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TAX REFORM FOR TAX COMPETITION: WHICH ALTERNATIVES SHOULD BE USED?**

In this article the authors' objective is to discover the extent to which the economic concept of interest-adjusted income taxation, which from a national standpoint is most attractive, can also render a country more attractive as a business location in global tax competition. In order to achieve this objective the authors first attempt to determine the rules that must be complied with by a country in the structuring of its domestic tax law against the background of global tax competition. A central factor here is the prohibition of tax discrimination between domestic and foreign taxpayers, whereby domestic tax law is subservient to the requirements of international tax law. National sovereignty remains intact, however, with regard to the choice of a concept for the tax system to be adopted. With this in mind, the authors show that the attractiveness of a country as a business location with a given tax rate is enhanced by the introduction of an interest-adjusted income tax with the deduction of interest on equity capital as a special feature. This is reflected in the principal international measure of the tax burden, the Effective Average Tax Rate (EATR).

Key words: interest-adjusted income taxation, tax competition, effective tax rate

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I. Introduction

Is *tax competition* harmful or useful? Referring to the paper by Lars Feld in this journal, No. 9/2005[1], after a broad review of the main theoretical arguments and the empirical evidence, the answer is that *it is useful rather than harmful*.

On the basis of this thesis, we first try to draw a dividing line between fair and unfair tax competition arguing that rules have to be set in order to prevent tax discrimination between foreigners and residents ("ring-fencing") (Part II). This, of course, restricts the scope of national tax policies, but does not affect the sovereign choice of the national tax base. Building the basis for the decision to choose a certain concept of taxation, we present some criteria for defining an optimal tax system (Part III). We demonstrate effects of the traditional concept of income taxation which governs the income taxation of most European countries (Part IV). We then evaluate alternative tax systems with respect to those criteria from a national point of view (Part V). Avoiding "ring fencing", tax competition necessitates taking into account not only the international competitiveness of tax systems but also the efficiency aspects in a domestic setting. We show that the tax reform option of an interest-adjusted income tax system will satisfy both the domestic criteria of an optimal tax system and the requirements which are set by international tax competition. In this context, we calculate the well known measures of Effective Marginal and Effective Average Tax Rates (EMTR and EATR) for an interest-adjusted tax system and compare them to the ones that can be determined for different EU-countries' traditional tax systems (Part VI). The international attractiveness of an interest-adjusted tax system can be proved thereby.[2] Finally, in Part VII, a brief conclusion encompasses the main results of our article.

II. Fair and unfair (harmful) tax competition in the EU

Communities of countries such as the EU can decide to harmonise their tax systems. Whether and how this has to proceed can only be judged on the basis of the common goals established by the community and the limitations to the sovereignty of individual states that have been accepted. One of the prime objectives of the EU

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[1] Cf. Feld, L. (2005).

[2] Our paper, however, is not prepared to discuss all merits and practical issues of an interested-adjusted system of taxing income from capital and current tax reform initiatives in Europe incorporating this element. There is an extensive body of literature and other sources available for readers interested in this broad analysis. See for example Boadway / Bruce (1984), Keen / King (2003), Rose (1999), Wenger (1999) and papers which may be downloaded from www.einfachsteuer.de.

is the dismantling of barriers to competition and not the limitation of competition, as this is a policy that will raise welfare standards in all member states. If competition for the best tax system contributes to an improvement of welfare in the EU, it should not be limited or even blocked by harmonisation regulations. If a member state applies a system to tax the capital income of its citizens and therewith enterprise profits too, such a system must be – provided that foreigners and residents are treated equally – accepted as internationally fair. The same argument holds for example for a tax system with an interest-adjusted tax base.

A country choosing one of alternative tax systems which are described in Part V is not, therefore, in our view, pursuing a policy directed against the interests of the EU. Hence, there is no reason to forbid a country's adoption, for example, of the dual income tax system introduced by the Nordic countries or of the model of tax exemption for normal market returns which are characterized as alternatives B2 and B3 in Part V. The economic performance of enterprises in the EU would rather be gravely impaired if the EU were to impose a harmonisation model based on the traditional system of income and profit taxation (see Part III).

According to the declared objectives of the community, a country's tax policy is to be considered unfair, if it offers particularly attractive conditions for investments that are not based on the principles of a system of equal treatment of equal incomes (profits) – irrespective of the investor's residence.[3] With regard to unfair tax competition, a similar view is shared by the OECD.[4]

Unequal tax treatment of foreign and domestic investors can occur directly and indirectly. In this context, the privileged taxation of corporations – as compared to enterprises with business profits taxed at the personal level of the shareholder – generates special tax benefits for foreign investors since those operate typically in the legal form of corporations. A country pursuing such a strategy avoids the revenue loss that would arise within a regime of fair tax competition, i.e. under an equal treatment of profits, irrespective of the enterprise's legal form.[5] The revenue loss could be further reduced by raising the tax rate on dividends – which affects only resident shareholders – in order to compensate for the lowered corporate tax rate.

Another example of unfair methods are special regulations that are not integral elements of the system and govern the taxation of returns from financial assets, for example, by offering special tax relief to holding companies. If a country taxes the returns from real investments in one way and those from certain financial investments in another, no justification is possible in terms of a tax system.

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[3] Cf. Commission of the European Union (1997).

[4] Cf. OECD (1998).

[5] Privileges in the taxation of business profits granted only to corporations may also implicitly discriminate against income from labour.

According to the proposed criterion of fair and unfair (harmful) tax competition, for example, Estonia, Ireland, Hungary, Austria and Croatia are all currently applying a form of enterprise taxation that runs counter to community interests, as not all forms of capital income – e.g. the profits of a sole proprietor and small partnerships not liable to profit tax but to (personal) income tax – are subject to the same reduced tax rate. Some proposals which aim at a further reduction of the rate of the German corporation income tax without at the same time reducing the rates applied to all other kinds of capital income also fail to meet the criterion of international fair tax competition.

The new Slovak tax law, on the other hand, is system-based and can be judged internationally fair. There is, therefore, no need whatsoever to harmonise the Slovak system with any new standard EU-model. As far as Slovakia can afford low tax rates because of grants given by the EU, this EU-policy could be criticized. How much Slovakia receives in the form of grants from the EU does not depend upon the nature of the Slovak tax system but on the EU system for allocating its funds. If the EU takes exception to the low tax rates applied in some individual member states, it should implement a sweeping reform of the system for allocating its funds.

One can well imagine, however, an EU-tax policy which aims at dissuading member states from using privileges granted by means of special regulations to certain types of income (e.g. corporation profits) which are not in line with their tax systems in order to attract internationally mobile capital from other member states. This is a very demanding task since in most EU countries tax laws are not framed in accordance with a system. On the other hand, not every deviation from a system has a problematic dimension from an international standpoint.

Against this background, the EU's efforts to lay down as quickly as possible uniform procedures for calculating the profits of corporations or even to stipulate minimum tax rates are incompatible with the principles of (fair) tax competition. Whether the profits of an enterprise are calculated, for example, according to the cash principle or rather according to the accrual principle depends upon the system. The same holds for the deduction of interest on equity capital within the system of interest-adjusted income taxation (see alternative B3 of Part V).

Competition among different tax systems has by no means resulted in general acceptance of the best tax base for all EU countries. The OECD's model for the calculation of profits is only one conceivable model among many and cannot therefore be accepted as a reference model for the determination of harmful tax competition.

In this respect we must refute the thesis that the standardisation of tax bases is merely a formal harmonisation that can only be regarded as an instrument to enhance transparency. In fact, this would take away a country's sovereignty to decide upon the system of income taxation. Those supporting the EU's rapid EU-wide

harmonisation of tax bases, for instance on the basis of the OECD model, overlook the fact that the burden imposed by a tax system does not only depend upon the tax rates but without doubt also upon the tax bases that have been selected. This will be demonstrated at length in Part VI of this article. Competition among tax systems must permit competition for the best tax bases. As, in general, it can be chosen from several tax systems, the EU should rather concentrate its efforts on developing criteria for judging unfair deviations from a system that has been chosen freely as the result of the sovereign decisions of individual member states.

III. Criteria for establishing an optimal tax system

The following targets and criteria, which are important for the design of a country's optimal tax system, will at the same time also determine its success in global tax competition. For any country attempting to choose an optimal tax system, the prime objective is to ensure that the tax law adopted secures the highest level of economic welfare possible for its citizens.

The level of economic welfare of any country is fundamentally determined by the economic performance of its enterprises in whatever organisational form (sole-proprietorship including all kinds of self-employment, partnerships and corporations). It should and will be of the greatest interest to any country that the economic performance of enterprises develops as freely as possible and that the tax system does not constitute a hindrance thereto, i.e. it should guarantee decision neutrality as far as possible.[6] Only then will the criterion of *economic efficiency* be satisfied. Taxation should not interfere with the process of capital formation in particular, as otherwise an excess burden will arise causing welfare losses due to tax-induced changes of investment decisions.

Furthermore, from the domestic perspective, direct taxes must satisfy the criterion of *fairness* in that they do not impose upon certain types of income a higher or lower burden than is imposed on others. This requires that the profits of enterprises of different legal forms should bear equal tax burdens (neutrality with respect to legal form) and that capital income should not bear a higher tax burden than income from employment. In addition, there must be no special privileges for foreign companies ("ring fencing"), as this would amount to discrimination against domestic enterprises and run counter to fair international tax competition described in Part II.

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[6] Cf. Rose, M. (1999); Rose, M (2003).

In order to gain advantage from international trade and the mobility of both physical and human capital, it is in a country's own interest to have tax laws which on the one hand do not raise obstacles to the free exchange of goods, services and capital or to the mobility of its employees and on the other hand also help establish an attractive environment for foreign investment and highly-skilled employees.

In order to meet the important criterion of *transparency*, tax laws should be framed exclusively according to a clear system. This would help reduce tax compliance cost of citizens and enterprises.

IV. The concept of traditional income taxation

In the competition to achieve the best tax system, those alternatives are most promising that will result in a better performance by enterprises operating within the domestic territory of the country concerned and in an increase in the working population's stock of human capital.

In the *traditional system* of taxing income[7], the fairness principle is oriented according to the burden on yearly income and assumes that equal taxation means equal yearly burdens. It is well known, however, that the traditional system of income and profit taxation imposes a heavy tax burden on enterprises, i.e.

- the taxation of normal market returns on equity capital means that a double tax burden is imposed, as the equity capital formed in the enterprise from taxed profits will already have reduced the available profits from investment[8] and
- the taxation of the profit arising from the disposal of shares of corporations creates a triple burden on normal market investment returns, and a double

[7] The traditional concept of income taxation has its origin in the famous article "Der Einkommensbegriff und die Einkommensteuergesetze" by Georg von Schanz. Cf. von Schanz, G. (1896). In the American tax literature the birth of the traditional concept of income taxation is linked with the names of Henry C. Simons und Robert Murray Haig. Cf. Simons, H. C. (1938) and Haig, R. M. (1921[1959]). Cf. also Musgrave, R. A. (1990); Goode, R. (1977) and Rimmler, M. R. (2005).

[8] This theorem of tax incidence is well-known in the literature of taxing income from capital. Unfortunately the theorem is often described as 'double taxation'. The correct description, however, here should be 'double burdening' because the pre-burdened return on savings is taxed only once. Joseph Schumpeter (1929/30, p. 125) described this phenomenon of intertemporal tax incidence most clearly as follows: „The benefit the saver will get out of the saved income part is the return on his investment. This return is, however, diminished twice as a result of the ruling (tax) practise. Firstly, the income tax levied on savings will cause the return to be smaller than it would have been without taxation. Secondly, this return already diminished by income tax is burdened once more by income tax."

burden on pure economic profits, i.e. on those parts of profits that exceed normal market rates of interest on equity capital.

The investment and tax burden example in Table 1 clearly illustrates this evaluation.

It is assumed that a young man or woman aged 25 founds an enterprise with the legal form of a corporation in the year 2005. The profits are retained in the company and – as a result – its market value increases. The entrepreneur covers his living costs with the salary he receives as chief executive of the corporation. At the end of each year he calculates the extra income that he could realise through the sale of his enterprise after payment of income tax on capital gain and that would be available to cover his private consumption needs. To simplify matters, we assume that the capital gain which the entrepreneur and shareholder will receive in the case of disposing his shares in the company is equal to the equity capital invested in the company.

Tab. 1:

TAX BURDEN ARISING FROM TAXING ENTERPRISE PROFITS ACCORDING TO THE TRADITIONAL SYSTEM OF INCOME TAXATION

Year	Equity capital = capital gain in the tax-free reference situation in €	Equity capital after profit tax = capital gain before income tax in €	Tax burden resulting from profit tax in %	Capital gain after income tax in €	Tax burden resulting from profit and income tax in %
2005	10 000	7 500	25,0	5 625	43,8
2015	14 802	10 079	31,9	7 559	48,9
2025	21 911	13 546	38,2	10 160	53,6
2035	32 434	18 204	43,9	13 653	57,9
2045	48 010	24 465	49,0	18 349	61,8

In the given example of a hypothetical investment project - assuming neither profit nor income tax - the pure profit of the first year amounts to 10 000 €. Starting in the second year, the enterprise earns a yearly normal gross rate of return of 4 % on equity capital which is fully invested. Thus, in the tax-free reference situation both the equity capital and the capital gain from disposing the company will grow at the rate of 4 % and amount to the figures as given in the second column of table 1. Imposing a traditional system of profit and income taxation with a uniform rate

of 25 % the first year gross pure profit of 10 000 € will be reduced to an amount of 7 500 € which - because of its investment - is now the initial equity capital stock. Starting in the second year, due to profit tax the rate of return on investment will be reduced from 4 % to the net rate of 3 %. At the same time this means that both equity capital and capital gain will grow at this new rate resulting in the figures as given in the third column of table 1. Tax burden at the business level is calculated as the loss in equity capital due to profit taxation, i. e. tax burden from profit tax amounts to the difference between the figures in column 2 and the figures in column 3 of table 1. If these differences are related to the equity capital in the tax-free situation as given in column 2 we will arrive at the tax burden in relative terms as presented in column 4 of table 1.

As the investment example shows, from the second year the tax burden exceeds the tax rate and this difference increases as the investment period lengthens. Should the entrepreneur wish to retire at the age of 65, he will discover upon examining the investment capital in his enterprise that, in comparison with the situation without any tax, he has lost almost 50 % of his equity capital through payment of the profit tax at a statutory tax rate of only 25 %. If he now wishes to make this investment capital available for consumption purposes and decides to sell his enterprise, he must then also pay income tax on his gain on disposal, which has resulted from the increase in the value of his enterprise generated by the investment of taxed profits. As acquisition costs do not exist in the example given, the entire revenue from disposing the company is taxed as income. Hence, revenue from disposing the company and taxable capital gain are equal to the figures as given in column 3 of table 1. Applying a tax rate of 25 % on this base of income tax the net capital gain which the entrepreneur can use for consumption purposes amounts to the figures in column 5 of table 1. In comparison with the situation without any taxes this constitutes a further tax burden. All in all the entrepreneur's fund for financing his consumption in retirement has been reduced by 61.8 % (column 6 of table 1).

Most current tax systems mainly follow the guidelines of the traditional system and are therefore an obstacle to the efficient performance of business enterprises. However, tax theory has developed systems that are much less of a hindrance to the economic performance of enterprises. A specific feature of these systems is a new concept of fairness which is based on the notion of equal tax burdens for equal lifetime incomes. Hence, it takes into consideration the fact that, by virtue of the former taxation of the income used for its formation, today's capital income already bears a tax burden without ever having been taxed. For a country trying to gain from tax competition there are options for it to be able to offer better tax environments for investments than those in other countries which are bound to the traditional concept of taxing personal income and business profit.

In the following part, different tax systems and policy options are introduced and their characteristics explained. The perspective will be that of a domestic in-

vestor, since the tax system chosen under tax competition also directly determines the tax-burden for residents, unless the country concerned wishes to run the risk of promoting "ring fencing".

V. Alternatives in the competition for the best tax system

In both the literature and policy platforms several reform alternatives have been discussed the implementation of which would result – compared with a traditional tax system – in a „normalisation" of the tax burden on investment returns and therefore competitive advantages for the country concerned. The following alternatives seem to be the most important ones:

A. *Raising of consumption taxes*, which have less impact on investment in enterprises. This means cutting back direct taxes in general and, for example, raising the rate of the value- added tax guaranteeing tax revenue neutrality. The disadvantage of such a policy is a shifting of the distribution so that lower incomes now bear a higher burden. The net effect, however, is unclear. Higher investment leads to higher levels of employment, which also benefits the lower income brackets.

B. *Restructuring of direct taxes* in order to reduce or eliminate multiple tax burdens.

   B1. *Introducing a system of dividend taxation*. Profits that are invested shall be tax-free and only profits distributed as dividends to shareholders and then used to finance personal consumption shall be subject to taxation. The same shall hold for all forms of return from citizens' savings.

   B2. *Introducing a system of Dual Income Taxation (DIT)*[9] with lower rates for all forms of capital income and, therefore, for enterprise profits.

   B3. *Introducing an "Allowance for Corporate Equity" (ACE)*[10] *system (a system of interest-adjusted income taxation)*. The ACE is characterized by a deduction of a normal market rate of interest on equity capital together with the deduction of loan interest from taxable profit. Dividends and capital gains arising from the sale of shares of enterprises

[9] Cf. Sørensen, P. B. (1994); Cnossen, S. (1999).

[10] Cf. Rose, M. (2003); Schmidt, F. (1998); McLure, C. E. / Zodrow, G. R. (1990). The ACE concept was developed at almost the same time by Ekkehard Wenger in Germany (cf. Wenger, E. (1983)) and Robin W. Boadway and Neil Bruce in America (cf. Boadway, R. W. / Bruce, N. (1984)).

are not taxed. This form of profit taxation guarantees the taxation of a citizen's lifetime income.[11] Within this concept of income taxation the tax-burdening of income sources in past calendar years and also the taxation of income in future calendar years is accounted for. The annual flow of incomes must therefore be checked in order to determine whether they already have a tax burden history, i.e. whether any of these funds have already resulted in a tax burden for the taxpayer. If this is the case, they must be excluded from taxation in order to avoid a multiple tax burden on the same income. Income received shall be tax-free, if it is used to generate future income and if the taxation of such income in the future is assured. In this sense, all expenses incurred in the acquisition of interest-bearing capital claims or shares in enterprises can be regarded as deductible, since they represent amounts that have been saved by the citizen from his inflow of income.

For **Alternative A**, quite apart from those limits established by the regulations governing membership in the EU, there is a limit by virtue of the fact that indirect taxes weigh upon the subsistence level of consumption, which impacts the lower income brackets in particular. As an impersonal tax, it is practically impossible to take into account the tax exemption of the subsistence level while performing market transactions. A differentiation of tax rates on necessities (low tax rates) and luxury goods (high tax rates) to effectively capture the tax-exemption of the subsistence level of consumption would only be a rough approximation generating further distortions.

Alternative B1 as an integral system is currently not a feasible proposition for a single country operating in a globalized world economy, as insoluble problems would arise with regard to the avoidance of double taxation in the case of the generation of cross-border incomes.

Alternative B2 guarantees only a partial "normalisation" of the tax burden on business profits and other kinds of capital income. It is not possible to choose the rate of tax on capital income in order to assure for all lengths of investment periods that the burden on capital income is fully adjusted to the burden on wages spent on immediate consumption. Furthermore, empirical evidence gathered in the Nordic countries which implemented a DIT in the 1990s has revealed the practical, administrative problems of clearly separating capital income taxed at lower rates from wages taxed at higher rates.[12]

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[11] On the concept of lifetime income see Kay, J. A. / King, M. A. (1986); Mitschke, J. (1985) and Rimmler, M. R. (2005).

[12] Practical problems would, in contrast, not prevail if capital income is fictitiously determined by multiplying the equity base by a certain interest rate and taxed at a flat rate. Deducting this capital income from the profit tax base, the residual will be taxed as wage income on the basis of a progressive tax rate structure.

In contrast **Alternative B3** as an integral system is a perfectly feasible proposal for a single country operating in a globalized world economy.[13] As can bee seen in table 2, which builds on the example of the investment project underlying table 1, the tax burden in relative terms exactly corresponds to the tax rate, so that in a lifetime perspective a single burden on all types of income is guaranteed. No problems would arise with regard to the avoidance of double taxation in the case of the generation of cross-border incomes.

Tab. 2:

TAX BURDEN ARISING FROM TAXING ENTERPRISE PROFITS ACCORDING TO A LIFE-TIME ORIENTED SYSTEM OF INCOME TAXATION

Year	Equity capital = capital gain in the tax-free reference situation in €	Equity capital after profit tax = capital gain before income tax in €	Tax burden resulting from profit tax in %	Capital gain after income tax in €	Tax burden resulting from profit and income tax in %
2005	10 000	7 500	25,0	7 500	25,0
2015	14 802	11 102	25,0	11 102	25,0
2025	21 911	16 433	25,0	16 433	25,0
2035	32 434	24 325	25,0	24 325	25,0
2045	48 010	36 008	25,0	36 008	25,0

VI. Traditional vs. interest-adjusted income taxation and tax competition in the EU

In this section we shall attempt to determine the extent to which the practicable systems of interest-adjusted and traditional income taxation presented in Part V constitute attractive alternatives in international tax competition.[14] For this purpose

[13] The ACE system was applied in Croatia between 1994 and 2001. Cf. Keen, M. / King, J. (2003).

[14] We do not take into consideration the value-added tax, the tax on distributed profits or the dual income tax. With regard to the structure of its tax base the latter corresponds to the traditional income tax; the different tax scales for incomes derived from work and capital have no significance within the framework of the model applied here.

we shall consider the standpoint of a multinational enterprise with the legal form of a corporation with world-wide share ownership. Both the tax status and the residence of individual shareholders are unknown, so that our analysis is limited to taxation at corporate level and taxes on the personal level of the individual shareholder are therefore not accounted for.

Our analytical tool is the well-known measure of Devereux und Griffith (1999), the Effective Average Tax Rate (EATR), which is designed to assess different competing tax systems given a profitable investment. The investments and financing of the enterprise under consideration are determined exogenously, so that pre-tax rates of return and distributed profits are fixed. We shall now examine the change in the payments flowing to shareholders in $t=1$ following a profitable (additional) investment in $t=0$ with due consideration given to the prevailing taxation conditions. Together with the statutory tax rate, the structure of the tax base is of decisive importance here. Special attention is given to the cash value of tax depreciation as well as – in the case of interest-adjusted income taxation – the deductible imputed interest on the equity capital that the investment under consideration brings with it.

It is assumed that the investment under consideration can only be made in one country and that it would be too expensive to operate at two or more locations due, for example, to the fixed costs that would be incurred.[15] To this degree the choice of a business location is a discrete decision. A comparison of post-tax rates of return (with given pre-tax rates of return) under the different tax systems is a direct indicator of the competitiveness of a tax system in global tax competition.

The international measure of the tax burden, the EATR, sets the difference between the net present value generated by the investment project in the fictitious tax-free world R^* and the corresponding post-tax net present value R in relation to the discounted pre-tax rate of return p. The EATR enables us to compare the profitability of one and the same investment under different tax systems (or in different countries). In general it is as follows:

$$EATR = \frac{R^* - R}{\left(\frac{p}{1+r}\right)}$$

[15] Cf. Devereux , M. P. / Griffith, R. (1999), S. 10.

The EATR can provide no information on the optimal size of an investment to be made under a given tax system or on the minimum pre-tax rate of return at which the proposed investment would become profitable in comparison with alternative investments on the capital market. This pre-tax real rate of return on an investment project $\tilde{p}$ is the lowest value of a pre-tax rate of return at which a business investment will be as attractive as an alternative investment on the capital market, hence at which it makes sense for the EATR to be calculated. In the case of taxes on the personal level not being taken into consideration, the value of the EATR belonging to $\tilde{p}$, which can be interpreted as the Effective Average Tax Rate of the marginal investment, just coincides with the Effective Marginal Tax Rate (EMTR).[16] For the latter[17]:

$$EMTR = \frac{\tilde{p} - s}{\tilde{p}}$$

s represents the post-tax real rate of return to the saver, which, if the tax on personal capital income is not taken into consideration at shareholder level, just corresponds to the real rate of interest *r*.

In this case the EATR is the weighted arithmetic mean of the statutory tax rate and EMTR with marginal rates of return and rates above market rates, each normalized to the pre-tax rates of return, as the weighting factor. The lower the pre-tax rates of return, the greater is the weight given to the tax base (over the EMTR). The higher the pre-tax rates of return, the greater is the weight given to the statutory tax rate in the determination of the EATR.

Figure 1 compares the EATRs – depending on the pre-tax rates of return – of ideal traditional, conventional traditional and interest-adjusted systems of income taxation. In order to focus attention on the influence of the different tax bases, we assume the same statutory tax rates of 25 %. The exogenous weighting of the financing of the investment under consideration is in accordance with the following OECD weighting scheme: 55 % retained profits, 10 % new shares issued and 35 % debt.[18] The curves representing the ideal traditional (TRA id) and the conventional traditional (TRA) system of income taxation are based on this weighting scheme. In addition the curve representing the equity-financed ideal traditional system of income taxation (TRA id/eq) is presented, in order to show the reducing effect of debt financing on the EATR. Due to the financing neutrality of the interest-adjusted income and profit taxes the weighting scheme is of no significance for them.

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[16] Cf. Devereux , M. P. / Griffith, R. (1999), S. 21.

[17] This measure is based on the works of Mervin A. King und Don Fullerton. Cf. King, M. A. / Fullerton, D. (1984).

[18] Cf. OECD (1991).

With regard to the rules governing depreciation in the conventional traditional system of income taxation, tax depreciation (15 %) was assumed to be significantly higher than economic depreciation (10 %). The system of interest-adjusted income taxation satisfies the criterion of depreciation neutrality, for which reason the divergence between tax and economic depreciation is here without significance.[19] The ideal traditional system of income taxation is characterised by the fact that tax depreciation and economic depreciation tally.[20]

The curves in Figure 1 show that for each given pre-tax rate of return the effective tax burden under the interest-adjusted profit and income tax is significantly less than in the three versions of traditional income taxation. The greatest difference against the ideal traditional system is registered in the case of 100 % equity financing. In the case of partial financing with debt capital (35 %) the EATR is lowered slightly as the interest on borrowings is deductible as a business expense. The tax depreciation of the conventional traditional system of income taxation, which is more rapid than economic depreciation, results in a further reduction of the EATR. Moreover, in the interest-adjusted system of income taxation investment projects are implemented that would be unprofitable in the traditional system and are therefore not undertaken, although they would be rewarding before taxation (those with a pre-tax rate of return between 5 % (ACE) and 6.7 % (TRA id/eq), 6.1 % (TRA id) or 5.7 % (TRA)). As the pre-tax rates of return rise, the effective tax rates under all four of the systems under consideration approach the statutory tax rate of 25 %. The fact that in the case of lower pre-tax rates of return the effective tax burden in an interest-adjusted system of income taxation lies substantially below the statutory rate can be attributed to the system itself: the tax is levied only on those rates that are higher than those prevailing on the market. Matters are quite different in the case of the conventional traditional system of income taxation. The slightly reduced effective burden of lower pre-tax rates of return in relation to the statutory rate can be attributed to more rapid tax depreciation compared to true economic depreciation as well as to the comparative advantage of financing with debt capital. The traditional tax system achieves a lower EATR for lower pre-tax rates of return at the cost of efficiency losses.

In conclusion we note that, from the standpoint of international tax competitiveness, the interest-adjusted taxation of profits is extremely attractive in comparison with the traditional system of taxing profits, particularly in the case of investment projects that are not very profitable. However, with the same tax rate this advantage melts away when the pre-tax rates of return of investment projects increase.

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[19] The neutrality features of an interest-adjusted income tax are analysed by Wenger, E. (1983), Boadway, R. W. / Bruce, N. (1984) and Schwinger, R (1992).

[20] The ideal traditional system of income taxation serves as a reference system for a traditional income tax, as in accordance with the taxation of the net accrual to wealth it takes into consideration the true economic depreciation. In practice only a rough estimate of the true economic depreciation is possible. Tax depreciation frequently precede true economic depreciation.

Fig. 1:

EATR: TRADITIONAL VERSUS INTEREST-ADJUSTED TAX BASE

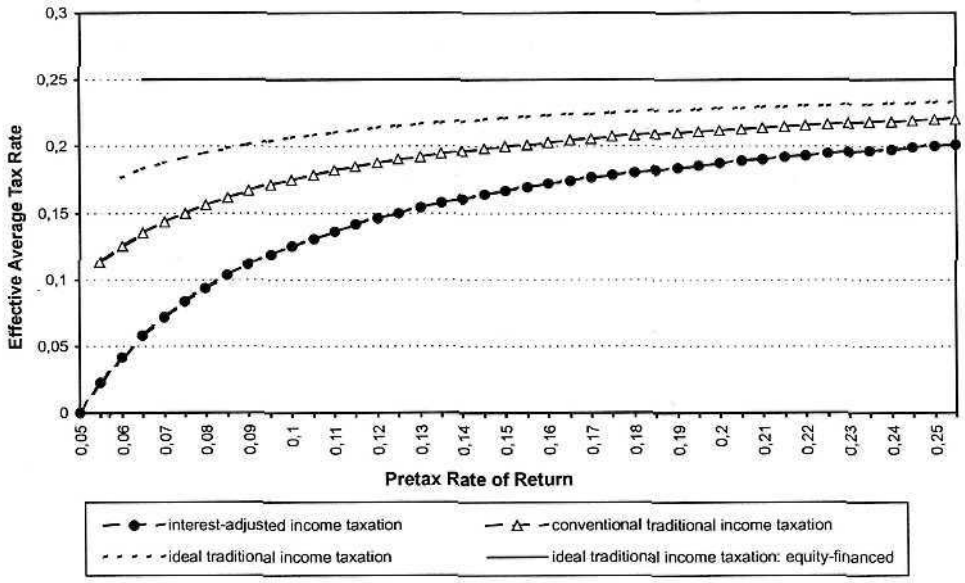
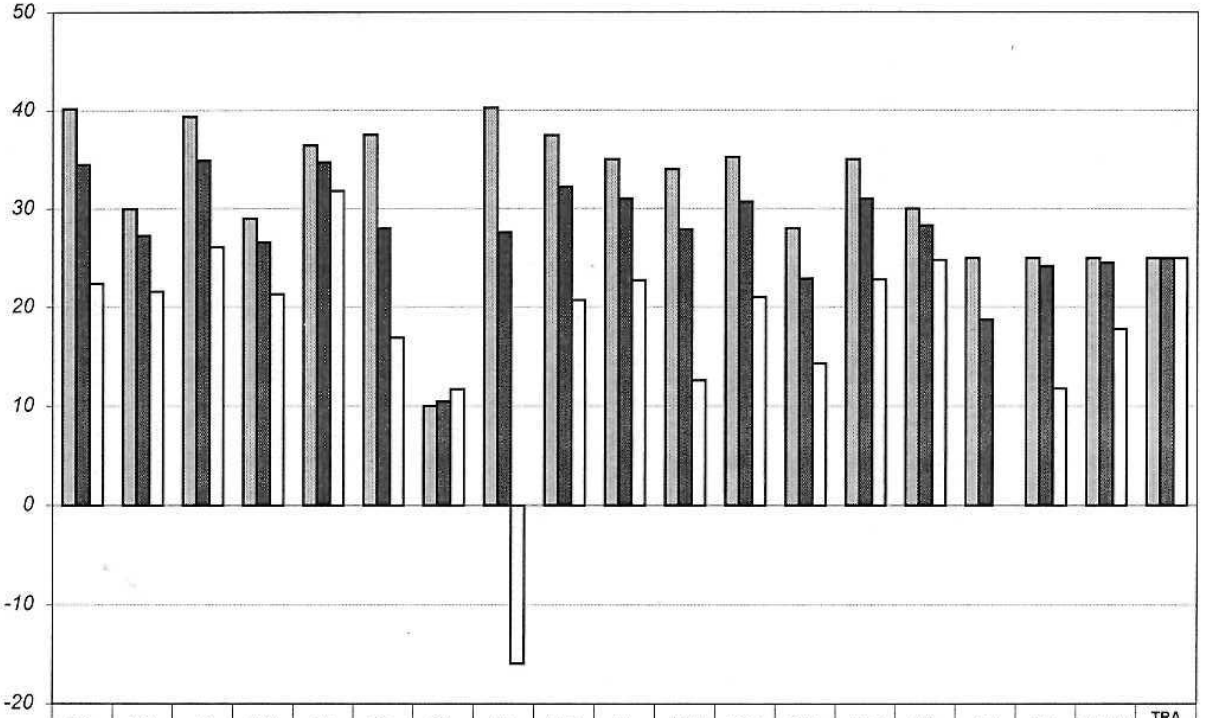


Fig. 2: STATUTORY TAX RATE, EATR AND EMTR IN THE EU-15 COUNTRIES (2001)[21] AND ACE IN %

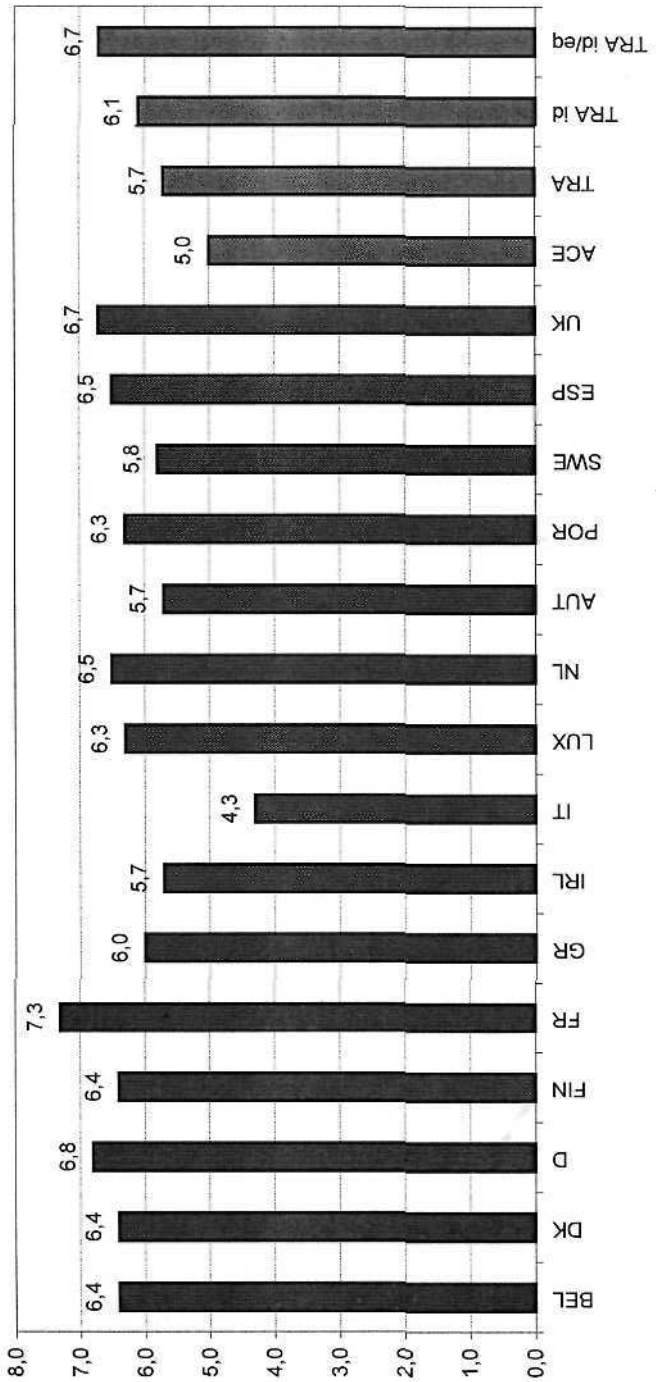


	BEL	DK	D	FIN	FR	GR	IRL	IT	LUX	NL	AUT	POR	SWE	ESP	UK	ACE	TRA	TRA id	TRA id/eq
Statutory Tax Rate	40,17	30	39,35	29	36,43	37,5	10	40,25	37,45	35	34	35,2	28	35	30	25	25	25	25
EATR	34,5	27,3	34,9	26,6	34,7	28	10,5	27,6	32,2	31	27,9	30,7	22,9	31	28,3	18,75	24,17	24,51	25
EMTR	22,4	21,6	26,1	21,3	31,8	16,9	11,7	-15,9	20,7	22,7	12,6	21	14,3	22,8	24,8	0	11,76	17,81	25

[21] Cf. Commission of the European Union (2001).

Fig. 3:

COST OF CAPITAL IN THE EU-15-COUNTRIES (2001)[22] AND ACE IN %



[22] Cf. Commission of the European Union (2001).

The attractiveness of interest adjustment is clearly demonstrated by Figure 2, which compares the system of interest-adjusted income taxation with the primarily traditional systems that prevailed in the different EU-15 countries in 2001. The three model versions of traditional income taxation discussed above are also represented. For the empirical calculation of the EATR and the EMTR a pre-tax rate of return of 20 %, a real market interest rate of 5 % and a 2 % rate of inflation were assumed. Figure 2 does not take into consideration taxation at shareholder level of the multinational enterprise concerned.

Figure 2 shows clearly that the statutory tax rate exceeds the effective average tax rate in all countries except Ireland, which may point to more rapid tax depreciation in comparison with economic depreciation and, together with the deduction as business expenses of interest on debt capital, results in an EATR that is lower than the statutory rate. In Ireland on the other hand the rules governing tax depreciation induce a rise in the EATR compared to the statutory rate in spite of the deduction of debt capital. Due to the additional deduction of interest on equity capital the interest-adjusted system of income taxation has a lower EATR.

In all EU-15 countries, with the sole exception of Italy, the profit tax provides an incentive to reduce the level of investment. This is equivalent to stating that the effective marginal tax rate is positive. Projects that would be profitable before taxation are not implemented. The opposite holds true for Italy, whose tax system on the whole generates an excess of investment; here the EMTR is negative. Only depreciation-neutral interest adjustment guarantees an effective marginal tax rate of zero. Taxation does not result in a tax-induced change in the volume of investment.

This is also demonstrated by Figure 3, which shows the capital costs of taxation. The capital costs, i.e. the pre-tax rates of return that render the investment project just profitable under the given tax system from the standpoint of the multinational enterprise and below which it would not be implemented, tally exactly in the interest-adjusted system with their capital costs in the tax-free situation. In all other EU countries (except Italy) the costs of capital are higher with the result that for reasons of taxation investment is not undertaken.

It should be noted that interest-adjusted income and profit taxation renders a country extremely attractive as a location for investment in comparison with the EU-15 countries from the standpoint of a multinational enterprise. This is confirmed by a comparison of the EATRs, in which only Ireland performs better thanks to its extremely low statutory tax rate. Moreover, investments are undertaken that in all other countries (except Italy) would not be implemented. Even Ireland's performance is worse here due to the unattractive rules governing tax depreciation. Italy, on the other hand, cannot compete for sufficiently profitable projects because of its high statutory tax rate of 40.25 %.

VII. Conclusion

Working on the assumption that tax competition between individual countries promotes the welfare of all, an attempt was made to draw a line between fair and unfair tax competition. It was argued that the choice of a tax system is a sovereign decision to be made by the country concerned and that this does not touch the level of fair or unfair tax competition. Only non-discrimination between domestic and foreign taxpayers must be secured in the sense of fair competition. If a country enjoys the freedom to choose its own tax system, it is then faced with the fundamental question of whether to opt for a traditional or an interest-adjusted system of taxation. The authors adopted a position with regard to the theoretical basis for such a decision. It was shown that not only does the interest-adjusted system of taxation satisfy all the desiderata – from a domestic standpoint – of an optimal tax system, but it is also highly attractive – as measured by the EATR – in an international perspective. This is a result of the tax-base effect that arises from the deductibility of interest at the normal market rate on equity capital in the tax balance sheet. This even enables a country to compete with others which, on the basis of a traditional concept of income taxation, have a significantly lower statutory tax rate. This is confirmed by a comparison with low-tax Ireland. Should a country wish to improve its attractiveness as a business location in global tax competition, rather than decide to lower its statutory tax rate, which would endanger both synthetic taxation and neutrality of legal form, it should instead consider switching to the use of interest-adjusted enterprise profit taxation. Belgium leads the field in the European Union – with effect from 2007 enterprise profits will be taxed on an interest-adjusted tax base.[23]

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[23] Cf. Freshfields Bruckhaus Deringer (2005).

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POREZNA REFORMA ZA POREZNU KONKURENCIJU: KOJE ALTERNATIVE VALJA UPOTRIJEBITI?

Sažetak

Autori u ovome radu pokušavaju odrediti u kojoj mjeri ekonomski koncept oporezivanja dohotka umanjenog za kamate (koji je sa nacionalnog stanovišta najatraktivniji) može učiniti zemlju privlačnijom poslovnom lokacijom u uvjetima globalne porezne konkurencije. Da bi postigli taj cilj, autori najprije pokušavaju odrediti pravila kojih se mora pridržavati neka zemlja kod oblikovanja domaćeg poreznog zakonodavstva, uzimajući u obzir globalnu poreznu konkurenciju. Ovdje se najviše mora voditi računa o zabrani porezne diskriminacije između domaćih i stranih poreznih obveznika, pri čemu je domaći porezni zakon podređen međunarodnome. Zemlja međutim zadržava suverenitet, jer sama odlučuje o izboru koncepta poreznog sustava. Imajući to na umu, autori pokazuju da se privlačnost neke zemlje kao poslovne lokacije povećava ako se uvede oporezivanje dohotka umanjenog za kamate, s odbitkom kamata na dionički kapital kao posebnim obilježjem. Odraz toga je osnovna međunarodna mjera poreznog opterećenja (the Effective Average Tax Rate – EATR).

Ključne riječi: oporezivanje dohotka umanjenog za kamate, porezna konkurencija, efektivna porezna stopa