Dual Income Taxation in EU Member Countries*

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Dual income taxation has become an increasingly important blueprint for income tax reforms in Europe. Originally constrained to the Nordic countries in the beginning of the 1990s, final withholding taxes on capital income have been introduced in several European countries and tax reform proposals in favour of a dual income tax system have been made for Germany (Spengel/Wiegard, 2004) and Switzerland (Keuschnigg, 2004).

The characteristic features and the economic background behind the dual income tax (DIT) has been surveyed recently by Boadway (2004) in this journal. The purpose of our paper is to complement this discussion by providing an overview of implemented income tax structures. This discussion shows that existing tax systems in many countries resemble some characteristic features of a dual income tax system. The scope of our analysis is not restricted to the Nordic countries, we also include other European countries, which according to our view have made steps towards a dual income tax system. Based on this evidence an EU wide adoption of a dual income tax system as sketched recently in a reform agenda for European business taxation (Cnossen 2004) does not seem a completely unrealistic scenario.

The paper is organised as follows. We shortly review the pros and cons of a comprehensive, Schanz/Haig/Simons type, income taxation. We then discuss some aspects of the implementation of the DIT in selected countries. Finally we assess some of its problems and end our discussion with some concluding remarks.

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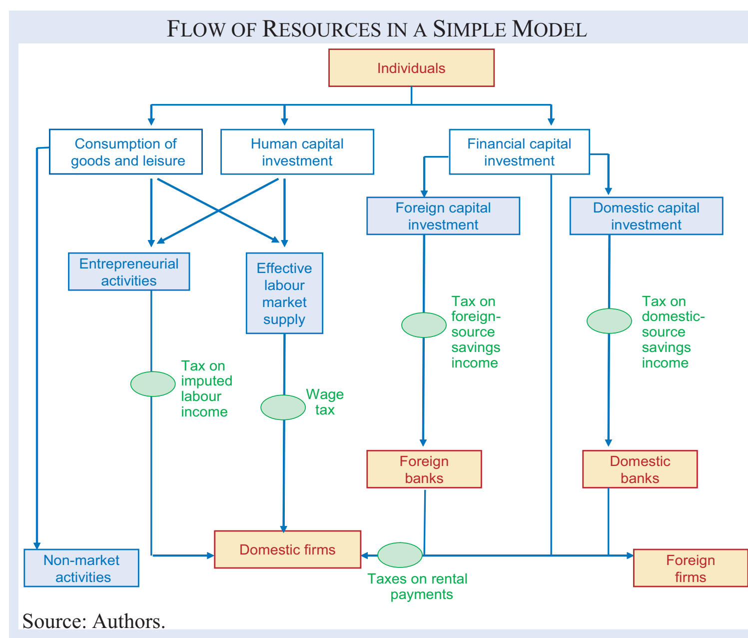
The case for a dual income tax

The income tax system in Germany and in many advanced countries is supposed to follow the principle of comprehensive income taxation. Comprehensive income is defined as the net growth in the tax payer's personal wealth during one taxable year. Comprehensive income has been favoured as the best economic indicator of ability-to-pay, ensuring horizontal equity – since tax payers with the same ability-to-pay bear the same tax burden – and vertical equity according to a graduated schedule on different levels of comprehensive income. Technically, under the Schanz/Haig/Simons system, income from all sources is aggregated and total income is subjected to the respective tax rate defined by the progressive rate schedule.

Before presenting the main features of the DIT we would like to identify some basic obstacles against comprehensive income taxation. For this purpose, let us sketch a simple view of the world where individuals choose their labour supply and invest in human capital and financial wealth. The latter two decisions are intertemporal in nature, as human and financial capital formation are two alternative investment strategies to increase future consumption. The figure illustrates the resource flows and the tax handles in such a basic model.

The skill acquired through human capital investment and the hours worked in the labour market determine theses individuals' effective wage income. Alternatively, the individual can act as an

Flow of Resources in a Simple Model



Source: Authors.

entrepreneur and receives imputed labour income from business activity.

Intertemporal consumption smoothing can be financed out of human or financial capital formation. Human capital investment will increase future labour income, financial capital investment increases future capital income but also allows for using up the principal. Let us assume that savers can directly invest in firms or save in domestic and foreign bank accounts. The banks will lend the savings to domestic or foreign firms.

The market returns from the flows of resources are taxable income for a government which is faced with a given revenue requirement. Under a comprehensive income tax income from all sources is subject to the same tax rate. Optimal taxation, however, requires considering all tax handles separately.

Economic growth

In an intertemporal setting with savings in each period, the tax burden on capital income accumulates under comprehensive income taxation: the tax is levied on income from investment which has been financed out of income that has already been taxed. Hence, any positive capital tax will discourage savings and, thus, capital supply to firms. In the long run only a zero tax on capital income is compatible with a positive level of savings because the tax burden on capital grows exponentially over time. A similar case can be made for human capital investment. A tax on labour income discourages human capital formation because part of the return on investment is taxed in all subsequent periods (Jones, Manuelli and Rossi 1997) and double taxation of the returns can only avoided by a zero wage tax. These arguments suggest that positive taxes on the income of any factor that accumulates over time are hard to justify. It is therefore necessary to shortly explore the robustness of results.

The result in Jones, Manuelli and Rossi (1997) hinges on the assumption that no pure rents can be created by investment in human capital. The zero tax result does not hold if the accumulation technology is non-linear. Nielsen and Sørensen (1997) demonstrate that the wage tax might be positive if education costs are tax deductible. The intuition is that the tax deductibility eliminates any distortions of wage taxation on human capital investment. A case for a non-zero capital tax is discussed in Correia (1996), who makes a case for capital taxation assuming that the set of tax rates is constrained. Essentially, the argument here is derived from an argument that also underlies the analysis of open economy tax policy in Bucovetsky and Wilson (1991): The government makes use of capital taxation in order to control the supply of labour in an economy. This is, of course, a typical second-best argument.

Tax competition

The internationalisation of capital markets supports arguments against capital taxation. Let us return to the model we sketched above in the figure and assume that only the domestic government raises a tax on domestic-source savings income. What will be the consequence? The German government tested this policy in 1989, when it announced a 10% withholding tax on interest income. The reaction of tax payers becomes clear from a short inspection of the figure. Economic intuition suggests that savers will avoid this tax by investing in foreign banks. Even though foreign banks might invest in domestic firms, the domestic government is not able to raise revenue from capital taxation. This nicely explains the huge capital outflows Germany experienced in 1989, mainly to affiliates of German banks in Luxembourg. Luxembourg banks used a large fraction of the portfolio capital from German investors for investment in German firms. Furthermore, inspection of the figure suggests the simple argument that the foreign government has no incentive to increase the capital tax, since undercutting always increases tax revenue as long all taxes on savings income are zero.

Other arguments rationalise a zero rate of the tax on firms' rental payments: Any positive tax rate would reduce the net interest rate and cause a capital outflow. The capital outflow reduces the capital intensity in domestic production and thereby wages. However, wage income can be taxed more directly using the wage tax. Along these lines, any positive tax on capital might not be sustainable in an open economy under the assumption that optimal wage taxation is possible (Bucovetsky and Wilson 1991).

Informational problems

The German experiment we analysed on the basis of the figure supports the view that the foreign-

source income of residents is unobservable to the government. The government has to rely on the willingness of the foreign tax authorities to exchange information about the foreign-source income of residents in order to enforce a tax on foreign-source and domestic-source capital income. This exchange of information allows for residence-based capital income taxation, which is at the heart of the EU interest directive of 2003. International information exchange is vital if comprehensive income taxation calls for capital income to be taxed at the same rate as labour income.

However, comprehensive income taxation avoids another information problem. The tax authority need not know the imputed wage income of firm owners included in entrepreneurial profits, since labour and capital income components are subject to the same tax rate. These tax rates might differ, however, under a DIT. This might create an incentive for entrepreneurs to manipulate the capital/labour income structure in order to minimise tax payments.

It is evident from this discussion of the figure that comprehensive income taxation would certainly be dominated by tax patterns which account for margins of substitution that determine the intratemporal and intertemporal decisions of rational tax payers.

The characteristic features of a dual income tax

The DIT is a schedular tax regime which divides total income into capital and labour income and regards them as different tax bases. This increases an additional degree of freedom for tax policy, which can potentially be used to attack some problems of comprehensive income taxation.

Under the DIT, capital income includes business profits, dividends, interest income, rents, but also rental values as well as capital gains on real capital and property. Labour income consists of wages and salaries, non-monetary fringe benefits, pension payments and social security transfers. Capital income is taxed at a flat rate, labour income on the other hand is subject to progressive tax rates. Costs of earning capital and labour income are tax deductible from both tax bases.

The tax rate on capital income is equal to the labour income tax rate in the lowest income bracket, which intends to ensure that labour and capital income are taxed at similar rates. There is no general recommendation in DIT proposals whether negative capital income can be offset against positive labour income in the same period or can be carried forward or backward and offset against future or past capital income. However, personal allowances are deductible from labour income and thereby induce an element of indirect progressivity already in the first income bracket.

The DIT proposals do not seem to solve the problem of double taxation of dividends on distributed profits at the corporate and the personal level in a unique and definite way. Classical corporation tax regimes would double tax dividends, but DIT is also compatible with partial or full imputation of the corporate income tax. Under imputation the corporate income tax on distributed profits becomes a prepayment of the DIT on capital. Under full imputation DIT administration can thus be simplified by choosing the corporation tax rate equal to the DIT rate. The corporation tax credit would exactly cover the DIT liability.

Why is a dual income tax attractive?

Tax codes in virtually all industrialised countries contain specific exemptions from the Schanz/Haig/Simons standard, but nevertheless politicians pay lip service to it. Most exemptions have been implemented in a seemingly ad hoc manner to maintain the assertion of redistributive capital income taxation and, at the same time, to master the challenges caused by the new economic developments on capital markets. The result is a low level of tax revenue combined with high compliance and collection costs. The DIT is a well defined alternative variant of a schedular system. It intends to create a level playing field for capital investment by taxing all capital income at the same flat DIT rate.

The DIT recognizes that the scope for progressive capital income taxation is limited. Taxing capital income by a final withholding tax at a flat and lower rate significantly reduces tax compliance and collections costs compared to the present tax system in Germany where a savings allowance (Sparerfreibetrag) is operated. A proportional DIT can be levied as a source tax without filing requirement. A flat capital tax has the additional advantage of reducing the tax rate differential between domestic taxes and source taxes in foreign countries, thereby limiting the incentives for capital flight. In addition, lower

tax rates also reduce the problem of negative after-tax returns on real wealth under inflation. Finally, a flexible adjustment of capital income taxation to changing economic conditions as well as multilateral co-ordination, e.g., in the EU, is possible under DIT.

Implementation of the dual income tax in the Nordic countries

Table 1 surveys the main properties of the Nordic tax systems. The Nordic countries implemented dual income tax systems in the early 1990s, which exhibit some common features (see e.g., Sørensen 1994, 1998; Cnossen, 1999). Capital income is taxed at a flat rate close to the corporation tax rate and close to the labour tax rate in the first income bracket. Labour income is taxed progressively. Indirect progression enters in the first bracket due to personal exemptions, then graduated marginal tax rates are applied to labour income levels exceeding the first brackets. The gap between labour taxation and capital taxation is reinforced by the fact that most social security contributions are included in the labour tax base.

A common problem in schedule systems is the misdeclaration of income. In order to distinguish labour and capital income in practice, an income splitting model was constructed. Active owners, who are working in their firms as managers or primary workers are forced to split their business income into a labour and a capital component. Basically, capital income is defined as the imputed return on the stock of business assets and the difference between business income and imputed returns is classified as labour income. The calculation of the imputed rate of return is defined in national tax codes and differs between the Nordic countries. Income splitting is mandatory for sole proprietorships and partnerships, but also for corporations with active owners, who must own a substantial share of their business (e.g., two thirds) and work in their firm for a minimum number of hours per year.

All Nordic countries allow for some integration of capital and labour income, if capital income is negative. There is also integration of corporate and capital income, although there are considerable differences between the four Nordic countries, ranging from full integration in Norway and Finland to substantial double taxation in Sweden and Denmark. A final characteristic feature of the Nordic countries (with the exception of Denmark) is that DIT is supplemented by a net wealth tax.

Sweden

In Sweden small corporations with active owners are taxed by splitting dividend income into capital income and labour income. Dividends are taxed as capital income only if the imputed return on the stock of business assets is higher than the actual return. This imputed return is calculated by adding a premium of five percentage points to the interest rate on 10-year government bonds. If actual returns are higher than the imputed return the residual is treated as labour income and taxed at the higher labour tax rate. There is, however, a further qualification to the splitting method. Residual income above a certain threshold is considered as capital income and taxed at the capital income tax rate. Sweden operates a classical system of corporate income taxation, although a reduced tax rate applies at the personal level. Furthermore, part of the labour

Table 1

The Nordic dual income tax (2004 tax rates in %)

DIT reform	Norway 1992	Finland 1993	Sweden 1991	Denmark 1987
PIT rates – Capital income – Earned income	 28 28 – 47.5	 29 29.2 – 52.8	 30 51.5 – 56.5	 28/43 38.1 – 59
Basic allowance for capital income	Yes	No	No	Yes
Offset of negative capital income	First bracket	Tax credit	Tax credit	yes
Integration of CIT and PIT	Full CIT imputation	Full CIT imputation	Reduced PIT rate, since 1994	Reduced PIT rate
CIT rate	28	29	28	30
Additional PIT – Dividends – Capital gains	 0 28 (net of retained earnings)	 0 29	 30 30	 28/43 28/43
Withholding tax – dividends – interest	 0 28	 0 29	 30 30	 28 0
Net wealth tax	0.9 – 1.1	0.9	1.5	No

Source: BMF (2003), BMF (2005).

costs may be added to the acquisition price of the shares.

Finland

Finland uses a similar method of income splitting. The main difference is that the imputed return is calculated on the net assets of the business. As in Sweden, the difference between actual and imputed dividends is taxed as labour income. Double taxation of dividends is completely eliminated by imputation.

Norway

Norway also splits corporate income into a labour and a capital component similar to Sweden and Finland. However, the imputed rate of return is equal to the interest rate on five year government bonds plus a premium of 4 percent. In Norway, imputed profits are calculated and the difference to the profits (before interest payments) is taxed at the labour tax rate, even if profits are retained. There exists an upper bound for residual profits, above which profits are taxed as capital income. Moreover, entrepreneurs are entitled to make a salary reduction of 20 percent in their wage bill from the residual profits, which increases the share of lower taxed capital income in dividend income.

Denmark

Denmark was the first country to implement a DIT as early as 1987, but deviated from the government DIT proposal immediately by taxing dividend income progressively. Since 1994 a higher rate (currently 43 percent instead of 28 percent) is applied if dividend income exceeds a threshold. Dividends are subject to a 28% withholding tax, which is final for dividend income below the threshold and credited against PIT for dividend income above the threshold. The Danish income tax code distinguishes personal income, capital income and income from shares. But only income from shares is taxed at a reduced rate, while personal and capital income is jointly taxed according to the progressive schedule. Contrary to the other three Nordic countries Denmark implemented tax reforms, marking a retreat from the DIT concept, which guided the tax reform of 1987 (Sørensen 1998, p. 24).

Final withholding income taxes in Austria, Belgium and Italy

Austria, Belgium and Italy did not introduce a fully fledged DIT but a final withholding tax on interest income and dividend income. Labour income as well as earned business income labour income is subject to a progressive schedule. There is, however, a DIT element in corporate and non-corporate income taxation in Austria and in Italy, as a share of business profits, calculated as an imputed return on newly injected capital, is subject to a reduced tax rate. In contrast to the Nordic countries there is no integration of earned income and negative capital income, but Austria and Belgium allow for a filing option for low capital income earners, which implies that filed capital income is taxed according to the progressive earned income tax schedule.

All three countries tax dividend income at the corporate and the personal level. The corporation tax on dividends is supplemented by a final withholding tax on dividends at the personal level. The combined tax burden on equity profits is therefore close to the top PIT rate on earned income.

Table 2

Final withholding taxes on capital income (2004 rates in %)

Tax reform	Austria 1994	Belgium 1993	Italy 1991
PIT rates – Final withholding tax – Earned income	 25 21 – 50	 15/25 26.88 – 54	 12,5/27 24.15 – 46.15
Basic allowance for capital income	Filing option	Filing option	No
Offset of negative capital income	No	No	No
Integration of CIT and PIT	Reduced PIT rate	Reduced PIT rate	Reduced PIT rate
CIT rate	34/25	34 (35.02)	33 (37.25)/19
Additional PIT – Dividends – Capital gains	 25 25	 25 33	 12,5 27
Withholding tax – Dividends – Interest	 25 25	 25 15	 12,5 12.5/27
Net wealth tax %	No	No	No

Source: BMF (2003), BMF (2005).

DIT elements generating a lower tax rate on capital income are restricted to interest income, which is subject to the low final withholding tax. In addition, dividend income on newly injected capital is taxed at a reduced CIT rate of 25 percent (instead of 34 percent) in Austria and at a reduced CIT rate of 19 percent (instead of 33 peercent) in Italy.

It should also be noted that Italy operated an imputation system up to 2003 and moved to a "classical system" with PIT rate reduction only in 2004.

Special regimes for capital income taxation in Greece and the Netherlands

The Netherlands and Greece recently also moved towards DIT, even though the tax relief for capital income is based on specific regulations which do not show precisely the features of the Nordic DIT. The Netherlands implemented a comprehensive tax reform in 2001 which subjects dividend and interest income to a presumptive income tax at the personal level. The presumptive PIT is levied at a rate of 30 percent on capital income, which is calculated by applying an imputed return of 4 percent on the average net value of assets in the tax period. The imputed PIT is equivalent to a 1.2 percent wealth tax on net assets and covers capital income of asset holders from dividends, interest and royalties. Personal allowances cause an indirect progression at the personal level of this "Box 3" type investment. Dividends, interest and capital gains from substantial shareholding are classified as "Box 2" type investment income and are taxed at a flat PIT rate of 25 percent.

Table 3

Special tax regimes on capital income (2004 rates in %)

Tax reform	Netherlands 2001	Greece 1993
PIT rates – dividends – interests – earned income	 30 (Box 3)/25 (Box 2) 30 (Box 3)/25 (Box 2) 33.4 – 52	 0 10/15 15-40
Basic allowance for capital income	for Box 3	No
Offset of negative capital income	No	No
Integration of CIT and PIT	Reduced PIT rate	Dividend exemption
CIT rate	34.5	35
Additional PIT – dividends – capital gains	 30 (Box 3)/25 (Box 2) 30 (Box 3)/25 (Box 2)	 No No
Withholding tax – dividends – interest	 25 No	 No 15
Net wealth tax %	1.2 (levied as presumptive PIT)	No

Source: BMF (2003), BMF (2005).

Greece is the only EU country which exempts dividends at the personal level. Thus, dividends are taxed at the CIT rate of 35 percent, which is only slightly lower than the top PIT rate of 40 percent. The tax relief is more pronounced for interest income, which is subject to a final withholding tax (10 percent on bonds and 15 percent on bank deposits).

Problems of running a dual income tax

While it is recognized that the Nordic DIT has a number of advantages over the hybrid and widely eroded comprehensive income tax systems, there is no doubt that the DIT system implemented by the Nordic countries should not be regarded as an ideal solution for income taxation in practice. There have been a series of amendments to improve the DIT systems and further reform steps are called for (Sørensen, 2003).

One major problem of operating a DIT is the separation of business income into capital and labour income. Calculation of capital income by imputing an average return on business assets is a crude measure and does not pay proper attention to the opportunity costs of capital. Moreover, the prescription of the imputation rate by the tax code has to be regarded as the outcome of a political game. Multiple imputation rates reduce transparency of the social bargaining process and will almost certainly not generate economically desirable results.

Separating capital and labour income by imputing a normal rate of return to capital investment is a procedure open to criticism. The residual income does not only comprise labour income but includes economic rents, risk premia and windfall profits which may be regarded as capital returns rather than labour returns. Thus the question arises if these components of residual income should qualify for preferential taxation as well. The Norwegian experience of residual income thresholds and salary deductions characterise the scope of political lobbying for preferential tax treatment (Christiansen 2004).

While a level playing field for highly mobile capital investment is a crucial desideratum, non-integration of CIT and PIT, preferential treatment of capital returns and nominal interest taxation provoke tax arbitrage and investment distortions. At the same time, however, capital tax arbitrage is less of a problem under DIT as a matter of a lower tax rate.

Finally one major advantage of DIT, the substantial reduction in compliance, collection and control costs has not been exploited fully in the past. The filing option for capital income owners, the possibility for labour income earners to offset capital losses or the different treatment of domestic and foreign capital income are costly methods of tax administration and certainly deserve further attention in DIT reform steps.

Concluding remarks

Starting out in four Nordic countries, dual income taxation has gained broad support in many European countries. Although evidence in those countries as well as in other countries following an impure DIT approach reveals that it is not an easy task to implement separate taxation of capital and labour income, there seems to be little pressure in these countries to return to comprehensive income taxation.

One major advantage of DIT is the easy integration of CIT and PIT. Although the current picture of corporate income taxation in Europe exhibits a clear affinity towards classical double taxation (mitigated by low CIT rates and a reduced PIT rate) Finland and Norway show that imputation can be easily administered by CIT credits, which fully cover the DIT on dividends if CIT and DIT rates coincide.

Incentives for strategic income shifting between capital and labour income can be considerably reduced if the PIT rate of the first income bracket and the DIT rate coincide. Gains in compliance and collection costs due to this tying of tax rates must nevertheless be confronted with the costs of reduced flexibility. Flexibility seems to be an important factor if the national CIT rate has to be adjusted in international tax competition or as a result of negotiated tax harmonisation.
The economic attractiveness of DIT is emphasised by recent reform proposals for Germany (Spengel/Wiegard 2004) and Switzerland (Dietz/Keuschnigg 2004) calling for DIT system in both countries. DIT is also regarded as a desirable starting point for co-ordinating corporate income taxation in the EU (Cnossen 2004). If the tax rates on capital and labour differ then co-ordination steps in capital income taxation should face less opposition by national governments because the tax rate autonomy on labour income remains unaffected and might even be extended to sub-federal levels without provoking capital flight.

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