{1}{2}\frac{t}{p} qnt = \frac{1}{2}\frac{t^2}{p} qn = \frac{1}{2}\left(\frac{t}{p}\right)^2 pqn$$

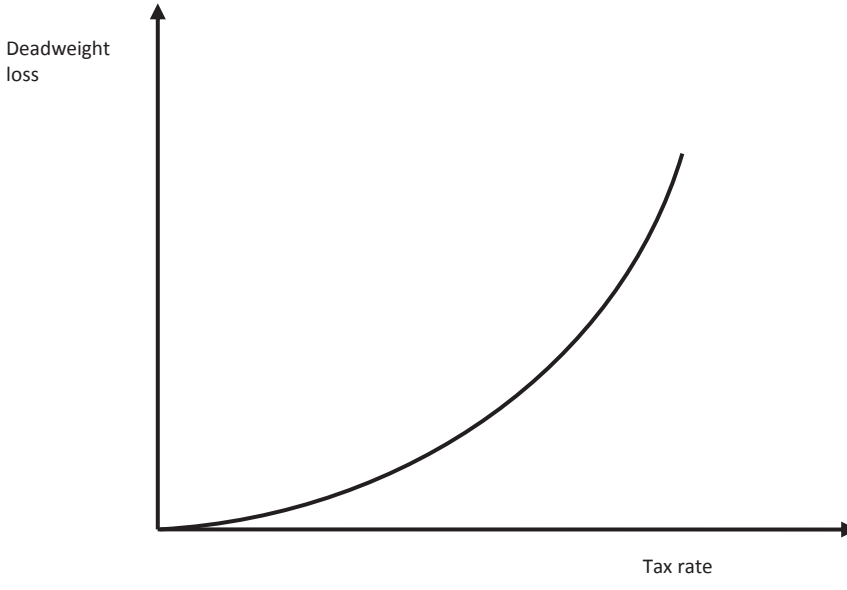
However, $\frac{t}{p}$ is the change relation of tax to the price, which is actually the tax rate Tr.

Hence, we get the following equation:

$$\frac{1}{2}\left(\frac{t}{p}\right)^2 pqn = \frac{1}{2}T^2 pqn$$

Based on the above we see that the deadweight loss rises (i) to the squared tax rate (as presented on the below figure) and (ii) substitution effect, which depends on the elasticity of demand. This is fully in line with the above graph models. The equation shows that the EU-15 countries have the capacity to impose higher CIT rates than do the New Member States, because the elasticity of demand exercised there by investors is lower and, consequently, the deadweight loss is acceptable with higher levels of CIT rates. The relationship between the deadweight loss and the tax rate is presented on Figure 10, below.

FIGURE 10. **Size of deadweight loss under different tax rates**



Source: own elaboration.

Affluence of Citizens

The taxation theory asserts that there are five commonly accepted features that a good taxation system should meet. One is justice. That is, a just treatment of various economic agents. How, then, does CIT meet this criterion? There is a concept of horizontal and vertical justice. Horizontal justice assumes that all parties in the same position should be subject to similar taxation. Vertical justice, on the other hand, states that parties capable of paying higher taxes should pay more.

Frank Ramsey proposed that various goods should be taxed according to supply and demand elasticity to minimize the deadweight loss (please compare the figures above). However, goods which have low price elasticity usually also feature low income elasticity – such as, for example, food products. If food products were heavily taxed, the taxation burden would fall primarily on the poor. Consequently, the function of taxes, which is, inter alia, redistribution of wealth among society, will not be met. That tax would therefore be unjust.

Lump-sum taxes may seem desirable as they avoid distortions. However, such taxes are rarely imposed. The main reason for this is that they are regressive[2]. Hence, worse

off taxpayers cannot afford it, whereas wealthy taxpayers would pay a fraction of what they could pay. Eventually, the poorer taxpayers could go bankrupt because of taxes, the rich would pay relatively small amounts, and the resulting fiscal revenues would not be enough to cover state budget expenditures. Thus, lump-sum tax is a solution only when all taxpayers are similar. But they are not. The income of taxpayers varies, both within and between countries.

Different CIT rates in old and new EU can be also analyzed from the perspective of vertical justice. Namely, EU-15 countries impose on average higher CIT rates than New Member States because taxpayers in those countries are typically more affluent and therefore capable of paying proportionally more taxes (as per the vertical justice concept).

Not surprisingly, people who earn more also save more [Żyżyński, 2009]. Therefore, without a major decline in their well-being, high earners could bear more CIT (assuming that the economic cost of any tax – including CIT – is eventually born by individuals and not by companies, which was broadly discussed in the literature).

The vertical justice concept, as applied to the EU-15, which are relatively wealthier than the New Member States, explains the capacity of the Western Europe to impose higher average CIT rates than the EU-12 countries.

Public Goods and Agglomeration Externalities

A tax in general is an enforced contribution without direct counter service. Naturally, so is a CIT. Therefore, any taxpayer should be interested in paying the least taxes possible. Public goods are accessible to all free of charge. Hence, if taxes weren't obligatory, a free rider problem would arise. That is, taxpayers would feel no incentive to pay (indirectly) for public goods, which were equally available to those who did and did not pay public contributions. However, particular countries provide for different sets of public goods. Therefore, although investors may be inclined to pay lower taxes, they are also interested in using public goods financed by taxes and accessible only in the territory of particular states.

The Tiebout model assumes that different regions offer certain basket of public goods at various prices, whose availability corresponds to the taxation burden imposed by each tax jurisdiction [Tiebout, 1956]. Since taxpayers (i) have different preferences with respect to the scope of government services they require and (ii) the price they are ready to pay for those services in the form of taxes varies, they move between different tax jurisdictions. Regions seek to minimize the average cost of public services provided. Hence, if a tax jurisdiction finds itself below the optimal level, it tries to attract new residents. As taxpayers choose, and tax jurisdictions respond, these two players determine equilibrium by moving to the most suitable tax jurisdiction. The model proposed by Tiebout was

designed for individuals. Fischel, White, and more recently Wellisch suggested, however, that the theory can also be adopted for international firms, which can change their residence according to their preferences for the mix of public goods and taxes [Fischel, 1975; White, 1975; Wellisch, 2000].

However, as indicated by Samuelson, each individual can enjoy public goods in a way that does not subtract that good from any other individual [Samuelson, 1954]. Moreover, individual preferences as to the consumption of private and public goods are not easily observable. Hence, it is not possible to determine a lump-sum tax for each individual, which would be the price for using public goods. He argues that "no decentralized pricing system can serve to determine optimally these levels of collective consumption" due to the fact that "it is in the selfish interest of each person to give false signals, to pretend to have less interest in a given collective consumption activity than he really has". From this perspective paying taxes by a particular taxpayer (which could be an individual or a company) seems less connected with the level of services provided by the government.

Researchers focus on capital mobility as a crucial factor that determines the tax base. It is assumed that capital, which creates the tax base for CIT, moves from countries imposing high CIT rates to countries with low CIT rates. Oates, who was a pioneer of tax competition literature, claimed that governments competing for mobile capital are likely to "keep taxes low to attract business investment" [Oates, 1972]. He noted, however, that a lack of necessary funding "may well be a tendency toward less than efficient levels of output of local services".

By contrast, economic geography literature claims that tax rates do not drive decisions on investment location [Brakman, Garretsen, van Marrewijk, 2001]. More central are transportation costs and increasing returns to scale. Companies focus on the size of the host domestic market and take into consideration its density. Therefore, the key is not taxes, but the market potential offered by a particular location. Hence, the preferred choice for capital is usually agglomerations, where investors save on logistics and benefit from agglomeration externalities [de Mooij, 2005]. Those benefits include, inter alia, a well-educated labor force and access to new technologies, as well as financial, social and political stability. To the extent these factors are financed from taxes, high taxes should not discourage investments but instead attract FDI [Garrett, 1998; Campbell, 2005].

Receiving value for money paid is always important. Therefore, in high tax locations residents demand a high level of public services. Governments can impose CIT in agglomerations, which would not trigger the outflow of capital as the tax is imposed largely on location-specific rents. Baldwin and Krugman claim that this holds for the European area in the triangle between London, Hamburg and Milan [Baldwin, Krugman, 2004]. This means countries located in this area are able to impose a high CIT burden. Interestingly, each of these countries belongs to the EU-15.

Therefore, the EU-15 compensate investors with services for higher CIT rates [Devereux, Griffith, Klemm, 2002; Slemrod, 2004]. A country's tax burden is certainly not the only

important factor driving location decisions of corporations and savers. As investors perceive CIT as the price for publicly provided infrastructure, they will accept higher CIT rates provided that the infrastructure meets their conditions. Therefore, they expect New Member States to keep CIT rates low.

Differences in Labor Taxation

It is worth noting that companies subject to CIT are never the final income taxpayer. Rather, it is the individual shareholders, who are subject to double taxation both at the company level (with CIT) and as individuals (with PIT).

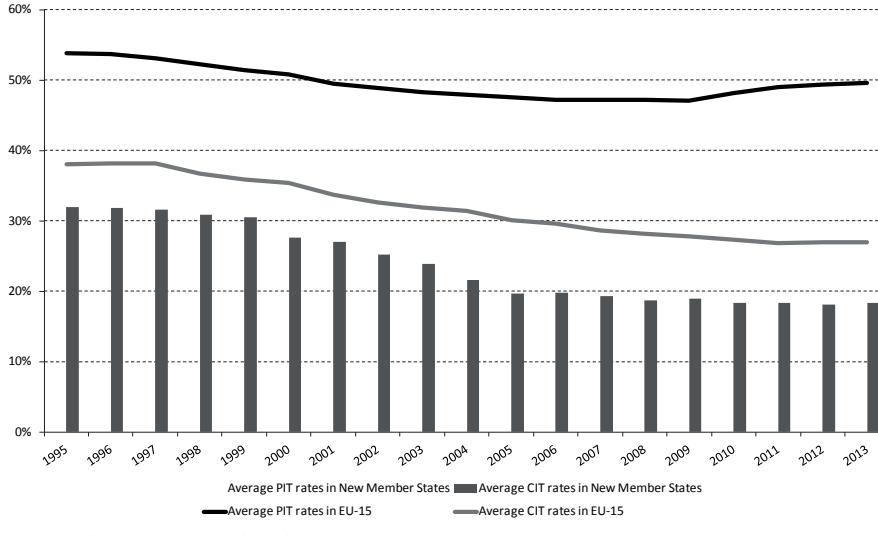
This fact partially explains Miller's model, in which the after-tax return from equity income is $(1 - CIT)(1 - PITd)$, where CIT is the corporate income tax rate and *PITd* is the tax rate imposed on dividends [Miller, 1977]. If instead of dividends the investor derives income from debt subject to progressive taxation, the net income would be $(1 - PITp)$, where *PITp* is the progressive PIT rate. Thus, as long as the following equation is met $(1 - CIT)(1 - PITd) > (1 - PITp)$ the investor should prefer to hold shares in a company rather than gain interest income. From this perspective, the investor who decides to buy shares or gain income from non-corporate sources compares (i) the after-tax returns on corporate investments (subject to CIT and subsequently PIT on dividend distribution) with (ii) after-tax non-corporate returns, which would be subject to progressive PIT tax rates but no CIT at any stage.

From a tax perspective, non-corporate sector investments could be more profitable for the majority of population as most individuals are subject to low PIT rates. However, a relatively small percentage of people with the highest incomes hold a significant number of shares in companies. Since this group is subject to high, progressive PIT rates, they may favor income from corporate sources to avoid progressive taxation. Assuming that there are more affluent people residing in the EU-15 countries this partially explains higher CIT rates in those countries than among New Member States.

CIT rates differences between the New Member States and the EU-15 could also reflect a disparity in the level of PIT rates. Namely, CIT is often seen as a progressive tax that backstops PIT. This results from the fact that some taxpayers could choose whether to pay PIT or CIT, depending on what taxation system they perceive as being more favorable to them. In the absence of CIT taxpayers who pay PIT would be incentivized to incorporate to avoid income taxation. Consequently, PIT revenues would erode. As evidence shows, CIT rates are usually higher in countries that impose high top PIT rates. Slemrod found a strong association between the top statutory CIT rate and the top statutory PIT rates in his cross-country analysis [Slemrod, 2004]. Hence, the role of CIT as a PIT backstop is reflected in practice.

EU-15 countries in general are welfare states with high redistribution objectives. Thus, they maintain progressive PIT systems and impose higher top PIT rates than New Member States, in which PIT rates for particular income brackets are lower or there is only one flat rate for all taxpayers. This is coupled with higher CIT rates, as only high CIT rates can function as a backstop for PIT and, thereby, play a role in a comprehensive progressive income taxation system. Figure 11 presents the development of the average top PIT rates for the EU-15 and New Member Countries, as well as the changes of top statutory CIT rates in those two country groups.

FIGURE 11. Average statutory top CIT and PIT rates in EU-15 countries and EU-12



Source: Based on Taxation Trends in the European Union 2013.

It is clear that EU-15 countries maintain on average both higher CIT and PIT rates than New Member States. The theory that PIT functions as a CIT backstop is consistent with higher CIT rates in the EU-15 countries.

Tax Culture and Tax Morale

Researchers suggest that standard economic models fail to properly grasp the tax compliance of taxpayers, which cannot be explained solely by deterrence, risk aversion, tax burden or complexity of tax regulations. For example, Alm et al. as well as Frey and Feld argue that most economic models assume too much tax evasion [Alm, McClelland,

Schulze, 1992; Frey, Feld, 2002]. In fact, some taxpayers do not seek ways to evade taxes and cannot be characterized as simple utility maximizers, although in certain situations evading taxes could be more favorable to them. Therefore, subjective perceptions, attitudes, expectations and the motivations of taxpayers are also important.

These facts should also have implications for CIT rate differentials in the EU. For example, Frey underlines that tax morality differs across countries [Frey, 1997]. He points, inter alia, to social norms and societal institutions, which are important determinants of tax morality and vary between states. Therefore, different levels of tax morality in the EU-15 and New Member States can partially explain the differences in average CIT rates. Assuming that tax morality is higher in EU-15, Western European countries are able to impose higher CIT rates with lower risk of tax evasion than New Member States.

Similarly, Alm and Torgler argue that tax morality should differ between countries because of cultural differences [Alm, Torgler, 2006]. For example, they found that that Northern Europe features higher tax morality than do Romanic countries. However, generally grasping the varieties and role that tax morality plays in different countries is difficult.

Moreover, Torgler and Schneider found a strong negative correlation between the shadow economy and tax morality [Torgler, Schneider, 2007]. According to their study, the lower tax morality is, the more likely that the shadow economy will be larger. They claim that if taxpayers perceive government as helpful rather than wasteful, they tend to comply with their tax obligations and remain in the official sector. Shadow economies differ in the EU and tend to be more prevalent among New Member States. Assuming that the level of tax morality follows the size of shadow economy, this also explains the need for lower CIT rates in this group of countries.

Alm and Torgler suggest that a strong relationship between trust and tax morality implies a reasonable policy strategy, in which governments should maintain well-functioning public institutions, positive public actions, and a social capital atmosphere [Alm, Torgler, 2006]. Such state behavior will be rewarded with increased tax morality and, consequently, increased tax revenues. They also suggest that democracy supports tax morality. Namely, governments that are "closer" to taxpayers should achieve better results, because taxpayers feel engaged in the political process and believe they can influence public goods. Torgler and Schneider admit that identification with government reduces the so called free-rider problems (i.e. connected with tax evasion) [Torgler, Schneider, 2007]. Interestingly, Abed and Gupta claim that in former soviet states institutional weaknesses and corruption is a major obstacle to market reform [Abed, Gupta, 2002]. If taxpayers feel that they are being cheated, corruption is widespread, and they are not adequately protected by law, they are more inclined to be active in the informal sector and evade taxes. This cause and effect relationship also sheds some light on the different level of tax morality in New Member States and the EU-15 countries, in that the developed democracies of the EU-15 are able to impose higher CIT rates.

Anderson and Tollison claim that religion also supports tax morality, as it acts as a "supernatural police" [Anderson, Tollison, 1992]. Alm and Torgler found that higher church attendance leads to greater tax morality [Alm, Torgler, 2006]. Again, the post-communistic New Member States (except for Poland) do not feature high religiosity.

Customs are very difficult to change, which encompasses the attitudes of economic agents to the tax law. Any amendments may incite the resistance of the local population and should therefore be introduced gradually. Usually even small modifications in the tax provisions are introduced with the use of vacatio legis, i.e., taxpayers are given some time to familiarize themselves with the new legal provisions before they become binding. Taxes have a long tradition in EU-15 countries and local citizens appreciate it. In general, state tax administration seems there also to be more responsive. Taxpayers in the EU-15 probably evade taxes less than in Central Europe, and have higher tax morality. All these features, however difficult they are to measure, suggest that on average EU-15 countries have a greater capacity than New Member States to maintain higher CIT rates.

Conclusions

Higher average CIT rates in Western Europe than in New Member States can be explained theoretically. In this article, several such theories have been highlighted and applied, including: (i) attitudes to tax competition and the requirements for new capital; (ii) economy size; (iii) legal tax bases; (iv) the wealth of particular country groups; (v) public goods available to taxpayers, the financing needs of different countries and the agglomeration externalities offered by those countries; (vi) differences in labor taxation; and (vii) tax culture and tax morality.

The primary purpose of this article is to identify and explain why governments of these country groupings impose CIT rates at different levels. A quantitative measurement of the effects of particular characteristics on specific economies is beyond the scope of this research and must await the attention of other researchers.

Notes

[1] Corporate income is taxed in several EU countries by CIT and similar surcharges (i.e. in Belgium, Germany, Estonia, Greece, France, Cyprus, Hungary, Ireland, Italy, Lithuania, Luxembourg and Portugal). To render that taxation of income comparable, adjustments were made.

[2] A regressive tax is one in which the tax rate decreases as the amount subject to taxation increases. An example of a lump-sum tax is a real estate tax based on square meters of land or building, without distinguishing between a modern building that can bring high office space rentals from a neglected building with low quality tenants.

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