Tax Neutrality and Business Taxation in Russia

A Proposal for a Consumption-Based Reform of the Russian Income and Profit Tax [1)]

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1. Introduction

Governments levy taxes in order to fund public spending. If we believe in the efficiency of market mechanisms, taxation should not influence the taxpayer's economic decisions, in other words: taxes should be neutral. Since Adam Smith[2)] generations of economists have been attracted by the idea of designing taxes in a way that does not distort the market allocation of resources.

Reality of taxation looks quite different from this ideal. Hall and Rabushka[3)] characterize the U.S. tax system as follows: "The federal income tax is a complete mess. It's not efficient. It's not fair. It's not simple. It's not comprehensible. It fosters tax avoidance and cheating. (...) It can't find ten serious economists to defend it. It is not worth saving." Similar verdicts can easily be found on the British or the German tax system.

The main reason for the chaotic state of modern income taxation lies in the founding principles of the comprehensive income tax: differencials in tax rates and an inconsistent income definition. The Russian income and profit taxes have copied these principles and, therefore, have suffered and will suffer similar symptoms. The recent introduction of a flat rate of 13% for private capital income is a bold and radical move which has certainly taken a lot of pressure from the system. But I think there is another move to follow – and that one has to do with the income tax base rather than tax rates. This is why my focus lies on problems around the definition of taxable income.

The paper consists of 4 parts. I will start with defining the relevant aspects of tax neutrality. Then, I will evaluate general profit taxation in Russia with respect to its influence on economic decisions. The third part discusses the government bill for a simplified single tax for small businesses. In the last part, a proposal for reforming Russian profit taxation is presented that would make the income tax system neutral with respect to most business decisions.

[1)] The paper is based on a presentation given at the conference on "Small Business Taxation: A Blueprint for Big Business?" at the Higher School of Economics, Moscow on June 21, 2002.

[2)] Smith (1979), V.ii.b.6, p. 826 f.

[3)] See Hall and Rabushka (1995), p. 2.

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2. Neutrality as Guiding Principle for Tax Design

Unfortunately, neutrality is an illusion with respect to individuals' most basic decision – whether to earn legal market income, to move into the shadow economy or not to undertake market activities at all – because the latter cannot be observed. Here, the best thing to do for tax authorities is to keep the tax burden on market income reasonably small[4)].

Once you have earned income, you have to decide whether to spend it or to save it for future consumption. An income tax that does not influence the savings decision – and this means: the rate of growth of an economy – is called *intertemporally neutral*.

When indivuals save they must choose between different investment alternatives. *Investment or intersectorally neutral* income taxation will not influence the investors' decision where to invest. There will be no tax discrimination between industry sectors or types of assets. Investment in a corporate business is regarded as just one alternative among others, like bank deposits, self-employment or some small business.

Intersectoral neutrality also includes neutrality with respect to reinvestment decisions: there must be no tax discrimination between profits paid out as dividends and profits reinvested in the same taxable entity.

Last but not least, income taxation should be neutral with respect to *financing decisions*. This means, that the decision between debt and equity should not be influenced by taxation.

A neutral income tax system is also a prerequisite for influencing economic behaviour through taxation. Investment incentives or ecological taxes are most effective in a neutral system.

3. The Russian Income and Profit Taxes

3.1. General Elements of the Income and Profit Taxes

As a guest in your country I do not pretend to have full overview of the Russian tax system. Rather, I will focus on some aspects of the definition of taxable income insofar as they are relevant for the following discussion of tax neutrality[5)]:

- Both the income and profit taxes have a traditional tax base: return on marginal investments – including interest income from bank deposits or government bonds – is treated as regular income.

[4)] For a general introduction into optimal taxation see Rosen (1992) or Sandmo (1976). On tax evasion in Russia see Yakovlev (2001).

[5)] My information on the Russian income tax system and the draft law on simplified taxation of small business is mainly based on: Institute for the Economy in Transition (2001), Karzanova (2002), Polyak and Romanov (2002), a German translation of the Government draft as of May 2002, and the protocol of the remarks of the First Deputy Minister of Finance, Sergei Shatalov, at a breakfast of the American Chamber of Commerce in Russia at the Marriott Grand Hotel, Moscow, on May 17, 2002.

- Business income under the profit tax is calculated on an accrual method similar to and based on financial accounting profit. Interest costs are fully deductible under the profit tax[6)].
- There is no capital gains tax on shares. And there is no double taxation of dividends as the profit tax they carry can be offset against the investor's income tax liabilities.
- For small businesses a Government draft bill plans a "simplified single tax" which would optionally replace the regular profit tax, property tax, VAT, etc.
- The income tax has a general flat rate = 13%, the single tax for small business = 20%, corporate profit tax rate = 24%.

In my analysis I will focus on the regular profit tax and on the simplified tax for small businsesses. For evaluating the effects the Russian income tax has on taxpayers' economic decisions I will use a formal criterion – the net present value – which I illustrate with an example.

3.2. Investment Decisions: The Decision Criterion

Assuming a perfect capital market where individuals can save and lend money at the uniform capital market rate i, investment decisions can be taken on the grounds of the NPV of a project, which I write as:

$$NPV = -I + \sum_{t=1}^{n} (E_t - C_t) \cdot q^{-t}$$

with C_t: cash cost at date t;
E_t: cash earnings at date t;
I: initial investment at date $t = 0$;
q: discount factor with $q = 1 + i$;
t: year of project life with $0 \leq t \leq n$;
NPV: NPV at date $t = 0$ of total cash flow.

Any project with a positive NPV is better than saving at the market rate i, and will be realized. For illustration I will use the example of an investment project with an initial investment of 900,000 currency units (CU) and the following cash flow. At an interest rate of $i = 0{,}06$ it has a positive NPV of 32,441. I assume that all payments are being made at the dates $t = 0, 1, 2, 3$ of the project life and that each period t corresponds to one year.

t	0	1	2	3
I, $E_t - C_t$	-900,000	320,000	350,000	380,000
NPV	32,441			

Table 1: Investment project before tax (with $i = 0{,}06$)

[6)] According to Karzanova (2002, p. 239), under the 2002 tax code, interest deduction can be denied if the interest rate is qualified as excessive. For foreign currency loans this rate is assumed as more than 15%, for Ruble loans more than 110% of the Russian Central Bank's refinancing rate.

When an income tax is levied, the NPV after tax in its most general form can be written as:

$$NPV_\tau = -I - T_0 + \sum_{t=1}^{n} \left(E_t - C_t - T_t\right) \bullet q_\tau^{-t}$$

with q_τ: discount factor after tax; $q = 1 + i_\tau$;
T_t: Tax payment at date t;
NPV_τ: NPV after tax of total cash flow.

In an income tax that taxes the market rate of interest (which is equal to the return of a marginal investment) as regular income the after-tax market rate $i_\tau = i(1-\tau)$ is used in the discount factor. On the other extreme there are consumption-based tax systems which do not tax the marginal invesment and therefore the discount factor $q_\tau = q$.

An income tax that is neutral with respect to investment decisions must fulfill two conditions. First, the NPV after tax must be a monotonous (not necessarily linear) function of the NPV before tax

$$\frac{dNPV_\tau}{dNPV} > 0 \quad \text{for all } NPV,$$

and second, investments that are marginal before tax must also be marginal after tax:

$$NPV_\tau\left[NPV = 0\right] = 0\,.$$

It is assumed here that cash flows and interest rates are the same before and after tax.

3.3. Taxation of Economic Income

Taxation of true economic income (Johansson 1969, Preinreich 1951, Samuelson 1964) is widely seen as the theoretical foundation of the comprehensive income tax. Economic income at any date t is defined as cash flow less economic depreciation δ_t of the investment. Economic depreciation is the difference between the remaining cash flow's present value at the beginning and at the end of the tax period t. This is equivalent to the interest rate i on the remaining cash flow[7]:

$$\pi_t = E_t - C_t - \delta_t = E_t - C_t - \left(V_{t-1} - V_t\right) = i \bullet V_{t-1}\,.$$

Economic income from one CU invested at the market rate i is the market rate itself; therefore, the discount rate is the market rate after tax, that is:

$$i_\tau = i\left(1-\tau\right).$$

Under taxation of economic income NPVs before and after tax are equal:

$$NPV_\tau = NPV,$$

[7] Line 3 can easily be derived by rewriting V_t as $(1 + i)\, V_{t-1} - (E_t - C_t)$ and inserting this into line 2.

and taxation is neutral. This can be demonstrated with the example project. I assume a tax rate of 25% and a capital market rate of 6%. Line [2] shows the remaining cash flow's present value, line [3] the economic depreciation, line [4] the tax base and line [5] the taxes paid. Discounting the net cash flow [6] results in NPV_τ=32,441 which is equal to the NPV before tax.

	t	0	1	2	3
[1]	$I,\ E_t - C_t$	-900,000	320,000	350,000	380,000
[2]	V_t	932,441	668,387	358,491	0
[3]	δ_t		264,054	309,897	358,491
[4] = [1] − [3]	π_t		55,946	40,103	21,509
[5]	T_t		13,987	10,026	5,377
[6] = [1] − [5]	CF_t	-900,000	306,013	339,974	374,623
	NPV_τ	32,441			

Table 2: Investment − taxation of economic income (with $i = 0{,}06,\ \tau = 0{,}25$)

Note that economic depreciations [2] are progressive in this example. For different structures of the project cash flow linear or degressive patterns could be required. The sum of all economic depreciations is always equal to the present value of the cash flow or the NPV plus the initial investment. Only for marginal projects depreciation costs are equal to the historic investment I at date 0.

3.4. The Tax Base of the Russian Profit Tax

Under real-life conditions it is practically impossible to design a comprehensive income tax that is neutral with respect to investment decisions. This is as true for the Russian as for the German or the U.S. profit tax. The reason is that capital is valued at its historic value whereas economic income calculation is based on the present value of future cash flows. Let me explain this using the investment example.

	t	0	1	2	3
[1]	$I,\ E_t - C_t$	-900,000	320,000	350,000	380,000
[2]	dep_t		300,000	300,000	300,000
[3]	A_t	900,000	600,000	300,000	0
[4] = [1] − [2]	π_t		20,000	50,000	80,000
[5]	T_t		5,000	12,500	20,000
[6] = [1] − [5]	CF_t	-900,000	315,000	337,500	360,000
	NPV_τ	25,961			

Table 3: Investment − Russian profit tax (with $i = 0{,}06,\ \tau = 0{,}25$)

A typical income tax will depreciate the investment of 900,000 over the useful life of the asset, in the example I have chosen a linear scheme [2]. This is less than the

sum of the economic depreciations which was 932,441. Therefore, nominal depreciation handicaps any real investment project with a positive NPV compared to saving at the marginal rate of return. Here the NPV has gone down to $NPV_\tau = 25{,}961$.

Furthermore, the structure of economic depreciation depends on the structure of the project's cash flow. Two projects with the same NPV but different cash flows implie different depreciation rules. Applying the same depreciation pattern to both – whether linear, degressive or progressive – is not neutral. After-tax NPVs will be different for both projects. This means, that a traditional profit tax will always influence capital allocation to industry sectors.

In reality, it is not clear if the NPV after tax is lower, equal or higher than before tax. Depreciation of assets is not the only difference between accrued income and economic income. There are many types of balance sheet assets and liabilites. And many accounting rules can help reduce the tax burden of the investment project. Just imagine, that in the example project you would be allowed to make a provision for some future warranty costs. This reduces taxable income today on the same pre-tax cash flow.

Indeed, any accounting rule that allows you to postpone the realization of cash inflows or to predate the realization of cash-outs reduces the present value of taxes. I was not surprised to read that in this year's discussion of proposals for income tax reform in Russia there was enormous dispute and bargaining on profit calculation rules like depreciation rates, useful life tables, pooling of asset classes or not, provisions for bad debt of banks or for warranty services.

Lobbying may reduce the tax burden of business activities, but is at least unclear if this has also a positive effect on growth or if it is just a windfall profit for those taxpayers who can make use of the accounting rules in question.

3.5. Intertemporal Effects

Our finding that taxing economic income leaves the NPV of any investment unchanged was based on the assumption of a discount factor that was equal with and without taxation. You may ask why an investor who expects a minimum return $i = 0{,}06$ in a world without income tax should not ask for the same net return under taxation.

If i denotes the capital market rate in a world without tax the required rate of interest in a world with interest taxation would be given by:

$$i^* = \frac{i}{1-\tau}.$$

In our example $\tau = 0{,}25$, so the investor would ask for a minimum return of $i^* = 0{,}08$. When the discount-factor rises, the NPV of a given project will then be lower after tax, that is $\mathrm{NPV}_\tau < \mathrm{NPV}$. In total, less projects will remain profitable, people will save less and the economy grows at a slower rate. This effect is a well-known result of income taxation in neoclassical growth models[8]. In contrast, *cash flow taxes* are intertemporally neutral.

[8] See Sinn (1985 and 1987).

	t	0	1	2	3
[1]	I, $E_t - C_t$	-900,000	320,000	350,000	380,000
[2]	V_t	898,021	649,863	351,852	0
[3]	d_t		248,158	298,011	351,852
[4] = [1] − [3]	π_t		71,842	51,989	28,148
[5]	T_t		17,960	12,997	7,037
[6] = [1] − [5]	CF_t	-900,000	302,040	337,003	372,963
	NPV_τ	-1,979			

Table 4: Investment − taxation of economic income (with $i = 0{,}08$, $\tau = 0{,}25$)

3.6. Inflation

Under inflation the intersectoral and intertemporal distortions grow more important. As all cash flows including the market rate of interest contain a compensation for inflation taxing them nominally can result in very low or even negative real rates of return.

I do not know the accounting rules the Russian profit tax code allowes in case of inflation[9]. A typical solution which can be found in many tax codes is a more or less selective adjustment of assets or equity values. Depreciations based on written-up inventories will then reduce the inflationary effect on the taxable income. But again: this will not ensure intersectoral and intertemporal neutrality[10].

For interest income of individuals, the low Russian income tax rate of 13% reduces the problem a lot. So, if investments are debt-financed the negative effect on growth may be small. This leads us to the next aspect: distortions of financing decisions.

3.7. Effects on Financing Decisions

In a comprehensive income tax − and Russia should be no exception here − interest expenses from a business loan are fully deductible and the creditor's interest income is taxed as regular income. Typically the ultimate recipient's income tax rate will be lower than the profit tax rate of the debtor, in Russia: 13% vs. 24%. This induces investors to replace equity by debt. To the extent that income earned in a business can be shifted from the debtor to the creditor it will not be taxed at the intended profit tax rate 24% but only at the lower tax rate of the creditor, 13%.

[9] According to Karzanova (2002, p. 237), revaluation of assets was allowed until 2001 and was abolished with the new Russian tax code which came into force in January 2002.

[10] A systematic and neutral solution would be to tax real instead of nominal economic income (Wenger 1985, p. 717 ff.). Therefore, the market rate of interest has to be split up into an inflation rate and the real rate of interest $i^r = \frac{(1+i)}{(1+p)} - 1$. The tax base from one CU invested at the capital market rate is the real interest rate i^r, real economic income from other projects is the real return on the remaining cash flow's present value: $\pi^r = i^r \cdot V_{t-1}$, where the present value of future cash flows V_{t-1} is discounted at the nominal rate of interest. Again, this is not feasible in real life because we cannot fix depreciations as we do not know future cash flows.

In many cases the business owner himself will lend money to his business in order to reduce the tax burden on his investment. Therefore, there are restrictions on the deductibility of interest expenses or thin capitalization rules that limit the debt-equity ratio or – like in the Russian income tax – interest income is taxed at a higher rate if it exceeds a benchmark rate. All these rules can limit tax planning games to a certain extent. Nevertheless, I believe that the traditional income tax has a natural tendency to privilege debt over equity. In Germany and the U.S. a big share of private savings is invested in long-term investment vehicles which enjoy preferencial tax treatment. For example, German life insurance companies have become big and powerful thanks to distortionate tax rules. On the other hand German private investors traditionally have invested very little in shares.

I would expect the Russian income and profit tax to have similar long-term effects. Of course, these effects could be reduced if interest income would be taxed at a rate equal to the debtors' tax rate without exceptions, that is 24% instead of 13%. But this may result in slower economic growth as intertemporal neutrality is now hurt in all saving forms. This trade-off – between distorting companies' financial structure and slowing down growth – is may be the biggest dilemma of the traditional income tax.

4. The Simplified Single Tax for Small Businesses

4.1. The Simplified Single Tax

Recently, a lot of attention has been given to the insufficient development of small business in Russia and taxation has been identified as one of the culprits. This year, the Russian government has drafted an interesting bill on a special tax regime for small businesses. Self-employed taxpayers and small companies can opt for the simplified singel tax which replaces regular income or profit tax, property tax, VAT, and some more taxes. There are two methods of income calculation under the single tax: (1) imputed income and (2) a modified cash flow income.

Imputed income methods do not perform very well from a neutrality perspective. They can only be justified as a simplification rule in cases where calculating taxable income is impossible. The second method, the modified cash flow tax, is more interesting for the purpose of this paper. Here, the tax base is the businessrelated cash flow excluding payments from financial contracts (debt or assets). This corresponds to the so-called R-Base type of a cash flow tax where R stands for real or non-financial assets. This income is taxed at a rate of 20%. If income is negative there is no immediate loss-offset. Rather, losses can be carried forward over a maximum of 10 years. During this period loss-offset is limited to 30% of the income of the respective period. That is: after the loss-offset there must remain a positive tax base of at least 70% of the year's cash income.

4.2. The Cash Flow Tax in Theory

Before discussing the single tax the theoretical concept of the cash flow tax (Brown 1948, Kaldor 1955) is presented. Cash flow taxation means that the cash flow of an investment itself is the tax base. The tax authority participates in an in-

vestment and any revenue with a share equal to the tax rate τ. As a consequence, an investment's rate of return is the same before and after tax. This can easily be shown for a one-period investment of the amount I with a rate of return r:

$$r_\tau = \frac{(1-\tau)(1+r)I - (1-\tau)I}{(1-\tau)I} = r\,.$$

Therefore, our discount rate is the gross market rate i, irrespective of whether it is formally taxed or not. The after tax NPV of the investment project is given by:

$$NPV_\tau = -(1-\tau)I + \sum_{t=1}^{n}(1-\tau)(E_t - C_t)\bullet q^{-t} = (1-\tau)NPV\,.$$

After-tax NPVs are a proportional factor of before-tax NPVs, thus maintain the pre-tax order of relative attractiveness among all available investment alternatives. For illustration the example project is taxed on a cash-flow basis at a rate of τ=0,25, the market rate is again i = 0,06. The NPV after tax is 24,331, which is 75% of the pre-tax NPV.

	t	0	1	2	3
[1]	I, $E_t - C_t$	-900,000	320,000	350,000	380,000
[2]	T_t	-225,000	80,000	87,500	95,000
[3] = [1] − [2]	CF_t	-675,000	240,000	262,500	285,000
	NPV_τ	24,331			

Table 5: Investment − cash flow taxation (with i = 0,06, τ = 0,25)

As to credit arrangements, two different forms of treatment are possible. Under an *R-Base tax*, cash flows from financial contracts, loans or investments, are ignored. All taxes on real investments with positive NPVs are borne by the investors realizing them. If a part of this positive present value or economic rent is transferred to a creditor through a loan arrangement with an interest rate above the market rate[11] the tax is levied where the rent from the real investment is realized. The debtor's and creditor's NPVs from the loan contract are the same before and after tax.

The other possibility is the *R-and-F-Base tax* which includes cash flows from financial contracts. In this case the indebted investor is allowed to deduct all loan servicing payments, interest and principal redemption, from his tax base, and the loan he receives is treated as earnings. The debtor's after-tax NPV from loan at an interest rate above the market rate is negative before tax, for example -16,000. Given a tax rate τ = 0,25 his after tax NPV from the loan is 0,75 • (-16,000) = -12,000. The share of the project's NPV that is transferred to the creditor through the loan at a rate $i_L > i$ is taxed with him.

[11] Considering loan arrangements with a $NPV \neq 0$ means to give up the assumption of a perfect capital markets. We can still use *NPVs* as decision criterion as long as individuals can always save money at an interest rate i. In addition we must assume that the total cash flow of the project plus loan is always positive, so that there is no need for an additional loan or credit line.

Both versions of cash flow taxation are neutral if applied consistently to all taxpayers. Problems of tax evasion arise when part of the taxpayers are taxed one way and another part the other way. For example, if companies can deduct cash flows from loan contracts and individuals financial investments are not taxable, there will be an incentive for profit syphoning. Positive tax bases in companies will be transformed into tax free cash flows via loan contracts with invidiuals at exaggerated interest rates above the market rate.

4.3. The Single Tax – Easy to Handle But Not Neutral

When evaluating the single tax we must keep in mind that its tax base is the business cash flow, but that the context is a comprehensive income tax. Therefore, it cannot be neutral. Neutrality would only be given in the context of a consumption-based income tax code. Still, my balance is positive:

- Income calculation is simple. Documentation requirements are minimal compared to the accrued income method. Invoices and receipts must be stored, and all expenditures and inpayments must be accounted for in a cash book. (To be more precise: payments to or from financial accounts as well as non-business related payments must be earmarked in the cash book. Furthermore, you must keep track of payments and withdrawals in kind.)
- Generally speaking, the single tax can be expected to promote real investments in small businesses because their tax treatment is favorable compared to financial investments whose return is taxed with at least 13% plus 35% for extraordinary high interest rates.
- The restriced loss offset works in the opposite direction, the later taxes are reembursed the less they are worth in NPV-terms. Some critics have demanded to abolish the 30%-limit. I don't think this is necessary. My proposal is to abolish the ten-years-limit and to accrue the loss carry-forward at the interest rate of government bonds. This allows the Russian state to collect some tax revenue also from the small business sector. On the other hand the devaluation of taxpayers' claims can be avoided.
- The most critical point about the single tax lies in the treatment of interest costs which are not deductible. If the creditor, for example a bank, is subject to profit tax, he will have to pay taxes on his interest income from the loan. Therefore, income generated in the small business and transferred to the creditor is taxed twice. The only chance to avoid this for the small company is to opt out of the single tax and return to the regular income or profit tax scheme, which is probably a dismall choice. You might argue that this is not a problem at the moment as small business doesn't have access to credit finance in Russia. Anyway, this could become a problem inthe near future.

5. A Proposal for Neutral Business Taxation in Russia

Given the distortionary effects on economic decisions of the Russian income tax system the question must be raised what alternative is at hand, and – to repeat the leitmotif of this conference – if the draft for small business taxation could be this alternative. I do think that a reform towards a *consumption-based income defi-*

nition will solve many of the problems I have mentioned before[12]. Actually, only minor changes are needed to get there.

5.1. The Croatian Example

My proposal is based on the only existing consumption-based income tax system. Since 1994 the Republic of Croatia had an income tax system which was neutral with respect to investment and financing decisions as well as intertemporally neutral[13]. I use the past tense, because after general elections in 2001 major changes have been made to the tax code which have destroyed most of the constituent principles of this system.

The system has rendered good results. It was convient to handle, generally accepted among taxpayers and, what is most important, it generated considerable tax revenues. According to Keen and King (2002) the level of revenues was comparable to comprehensive income tax systems in industrialized countries.

5.2. A Consumption-based Income Tax System for Russia

Making the Russian income and profit taxes neutral does only require minor changes. This is an enumeration of the main elements:

- Labour income is to be taxed as before.
- Dividends received and capital gains from holding shares are not regarded as income.
- Interest income is not taxable on a personal level. It could be argued that interest income at an excessive rate (which would have to be defined) has to be taxed in order to prevent tax planning that transforms labour income into capital income in order to avoid the social tax.
- Income from any other private investment, self-employment or small business is taxed according to the rules of the single tax bill for small businesses. Private investment means, for example, real estate or property rights and the like.
- The imputed income method is reserved to cases of insufficient documentation or to branches where documentation cannot be expected, for example small agricultural businesses.
- The taxpayer may opt to be taxed with any of his investments under the profit tax instead of the single tax.
- Losses may be carried forward without time-limit and are accrued with the interest rate on risk-free investments. Nevertheless, the possible loss-offset in any tax period can be restricted in order to generate the required tax revenues.

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[12] For a good first reading on consumption-based tax reform see Rose (1991) and Rose (1998), for proposals on such a reform in the UK see Kay and King (1986) and Institute for Fiscal Studies (1978), in the U.S. see Hall and Rabushka (1995) or Bradford (1986). On the so-called dual income tax which the four nordic countries (Denmark, Finland, Norway and Sweden) have introduced: Cnossen (1999) or Sørensen (1994).

[13] For details on the Croatian income and profit taxes see Schmid, Wissel and Stöckler (1996).

5.3. The Modified Profit Tax

Companies (corporations and partnerships) and the business of individuals exceeding a certain size are taxable under the profit tax. The size limit may be defined like in the single tax bill. Individuals and entities taxable under the profit tax must keep complete accounting records. Like under the current Russian profit tax, company profits are calculated as an accrued balance sheet income. If the general financial accounting numbers are used, profit must be modified according to the profit tax code. The only but essencial new element is the deduction of an allowance for the cost of equite (ACE)[14]. This scheme shows how taxable income is calculated:

taxable income under 2002 legislation − allowance for cost of equity (ACE)
+ excess interest paid to subjects of income tax + imputed interest income from loans to subjects of income tax
= tax base of modified profit tax

Table 6: Tax base of the modified profit tax with ACE

The deduction of an allowance for the cost of equity is calculated as the product of the "protective interest rate z" and the equity base Q during the tax period:

$$ACE_t = z \bullet Q_{t-1}.$$

The protective interest rate is fixed by tax authorities and should ideally be equal to the interest rate on risk-free investments. Given the fact, that capital markets in Russia are little developed this rate may be difficult to observe. In this case, the protective interest rate could be calculated as an assumed real market rate of interest (of say 3−4%) plus some inflation rate which is published regularely and reliably. The protective interest rate could then be calculated using the Fischer-formula[15]:

$$z = \left(1 + i^r\right)\left(1 + p\right) - 1.$$

As book equity varies during a tax year due to e.g. dividends paid out or new shares issued, the ACE should not be based on book equity at the beginning of the year. It should rather be calculated on a quarterly or even monthly basis. Whatever the rithm, equity increases must be accounted for at the end of a month, and equity reductions at the beginning of a month. This is done to prevent arbitrage games designed to inflate book equity and reduce the tax base.

The tax rate of the profit tax should ideally be equal to the top rate of the income tax, provided that there is no other selective tax which has to be taken into account. In general, the tax rate on a non-distorting tax-base can be higher than on a distorting one. For example, in Croatia the profit tax rate and the top rate of the income tax was 35% in 2000.

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[14] The ACE tax has first been proposed by Boadway and Bruce (1984), Bond and Devereux (1995), and Wenger (1983, 1985, 1986).

[15] See Fischer (1930).

To illustrate the functioning of the ACE system I use the same numerical example as before. In line [2] linear depreciations are assumed, line [3] is the remaining book value of the investment after depreciation[16)], line [4] is the ACE, that is 6% of the book value at the beginning of the same period. Taxable income π is line [5]. As you can see from the example, the after-tax NPV under the ACE-tax is exactly the same as under cash-flow taxation, that is $(1 - \tau)\, NPV$ or 75% of the NPV before tax.

	t	0	1	2	3
[1]	$I,\ E_t - C_t$	-900,000	320,000	350,000	380,000
[2]	dep_t		300,000	300,000	300,000
[3]	A_t	900,000	600,000	300,000	0
[4]	ACE_t		54,000	36,000	18,000
[5] = [1] − [2] − [4]	π_t		-34,000	14,000	62,000
[6]	T_t		-8,500	3,500	15,500
[7] = [1] − [6]	CF_t	-900,000	328,500	346,500	346,500
	NPV_τ	24,331			

Table 7: Investment − profit tax with ACE (with $i = z = 0{,}06,\ \tau = 0{,}25$)

This implies that depreciation rules are meaningless for the tax burden. The advantage from accelerated depreciation is offset by a reduced ACE given the lower book value of the asset written down. *Any* other dispute over tax accounting rules which dominates tax debate everywhere on the world, not only in Russia, loses its importances. Provisions for bad debt or for contigent liabilies, valuation of goods and products on stock, timing of earnings realization, etc., are all neutralized by the ACE deduction.

In the example, I have assumed an *immediate loss offset* in year $t = 1$. If we carry forward the loss, instead, accrued with the protective interest rate, this will not change the NPV. Also, unlike the Russian income tax, under *inflationary conditions*, there is no further provision needed given the ACE and the fact that personal interest income is also non-taxable.

As to the effect on financing decision, neutrality is reached through general deductibility of interest costs if the creditor is also taxed under the profit tax. So, this is like in a traditional income tax. In the ACE-system, this has the effect that a positive NPV from a business is only taxed once. If the interest rate on the loan is equal to the market rate $i = z$ the whole NPV will be taxed with the debtor. The creditor will not have to pay taxes as his interest earnings will be offset by an ACE deduction of equal amount. If the loan's interest rate is higher ($i_L > i = z$) this will reduce the debtor's tax base and the creditor has a positive taxable income of equal amount. His income is the interest earned less the ACE deduction on the capital employed for the loan he has handed out.

[16)] Here, the asset value is equal to the equity value at each date t as the project is equity financed and cash flows are paid out. Reinvesting cash flows (fully or partly) at the market rate i, instead, will not affect the result in NPV terms due to the ACE deduction of equal amount (for $i = z$).

5.4. Coordination of Profit and Income Taxes

From a technical viewpoint the profit tax and the simplified single tax look quite different. But they are both forms of consumption-based income taxation and, as such, are neutral. The single most important difference is that under the income tax interest income from financial investments is ignored and that interest costs for loans or credits are not deductible. To avoid arbitrage a lot of care must be taken at the design of the interface of credit contracts where one party is subject to income tax, the other to the profit tax.

Two possible constellations must be considered: (1) the debtor is subject to the profit tax, the creditor to income tax and (2) vice versa.

ad 1): If a debtor, for example a bank, were allowed to deduct interest costs paid to an individual without any limit this bank could effectively transfer to its creditor positive NPVs that it has created through its business without paying taxes. There, it would also remain tax-free as interest income is not taxed under the income tax in my proposal. To avoid this the deduction of interest costs is limited to the level of the protective interest rate z when it is paid to a creditor who is not subject to the profit tax himself.

ad 2): In the other constellation taxes can be avoided if the subject of the profit tax lends money to someone underlying the income tax at a very low rate of interest. If this happens some minimum interest income must be imputed to the ceditor on the basis of the protective interest rate z.

The alternative to these coordination rules would be to tax interest income and make interest costs deductible in the income tax. But this would raise the cost of administration and of compliance enourmously. And if tax rates differ among individuals, there would still remain room for tax planning even in this case. On the other hand, the right to opt for the profit tax instead of the income tax, unlike today, really reduces the need to allow for interest cost deduction in the income tax.

5.5. Other Issues

There are some more coordination problems that I will not treat in detail. Let me just mention a few points:

- Opting for taxation under the profit tax instead of the income tax means a change in the accounting method applied. Therefore, some corrective calculations must be made at the date of transition which will lead to an extraordinary tax base (typically positive) which is taxable like regular income.
- A profit or loss from liquidation of a business (from disclosure of reserves) should be treated like regular income.
- When a firm is sold as a going concern, there are two systematic solutions. They are different in the timing of tax revenues but not in the NPV of the amount of taxes levied. If the acquirer retains the seller's book value, a profit or loss from the sale will not be treated as income. Alternatively, all reserves can be disclosed. The acquirer gets an extra tax shield from the marked-up asset values (and a goodwill), the seller pays taxes on a profit which are equal in present value to the buyer's additional tax shield.

Consumption-based taxation does not solve all problems of the traditional income tax: Of course, a catalogue of non-business related expenses must be defined, and you have assessment problems when you have to make adjustments of revenues and expenses in cases of revenues in kind (e.g., barter trade) or when goods or assets are withdrewn for non-business purposes.

6. Resume

I have analyzed the main elements of the Russian income and profit taxes with respect to their effect on economic decisions. Like other traditional income tax systems in OECD countries it heavily affects investment and financing decisions and, therefore, is the target of continous political bargaining and lobbying.

Some major distortionary effects of the Russian income tax system can easily be removed through minor reforms which make it a consumption-based income tax system. I know that the public discussion of the Russian tax system has a rather different focus. And I know that many a politician will argue that those issues people are aware of and criticize should be adressed with priority.

But as economists we must also keep in mind that taxpayers ask for low taxes – for themselves, not for the others, of course – but they do not care about neutral taxes. A neutral tax system is a typical public good. Apart from some strange economists nobody will miss it. But society pays a price for a non-neutral tax system in form of less growth and a distorted industry structure.

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