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TAX SYSTEM AS A FACTOR ATTRACTING INVESTMENT INTO THE EUROPEAN UNION MEMBER COUNTRIES

This work discusses the relationship among institutional tax competition, economic theory on investment attractiveness and location of enterprises in the European Union. While tax competition literature is well developed, the value added of this text is to intertwine institutional economics with mainstream economics to explain the mechanism of tax systems competition and its impact on economy. It begins with a discussion of economic theories and it progresses to the presentation of historical and current tax systems of EU member countries. At the end, the author shows the impact of tax systems competition on economic growth.

Keywords: tax systems, tax systems competition, institutions, institutional competition, attracting factor (tax)

1. MODELS OF INSTITUTIONAL TAX COMPETITION AND LOCATION OF ENTERPRISES IN THE EU

Douglas C. North, a prominent academic authority on institutional competition perceives it as a national “deliberate strategy” designed to improve the competitive position of an economy in relation to other countries (1994). North (1994) sees competitive pressures as a blessing bringing the benefits of change to an otherwise institutionally stagnant economy. Before discussing the model in detail, it is necessary to define institutions and organizations. North (2006) defines institutions to be the “rules of the game in a society or ... humanly devised constraints that shape human interaction” (3). That is, institutions are incentives that have impact on all spheres of human interactions, and, in the context of this work, institutions are rules based on which companies and governments interact to engage in an economic activity. Organizations are firms, companies and multinational corporations that use institutions to pursue their activities. While institutional change is done by organizations’ hands, it can be noticed by the changes taking place within institutions.

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Building a model of institutional change, North (1994) first sets forth five propositions of institutional change. First, institutional change occurs as a result of a continuous interaction of institutions and organizations in an economic environment characterized by scarcity. Second, due to competitive pressures, organizations must invest in an acquisition of skills and knowledge, but which ones they acquire will impact the quantity and quality of the institutional change. Third, an institutional framework, which is a result of historical evolution of the institutional change, will have impact on the kinds of skills and knowledge that are acquired. Fourth, organizations pursue those skills and knowledge which give a maximum benefit to them, yet these are based on their “mental constructs”. Fifth, as a result of factors such as “economies of scope, complementarities, and network externalities” institutional change is “overwhelmingly incremental and path dependent”.

Next, let’s apply these five postulates of institutional change to tax systems and the change they undergo. Tax systems are institutions prepared by the government, the result of historical institutional change and codified in taxation legal doctrines. The interaction among various organizations and their stakeholders leads to institutional change.

However, this process has many stepping stones. The reasons for change might be two-fold. Exogenous changes in the environment as the changes in tax incentives offered by a foreign nation will impact on the costs of business of an organization, even if these are only opportunity costs forgone. Alternatively, the interaction between organizations such as the changing communication methods between tax collection agencies and firms will alter the relative prices for all involved. The analysis becomes even more complex within a multinational environment like the European Union where many organizations and companies interact and where these are affected by occurrences taking place in a global economy. In this very multifaceted setting, in order to gain an upper-hand, all organizations invest in acquisition of knowledge and skills. However, skills and knowledge acquisition will not generate a positive outcome by itself – that outcome will depend on which abilities are acquired, what is historically path dependant, and the future direction of the productive developments will guide the nation toward prosperity.

Again, this process can take two forms. It can either be a process of learning by doing or the attainment of formal abilities by engaging in professional training. However, because of their profit-centred approach, organizations will gauge whether each acquisition of knowledge and skills is cost-efficient. When the institutional tax competition is subdued by tax

harmonization, it can be expected that institutional change will not occur, which is the intention of this work to show, it will negatively impact an economic growth (North, 1994). Furthermore, economic growth is fueled by the fact that organizations motivate their constituents to invest resources in skills and knowledge development (North, 2006, 79).

An alternative to organizations investing in the attainment of skills and knowledge is to directly devote resources to change unfavourable policies. This can be achieved by involving themselves with special interest groups who will aid them in overcoming the obstacles. Although these changes might also be beneficial in terms of increasing economic growth, they will likely be less comprehensive and situation-specific (North, 2006, 79).

According to North (1994), economies due to their past political, social and economic factors may favour one of the two above-mentioned incentives to boost economic growth. Whether economies are productivity-oriented or redistribution-oriented will impact the way nations develop. That is, the economy will flourish in the longterm if its institutional tax system is construed to increase national productivity.

Organizations are agents of institutional change and thus economic growth, but in North's (1994) model, organizations are also composed of people who hold 'mental constructs' about institutions and organizations they are part of. These 'constructs' are a result of past information and experiences both individual and society-based. In the context of this thesis, it is important to note that individuals never possess full information, and therefore "the meeting of the minds" between them and organizations they represent may lead to the creation of "multiple equilibria". Applying this to a tax system's institutions, preconceptions held by people about the tax system, organizations associated with them, and the organizations they work for. They may engage in erroneous activity in order to meet their preconceived notions.

To summarize, as North (1994) states, an institutional matrix such as the one associated with a tax system upholds the organizations that function within it. Change is usually small, resulting from competitive pressures and then a new fit with existing conditions. A great change will only occur "in the case of a 'gridlock'" and will for some time incapacitate one of the institutions. That is, usually small incremental changes in tax systems are expected with a tax rate and exemption changes at the forefront, and large changes like harmonization unexpected to occur often, since their introduction will create enough chaos to injure the system for some time before any loopholes are closed.

Decentralization in decision-making provides a benefit (North, 2006, 87) since it ensures that resources are divided locally rather than centrally, so organizations that arise to service the funds manage lower amounts of money and thus are less powerful. If taxation decisions were made centrally on the European Union level, it might be expected that powerful interest groups would arise to lobby in their favour in order to gain an advantage in an institutional matrix.

Next, we shall turn to the relation between the above-mentioned model of the institutional matrix and economic growth. According to North (1994), positive economic growth occurs when organizations, functioning as part of an institutional matrix are productive and so provide economic incentives to productivity. Within those productive institutions, it is expected that the most cost effective of them will continue to positively influence institutional change, whereas others will fail. Moreover, institutions which prove to be efficient will spread to other countries (North, 2006, 95), whether by trial and error or willful adaptation, so forced harmonization is unnecessary. To clarify, organizations do not select to aim at institutional change, rather it occurs as institutions pursue their primary objective whatever it may be, but that brings about change in the process of operating in an institutional matrix planted with proper incentives (North 2006, 73).

To draw the insofar presented reflections together, one can recall the quote from North (2006): “I wish to assert a much more fundamental role for institutions in societies; they are the underlying determinant of the long-run performance of economies” (107).

In the process of economic growth, North (2006) stresses the importance of adaptive efficiency rather than allocative efficiency. While the latter is linked with Pareto-optimality and often used to analyse a tax equivalence of various fiscal policies, the former is related to the motivation of society to acquire abilities necessary to solve competitive problems. In North’s (2006) eyes, adaptive efficiency is a motivator for the decentralized decision-making to occur, which can more greatly aid the process of institutional change through trial and error and so positively impact on the growth of an economy. The linkage between adaptive efficiency and decentralized decision-making comes from the ideas of Hayek (1960) who argued that society will generate maximum profits if it is permitted to make decisions in a decentralized way in order to make “organizational trials” and thus purge “organizational errors” (North, 2006, 81).

However, increasing returns from acquired skills and knowledge are part, but an incomplete one, of the puzzle. Another is a concept developed by

Coase (1937) that transaction costs which are essential in the development of institutional change and economic growth. Given the importance of transaction costs they increase the difficulty of understanding and functioning within the institutional matrix (North 2006, 95). Therefore, they further increase the importance of decentralization, competitive process, and trial and error, because without them, economies may persist on a negative growth path.

It is important not to forget that competitive process and pressures are a vital ingredient in the larger scheme. In regards to the tax system, competition is needed to produce incentives for organizations to be productive and function to work towards increased economic growth. Therefore, economic organizations will be attracted to European Union member countries that have these incentives in place and operate with competitive forces at the heart of their economic policies.

In the end, North (2006) urges us to study the relationship between regulations such as taxation and economic growth. Let us recall his argument: “We have long been aware that tax structure, regulations (...) shape the policies of firms, trade unions, and other organizations and hence determine specific aspects of economic performance; but such awareness has not led us to a focusing of economic theory on modelling the political/economic process that produces these results” (111). North (2006) thus believes that institutions should be taken into account in any economic analysis of economic performance of countries as vital determinants of their success (112).

Another important theoretical, yet backed by historical examples, voice on the topic of institutional tax competition is that of Siebert and Koop (1993). They set up a different model in which they envisaged “a market for institutional arrangements” (16). The theory is based on two fundamental assumptions: (1) allocation by market is superior to central planning and price system is a mechanism leading to “economic efficiency” (Hayek, 1968 quoted in Siebert and Koop, 1993, 17) and (2) firms and individuals are rational decision-makers and reach their decisions based on optimizing behaviour (Siebert and Koop, 1993, 17).

The legislative branch of government supplies the goods. It creates regulations, institutional arrangements and rules such as a tax policy to attract firms to locate within their boundaries. Other suppliers of these regulatory goods include private institutions providing customary arrangements as well as local governments and lobbies such as trade unions which have an impact on laws proposed by government. Given their utility function composed of private and public goods, households and companies

demand the legislation. Voters, either firms or private business persons represent the demand side of the model. The tax rate is set to equate the marginal utility of private and public good, so that production of one unit of the former is an opportunity cost of one unit of the latter. Individuals and companies make decisions about which locality to reside/operate in by assessing the government's legislation in terms of their maximization problem. A jurisdiction which is able to attract new companies and individuals increases the quantity and quality of production factors that generate "an additional income for the immobile factors" (Siebert and Koop, 1990, 441). Thus, voters see the benefits generated by the new policy – including tax incentives, exemptions and low rates – and so they choose and then re-elect the government which cares for their regions' development (Siebert and Koop, 1990, 440).

In this model, competition among governments is beneficial since they have an incentive to improve tax institutions in order to generate more income and thus increase economic growth from corporate investments. Siebert and Koop (1990) in their 1990 article describe how this mechanism works. When a nation implements legislation which is better at mobilizing economic national and international resources than that which is available in other similar countries, the former country receives an advantage from which it can derive "monopoly profits" (443). The country with a comparative advantage cannot put a trademark on it or a patent, but it can use it for some time to its benefit. The duration of this advantage will depend on the costs of copying the legislation, which are related to the costs of altering institutional arrangements existing in a nation trying to mimic the policy (Siebert and Koop, 1990, 443). Moreover, Siebert and Koop (1990) believe that thanks to institutional competition, the power of special interest groups that, for example, seek to increase taxes for their own benefit or to plague the taxation system with administrative hurdles will be corrected by competitive market forces (442).

Another argument for institutional competition, and against harmonization, is the inefficiencies associated with the latter. Differences in natural resources reflected in the prices they command in the market and the price commanded by other commonly thought of as an immobile factor of production – i.e., labour – come from historically diverse natural endowments and productivities of countries. To be precise, according to historical economic thought of early classical period, specialization and trade developed as a result of differences in both regards. According to Siebert and Koop (1990) subduing the competitive process that developed "would reduce

efficiency in the allocation of resources and the competitiveness of the EC” (445). Furthermore, these authors argue that ex-ante top-to-bottom harmonization is not necessary, since due to competitive processes, it might be expected that countries’ tax rates will converge to economically more beneficial levels. That is, high tax countries will likely reduce their rates to compete with low tax countries for investment capital, whereas low tax countries might raise them somewhat to increase fiscal revenues (446). In the European Union member countries this process is visible to some extent, while at the same time, it is distorted by an on-going harmonization in some tax areas.

According to Siebert and Koop (1993) it is vital that freedom of movement existed between otherwise policy-competitive countries (17). Among the European Union member nations, freedom of movement of factors of production, labour, capital and goods and services does exist although practically, in some areas, it is of a lesser degree than theoretically possible. This mobility allows governments to compete with each other because individuals and companies alike are free to leave the location with undesired policies. Thus as Siebert and Koop (1990) put it: “Inefficient national regulatory systems will be punished more and more by emigration of firms, capital and qualified labour” (439). Hayek (1968) agrees with this view stating that as a result of “the diversity of national political systems and economies in Europe, institutional competition allows governments to react individually to changes in their respective environments, trying out new solutions to new problems” (Hayek, 1968 quoted in Siebert and Koop, 1993, 17).

To summarize, the case for tax competition from an institutional perspective: Siebert and Koop (1990) state that (1) for historical reasons or path dependencies as North (2006) calls them a variety of institutional arrangements may exist simultaneously in various countries each of them offering a unique opportunity to develop their economies; (2) a differentiation in regulation may lead to a trial and error process where the best institutional rules are found and spread to other countries; (3) harmonization has proved inefficient; and (4) competition is a way to shelter the economy from the influence of special interest groups (443-444). However, different academics raise various questions to the above-mentioned theory of the institutional competition. In this work, the author shall address five of the most significant objections and provide some counterarguments to deter them.

First, a common argument for intervention and thus harmonization in the private sector is the presence of externalities resulting in market inefficiencies or market failure. When externality has a foreign origin, some

harmonization, such as value-added-tax harmonization of general rules and regulations may be needed, yet when the externality concerns only a single country, harmonisation is unwarranted. Second, representatives of firms and government at times call for uniformity arguing that differentiation of rules in countries with business ties leads to uneven competitive advantages to some. However, this non-uniformity, although painful to some, brings about the competitive benefits mentioned earlier. Third, still others raise a concern that, where harmonization already happened, it should not be reversed even if its benefits are questionable. Yet such a situation creates a barrier for new and better policy solutions to be found. Fourth, another argument against institutional competition is that, like tax competition, it may lead to levels of regulation that are unacceptable to a modern society. The fifth objection is also closely linked with tax competition stating that special interest groups may influence governmental officials to favour inadequate policies, which will not provide enough revenue to pay for public services, or tax regulations flexible enough that companies will act irresponsibly (Siebert and Koop, 1993, 19-21). While in the end, the authors agree that harmonization may be to some extent called for when externalities do exist, generally it is unwanted since it limits competition (Siebert and Koop, 1993, 30).

2. MAINSTREAM ECONOMIC THEORY AND LOCATION OF ENTERPRISES IN THE EU

The reasons for and extent to which tax incentives offered by the country's government impact, among other factors, the attractiveness of an investment to a company. Among the most important factors, firms list efficient labour force, infrastructure development levels, (infrastructure) access, and an attractive climate (USC Institute for Public Service and Policy Research, 2002, 12). Authors suggest that tax incentives, particularly in the United States, affect investment location decisions of companies most significantly when places for investment are similar in other dimensions (Bondonio and Greenbaum, 2007, 124). While European Union countries are becoming similar in many economic dimensions, taxation factors may play an increasingly important role in determining the most profitable place for an investment.

While on the one hand, one has the business decisions of firms, these must be weighted on the other hand with the business incentives offered by states. According to USC Institute for Public Service and Policy Research,

two facets of business incentives – economic impact and fiscal impact, and primarily the difference between them, matter when making investment location decisions. That is, when a government decides to offer incentives, it calculates the economic and fiscal impacts which amount to the positive cash flows to all corporate stakeholders, negative cash flows they must provide to a company to encourage it to choose that particular location and the opportunity cost of lost revenue to all stakeholders (2002, 11). Inflows include the number and the kind of new jobs created, sum of a new capital investment, infrastructure developments as well as the satellite industries that may follow the leader. Outflows include layoffs of workers, governmental investments into the infrastructure and environmental costs the firm and others following it might incur. For the government considering a business incentive offer, not only the absolute numbers matter, but also the distribution of revenues and costs among various social, political and economic groups (2002, 11).

Different tax systems utilize various accounting standards to arrive at the taxable amount. The tax base, the amount to which a nominal tax rate is applied, therefore often varies among countries. Although this figure does not have much impact on firms deciding to locate in the European Union member countries since all are required to use to some degree harmonized rules of International Accounting Standards (IAS), these companies are influenced by various tax credits, amounts which can be deducted from taxable income, tax deferrals, amounts of tax which can be deferred to future payment periods, or tax incentives, enticements usually in the form of tax credits to induce a company to locate in a specific region. Therefore, companies often use effective tax rates instead of nominal tax rates, which take into account the above-mentioned motivators in order to effectively compare tax burdens among countries.

When countries compete for investment capital they may offer some specific incentives to firms to attract them. Specifically, a government may offer: (1) tax holidays, that is, suspension of payable taxes for some time or lowering the amount of taxes payable for a given time period, (2) accelerated depreciation, that is, the ability to deduct higher than usual depreciation (amortisation) on capital assets, (3) tax reliefs and tax exemptions which lower amounts of payable taxes either directly by reducing tax payments or indirectly by reducing the taxable base.

The tax impact depends on the type of investment the company is contemplating. When engaging in trade activities, companies will be concerned with tariffs and customs regulations rather than corporate taxation

rules. The same holds true if a company is anticipating equity FDI, that is purchasing stocks of a foreign company below a point of ownership, or licensing, when a company buys or sells its license to do business in a foreign nation. Firms are attracted by tax incentives and corporate taxation, to and the regulations associated with it, primarily when they plan to make so-called green field investments, that is, establish a subsidiary or a joint venture partnership in a foreign location.

3.TAX SYSTEMS AND INVESTMENT ATTRACTIVENESS OF THE EU COUNTRIES

Despite official remarks and scientific studies suggesting that the corporate tax systems of the European Union member-countries are becoming similar; in fact they still differ a lot. This can be explained by various rules being used by countries as generally accepted accounting principles (GAAP) and the range of tax reliefs and tax credits being offered (e.g., accelerated depreciation allowances, tax breaks for creating jobs, tax incentives to locate in deprived areas), which often result in large discrepancies between the statutory and the effective corporation tax (Joumard, 2001, p. 34). The reasoning behind such offerings is threefold: (1) they favour companies in fixed capital- and labour-intensive industries, (2) they help small and medium size enterprises to establish themselves in a market or, in other words, support entrepreneurial activities, and (3) they act to attract foreign direct investment, especially into backward areas or underdeveloped industries (Joumard, 2001, 34-35).

However, it is important to notice that since 2005, the EU listed corporations are required by the European Union law to prepare accounting statements based on international accounting standards (IAS). This eases making comparisons when analyzing companies, but since companies must still maintain their national accounting records according to domestic standards for tax purposes, it increases their costs without any impact on tax competition processes (Djurovic-Tudorovic 2002, 58).

In the EU, companies are taxed according to the country's taxation laws, though in some instances the EU law provides additional guidelines. There are taxes that may apply to a business depending on its location; they include (1) corporate tax, (2) legal entity tax, (3) occupational tax, (4) payroll tax, (5) crisis fee and (6) solidarity fee. While in some countries a business operating under a limited liability clause is considered a corporation and taxed according

to corporate taxation laws, in other nations corporations and legal entities are separate organizations and so taxed differently. Since there are underlying reasons for large differences in current taxation rules, the only viable way to compare and contrast these systems is to present them separately. Therefore, Table 1 presents the number of income levels with corresponding nominal and effective rates as well as some brief explanations.

Table 1

Corporate income tax in the European Union member countries, as of 2005

Country	No. of income levels	Income level – nominal rate (effective rate)	Additional information
Austria	-	linear rate – 25% (28%)	communal tax 3%, payroll tax 4.5%, association tax 3%
Belgium	-	linear rate – 33%(33.99%)	crisis tax 3%; for businesses earning less than €322,500 preferential rates are: 22.98%, 31.93%, 35.54%
Cyprus	-	linear rate – 10% (10%)	for organizations with public equity the rate is 25%
Czech Republic	-	linear rate – 24% (24%)	
Denmark	-	linear rate – 28% (28%)	
Estonia	-	linear rate – 0% (0%)	rate of 0% for reinvested profits, rate of 28.21% for distributed income
Finland	-	linear rate – 26% (26%)	
France	2	income below €38,120 – 15% (15.45%) income above €38,120 – 33.33% (34.45%)	additional tax 3% of tax payable, payroll tax 0.5%, freelance workers pay occupational tax
Germany	-	linear rate – 25% (max. 38.29%)	solidarity tax 5.5%, local tax on business operations 22% to 25.75% (16.18% of that tax deductible from taxable income)
Greece	2	corporations – 29% (29%) other businesses – 22% (22%)	
Hungary	-	linear rate – 16% (16%)	additional payroll tax and local tax with various rates; companies can use a special tax system EVA with a rate of 15%

Ireland	-	linear rate – 12.5% (12.5%)	preferential temporary rate of 0% or 10% for new businesses and rate of 25% for companies in mining and fuel industries
Italy	-	33% (36.25%)	regional tax on business operation 2.25% (+/- 1%)
Latvia	-	linear rate – 15% (15%)	small enterprises can apply deduct 20% of accrued tax
Lithuania	2	income below LTL500,000 – 13% (13%) income above LTL500,000 – 15% (15%)	social tax only in 2006 (of 4%) and 2007 (of 3%)
Luxembourg	-	linear rate – 22% (30.38%)	employment fund 4%, local tax on business operation 7.5% or 6.98%
Malta	-	linear rate – 35% (35%)	
the Netherlands	2	income below €22,689 – 25.5% (25.5%) income above €22,689 – 29.6% (29.6%)	
Poland	-	linear rate – 19% (19%)	
Portugal	-	linear rate – 25% (27.5%)	local tax maximum 2.5%; small companies can use a preferential rate of 20%
Slovakia	-	linear rate – 19% (19%)	
Slovenia	-	linear rate – 25% (25%)	payroll tax 3.8% to 14.8%; special economic zones with a rate of 10%
Spain	2	SME income below €90,151.81 – 25% (27%) SME income above €90,151.81 – 30% (32%) other businesses – 35% (37%)	local tax and association fee 0.01% to 0.75%, regional tax due to business operation 1.29% to 1.35%
Sweden	-	linear rate – 28% (28%)	possibility of establishing a reserve for up to six years, then a rate of 25% applies
the United Kingdom	5	rates of 0%, 0%-19%, 19%, 19%-30%, 30% depending on the income level	

Source: Wach, K. (2005), *Systemy podatkowe krajow Unii Europejskiej*, p. 52-55.

Insofar as the tax rates differ much between member countries, they have also changed through the years. Table 2 presents historical changes in nominal tax rates over the period 1980-2005.

Table 2

Nominal tax rates in the European Union member countries, 1980-2005 (in %)

Country	1980	1985	1990	1995	2000	2001	2002	2003	2004	2005
Austria	61	61	61	34	34	34	34	34	34	25
Belgium	48	45	43	40.17	40.17	40.17	40.17	33.99	33.99	33.99
Cyprus	NA	NA	NA	25	29	28	28	15	15	10
the Czech Republic	NA	NA	NA	41	31	31	31	31	28	26
Denmark	37	50	40	34	32	30	30	30	30	28
Estonia	NA	NA	NA	26	31.58	31.58	31.58	31.58	31.58	31.58
Finland	50	50	40	25	29	29	29	29	26	26
France	50	50	36.7	36.7	36.66	35.33	34.33	34.33	34.33	34.33
Germany	64	61	61	56.8	51.6	38.29	38.29	38.29	38.29	38.29
Greece	49	49	46	40	40	37.5	35	35	35	32
Hungary	NA	NA	NA	19.6	18	18	18	18	16	16
Ireland	45	50	43	40	24	20	16	12.5	12.5	12.5
Italy	36.3	47.8	47.8	52.2	41.25	40.25	40.25	38.25	37.25	37.25
Latvia	NA	NA	NA	25	25	25	22	19	15	15
Lithuania	NA	NA	NA	29	25	24	15	15	15	15
Luxembourg	45.5	45.5	39.4	40.9	37.45	37.45	30.38	30.38	30.38	30.38
Malta	NA	NA	NA	35	35	35	35	35	35	35
the Netherlands	46	42	35	35	35	35	34.5	34.5	34.5	31.5
Poland	NA	NA	NA	40	30	28	28	27	19	19
Portugal	51	51	39.6	39.5	30	28	28	27	19	19
Slovakia	NA	NA	NA	40	29	29	25	25	19	19
Slovenia	NA	NA	NA	25	25	25	25	25	25	25
Spain	33	33	35	35	35	35	35	35	35	35
Sweden	40	52	52	28	28	28	28	28	28	28
the United Kingdom	52	40	35	33	30	30	30	30	30	30

Source: Wach, K. (2005), *Systemy podatkowe krajow Unii Europejskiej*, p. 50

In general, over the last fifty years, rates declined in all fifteen member states, while over 1995-2005 rates decreased in all but four nations – Spain, Malta, Slovenia, and Sweden. It is important to note that nominal rates may differ from effective rates due to additional taxes levied (see Table 1) as well as tax allowances and credits.

4. INVESTMENT ATTRACTIVENESS OF THE EU COUNTRIES AND ECONOMIC GROWTH

The 1998 UNCTAD report on FDI incentives shows that multinational companies are interested in FDI locations with specific financial and fiscal incentives. The same conclusion was upheld by Devereux and Griffith (2000) in their study of multinational corporations interested in investing in Europe. Another study conducted by Grubert and Mutti (2000) based on micro economic data from a pool of 500 multinational corporations reached a conclusion that effective tax rates can be an attracting factor when making investment location decisions and that they also impact on the amount of capital invested. French academics Benassy-Quere, Fontagne and Lahreche-Revil (2004) conducting a study of 11 OECD countries over 1984-2000 and found that larger than average taxation was a prohibitive factor for companies. Furthermore, as Tøndel (2001) observed, foreign investors may be more attracted to a location with a transparent tax system, rather than with specific tax incentives.

Looking at European Union countries in terms of their attraction to foreign companies, The World Bank and PriceWaterHouseCoopers' 2006 report *Doing Business* ranks member nations according to these three criteria:

(1) the annual number of taxes paid by entrepreneurs, e.g., corporate income tax, personal income taxes withheld by the company including payroll taxes, value-added-tax and other sales taxes, real estate taxes, dividend tax, capital tax, vehicle and transportation taxes, as well as environmental taxes;

(2) the number of hours necessary to prepare paperwork and make payments on three primary types of taxes – corporate income tax, sales taxes including VAT, and payroll taxes;

(3) the tax rate as a percentage of commercial profits paid by the company within a taxable period in the second year of its operation.

Table 3

Tax burden of an average company operating in the European Union countries, as of Jan. 2006

Country	Total tax payments (number)	Corporate income tax payments (number)	Labour tax payments (number)	Total time to comply (hours)	Corporate income tax compliance (hours)	Labour tax compliance (hours)
Austria	20	1	4	272	80	96
Belgium	10	1	2	160	24	40
Cyprus	NA	NA	NA	NA	NA	NA
the Czech Republic	14	1	4	930	150	420
Denmark	18	1	2	135	25	70
Estonia	11	1	1	104	20	36
Finland	19	13	2	264	16	200
France	33	1	24	128	24	80
Germany	32	15	3	105	30	35
Greece	33	1	12	204	12	48
Hungary	24	1	8	304	16	192
Ireland	8	1	1	76	10	36
Italy	15	2	1	360	24	320
Latvia	8	1	2	320	32	192
Lithuania	13	1	2	162	28	76
Malta	NA	NA	NA	NA	NA	NA
the Netherlands	22	1	12	250	40	150
Poland	43	12	3	175	50	100
Portugal	7	2	1	328	40	192
Slovakia	30	1	12	344	80	120
Slovenia	34	1	24	272	80	96
Spain	7	1	1	602	26	288
Sweden	5	1	2	122	50	36
the United Kingdom	7	1	1	105	35	45

Source: World Bank and PriceWaterHouseCoopers. (2006), *Doing Business in 2005. Paying Taxes*, The International Bank for Reconstruction and Development/The World Bank, www.doingbusiness.org.

Looking at the total tax payments, the figure of 43 for Poland stands out, especially given the average for the above listed countries of only 18. This might be excessively troublesome for investors deciding to invest in the Eastern European region, although this is somewhat mitigated by the fact that the number of hours spent fulfilling tax obligations for Poland is much lower than

the average of 260 hours. Other countries such as France, Germany, Greece, Slovakia, and Slovenia have the total number of tax payments above an average, however for all of them except Germany, this is linked to large numbers of labour or other tax payments. Moreover, these countries excluding the Slovak Republic and Slovenia are associated with compliance time below average and the latter ones still are not characterized by excessive compliance times. On the other hand, the Czech Republic and Spain have compliance times exceeding 600 hours which is connected to their large compliance costs with labour tax and other taxes.

Table 4

Tax burden of an average company operating in the European Union countries, as of January 2006 (in %)

Country	Total tax rate	Corporate income tax rate	Labour tax rate	Other taxes	Nominal tax rate
Austria	56.1	16.2	36.3	3.5	25
Belgium	70.1	11.7	57.3	1.1	34
Cyprus	NA	NA	NA	NA	NA
the Czech Republic	49.0	0.0	40.6	8.4	26
Denmark	31.5	27.4	2.2	2.0	28
Estonia	50.2	9.6	39.7	0.9	24/76
Finland	47.9	17.1	29.6	1.2	26
France	68.2	8.6	54.9	4.7	34.9
Germany	57.1	24.7	22.3	10.1	25 (CIT) + trade tax + 5.5
Greece	60.2	21.4	36.2	2.6	32
Hungary	59.3	7.8	42.9	8.6	16
Ireland	25.8	12.4	12.5	0.9	12.5
Italy	76.0	26.9	48.2	1.0	33
Latvia	42.6	9.1	28.0	5.5	15
Lithuania	48.4	5.9	36.2	6.3	15
Malta	NA	NA	NA	NA	NA
the Netherlands	48.1	26.6	17.8	3.7	31.5
Poland	38.4	11.5	25.0	1.8	19
Portugal	47.0	17.8	27.5	1.7	27.5 + municipal tax
Slovakia	48.9	7.7	40.8	0.4	19
Slovenia	39.4	15.6	19.3	4.5	25
Spain	59.1	23.6	34.9	0.7	35
Sweden	57.0	18.5	38.5	0.6	28
the United Kingdom	35.4	20.5	10.5	4.4	30

Source: World Bank and PriceWaterHouseCoopers. (2006), *Doing Business in 2005. Paying Taxes*, The International Bank for Reconstruction and Development/The World Bank, www.doingbusiness.org.

Furthermore, the total tax rate is rather high in Belgium, France, Hungary, Italy, Spain, and Sweden – that is primarily in countries that make up the so-called old European Union. These high rates of almost 60% or more are most often dictated by high labour tax rates. Therefore, while for some member nations labour and other taxation may play a very important role, for the majority the balance between them is kept, and companies looking for green field investment in the European Union will look at the total figures rather than subtotals.

UNCTAD's (2005) research on 140 countries around the world shows that over 70% of the nations studied undertook regulatory measures to improve conditions to attract foreign direct investment. Taxation was one of the legal areas in which the greatest improvements were made (22). For example, from 2004 to 2005 eight European Union countries decreased their nominal corporate income tax rates, while only one (Germany) increased it. An additional example is provided by the Dutch Ministry of Economic Affairs (2004), which in a report published in October 2004, blamed the Irish low corporate income tax rate of only 12.5% for the seven-fold greater investment of pharmaceutical companies in Ireland than Holland. McGee (2004) in his study supported this position concluding that in 2000 Ireland attracted more foreign direct investment than Japan or Italy (105-107). McGee (2004) believes that lower corporate income tax allows for better utilization of capital than a government distribution mechanism can accomplish (reprinted in Oręziak, 2007, 89). Moreover, according to Oręziak (2007) regulatory infrastructure building is done because of the need to stimulate inward investment and increasing competitiveness of FDI funds.

While, as was mentioned before, taxation is only one of the aspects that may attract companies to a particular country, it may be an especially vital one as nations within the European Union community become similar in other dimensions. Thus, it becomes a key mechanism for countries to make differences among them visible to investors. At the same time, taxation becomes a double-purpose weapon for developing and developed nations alike. Using taxation, countries not only can attract new businesses but also develop those already functioning in their midst by providing stimuli to them to invest in infrastructure development.

In the 1980s and 1990s, a number of empirical studies were conducted to assess the impact between taxation and economic growth. They generally found that a tax rate increase may negatively impact the economy, although the transfer mechanism was not well analysed. (Cf. Leibfritz, Thornton and Bibbee (1997) for a complete literature review on this topic.) Although

imperfect, for visualisation purposes only, the author presents Table (5) showing changes in gross domestic product (GDP) in purchasing power parity standard along with the changes in nominal corporate taxation in the same time periods.

Table 5

Changes in GDP in purchasing power parity standard, implicit corporate income tax / nominal corporate income tax over 1999-2006 (in %)

Country	2000-1999 change in GDP	2000-1999 change in implicit CIT	2002-2001 change in GDP	2002-2001 change in implicit CIT / change in nominal CIT	2004-2003 change in GDP	2004-2003 change in implicit CIT/ change in nominal CIT	2006-2005 change in GDP	2006-2005 change in implicit CIT
Austria	7.29	-4.42	4.97	-17.13/0.00	5.12	0.00/0.00	4.76	1.02
Belgium	9.78	-4.52	5.32	2.11/0.00	3.00	1.53/0.00	4.56	0.50
Cyprus	9.77	NA	2.91	6.19/0.00	8.58	-3.76/0.00	6.58	29.49
the Czech Republic	5.16	-2.19	3.56	7.22/0.00	6.92	17.81/ -9.68	7.80	-2.15
Denmark	7.91	-13.14	4.33	-1.71/0.00	5.99	40.38/0.00	4.64	-19.17
Estonia	12.10	-59.82	11.48	47.06/0.00	8.70	1.54/0.00	13.93	8.20
Finland	9.14	16.24	3.30	6.02/0.00	7.82	0.47/-10.34	7.08	-9.05
France	8.21	4.19	4.48	-7.28/-2.83	3.53	11.24/0.00	5.12	6.83
Germany	3.84	1.24	2.39	-7.14/0.00	4.23	2.33/0.00	4.03	3.68
Greece	8.97	14.07	9.00	3.76/-6.67	6.75	0.79/0.00	6.68	NA
Hungary	11.77	NA	7.85	NA/0.00	4.04	NA/-11.11	6.11	NA
Ireland	12.09	2.55	9.62	-1.20/-20.00	7.03	4.14/0.00	9.00	12.60
Italy	6.34	0.44	-1.37	-5.26/0.00	1.62	-8.57/-2.61	3.77	15.56
Latvia	8.14	-34.95	9.35	-4.29/-12.00	9.49	5.77/21.05	12.40	NA
Lithuania	7.61	-31.25	9.59	-7.69/-37.50	6.95	21.74/0.00	10.27	26.32
Malta	11.11	NA	6.44	NA/0.00	3.19	NA/0.00	5.26	NA
the Netherlands	10.50	-12.94	3.91	6.47/-1.43	4.67	-0.64/0.00	4.94	0.00
Poland	6.19	-4.19	5.01	8.23/0.00	8.11	-11.39/ -29.63	7.35	NA
Portugal	7.12	11.98	3.87	0.00/0.00	2.21	-1.50/ -29.63	4.17	NA

Slovakia	6.13	-13.98	7.03	2.07/-13.79	7.61	-3.55/ -24.00	10.63	-4.12
Slovenia	6.10	NA	6.66	NA/0.00	8.32	NA/0.00	6.57	NA
Spain	8.98	11.05	7.54	5.79/0.00	6.18	7.11/0.00	8.73	7.76
Sweden	8.28	27.60	3.54	18.45/0.00	6.66	NA/0.00	6.35	NA
the United Kingdom	8.24	2.94	4.57	15.69/0.00	6.96	4.26/0.00	4.52	10.50

Source: Eurostat, GDP and implicit tax rate retrieval on September 6, 2008 and nominal tax rates from Wach, K. (2005), *Systemy podatkowe krajow Unii Europejskiej*, p. 50

Before an in-depth analysis of the information presented above, it is important to compare the implicit and nominal tax rates. Implicit tax rate is computed as tax revenues divided by the approximated tax base. On the other hand, nominal tax rate is set by national government and is a rate at which annual revenues are generated. Thus, implicit tax rate is influenced not only by changes in nominal tax rate but also changes (often quite large) in the tax base. Since it encompasses both parameters of base and rate it is a better, although still imperfect proxy, for judging its impact on economic growth.

Table 5 shows that in some countries over some years the relation between declining corporate income tax and improving economic conditions holds, while for others, it is sporadic or nonexistent. Newly accessed EU member countries more often than old continental nations are subject to the negative relation, most likely because they undertake measures to attract foreign direct investment and spur national economic development. Among the new entrants Poland, Slovakia, Lithuania, Litvia, Estonia, and the Czech Republic took taxation measures in 1999-2000 as they improved economic growth. Only Latvia and Lithuania continued that trend in the following 2002-2001 period, but again by 2005-2006 other countries such as the Czech Republic and Slovakia followed suit. For old European Union countries implicit tax cutting was very intensive in three periods 2000-1999 – Austria, Belgium, Denmark, the Netherlands, 2000-2001 – Austria, Denmark, France, Germany, Ireland, Sweden and the United Kingdom, and 2004-2003 – Cyprus, Italy, the Netherlands, and Portugal. While, of course, the analysis is grossly incomplete and cannot be used to infer the impact of taxation changes on economic growth, its purpose is to visualise the relationships between taxation variables and economic growth over recent history.

Kudła (2006) conducted empirical studies to relate tax systems variables to economic growth. For that research a panel data of 15 countries over eight years was used and estimated using Stata 8 program with a panel correlated

standard errors technique (PCSE) (9). As a dependent variable the author used differenced GDP, while for independent variables he used differenced tax revenues from a variety of sources lagged by one and two periods. The final R^2 figure amounted to 0.74 which is a quite satisfactory explanation of the data (16).

Kudła (2006) found that the corporate income tax burden is positively related to economic growth. Although at first this might be counterintuitive, one must closer examine the results to understand the economic reasoning. While low taxes whether nominal, implicit or effective might be, along with transparent taxation system, an attracting factor to foreign direct investment as well as new entrepreneurs, for businesses already operating within a country at their optimum, additional tax burden as long as it is levied in a matter so that higher pre-tax profits will lead to higher post-tax profits bears no consequences for that company. Therefore, Kudła (2006) concludes that taxation that is not imposed on any specific source of capital is more beneficial to economic growth as it to a lesser degree hurts savings and investments of which tax on corporate income is a perfect example (16).

Finally, based on the dynamic model Kudła (2006) analyses, the author reaches a conclusion that short lived changes in rates are less effective for stimulating economic growth and that a better mechanism to do so is to fit the general structure of the taxation system, so that it supports economic development. Moreover, he notes that based on his research findings, taxation is only one of the factors affecting economic growth and because of its weakness other macro economic mechanisms dominate its influence (18). These findings correlate with earlier research presented, proving that although tax factors might be an important tool in attracting investment, it might be an inadequate tool to spur economic growth without other fundamental macro economic and institutional factors.

Moreover, as the World Bank and PriceWaterHouseCoopers' (2006) report mentions, it may not be absolute level of taxation that is most important for economic performance, but rather other factors related to tax systems. These include the following:

- (1) the ratio of direct to indirect taxation with direct taxation having a greater impact;
- (2) the progressiveness of various taxes and of the tax system as a whole;
- (3) the purpose for which taxation is used – to invest in the development of a country or to redistribute the funds to reach greater social equality;
- (4) the quality of governance of the taxing authority; and

(5) the efficiency of the tax system with lower compliance and administrative costs in nations that have more uniform regulations (18).

Finally, the World Bank and PriceWaterHouseCoopers' (2006) booklet states that "Attempts to impose internationally uncompetitive tax rates on these forms of mobile capital may be particularly damaging to an economy in a long term" (18).

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