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Entrepreneur's Choice of Tax Base: Earned or Capital Income?

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Abstract

The determination of the entrepreneur's tax burden in the dual income tax system is studied. The dual system taxes income from capital at a flat rate, but earned income at progressive rates. The media view claims the entrepreneur to be able to take his pay as favourably taxed income from capital. It is shown not to be supported by the recent data nor by deductive analysis in case of start-ups when (i) proper opportunity costs of the outside employment option and (ii) the financial capital tied in the company, (iii) the constraint on the maximum dividend taxed as capital income and (iv) the obsolescence of the tax surpluses (corporation taxes on undistributed profits) in the imputation system are taken into account. Instead it is shown to be optimal for the entrepreneur to raise dividends from his start-up also as earned income. Therefore, the entrepreneur's tax equilibrium implies tax-indifference between raising the marginal euro from his company either in the form of dividend or capital gains income. Because the latter is double-taxed, the marginal tax rate on dividends as earned income must equal the average (and marginal) tax rate on capital gains. The split-rule into capital and earned income is shown to offer a minor incentive for supplying additional entrepreneurial effort, but the system itself discriminates capital formation of start-up enterprises in contrast to old capital from the past tax regimes. Finally, it is stressed how the previous tax system was tilted towards channelling income from the non-listed company to the household sphere in the form of wages and earned income while the dual income tax system tilts such reporting incentives towards income from capital without tax avoidance.

Key words: dual income tax, tax arbitrage, capital gains tax, double taxation

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Entrepreneur's Choice of Tax Base: Earned or Capital Income?

Ever since Finland adopted the dual income tax system in 1993, confusion has prevailed of the relative severity of the flat-rate tax on income from capital with respect to the taxation of earned income at progressive marginal tax rates. The main daily, Helsingin Sanomat, is representative of the view held by mass media. Its editorial (Nov 4th 2000) suggests that an entrepreneur can take his pay as favourably taxed income from capital instead of highly taxed earned income. The view is shared by many economists, lobbyists and bureaucrats who bother not to study the problem itself, but accept the illusion of truth in the persuasion of media.

The view is based on the annual list of taxpayers[1] which is usually topped by those who sold their businesses during the previous year and whose reported tax rate is close to the statutory flat-tax rate on income from capital. It is selectively[2] compared implicitly to the journalists' and readers' own marginal tax rates in the bracket of 50-59 per cent. Such a mental exercise is easily done by everyone and as easily accepted truth, though in fact according to the IRS statistics (Verohallinto 2001, 2002) the average tax rate of wage earners' assessed income has not exceeded 30 per cent in the recent years.[3]

The flat tax is, however, on realised nominal capital gains without any allowance for the decline of purchasing power of the invested funds. Therefore, inflation increases the tax rate of real capital gains while the deferral of realizations, the effective interest-free loan from the state treasury, decreases it. The effect of the former is confiscatory at low real rates of return[4]

[1] This is a public register in Finland, containing each taxpayer's taxable income and amount of income and wealth taxes paid.

[2] Interestingly, Helsingin Sanomat has never analysed why their owners' reported tax rate was over 70 per cent before the company went public. Had they done it correctly they had been obliged to do the same analysis as in this paper.

[3] It was 28.1 (28.3) per cent in 1999 (2000). These figures include: a) dividends taxed as earned income, their average tax rate being 51.7 (52.6) per cent in 1999 (2000) for all natural persons (own calculations on the basis of IRS statistics), as well as b) tax on earned income from proprietorships and c) wealth tax. The average tax rate of all natural persons (pensioners, wage and salaried taxpayers plus self-employed) was 26 (29) per cent in the respective years.

[4] Sunset businesses as village shop keeping operating in the owner's premises will thus get their final blow from the tax collector.

as is evident from Appendix which repeats the calculations of Ylä-Liedenpohja (1999). The situation is even worse when the effect of the annual wealth tax is included. Adding the corporation tax on retained earnings, their economic tax rate is of the size of 50 per cent or over. Ylä-Liedenpohja (1997) considers non-listed companies in the arbitrage equilibrium and conjectures approximately the same effective tax rate to hold also true for dividend income, because part of the dividends is taxed as earned income, and for interest income, because the flat tax is on nominal interest income. Such an equilibrium can be characterized equivalent to classical corporation tax with double taxation of the whole corporate income.

This paper illustrates first numerically the problem to what extent it is possible for an entrepreneur to transform his wage into capital income, utilising the year 2000 tax code of Finland. Such a switch is demonstrated to be impossible unless the entrepreneur's initial stake, inherited from the previous tax regime and invested in his venture, is unrealistically high. The reason is that the tax code limits the maximum that can be taxed as income from capital in any year to be a certain percentage of the year-end book net worth of the company. Higher dividends are taxed as earned income at progressive marginal tax rates. If the entrepreneur retains those earnings instead, the company accumulates not only its book net worth but also tax surpluses, corporation taxes on undistributed profits. They can be used towards the imputation credit on dividends, if in some year the annual dividend is higher than that year's post-corporation tax profit, but only for a 10-year period after which they become obsolete.

So the entrepreneur faces an intertemporal trade-off, whether to distribute dividends that are taxed as earned income, or put off their distribution to the future when the book net worth of the corporation is higher as will be the dividend taxed as income from capital. The optimality of distributing dividends as earned income in a non-listed company is studied in Section 2, taking into account the fact that unutilised tax surpluses may become obsolete. Section 3. examines the tax arbitrage equilibrium in which the entrepreneur is indifferent to raising his income from the company in the form of dividends as earned income or capital gains. Final section concludes and relates the findings to topical policy issues.

1. The mass media problem

Mass media correctly sees the entrepreneur as a rational tax planner, but denounces it morally wrong. To concentrate solely on the easiness or difficulty of transforming the entrepreneur's own pay into income from capital, he is assumed to incorporate himself for the sole business of channelling his pay as an editor into income from capital. The specific assumptions are as follows. He invests the minimum share capital of FIM 50000 to his company. Every year he pays himself a wage big enough to benefit from the initial phase of the progressive tax schedule, where the marginal tax rates are lower than the flat-tax rate 29 per cent on income from capital, and from certain allowances and deductions which are granted only on the basis of taxable earned income.[5] Therefore, his taxable wage income after those allowances and deductions is FIM 63600 in the state income taxation.[6]

The columns of Table 1 give the financial information of the company in different years as follows:

MATHope = the opening mathematical value (= book equity) of the company, the first year value being the initial share capital

PROFpre = pre-tax profit of the corporation which comprises each year of the editor's residual pay FIM 200 000, net of any natural operating expenses, billed by the company plus a 10 per cent pre-tax real rate of return on MATHope, which is a slight overestimate of the opportunity cost of those funds in financial markets

CorpTax = corporation tax paid at the prevailing rate of 29 per cent

PROFpost = post-tax profit of the corporation

MATHend = the year-end mathematical value of the company, which is MATHope + PROFpost

[5] There are two different general allowances which reach their maximum at the level of taxable income of FIM 63600 where the marginal tax rate on earned income jumps from 26 per cent to 36 per cent. The most important is however the deductibility of pension insurance premiums, which the entrepreneur himself deducts from his taxable earned income, not his company. The entrepreneur himself can also choose his pension wage on the basis of which the premiums are determined. In this example the pension wage is assumed to the same as the one as a salaried editor.

[6] His post-tax annual wage is FIM 51670, because taxes are FIM 930 to the state and FIM 11000 to the municipality, assuming a 20 per cent tax rate. Taxable income in the latter taxation is FIM 55000 due to different allowances.

DIV = dividend which is taxed as income from capital, being 71 per cent of the 13.5 per cent gross return on MATHend; DIV is assumed to be paid in the beginning of next year so that MATHope =MATHend minus DIV
TaxCredit = the imputation credit on DIV which is 29 per cent of the 13.5 per cent gross return on MATHend
TaxSurpl = the year's tax surplus equal to CorpTax minus TaxCredit

There are four fallacies in the media claim.[7] The first is the neglect of the constraint which limits the maximum pre-tax dividend, DIV plus TaxCredit, to be 13.5 per cent on MATHend, the year-end[8] book equity of the corporation. The second is the neglect of the intertemporal aspect of the problem which means that book equity can be accumulated only by saving out of post-tax income and generating tax surpluses in the company. The third is the neglect of the opportunity wage of the entrepreneur so that part of the disclosed profit of the company is in fact no profit at all but reflects the wage of his outside option. The fourth is the neglect of the opportunity cost of the funds invested in the company, the 10 per cent real return in financial markets. In the example of Table 1 the whole of pre-tax profit reflects the opportunity costs of the entrepreneur's labour and invested funds. The entrepreneur is assumed to be as productive as in his outside option.[9]

It is seen from Table 1 that dividend DIV, which the entrepreneur can take as income from capital, falls far short of PROFpost. Because DIV is 9.585 per cent on MATend, our poor editor should have an initial book equity X so that

[7] A milder version of the view is contained in the international tax literature on the dual income tax system, criticizing the Finnish system that retained corporate profits are subject only to the corporation tax rate even though such income may derive from the owner-manager's labour. The observation does however not address the problem of how such undistributed profits can be transferred to the household sphere without eventual double taxation.
[8] In contrast, an entrepreneur whose business is unincorporated faces the constraint on the basis of the beginning-of-the-year net worth of his business. Thus he cannot choose between earned and capital income. Capital income is separated first, and the residual is taxed as earned income. This rule is to the disadvantage of those entrepreneurs who earn less than the income level at which the average tax rate of earned income reaches 29 per cent. They are taxed more heavily than wage earners at equal income levels.
[9] Due to this assumption the editor's residual gross salary is in fact smaller than the pre-tax profit FIM 200000 of the company which is boosted by the employer's tax-like social insurance premiums. It is of course debatable if any of them are taxes, that is, the entrepreneur does not derive any benefits from them. The prime candidate is national old age pension, which is phased out above mean earnings. Its premium ranges from 2,4 to 4,9 per cent on gross salary depending on the ratio of tax depreciation allowances to the wage bill of the company.

(13.5 % -10 %)X = 200 000

It gives X = FIM 5.7 million. Even if the opportunity yield in financial markets is reduced to 7 per cent[10] the required initial stake is about FIM 3.1 million. Because of political risk of potential changes in the tax system, no one risks such a quantity of his personal wealth just for reaching a zero-profit point of tax arbitrage. Most small companies are started with a minimal equity stake.

Table 1. The Editor as an Entrepreneur

Year	MATHope	PROFpreT	CorpTAX	PROFpost	MATHend	DIV	TaxCredit	TaxSurpl
1	50	205	59,45	145,55	195,55	18,74	7,66	51,79
2	176,81	217,68	63,13	154,55	331,36	31,76	12,97	50,15
3	299,60	229,96	66,69	163,27	462,87	44,37	18,12	48,57
4	418,50	241,85	70,14	171,71	590,22	56,57	23,11	47,03
5	533,65	253,36	73,48	179,89	713,53	68,39	27,93	45,54
6	645,14	264,51	76,71	187,81	832,95	79,84	32,61	44,10
7	753,11	275,31	79,84	195,47	948,58	90,92	37,14	42,70
8	857,66	285,77	82,87	202,89	1060,55	101,65	41,52	41,35
9	958,90	295,89	85,81	210,08	1168,98	112,05	45,77	40,04
10	1056,93	305,69	88,65	217,04	1273,98	122,11	49,88	38,77
11	1151,87	315,19	91,40	223,78	1375,65	131,86	53,86	37,55

In Table 1 our entrepreneur has two choices: either to pay himself a higher dividend which is taxed as earned income to maintain the same post-tax income as a salaried editor, or to postpone dividends and to accumulate the book equity of his company. The previous case gives such a small tax benefit,[11] about FIM 4 400, that media would not pay attention to it. In fact, the first 11 years of his company shows almost no growth at all.

Following the latter choice, our poor editor cannot in the 10th year pay himself a dividend which would be as high as his post-tax pay left in the company. Waits he till year 11 he becomes quite close already, but now he looses the tax surplus from year 1. His “tax-free” dividend in year 11 is then effectively double-taxed. Compounding interest at the rate of 3 per cent per annum, the interest factor is 1.344, and the year 1 tax surplus is FIM 69 606 in the year 11 money. Therefore the effective tax rate of the year 11 pre-tax dividend, DIV +

[10] This reflects a return on a diversified investment of roughly one third in cash and fixed income securities and two thirds in equities. Such a cash management policy is better in line with the annual dividend requirement.
[11] DIV plus TaxCredit are now taxed at 29 per cent instead of the marginal tax rate of 45.7 per cent on earned income in this income band.

TaxCredit, is 66.5 per cent.[12] The rate of growth of DIV series is pretty high in the first years of the company, a media attraction of course!

But, the plain conclusion is that at his opportunity wage the editor can never transform his pay into "leniently taxed" capital income. The conclusion does not change materially, if one uses a more realistic lower opportunity costs for outside options, return on financial markets and wage. The average wage of the economy is less than half of the one in the example, equal to FIM 115779 in 2000 (Verohallinto 2002).[13] Another conclusion is that the current system of taxing non-listed companies does not favour start-up enterprises and entrepreneurs in relation to old capital inherited from the past tax regimes, either.

There is still the alternative that our editor liquidates his company in some future year. The proceeds from liquidation are taxed as realized capital gains. Then he benefits from the deferral of the gains.[14] But, again he must finance his consumption. In Finland the entrepreneur can borrow from his company, the amount borrowed being taxed as income from capital, and the amount paid back with interest can be deducted from income from capital if it is done within five years. The borrowing and its repayment however cancel out in present value terms. Borrowing without repayment is equivalent to double-taxation without benefit from deferral. That is, income is taxed at the marginal tax rate of 49.6 per cent = 1 – (0.29)(0.71). As a permanent strategy this gives him only marginal tax benefits.[15]

[12] Taxes are 53.86 + (1.344)(51.79) = 123.5 and DIV + TaxCredit = 185.7, both in thousand FIM.

[13] This is 19472 euros and equivalent to about 20400 euros at the year 2002 earnings level. In the year 2002 tax schedule the wage earner's average tax rate reaches 29 per cent at the income level of 25 393 euros. Thus, average wage income is more leniently taxed than the statutory rate on income from capital.

[14] Appendix of this paper reports my earlier calculations on this problem. One finds the effective capital gains tax rate to be the higher the lower is the real rate of return on the assets of the company. At the average real rate of return on a diversified equity portfolio the effective tax rate on realized gains is in practice equal to the statutory one if the holding period is 10 years and if the effect of the wealth tax is taken into account.

[15] Now it pays to increase the dividend which is taxed as earned income up to FIM 178 000 at which threshold the marginal tax rate on earned income jumps to 51.7 per cent. So he needs to borrow FIM 22 000 which is taxed at 49.6 per cent. The tax saving is not worth mentioning. The borrowing is not final income because the owner is required to pledge collateral.

2. Optimal dividends as earned income

Hence, it is optimal for the entrepreneur from a purely tax point of view to also distribute dividends which are taxed as earned income. Here a more general approach to the problem is adopted, yet assuming the tax framework of Finland. Kari (1999) derives the tax savings from the accumulation of book equity when the marginal dividend is taxed as earned income. He utilizes the standard neoclassical approach which leads him to modify the well-known trapped equity results. He does, however, not address the problem of tax surpluses and their obsolescence.

Let u stand for the rate of imputation applied to pre-tax dividend. Then one euro's declared dividend is born out of $1/(1-u)$ euros of pre-tax income, because it carries a tax credit of $u/(1-u)$ euros. If the entrepreneur refrains from distributing himself one euro's dividend taxed as earned income, he sacrifices $(1-\tau^e)/(1-u)$ of an euro of post-tax dividend income, where τ^e denotes his constant marginal tax rate of earned income. The benefit arises from a permanently higher future dividend taxed as income from capital. Because such a dividend is restricted to a proportion b of each euro of higher book equity, the stream of future tax savings is therefore $(\tau^e - \tau^c)b$, where τ^c denotes the flat-tax rate on income from capital. The tax savings can be invested in financial markets at the rate r. Relating this to the sacrifice of the owners, gives the reduction of the cost of capital of the company to be the following

$$MB = \frac{(\tau^e - \tau^c)b}{(1-\tau^e)/(1-u)} \cdot r \tag{1}$$

as derived by Kari (1999). The benefit side is derived from assuming book equity being raised permanently with one euro. This implies that the tax surplus is eventually lost after n years.

Consider the cost of the tax surplus $u/(1-u)$ created by the strategy. The opportunity cost of the tax surplus is the pre-tax return which such funds earn in financial markets at the rate r.

The total cost to the company is hence the present value of the imputed interest on the tax surplus plus the present value of the lost principal.

$$(2) \qquad PV^C = r\frac{u}{1-u}\left[1+\frac{1}{1+r}+\ldots+\frac{1}{(1+r)^n}\right]+\frac{1}{(1+r)^n}\cdot\frac{u}{1-u}$$

$$= \frac{u}{1-u}\left\{r\left[\frac{1}{r}\left(1-\frac{1}{(1+r)^n}\right)\right]+\frac{1}{(1+r)^n}\right\}$$

$$= \frac{u}{1-u}$$

that is, the tax surplus itself. This is also its value to the owner if no tax surplus was created and one euro was distributed.

Because (2) is a present value (PV) it must be compared to the PV of the benefit stream (1), i.e. to MB/r. The latter is much smaller than the tax surplus. Therefore, it does not pay to loose them. This does not prove that it does not pay to create tax surpluses. In fact their growth has been enormous during the past decade.[16] The company may have investment opportunities whose average real rate of return ARR is higher than the one in financial markets. The benefit stream now grows compound interest at the rate of ARR so long as the company can maintain the profitability of its investment at ARR:

$$(3) \qquad \frac{(\tau^e-\tau^c)b}{(1-\tau^e)/(1-u)}\cdot\left(\frac{1+ARR}{1+r}\right)^t = \frac{u}{1-u}\cdot\left[1-\frac{1}{(1+r)^t}\right]$$

The lhs of (3) is the PV of the tax benefit stream. The rhs contains only the PV of the imputed interest from (2), because the tax surplus will eventually be utilized.

[16] The stock of unutilized tax surpluses was 17.8 billion euros at the end of 2000. Their growth was 4.0 billion euros, or 54.1 per cent of the corporation tax revenue in 2000.

The question is how many years of supernormal earning power at the rate ARR it takes to equalise the lhs and rhs of (3). Because condition (3) contains two unknown variables ARR and t = the number years, the break-even value of ARR*, the real rate of return on new assets, is calculated at successive years t = 1, 2,… . The following parameter values are used: $\tau^e = 0.56$, $\tau^c = 0.29$, $b = 0.135$, $u = 0.29$, $r = 0.1$ or $r = 0.07$.

The results are very sensitive to the value of r assumed. With $r = 0.1$ it pays to create a tax surplus, if ARR* = 0.201 is satisfied by $t = 2$ at which point the tax surplus should be utilized. To wait until $t = 3$ requires ARR* = 0.62. With r = 0.07 more modest profitability is required. To wait till $t = 3$ requires now only ARR* = 0.16, and till $t = 6$ ARR* = 0.23.

3. Tax arbitrage equilibrium

Thus, the previous section provides somewhat more structure and exactness to the conjecture in Ylä-Liedenpohja (1997) that it pays to generate tax surpluses and to maintain them some time, but not to loose them altogether. If the latter threatens, then the sale of the company clearly is the tax minimizing strategy. In reality profit growth does not occur at a constant rate as assumed here, but at widely fluctuating ones with temporary losses. Therefore the company is able to utilize past tax surpluses in loss making years by maintaining enough cash and a positive dividend which is set according to its long-term profitability and growth prospects. More importantly, the dividend will be set so that in the tax arbitrage equilibrium the owner is indifferent to raising the last euro from his company in the form of dividends taxed as earned income and to committing to realize it as a capital gain through a trade sale or stock market introduction of his company or by dissolving it.

Therefore we can write

$$(4) \qquad MTR^{div}\begin{pmatrix} POR & \tau_i^e \\ (+) & (+) \end{pmatrix} = MTR^{re}\begin{pmatrix} g & \pi & \tau & T \\ (-) & (+) & (+) & (-) \end{pmatrix}$$

as the equality between the marginal tax rates (MTR) of dividend (lhs) and capital gain (rhs) income. The former depends positively on the dividend pay-out ratio POR and on the tax schedule of earned income τ_i^e, where i denotes income band with rising marginal tax rates $\tau_{i+1}^e > \tau_i^e$. From Appendix it is known that the MTR of retained earning depends negatively on g = real rate of return on assets and T = the length of the ownership period, and positively on π = the rate of inflation during the ownership and τ = tax rate on income from capital which is also equal to the corporation tax rate.

The rhs of (4) may be regarded largely exogenous to the owner, with T being most under his control. Because the tax schedule is given, the lhs determines optimal POR* which itself depends positively on b = the presumptive maximum gross dividend taxed as capital income as a ratio of the year-end book equity. In a wider tax arbitrage equilibrium the rhs of (4) must of course equal the MTR of interest income which depends positively on τ and π.

Hence it is double-taxation of corporate retained earnings which determines the MTR^{div}. The marginal and average tax rates tend to be identical both for retained earnings and interest income. In case of dividend and wage income, the owner enjoys surplus. Their average tax rate is less than the marginal one due to progressivity of the tax schedule.

The final margin of tax arbitrage is the entrepreneur's supply of effort. Above his productivity is assumed to be the same as in the outside option. But, the corporate form changes his incentives in contrast to being a wage-earner, because it is the year-end book equity on the basis of which the distributed dividend is split into income from capital and earned income. Therefore, his tax rate of a marginal euro earned on his effort is the weighted average of the statutory flat-rate on income from capital and the marginal tax rate on earned income faced by him, that is, $b\tau + (1-b)\tau_i^e$. Hence an entrepreneur who incorporates himself faces a lower effective tax rate on the fruits of his effort than a wage-earner in those income bands where $\tau_i^e > \tau$ holds.[17] This encourages effort to generate additional income.

[17] The advantage is 4 percentage points for one facing the top marginal tax rate of 58.5 per cent in 2000, and about half a percentage points more, if the effect of the avoided minimum, tax-like old age pension premium is taken into account.

4. Conclusion

Following her Nordic neighbours, Finland adopted the dual income tax system in 1993. All categories of income from capital are taxed comprehensively at a flat rate, which is set the same as the rate of corporation tax. In case of dividends, only those distributed by a company quoted on the main list of the Helsinki Stock Exchange, enjoy full imputation credit. This guarantees that pre-tax dividends flowing to the household sector are effectively taxed[18] at the flat rate on capital income. All other dividends are subject to the split rule which, on the basis of year-end book equity, defines the maximum of dividends taxed at the flat rate, the rest being added to the owners' earned income and taxed progressively.

The severity of tax burden of such companies is very poorly understood among the great public, lobbyists, journalists and economists. The most recent statistics from year 2000 reveal the average tax rate on labour income to have been lower than the statutory flat-tax rate on income from capital. Neither does deductive analysis here support the claim that an entrepreneur is able to transform his wage income into more leniently taxed capital income in the current dual income tax system of Finland unless he has not inherited a substantial net worth from the previous tax regime. It is simply impossible for a fresh entrepreneur. The current dual tax system therefore discriminates new, to-be-created capital of start-up enterprises in contrast to old capital inherited from the past tax regimes.

Another topical issue is the shift in the functional distribution of the GNP towards income from capital during the latter half of the 1990's. Part of it reflects the adjustment (as repayment of foreign debt) to the opposite swing and to the subsequent deep economic crisis a decade earlier. Part is due to a global shift of investment opportunities towards "new economy" which enormously benefitted Finland at least temporarily. The rest may be due to the adopted dual income tax system which affects the functional income distribution in two ways.

[18] Equalization tax on repatriated dividends which are distributed onwards to the shareholders resident in Finland causes the effective tax rate on dividends to be higher than the statutory 29 per cent.

First, there is the reporting effect: part of income which was previously reported as labour income[19] is now reported as income from capital.[20] As analysed in Section 1 above, this does not represent tax avoidance because (i) part of dividends is anyway taxed as earned income, (ii) tax surpluses (corporate taxes on retained profits) will become obsolete after 10 years, and (iii) of double taxation of capital gains. Second, as analysed in Section 3, there is the incentive effect of supplying more effort via the corporation and generating more GNP in the form of income from capital.[21]

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[19] The previous tax system was clearly tilted towards reporting corporate income in the form of labour income, by paying wages to family members, for example. Tax code became filled with statutes which tried to hinder concealed dividend distributions. That had not been the case had the old system been neutral with respect to the form of channelling cash from the company to its owners. In case of unincorporated companies the old system treated the company as a separate tax entity, but their income was taxed at the same progressive schedule as personal income. Therefore income from such businesses was split among the companies and their owners' wages to benefit from the initial low marginal tax rates of the progressive schedule. Since the adoption of the dual income tax system the setting-up of unincorporated companies has practically ceased.

[20] There is an additional twist concerning the distribution of tax revenue among the state and the municipalities under the dual income tax system in contrast to the previous one. The latter encouraged concealing taxable corporate profits and favoured the splitting of corporate income as wages among family members. The current system encourages reporting taxable corporate profits and taxes first income from capital the revenue of which goes to the state, earned income being a residual and subject to both the state and municipal income tax.

[21] Those who worry most about the "adverse development" of the functional income distribution tend to have a bias towards denouncing incentive effects of marginal taxation and interpreting observations in favour of tax avoidance.

APPENDIX: EFFECTIVE TAX RATE OF REALIZED CAPITAL GAINS

The main message of Table 3 of Ylä-Liedenpohja (1999) is repeated here in Table A. Column g = average annual real rate of return on an asset. Column True denotes the true realization gain as developed by the *Meade Committee* (Meade 1978, 148-149):

$$\text{True} = \frac{gA}{g + \pi - \rho}\left(\frac{S}{A} - R^{\tau}\right)$$

where A = the acquisition cost of an asset, π = the average annual rate of inflation during the holding period of an asset, S = the realized sales revenue of an asset net of any brokerage etc. costs determined on the basis of $A, g + \pi$ and the length of ownership, R^{τ} = the post-tax interest factor, reflecting the compound benefit of deferral over the ownership. The following numerical values are applied: A = 1, π = 0.02, the post-tax nominal rate of interest = 0.025 and the flat-tax rate on nominal taxable income from capital = 0.28 = the rate of corporation tax. Column FI of Table denotes the taxable capital gain in the Finnish system which is either $S - A$ if the holding period is less than 10 years[22] or S/2 if the holding period is longer than 10 years and if in such a way the taxable gain is smaller than S-A. Column Tax% denotes the effective tax rate on realized true economic gain equal to (True/FI)(0.28) in per cent. Column DblTax% reports the effective double-tax rate of realized capital gains, assuming the true undistributed profit of corporation having been taxed at the statutory rate of 28 per cent. Hence DblTax% = 0.28 + (1 - 0.28)Tax%. At current capital income tax rate of 29 per cent in force since 2000, the tax rates of Column Tax% would be 1½ percentage points higher on average. Three holding periods are assumed: 9, 10 and 20 years.

The figures of Table A do not contain the effect of wealth tax which is 0.9 per cent above the threshold of 185 000 euros of taxable wealth. The taxable value of listed shares is 70 per cent of their year-end market value. Since g = 0.09 is close to the historical average real rate of return on the equity market portfolio, annual wealth tax is equivalent to a tax of (0.7)(0.009)/0.09 = 0.07 or 7 percentage points on real return. If g = 0.04 applies, wealth tax adds = (0.7)(0.009)/0.04 = 0.1575 or 15.8 percentage points to the respective values of

Column Tax%. The taxable value of non-listed companies is 30 per cent of their year-end book equity. This is justified almost solely on the basis of deducting the owner's implicit tax liability of realization gains and earned income dividend if book equity consists of undistributed profits.

Table A. Economic tax rate of realized capital gains and double-tax rate of corporate retained profit.

g	True	FI	Tax%	DblTax%
	holding period 9 years			
0.10	1.65	1.82	30.8	50.2
	holding period 10 years			
0.10	1.99	1.58	22.3	44.0
0.07	1.20	1.20	27.9	48.1
0.04	0.60	0.80	37.6	55.1
	holding period 20 years			
0.10	8.80	5.00	15.9	39.4
0.07	4.43	2.88	18.2	41.1
0.04	1.85	1.63	24.7	45.8
0.01	0.35	0.81	65.4	75.1

The assumptions concerning the rate of inflation and the rate of nominal interest are historically unexperienced in Finland. Only after 15 more years, if the EMU operates according to its aim of low inflation and stable low interest rates, the effective tax rates of the third block in Table A will be representative of the effective tax rates on true realized capital gains.

[22] The alternative 0.8S is used if it is lower than S-A, but this is not operative under the particular parameter values of Table A.