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## Article

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# **Consumption-Based Taxation at the Business Level: The Croatian Experience**

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Croatia is the first country in the world to implement consumption-based direct taxation aimed at the individual as well as the business levels. Traditional corporate tax has been replaced by the so-called "interest-adjusted profit tax", which encompasses the corporate as well as the non-corporate sector. This paper analyzes the efficiency of this tax in Croatia with regard to its neutrality as well as its cost-effectiveness. This tax can be regarded as neutral in terms of investment, finance, inflation and organizational form. But the imperfections of financial markets in Croatia still cause distortions between debt and equity capital as well as some distortions between the corporate and non-corporate sectors. The second efficiency aspect is identified as more doubtful, because of the relatively high tax expenditure of protective interest and incentive effects that have not been proven in practice.

## **Introduction**

Use of consumption-based direct taxation (instead of an income-based system) has been advocated for some time. Some of its most famous proponents were Hobbes, Smith, Mill, Weber, Marshall, Einaudi, Pigou, Schumpeter, Fisher and, more lately, Kaldor, who first

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implemented it as a supplementary tax in India (1958-1962) and Sri Lanka (1958-1962, 1976-1978). However, discussions concerning proposals for a consumption concept have recently reemerged,<sup>1</sup> this time supplemented with a parallel consumption-based tax at the corporate level, which could be uniform for all business entities. Still, Croatia is the first country in the world to fully accept a consumption concept in the field of direct taxes (personal income tax and profit taxes).<sup>2</sup>

This paper concentrates on the enterprise tax. It aims at analyzing efficiency aspects of this tax in Croatia. In general, there are three commonly used concepts of efficiency in the public finance literature. The primary definition refers to minimizing distortions in the allocation of resources caused by taxes. A second use of efficiency is connected with effectiveness and refers to tax incentives (the incentive is efficient when it accomplishes its purpose at a minimal cost in revenue). The third use of the term relates to administration and compliance costs. Thus a tax system is efficient if it collects taxes without large administrative costs to the government and without large compliance costs to taxpayers.

This paper focuses on the first two concepts regarding the Croatian business income tax. The former concept is analyzed in the first part of the paper, with the objective of demonstrating the different aspects of neutrality. The latter concept is analyzed in the second part of the paper, where the cost of the tax expenditure is presented. It is calculated relative to the conventional corporate income tax. The objective of the second part of the paper is not only to express the magnitude and relevance of the cost of this specific investment incentive in Croatia, but also to assess its possible incentive effects on investment in comparison with the other, possibly more suitable, forms of investment incentives.

## **I. Neutrality of consumption-based tax reform at the enterprise level**

It is well known from public finance theory that the "standard" form of direct taxation at the corporate level (cash-flow tax) possesses the characteristics of investment as well as financial neutrality (see for instance Pechman, 1980). This is due to immediate expensing (100 per cent capital allowance), which reduces the marginal effective tax rate to zero and the greatest advantage of this tax in comparison with the traditional income concept of profit taxation.

This tax system is neutral concerning equity or debt finance. This is not the case with traditional profit taxation, which favors debt over equity, as well retained earnings over dividends. In the end, all cash-flow basis are neutral regarding inflation and at the same time avoids complicated depreciation techniques regarding inflation adjustments. However, immediate depreciation is disadvantageous from a fiscal point of view and is especially difficult for transition economies. Hence, alternative approaches are used where the assets are depreciated over their usefulness, but the neutrality of the tax is preserved. The zero marginal effective tax rate is accomplished by the deduction of imputed interest, which is equal to the average market rate of interest.

The business tax model in Croatia almost fully confirms to consumption taxation principles. Some departures from the model are the result of the difficulty of fully implementing

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<sup>1</sup> Some excellent work in this area was done by Pechman, ed.: 1980; Bradford, 1982; Boadway, Bruce, Mintz, 1983, Bradford and the U.S. Treasury Tax Policy Staff 1984; Rose, ed.: 1990; Zodrow and McLure, 1991; McLure, 1991; Kaiser, 1992 and Wiswesser, 1999.

<sup>2</sup> Also many countries that have introduced some elements of the interest adjusted income tax at the personal level (by not taxing some capital income), have introduced some elements similar to the interest adjusted profit tax (taxing fictitious interest on qualified increases in equity capital at lower rates.)(See IBFD, European Tax Handbook, 2000 and Taferner, 1999).

the theoretical model and due to financial market imperfections. Companies with full profit and loss accounting based on the balance sheet, are allowed to deduct imputed interest on equity capital from the tax base. For companies earning the average market rate of return the tax rate is zero. Income above average profits are taxed, but only on the basis of the difference between imputed interest (average profits) and remaining profits. In Croatia imputed interest is called "protective interest", because it protects the normal return on equity from taxation. It taxes only true "economic profits" and not accounting profits. This leaves minimum capital exempt (Rose, 1998). Since there is no well-developed government bond market in Croatia, which according to the theoretical models should determine the rate of such an allowance, this protective interest is now stated at 5%. Figure 1 shows the effects of this allowance on equity.

It is obvious that the exemption of the 5% rate of return from taxation leads to progressiveness of the Croatian "profit tax". Higher profits (above 5% on equity) lead not only to higher tax, but also to the higher tax rate. Since this is only due to the indirect progression (5% equity allowance), it logically follows that it slightly diminishes for higher rates of return. Likewise, it is sharper for the "lower" rates of return.

Protective interest also has some elements of negative taxation. Firms with accounting profits can have "tax losses" if profits are lower than 5%. This is not presented in the figure because it does not effect the effective tax rate of that year, but it should be taken into account because of loss carry-overs (limited to five years). When the loss is shifted, its amount is multiplied by the protective interest. If an accounting loss exists, it is even higher because protective interest is added to the loss. Thus, protective interest shields unsuccessful investments.

As the consumption concept standard requires, investment neutrality is followed by financial neutrality. Interest deductibility with no additional tax on any form of interest at the personal level is followed by interest deductibility on equity capital. Hence, there is no advantage in debt capital. Dividends and retained earnings are treated equally at the company level as well as at the shareholder level. There is no additional tax at the personal level because all capital income is exempt from income tax. This causes tax discrimination of human capital investment. However, this is a "normal" distortion inherent in consumption-based taxation (Bosworth, 1984; Boyer and Russell, 1995). This distortion exists because the yield on capital investment is tax exempt, whereas the yield on human capital investment is taxed.

Yet the real world often departs from the assumptions behind financial theory. The consumption-based tax model assumes, among others things, perfect capital markets with a risk free rate which is the same for all forms of investment. The Croatian capital market has been characterized by extremely high interest rates in comparison to the rate of return on equity capital. This also favors debt capital because interest expense is fully deductible. The limitation of the interest expense deduction to 5% would formally abolish this discrimination, but effectively lead to the over taxation. This would additionally enlarge the interest expense burden of enterprises. On the other hand, interest income at the company level is taxable, so profits originating from that source are not at a disadvantage. Differences between interest received on financial assets and paid on debt are recognized for tax purposes.

This imbalance is even more serious when income tax payers are taken into account. Enterprises that are not obliged to meet all requirements of proper profit and loss accounting are allowed to use a simplified accounting method. Their profits are then taxed as personal income tax. Their interest income is tax-free and interest expense is not deductible. They also have the right to deduct protective interest from their "profits". It is very unrealistic to assume that interest rates charged on debt are equivalent to interest rates from financial investments and any

difference goes unrecognized for tax purposes. Furthermore, since income from financial investments in Croatia is much higher than income from real investments, it turns out that the tax system gives an additional privilege to those who are already market privileged (Those who are net creditors and earn a higher proportion of their income from financial investments).

Finally, interest adjusted income tax has an important horizontal equity disadvantage in comparison to the other form of consumption-based tax: the personal expenditure tax. Financial theory indicates that horizontal equity is here accepted as *ex ante* and not *ex post*.<sup>3</sup>

In Croatia, taxation of above-average capital income occurs only at the company level. However some capital income is generated only at the individual level. This is especially true for high capital gains at the individual level in transitional economies, where greater stock market oscillations and imperfections exist than in developed economies. The authors of the Croatian tax model (Rose and Wenger, 1992) admitted that they assumed that the capital income of individuals would more or less be around the "normal" level (officially stated at 5%). This assumption is justified if we take into account simplicity and efficiency from the point of view of low compliance and administrative costs, but it has its inevitable neutrality and horizontal equity distortions.

## **II. Tax expenditure of allowance for equity ("protective interest")**

The "interest adjusted profit tax" is claimed to be efficient, because of its investment and financial neutrality. But the other understanding of efficiency (cost-effectiveness), raises additional questions. In comparison with other countries that do not allow "protective interest" (allowance for equity), the Croatian budget has an additional cost (revenue loss). Despite the fact that "protective interest" is an integral part of the consumption-based profit tax system, it can be regarded as a specific form of tax expenditure. This can be done if we compare it with the traditional corporate income tax. Although the notion of tax expenditure is now familiar, definitions of what constitutes a tax expenditure vary substantially in practice (OECD, 1996). Due to protective interest tax expenditure is calculated relative to the conventional corporate income tax. As noted, although "protective interest" is an integral part of the chosen consumption concept in Croatia, it can be regarded as a special allowance as well as a special general investment incentive in comparison to the "traditional" (corporate) income tax.

An analysis is based on the sorted data from tax returns (Spajić, 1998 and 2000), grouped according to a positive or negative tax base (taxable profit or "tax loss"). Tax expenditures due to the "protective interest" are classified as following:

- Direct tax expenditure: the tax expenditure that follows from a smaller amount of tax from enterprises that have a positive tax base (taxable profit), and
- Indirect tax expenditure: the tax expenditure from enterprises that have a negative tax base ("tax loss") due to the loss carry-forward.

The direct tax expenditure is calculated by taking into account companies that have a positive tax base and pay profit tax in the year. The loss of tax revenue for the government is calculated by applying the relevant statutory rate of tax to the amount which is deducted from taxable profit and represents the "protective interest". This protective interest (row 2 in Table 1) refers only to the protective interest for that year. Furthermore, as already mentioned, tax

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<sup>3</sup> The theoretical model of equivalence between interest adjusted income tax and saving adjusted income tax assumes normal rates of return.

expenditure represents the lost tax revenue for companies that had returns on equity higher than the protective interest for that year. After the deduction of the protective interest a positive tax base still exists. The tax revenue loss is higher because it should include the lost tax revenue of companies that had a return on equity which was positive, but lower than the protective interest. After the deduction of protective interest they had a negative tax base ("tax loss").

The amount of tax expenditure is first expressed as a share of that year's tax in Table 1. The amount of tax paid is calculated by taking into consideration ultimate taxable profit, which is lower than taxable profit after protective interest because of the tax losses from previous years. The relevant tax rate varied from 25% to 35% from 1995 - 98. The protective interest varied from 3% to 5%. The other share represents the proportion of tax expenditure in the tax calculated on taxable profit before protective interest. This share shows the relative amount of decrease in the original tax base due to protective interest for companies that have rates of return on equity higher than this protective interest. The tax rate in the last row is not the real effective tax rate, because it is not calculated on accounting profits. It takes into account only the influence of the protective interest on the tax base.

The absolute tax expenditure is still considerable. Its rise in the second and third year is the result of the rise in taxable profit before protective interest. However, the considerable rise in 1997 is mostly due to the rise in tax rates and the rate of protective interest. The fall for 1998 is the result of the fall in taxable profit before protective interest which caused the fall in protective interest.

The relative tax expenditure ranks from 25-32% of the ultimate profit tax due for that year. Despite the fact that it is undervalued, this is substantial. The fall in the share for the second year is caused by the increase in the tax base. The rise in the third year is caused by changes in the tax law, which influenced the absolute data. The fall for the last year is caused by the fall in the absolute amount of tax expenditure. The same pattern is reflected in the next calculation of the share of tax expenditure (% of tax expenditure 2), which does not take into account loss carry over from previous years and ends with slightly lower results.

The calculation of direct tax expenditure is incomplete because it does not encompass the influence of protective interest on the higher tax loss (Table 2) and the resulting tax expenditure in the future. Its calculation is based on protective interest of companies with a negative tax base and the resulting higher accrued receivables of the tax refund in the future. The amount of receivables which originates from the tax loss of that year alone is calculated (row 3 of Table 2). A rate of 35% is applied to the tax loss for 1996, taking into account the announced rise in the profit tax rate in 1997. The total amount of receivables of tax refund for each year is much higher because it includes losses carried over from previous years.

The increase in accrued receivables because of protective interest for that year is an indirect "tax expenditure" for that year. It can be seen as the present value of future tax expenditures due to the protective interest for the stated year. Its share in the receivables of tax refund is calculated as follows: increase in accrued receivables of tax refund because of protective interest / accrued receivables of tax refund or: protective interest / tax loss.

Although the amount of indirect yearly tax expenditure is very high in absolute and relative terms, it should be taken with precaution. The stated amounts are exaggerated because there is no indefinite loss carry over period in Croatia. The period is limited to 5 years. Accordingly, it is highly likely that the substantial amount of accrued receivables for the tax refund will not be realized. Our data supports this conclusion.

### **III. Incentive elements of protective interest**

Thus the direct tax expenditure and its share in the profit tax (% of tax expenditure 1) must be taken into account. It can be said that the stated percentage (29% on average) represents the exact relative amount of loss in tax revenue which would be collected in the absence of protective interest. This simple accounting logic neglects the behavioral response (the possible positive influence of protective interest as an investment incentive). This is the basic disadvantage of the entire tax expenditure logic and calculation (Rosen, 1999; OECD, 1996).

The "benefit" of this tax expenditure (incentive for investment) is impossible to assess because it is hard to isolate the influence of the tax factors on the investment decision. This is especially so in turbulent times when the general economic and political environment is changing rapidly, as is the case in Croatia.

Investment at the beginning of 2000 still followed a negative trend, even though there was a certain increase in the first quarter 2001 in comparison with the low level in the last quarter of 2000. This level of investment is caused by reduced investments by government and enterprises, as the recession has exhausted their current saving. Simultaneously, the inflow of foreign capital is limited, while banks are hesitant to grant long-term loans to businesses.

It would be wrong to automatically jump to the conclusion that the (consumption-based) tax system, with protective interest as its main characteristic, is inefficient in general and that it is even the main cause for the lack of investment. It is more realistic to support the opinion (see for instance OECD, 1995; Shah, 1995; McLure, Jr., 1999) that the tax factors (and especially investment tax incentives) do not play a major role in attracting investments. Other factors, such as legal, political, institutional, infrastructural as well as other economic factors are much more significant. If they are negative, they can severely constrain the possible positive effect of tax incentives.

Furthermore, the elimination of non-tax disincentives for investment is more important than the existence of tax incentives. But this means that the preconditions for the effectiveness of tax incentives must be created. Again, it will be hard to isolate its positive influence from other factors.

Despite the prevailing negative attitude, especially the OECD and IMF, towards tax incentives for investment, such incentives have increased substantially in range and scope since the 1980s. Especially in transition economies, which gradually abandoned them in the period 1992 to 1995, tax incentives are again being introduced.

If we consider the recommendations concerning the "preferable forms" of tax incentives (Boadway and Shah, 1995; Mintz and Tsiopoulos, 1995; Shah, 1995; Holland and Owens 1997; Genser, 1999; McLure, 1999), protective interest could be claimed to have some "disadvantages" from the point of view of efficiency regarding cost-effectiveness. Tax incentives that apply only to new capital and are up front (payable when investment is undertaken) are likely to be more effective.<sup>4</sup>

Protective interest can be claimed to have some similar disadvantages as a general profit tax rate reduction. It applies constantly to the whole equity capital and not only to the new investment giving a windfall gain to owners of old capital. This also means lower tax revenue for the government in comparison with an investment tax credit or allowance. On the other hand, it does not have up front characteristics. The positive effects for entrepreneurs occur gradually in (all) future years of business. This implies uncertainty for the expected future benefits. This is

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<sup>4</sup> For instance (refundable) tax credits and tax allowances as well as full expensing. The latter is not compatible with protective interest, it can only be substituted for it.

particularly true of transition economies, where, unfortunately, political and economic instability is still an important element. Such a form of tax incentive also gives rise to expected increases in the profit tax burden in the future. In the end, there is a lack of further targeting possibilities, besides the stated lack of targeting to new investment.

Only time will tell whether the first implementation of a consumption-based tax system at the enterprise level will be effective in comparison to its costs and whether it will survive calls for its replacement by a more up front and targeted incentive procedure. Perhaps refundable investment tax credits or allowances would be preferable.

#### **IV. Conclusion**

An interest adjusted profit tax in Croatia is efficient with respect to neutrality, but this formal neutrality is jeopardized by the absence of perfect financial market in Croatia. There is still a distortion between debt and equity capital as well as between the corporate and non-corporate sectors. The efficiency of such a system in the sense of cost-effectiveness is doubtful, mostly because of the high tax expenditures of protective interest. The direct part of this tax expenditure is around 30% of potential revenue from the profit tax in Croatia. The potential effectiveness of protective interest could not be tested because of the predominance of the negative non-tax factors. Still, if it is found necessary to have tax incentives for investment, it seems that more "up-front" procedures and incentives that are limited to new capital would be more efficient.



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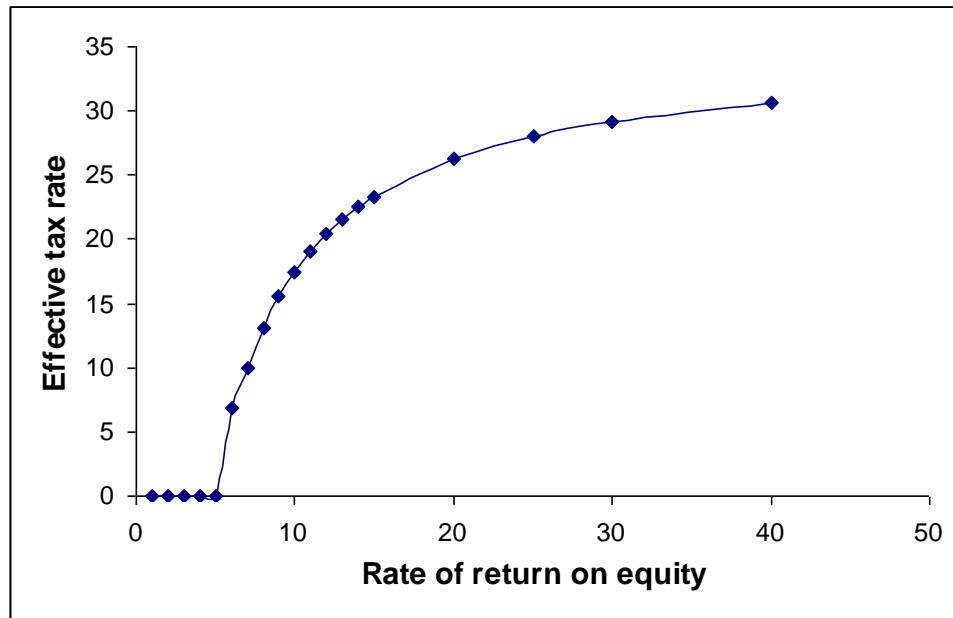
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**Figure 1**

Tax Burden on the Real Rate of Return of Business Investment in Croatia



**Table 1**

Tax expenditure for Croatian companies with a positive tax base  
(HRK Thousand)

	1995	1996	1997	1998
Taxable profit before protective interest	7,543,634	10,792,653	13,198,914	12,928,385
Protective interest	2,185,215	2,503,980	3,749,785	3,233,554
Taxable profit after protective interest	5,358,419	8,288,673	9,449,129	9,694,831
Profit tax <sup>1</sup>	1,271,018	1,873,736	2,764,810	2,907,147
<b>Tax expenditure because of protective interest</b>	<b>546,304</b>	<b>625,995</b>	<b>1,312,355</b>	<b>1,131,744</b>
<i>% of tax expenditure 1<sup>2</sup></i>	<i>30.06</i>	<i>2.85</i>	<i>32.19</i>	<i>28.02</i>
<i>% of tax expenditure 2<sup>3</sup></i>	<i>28.97</i>	<i>23.20</i>	<i>28.41</i>	<i>25.01</i>
Statutory tax rate	25.00	25.00	35.00	35.00
"Effective" tax rate <sup>4</sup>	17.76	19.20	25.05	26.25

<sup>1</sup> Calculated taking into consideration ultimate taxable profit.

<sup>2</sup> Tax expenditure because of protective interest that year / (ultimate profit tax + tax expenditure because of protective interest that year).

<sup>3</sup> The share of tax expenditure in profit tax calculated on taxable profit before protective interest or protective interest / taxable profit before the protective interest.

<sup>4</sup> (Taxable profit after protective interest x statutory tax rate) / taxable profit before protective interest.

**Source:** Data obtained from profit tax returns (Ministry of Finance-Croatia) according to Spajić 1998 (for 1995 and 1996) and Spajić 2000 (for 1997 and 1998)); other relative data: author's calculation.

**Table 2**

Tax expenditure for Croatian companies with a negative tax base  
(HRK Thousand)

	1995	1996	1997	1998
Tax loss before protective interest	8,791,888	11,425,333	10,565,401	16,028,188
Protective interest	4,705,444	5,707,479	8,874,643	6,502,909
Tax loss after protective interest	13,497,332	17,132,812	19,440,044	22,531,097
Accrued receivables of tax refund	3,374,333	5,995,434	6,804,015	7,886,233
Increase of accrued receivables because of protective interest	1,176,361	1,997,611	3,106,125	2,276,018
<i>% of tax refund increase<sup>1</sup></i>	<i>53.52</i>	<i>49.92</i>	<i>84.00</i>	<i>40.59</i>

<sup>1</sup> Protective interest / Tax loss before protective interest.

**Source:** See Table 1; last three rows: author's own calculations.