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# ***Prospects for Co-ordination of Corporate Taxation and the Taxation of Interest Income in the EU***

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## ***Abstract***

This paper evaluates the recent proposals for a co-ordinated capital tax policy in the European Union, focusing on an EU-wide minimum withholding tax on interest income and alternative ways to increase the effective tax rate on corporate profits. The analysis draws on current theoretical and empirical research and views the recent capital tax reforms undertaken by individual member countries as rational adjustments to changing conditions in capital markets. Special emphasis is placed on the constraints for EU tax policy imposed by the possibility of shifting capital income to third countries. The paper concludes that some aggregate efficiency gains can be expected from the EU co-ordination proposals, but additional tax collections will be limited largely to the group of small savers while highly mobile large-scale investors are likely to avoid the EU tax.

*JEL classification:* H24, H25, H87.

## **I. INTRODUCTION**

The integration of world capital markets has proceeded at a fast pace since the early 1980s. In Europe, this world-wide trend has been reinforced by the internal market programme, which abolished all remaining capital controls within the Community. In the period between 1983 and 1995, earnings from foreign direct

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investment increased by more than 600 per cent world-wide, rising (in nominal terms) from less than US\$50 billion in 1983 to almost \$300 billion in 1995 (International Monetary Fund, 1996). For foreign portfolio investment, the increase was even larger, and the total volume of portfolio investment now exceeds the volume of world-wide foreign direct investment (see Slemrod et al. (1996)). These increases are substantially higher than the growth of world commodity trade, whose volume has approximately tripled since the early 1980s. A further difference is that trade in capital is more heavily concentrated among OECD countries, with about 80 per cent of all foreign direct investment taking place between developed countries.

At the same time, national systems of capital income taxation have changed significantly during the 1980s and 1990s. Many OECD countries have lowered the statutory rates of both the corporation tax and the personal income tax while simultaneously broadening tax bases. In addition, several European countries — notably the Scandinavian countries and Austria — have broken with the principle of comprehensive income taxation and have introduced ‘dual’ income tax systems which tax capital income at a lower rate than labour income. These domestic tax reforms were accompanied by an increased use of withholding taxes or bank notification schemes in order to tighten the enforcement of interest income taxation. However, since most national governments levy withholding taxes only on their domestic residents, many savers are still able to fully escape interest income taxation by investing in neighbouring EU countries.

Until recently, initiatives at the EU level have been rare in the field of capital income taxation, despite the continuing integration of capital markets. In 1989, a proposal for an EC Directive imposing a minimum source tax of 15 per cent on all interest income failed to receive the required unanimous support of EC Member States. In 1990, an expert committee, chaired by Onno Ruding, was instituted to evaluate the need for greater harmonisation of business taxes in the Community. The Ruding Report (1992) made several far-reaching harmonisation proposals for corporate taxation, including the imposition of an EU-wide minimum corporate tax rate of 30 per cent, but so far these proposals have not been taken up by the Commission. However, in December 1997, EU Member States agreed on a ‘Code of Conduct’ concerning corporate tax policy. This agreement aims to eliminate, or at least reduce, the widespread use of discriminatory tax breaks, which currently exist in many EU Member States and which are aimed, at least partly, at attracting internationally mobile firms (see Council of the European Communities (1998)). Furthermore, in May 1998, the Commission launched a new initiative to enforce the taxation of interest income in the Union. According to this proposal, each EU Member State would be required either to levy a 20 per cent withholding tax rate on all interest paid to individuals residing in the EU or to issue a notification of the interest payment to the residence country of the EU investor (Commission of the European Communities, 1998).

The present paper attempts to provide a general evaluation of these recent co-ordination proposals, as well as of the earlier proposal by the Ruding Committee to set an EU-wide lower bound on corporate tax rates. No attempt will be made here to go into the details of either proposal. Instead, the emphasis is on the very general question of whether co-ordination measures of this kind can be expected to improve the current status of capital income taxation in Europe.<sup>1</sup> The criteria defining such an ‘improvement’ are the usual goals of economic efficiency and equity. On the surface, the main purpose of the current co-ordination proposals seems to be an increase in capital tax revenues. The underlying efficiency issue is, however, whether the excess burden of higher capital taxes under a co-ordinated EU policy is higher or lower than that of alternative sources of government finance, in particular taxes on labour income. Similarly, the equity issues arising from higher taxes on capital are less obvious than may appear at first sight, since — as I will argue in the context of interest income taxation — co-ordination measures may affect savers with different income levels in a discriminatory way.

The paper is set out as follows. Section II looks first at recent developments in national legislations concerning the taxation of interest income and the corporation tax. The idea behind this approach is that these national policy changes, interpreted as rational adjustments to changing conditions in capital markets, allow us to draw inferences about the effects of taxes on various types of capital flows. The resulting conclusions are compared with both theoretical results and some of the available econometric evidence on the effects of capital taxes. On the basis of this ‘positive’ analysis, Section III will then turn to a normative evaluation of the scope and limits of a co-ordinated EU tax policy, covering both interest income taxation and the taxation of corporate profits. The results are summarised in Section IV.

## **II. CAPITAL TAXATION IN EU MEMBER STATES**

### *1. Taxation of Interest Income*

The taxation of interest income legally follows the principle of world-wide income taxation in the residence country of the investor (residence principle). Residents of all OECD countries are legally required to declare all interest income, independent of where it has been earned, but are entitled to a tax credit for any withholding taxes that have been levied by the country in which the investment was undertaken (the source country). This is shown in the last column of Table 1, which summarises the current rules for the taxation of individual interest income in the EU. The core issue for the taxation of this type

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<sup>1</sup>References to ‘capital income taxes’ in the present paper are generally limited to the corporation tax and the taxation of interest income. The discussion here does not extend to other kinds of investment income, such as dividends or capital gains.

TABLE 1  
Taxation of Interest Income of Individuals in the EU, 1997

	Domestic investors		International investors	
	<i>Top personal tax rate<sup>a</sup></i> (%)	<i>Withholding tax rate</i> (%)	<i>Withholding tax rate</i> (%)	<i>Foreign-source income</i>
Austria	25 (50)	25	0	Credit
Belgium	15 (60.8)	15	0–15 <sup>b</sup>	Credit
Denmark	60 (60)	0	0	Credit
Finland	28 (58)	28	0	Credit
France	56.8 (56.8)	10–19.4	0–15 <sup>b</sup>	Credit
Germany	53 (53)	30	0	Credit
Greece	20 (45)	15–20	10–40 <sup>b</sup>	Credit
Ireland	48 (48)	10 and 26	0–15 <sup>b</sup>	Credit
Italy	30 (58.9)	12.5–30	0–15 <sup>b</sup>	Credit
Luxemburg	50 (50)	0	0	Credit
Netherlands	60 (60)	0	0	Credit
Portugal	20 (40)	20	10–20 <sup>b</sup>	Credit
Spain	56 (56)	25	0	Credit
Sweden	30 (56)	30	0	Credit
UK	40 (40)	20	0	Credit

<sup>a</sup>Top personal tax rate on non-capital income in parentheses (all levels of government).

<sup>b</sup>Withholding tax rates depend on double taxation agreements with other EU members.

Country notes:

*Denmark* — reporting of interest income of domestic residents to tax authorities.

*France* — interest from government bonds (withholding tax rate 10 per cent) integrated in personal income tax; other interest incomes subject to final tax rates of 15 per cent and 19.4 per cent.

*Germany* — personal allowance ('Freibetrag') of DM6,000 per capita.

*Greece* — withholding tax rate of 15 per cent on interest from savings accounts; otherwise 20 per cent.

*Ireland* — withholding tax of 10 per cent on interest income up to IRE50,000; higher incomes 26 per cent.

*Italy* — withholding tax rates depend on type of asset.

Source: Mennel and Förster, 1997.

of capital income is, however, tax evasion. During the 1980s, this became particularly visible in high-tax countries, such as the Scandinavian countries, Germany and Austria, which then levied no withholding taxes (source taxes) on individual interest income. In these countries, it was estimated that the vast majority of interest income effectively escaped taxation (see the contributions in Mutén et al. (1996)).

Various responses to this policy problem have been undertaken since then. As can be inferred from Table 1, the Scandinavian countries reduced top personal tax rates on capital incomes well below the top marginal tax rates applicable for wage income. This switch to a 'dual income tax' was accompanied by the installation of a reporting system, which enforced the taxation of domestic

interest income at the new, lower rates. The tax reform in Austria was similar in some, but not all, respects. As in the Scandinavian countries, the tax rate applicable for capital income was lowered substantially below the marginal tax rate on other forms of income. However, because of Austria's strict bank secrecy laws, a final source tax on interest income was introduced to enforce this tax ('Abgeltungssteuer'). In both Scandinavia and Austria, the reforms are generally regarded as successful, even though some problems — such as the decomposition of the income of the self-employed for tax purposes — remain (see Sørensen (1994) and Genser (1996) for overviews).

One important common element of the tax reforms in Scandinavia and Austria is that — as in many other EU states — the imposition of withholding taxes or reporting schemes does not extend to foreign investors (see Table 1). The importance of this provision is well documented by the experience of Germany. In 1989, Germany introduced a 10 per cent withholding tax on interest income that applied to both domestic and foreign residents. In anticipation of this tax, German long-term capital exports reached a record level of DM85 billion in 1988 (almost four times as high as in 1987), forcing the government to abolish the withholding tax in July 1989 (see Schlesinger (1990, p. 105)). In 1993, the German government was forced by its Supreme Court to reintroduce a 30 per cent withholding tax on interest income for equity reasons. The main difference was, however, that foreigners were now excluded from the tax. While the tax again caused substantial capital outflows, the exclusion of foreigners has so far made the withholding tax sustainable, despite its relatively high rate.

The effects of withholding taxes imposed on international investors have also been the subject of econometric analyses, which have estimated the change in the pre-tax rate of return required by investors. The effects of the 1989 German withholding tax have been analysed by Nöhrbaß and Raab (1990). They find that the gross interest rate has risen by the full amount of the tax, implying that international investors were able to fully shift the tax to the issuers of debt. A recent study by Eijffinger, Huizinga and Lemmen (1998) confirms this result for a broader sample of countries that impose interest withholding taxes on either US or Japanese investors. Here again, the estimates from the pooled cross-section, time-series regressions indicate that pre-tax returns must rise by the full amount of the tax, implying that none of the tax is borne by international investors.

These results indicate that the mobility of portfolio capital is indeed very high, at least for some groups of investors. Note also that this is true even though all countries extend tax credits to their domestic residents for withholding taxes paid abroad. If investors indeed paid residence-based taxes on their international interest income, then they should be indifferent (apart from liquidity effects) towards the imposition of withholding taxes levied in the source country. Hence a further conclusion from the empirical evidence is that international investors do not, at the margin, pay taxes on interest income in their residence country.

This, of course, confirms the widely-held belief that the avoidance or evasion of taxes on interest income is the rule rather than the exception in a world characterised by high capital mobility.

If the empirical evidence presented above is taken as fact, then source taxes levied on foreign investors are counterproductive for a small country. The fundamental argument is that, in the presence of perfect international capital mobility, any source-based capital tax will be fully reflected in the (gross) interest rate of the taxing country. The rise in interest rates crowds out real investment and reduces the marginal productivity of internationally immobile factors of production. Hence the source tax on capital effectively falls entirely on domestic workers and landowners and it would be more efficient to tax these immobile factors directly. This avoids the distortion in the domestic capital market caused by the fact that the interest rate exceeds the opportunity cost of capital in world markets (see Gordon (1986) and Razin and Sadka (1991)).

On the other hand, Table 1 shows that most countries levy withholding taxes on *domestic* investors. Clearly, if all investors were perfectly mobile internationally, then domestic withholding taxes would be fully avoided and earn zero revenue. Hence the fact that revenue collections from interest withholding taxes are non-negligible<sup>2</sup> indicates that there is also another group of investors which is relatively immobile internationally. This is consistent with the well-documented fact that the average portfolio composition of investors exhibits a significant ‘home bias’ in all OECD countries (see the discussion and references in Gordon and Bovenberg (1996)). Note that, if two groups of investors are differentiated, then this home bias need not be inconsistent with the above-mentioned evidence on the shifting of withholding taxes into gross interest rates, since the latter result is exclusively driven by the arbitrage considerations of the mobile group of investors.

A model with two dichotomous groups of investors is presented by Janeba and Peters (1999). They show, in a game-theoretic model of two countries of different size, that it is rational from the perspective of each country to discriminate between the withholding tax treatment of immobile domestic investors and that of mobile international investors. The outcome of this game is Pareto-inefficient, however, because mobile international investors remain completely untaxed.

To sum up the discussion in this part, it has been seen that it is rational for individual EU Member States not to levy withholding taxes on internationally

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<sup>2</sup>To give two examples, revenue collections from the interest withholding tax in Austria were öS22.8 billion in 1996, almost 4 per cent of total tax revenue (*Arbeitsbehelf zum Bundesfinanzgesetz 1998*, Teil 1, Kapitel 52, Wien, 1997). In comparison, revenues from the interest withholding tax in Germany were DM12.1 billion in the same year, approximately 1.5 per cent of total tax revenue (*Finanzbericht 1999*, Tabelle 12, Bonn, 1998). The substantially smaller share of revenue collections in Germany, despite the nominally higher withholding tax rate, is due to the high personal allowance (‘Freibetrag’) that leaves DM6,000 of interest income per capita tax-free.

mobile investors. This, however, creates an important loophole for the entire system of interest taxation in the Union, and there is substantial evidence that this loophole is thoroughly exploited by international investors. Nevertheless, the co-ordination of EU withholding tax policies on interest income is not a straightforward exercise. In general, it will involve redistributive effects between countries and it will also affect different groups of investors in a discriminating way. The most important caveat remains, of course, that the co-ordination measure will be geographically restricted, offering investors the possibility of transferring their portfolio capital outside the EU. These issues will be taken up when the prospects for a common European withholding tax on interest income are discussed in Section III(1).

## *2. Taxation of Corporate Profits*

An important difference between the taxation of interest income discussed above and the corporation tax is that the first taxes a normal rate of return whereas the latter involves the taxation of pure profits or rents, together with the normal return to equity. Despite this seemingly obvious distinction, the results of conventional models of capital taxation, with their assumption of perfectly competitive capital markets, have often been extended to the corporation tax. The need for a more careful analytical distinction between the taxation of competitive returns to portfolio investments on the one hand and the taxation of above-normal returns to foreign direct investment on the other has only recently been emphasised (by, for example, Devereux (1997)). Similarly, recent empirical studies have begun to differentiate between effective marginal and average tax rates — the difference being that the second also incorporates the taxation of pure profits — and have shown that the average tax rate is better able to predict the location decision of internationally mobile firms (Devereux and Griffith, 1998). As will be argued below, the existence of pure profits accruing to firms is important for explaining some of the empirical evidence on the location decisions of multinational firms, as well as the tax responses of national governments.

Corporate profits are generally taxed in the source country of the investment, whereas the residence country of the investor either exempts foreign-source income from tax or credits the taxes paid abroad. Even in the latter case, however, source taxes remain effective until profits are repatriated, and most commentators agree that the taxation of foreign direct investment closely follows the source principle in practice (for example, Tanzi and Bovenberg (1990), Keen (1993) and Sørensen (1995)).

In the period since the mid-1980s, following the lead of the US, almost all EU member countries have significantly changed their corporate tax systems. The general direction of these reforms was towards lower statutory tax rates combined with more comprehensive corporate tax bases. This is also indicated in

Table 2, which shows that, on average in the EU, statutory corporate tax rates fell more than effective marginal tax rates (EMTRs), which include changes in the tax base. Furthermore, the entire fall in the average EMTR derives from the tax changes in a single country (Germany). As a caveat, it must be emphasised that the figures for statutory and effective marginal tax rates given in Table 2 are not directly comparable with respect to either the time period or the set of countries covered. Furthermore, EMTR calculations are generally subject to relatively large measuring errors. However, independent and detailed studies tend to confirm the overall picture given in this table. Schaden (1995, Table 5.9, p. 106) finds that the average of EMTRs applying to German foreign direct investment in the EU countries has remained virtually unchanged during the

TABLE 2  
Statutory and Effective Marginal Tax Rates on Corporations in the EU

	Top corporate tax rate <sup>a</sup> (retained profits)		Effective marginal tax rate	
	1985 (%)	1997 (%)	1980 (%)	1991 (%)
Austria	61.5	34	—	—
Belgium	45	39	18	8
Denmark	50	34	6	16
Finland	50	25	—	—
France	50	33.3	28	8
Germany	61.7	53.1	54	16
Greece	49	35	—	—
Ireland	50/10 <sup>b</sup>	38/10 <sup>b</sup>	-2	2
Italy	47.8	52.2	8	16
Luxemburg	45.5	32	34	28
Netherlands	42	35	16	20
Portugal	51.2	39.6	26	14
Spain	33	35	8	18
Sweden	52	28	—	—
UK	40	33	-10	18
Average	48.6	36.4	16.9	14.9
- without Germany	47.6	35.2	13.2	14.8
Standard deviation	7.1	7.3	17.1	6.6

<sup>a</sup>Including local business taxes and surcharges.

<sup>b</sup>Special rate for manufacturing sector.

Sources: Ruding Report, 1992, Tables 8.5 and 8.19; Mennel and Förster, 1997. The cost-of-capital figures ( $r^s$ ) given in the Ruding Report have been converted into effective marginal tax rates ( $t'$ ), using  $t' = (r^s - r^n) / r^n$ , where  $r^n = 0.05$  is the (net) real interest rate assumed in the Ruding Report. The cost-of-capital figures in the report are based on no personal taxes and 3.1 per cent inflation in all countries and weighted averages of three forms of finance and three types of assets.



period 1981–91. Chennells and Griffith (1997, Table 4.2, p. 46) report for the period 1979–94 that the average of domestic EMTRs in 10 OECD countries (among them six EU members) has fallen by only approximately 5 per cent (from 21.7 per cent to 20.5 per cent). Both of these studies also find a significant reduction in the standard deviation of EMTRs, in accordance with the figures in Table 2.

Two questions arise immediately from these observations. The first is why the EU average of effective marginal tax rates has fallen relatively little in a period of rapidly increasing capital mobility. One argument, stressed by Sørensen (1994 and 1995), is that any reform of corporate taxation is very sensitive to distributional concerns. However, to the extent that the corporation tax falls on pure economic profits or rents, there is also an efficiency-based argument for the moderate fall in effective tax rates on capital. For example, natural resources or a favourable public infrastructure represent factors of production that need not be remunerated by the firm and hence give rise to pure profits. In such a setting, it is well known that even small countries are able to tax country-specific rents accruing to firms that locate in their jurisdiction (for example, Mintz and Tulkens (1996) and Huizinga and Nielsen (1997a)).

When the discussion is confined to these ‘traditional’ sources of national rents, however, it is difficult to explain either the significant changes in EMTRs that occurred in individual countries during the 1980s and 1990s or the convergence of EMTRs across EU Member States (see Table 2). Here, it may be helpful to turn to the ‘new trade and geography’ literature which has emphasised that location rents can also result from agglomeration benefits and the size of the host country’s home market (Krugman, 1991). Recently, first attempts have been made to incorporate these factors into the tax competition literature. Haufler and Wooton (1999), for example, analyse the competition between two countries of unequal size for the location of a foreign-owned monopolist. The existence of transport costs in their model gives the firm an incentive to locate in the larger market, leading to an equilibrium where the larger country is able to charge a positive profit tax and still attract the monopolist. Hence, in contrast to the advantage that the small country has in competitive capital markets (see Section III(1)), the large country has a competitive advantage in attracting foreign direct investment. In a similar spirit, Kind, Midelfart Knarvik and Schjelderup (1998) explicitly model market linkages in addition to trade costs and show that this enhances the potential for a country hosting an agglomeration to levy positive source-based taxes on capital. Recent empirical evidence confirms that the size of the host country’s home market and agglomeration indices both have positive and statistically significant effects on the likelihood of a firm locating in a particular country (Grubert and Mutti, 1996; Devereux and Griffith, 1998).

Linking these results to the empirical evidence on the development of EMTRs in EU Member States is clearly not a straightforward task. Nevertheless, one may at least speculate that increasing integration in Europe has modified the

definition of the 'home market' from the perspective of individual member countries, and may have generally raised the importance of the 'new trade' factors in explaining location rents. This could offer a way to understand why some countries have been able to raise their effective tax rates on corporations and why EMTRs have become more similar in the EU.

The second question that arises from the recent reforms of corporate taxation relates to the structure of the corporation tax. Here, there is an interesting contrast between the observed broadening of the corporate tax base through less generous depreciation allowances (see, for example, Chennells and Griffith (1997, Figure 3, p. 4)) and the calls for a reform of corporate taxation towards some form of neutral business taxation that leaves the return to marginal investments untaxed. Different variants of an investment-neutral corporation tax have been proposed both in the EU and in the US.<sup>3</sup>

Most observers see the primary motive behind the actual reforms in the EU (and elsewhere) as a domestic one, arguing that lower capital tax rates combined with fewer exemptions from the tax base reduce the distortions of the existing capital tax system. Empirical cost-of-capital comparisons have shown very clearly that one of the most important distortions caused by corporate taxation lies in the differential treatment of alternative forms of financing (King and Fullerton, 1984). It has also been shown empirically that these distortions have generally been reduced through the corporate tax reforms carried out since the 1980s (Schaden, 1995, pp. 95–9). This second-best argument cannot explain, however, why countries do not switch to neutral schemes of corporate taxation. From a national perspective, the latter is a first-best instrument since it leaves investment untaxed at the margin and at the same time treats all forms of financing alike.

An alternative argument to motivate the recent reforms of corporate tax systems therefore focuses on the ability of multinational firms to engage in transfer pricing and other profit-shifting activities. Within a multinational firm, the incentives for the shifting of 'paper profits' depend only on a comparison of statutory tax rates. Furthermore, it can be argued that the shifting of paper profits involves few costs to the firm, in comparison with the relocation of real investment, and hence corporate tax bases should be particularly sensitive to this type of tax arbitrage (Devereux, 1992; Keen, 1993).

If transfer pricing occurs in multinational firms, then it can be shown, in a conventional optimal tax model, that countries concerned about the stabilisation of corporate tax revenues will find it optimal to cut their corporate tax rate and simultaneously broaden the tax base by giving less generous depreciation allowances (Haufler and Schjelderup, 1999). There is also some econometric

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<sup>3</sup>For the EU, see, for example, IFS Capital Taxes Group (1991). For the US, see the Hall and Rabushka (1995) 'flat tax' proposal and the more recent alternatives discussed in Boskin (1996). For an overview, see Cnossen (1996).

evidence for the importance of profit-shifting activities, as the statutory tax rate has a negative and significant effect on the probability of attracting foreign direct investment even if effective marginal and average tax rates are controlled for (Devereux and Griffith, 1998, p. 354).

To summarise the discussion: I have argued that the existence of rents accruing to internationally mobile firms may be able to explain the moderate fall in overall effective rates of corporate taxation, while the ability of multinational firms to shift profit income to countries with low statutory tax rates offers one possible explanation for the observed tax-rate-cutting, base-broadening pattern of corporate tax reforms. The implications of these findings for the co-ordination of corporate taxation in the EU will be the subject of the discussion in Section III(2).

### **III. PROSPECTS FOR POLICY CO-ORDINATION IN THE EU**

#### *1. Taxation of Interest Income*

The discussion in Section II(1) has shown that, in the present situation of uncoordinated interest taxation in Europe, few countries impose withholding taxes on foreigners. While this tax policy is rational from the perspective of each individual country, its implication is that a significant portion of interest income earned by EU residents is able to escape taxation altogether.

This is the background against which the recent proposal by the European Commission for a common withholding tax on interest income must be judged. According to this proposal (Commission of the European Communities, 1998), each Member State will be required to levy a minimum withholding tax of 20 per cent on all interest income accruing to EU residents. Member States that do not want to impose the withholding tax can instead opt for a reporting system, under which banks automatically notify tax administrators in the investor's residence country of any interest payments to EU nationals.

A first and obvious problem with this proposal will be obtaining the unanimous support from all Member States that is required under current EU law for all matters of tax policy. The UK, for example, has significant objections to the withholding tax because of its potential effects on the Eurobond market. The strongest opposition is expected to come from Luxemburg, however, since it is the prime beneficiary of the present system of uncoordinated interest tax policy. For example, when Germany announced its 30 per cent withholding tax in 1992, 90 per cent of the resulting capital outflow was invested in this country (Schaden, 1995, pp. 14–17). Luxemburg's opposition was one of the core reasons for the failure of the 1989 initiative to impose a common interest withholding tax in Europe, and the stake that Luxemburg has in defending its current position is certainly as high now as it was in 1989.

The special situation of Luxemburg corresponds with the theoretical result that a sufficiently small country is able to gain from non-coordinated capital income taxation (Bucovetsky, 1991; Wilson, 1991). The intuition for this theoretical result is that the small country will face the more elastic capital tax base and hence find it optimal to set a lower capital tax rate than its large neighbour. This will attract a disproportionate share of capital into the small country, which more than compensates for the welfare loss induced by the inefficient tax choice. It is then clear that the small country has no incentive to join an international agreement on capital tax co-ordination.<sup>4</sup>

Given that it does not seem feasible in the short run to replace the present unanimity requirement for issues of tax policy by a qualified majority vote, the only remaining option may be to 'buy' Luxemburg's consent through some form of direct or indirect compensation (see, for example, Frank (1991) and Huizinga and Nielsen (1997b)). Clearly, the political difficulties caused by such a compensation scheme must not be underestimated, as the frequent and prolonged quarrels over rebates to the UK under the Common Agricultural Policy have shown. Nevertheless, economists tend to be notoriously optimistic about the feasibility of distributing overall efficiency gains in a way that leaves nobody worse off than before. In this tradition, I will also concentrate, in the following, on the aggregate efficiency effects of a common interest withholding tax in Europe, as well as its distributional implications for different groups of investors.

A crucial problem with an interest withholding tax levied only in EU Member States is the fear of capital flight to third (non-member) states. This is also seen by the European Commission, which has announced it will initiate talks with individual non-EU members, as well as the OECD, on this issue.<sup>5</sup> However, it will clearly not be feasible for the EU to extend either an automatic reporting system or a net of withholding taxes to all potential tax havens world-wide. Therefore a realistic restriction for a common EU withholding tax on interest income is that capital flight to third countries cannot be effectively controlled.

In this setting, and in the absence of transaction costs for international capital movements world-wide, Razin and Sadka (1991) have seemingly made a convincing case against tax co-ordination between a sub-group of small countries. They argue that, as long as the EU is unable to exert any substantial (downward) influence on world interest rates, the co-ordinated withholding tax will be fully shifted into higher interest rates in Europe. Hence, in their view, the

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<sup>4</sup>The standard model can be extended by considering additional tax instruments and tax competition between more than two countries. In this more general setting, it can be shown, through numerical simulations, that the incentive to join a co-operative agreement is generally increased and only a very small country will still gain from tax competition (Eggert and Haufler, 1998).

<sup>5</sup>In February 1999, for example, an EU delegation visited Switzerland in order to explore this country's willingness to co-operate with the proposed EU Directive. See *Neue Züricher Zeitung*, 27/28 February 1999, p. 11.

argument that it is inefficient for a small country to levy source-based taxes on capital (Section II(1)) carries over to a co-ordinated EU withholding tax on interest income. It is relevant to note that this fear of adverse repercussions on the financial sector and the level of interest rates was also an important concern under the 1989 proposal for a common EU interest withholding tax (see Huizinga (1994)).

This argument overlooks, however, an important provision in the new Directive proposal made by the Commission — namely, that the withholding tax will be levied only on the interest incomes of EU residents. This parallels the discriminatory withholding tax treatment of domestic and foreign investors used by most EU Member States (see Section II(1)) and implies that arbitrage by mobile non-EU investors will tie the level of the interest rate in the EU to the world rate. Hence this provision avoids the shifting of the withholding tax into gross interest rates and the resulting efficiency losses from capital market distortions in Europe.

Even in the absence of interest rate effects, a co-ordinated EU withholding tax could be completely avoided by EU investors — and hence have neither adverse nor beneficial effects — if they faced no transaction costs for investments in third markets. It has been seen in Section II(1), however, that the empirical evidence on the ‘home bias’ in international portfolio investment suggests that transaction costs — interpreted in a wide sense — may be a relevant factor in practice. One obvious reason may be exchange rate risk. Bhandari and Mayer (1990) have presented empirical evidence for the period 1975–87 that capital owners in Europe favour investments in other EU Member States over locations in non-EU countries, and they have linked this result to the relative stability of the European Monetary System in the time period underlying their study.

Consider, then, the following arbitrage opportunity for an EU investor who compares the return from an EU investment, net of withholding taxes, with the return from a tax-free investment in the world market, net of personal transaction costs. Given that interest rates in Europe and the rest of the world should be equalised through the arbitrage of non-EU residents, an investor  $i$  who is just indifferent between the two alternatives will have personal transaction costs  $c^i$  that equal the withholding tax payment (withholding tax rate  $t^w$  times gross interest rate  $r$ ):

$$r(1-t^w) = r - c^i \quad \rightarrow \quad t^w r = c^i .$$

All investors with personal transaction costs in world markets greater than  $c^i$  will continue to invest in Europe, whereas investors facing lower transaction costs will move their capital abroad and avoid the EU withholding tax.

On the basis of this simple argument, it is intuitive that the efficiency case for an EU withholding tax rests on differential transaction costs for investments in

non-EU markets on the one hand and investments in other EU Member States on the other. If such a positive differential exists, then the withholding tax will indeed be able to tax some of the rents that currently accrue to those EU investors who face relatively high transaction costs in world markets, yet are able to avoid taxation in their home country by investing in EU tax havens (where they face low transaction costs). It is then straightforward to show that the optimal EU withholding tax rate is positive, and co-ordination will yield efficiency gains for the EU as a whole (Huizinga and Nielsen, 1997b). Furthermore, continuing market integration in Europe, in particular monetary union, is likely to increase the transaction cost differential and thus strengthen the case for an interest withholding tax at the EU level (Genser and Haufler, 1996).

On the other hand, EU investors with low personal transaction costs of investing in third countries will be able to avoid the tax. This group is likely to consist mainly of large investors, who are able to take advantage of scale economies involved in international investments and reduce exchange rate risk by diversifying their foreign-asset portfolios. Hence, even if this group is relatively small, the volume of capital flight caused by an EU withholding tax may be substantial. This not only reduces the effectiveness of the EU withholding tax as a revenue-raising device but also implies that the tax will be paid primarily by small savers whereas large and wealthy investors are likely to escape the tax (see Gordon (1992)).

Also, investments in third countries are not the only way to avoid interest withholding taxes in Europe. A further route, which again will be open primarily to mobile large-scale investors, is offered by the recent growth of financial derivative instruments. These derivatives allow duplication of risk-free portfolio investments by a combination of other instruments. Alworth (1998) argues that it is very difficult to consistently apply source taxes to the cash flows resulting from these derivatives, which may be either positive or negative. If the net returns from transactions in derivatives remain untaxed, however, then their continued growth will constitute an additional and serious limitation for the effectiveness of an EU-wide withholding tax on interest income.

In sum, even though a basic efficiency argument can be made for an EU-wide withholding tax on interest income, the quantitative gains from this measure will depend to a large extent on the transaction costs that large-scale European investors face for investing either in third countries or in untaxed financial derivatives. If these group-specific transaction costs are sufficiently low, then the overall revenue collections from the withholding tax may be quite moderate, and they have to be weighed against the additional administrative and compliance costs introduced by this co-ordination measure. Furthermore, the distributional implications of the tax may not be desirable. Overall, then, while an EU withholding tax on interest income is likely to represent some improvement over

the status quo, it necessarily remains a very incomplete solution to the problem of tax-induced capital flight.

## *2. Corporate Taxation*

The need for greater harmonisation of business taxes within the Community was evaluated in detail by the Ruding Committee, which issued its final report in 1992. Despite the visible convergence of effective marginal tax rates in the EU (see Table 2), the report concluded that the existing pattern of company taxation still gave rise to significant distortions in the allocation of capital across countries. The committee proposed, among other measures, a minimum statutory corporate tax rate in Member States of 30 per cent and a harmonisation of corporate tax bases.

The recommendations of the Ruding Committee were criticised on various grounds. Many observers saw a contradiction between the committee's evaluation that there is no evidence of 'unbridled tax competition' (Ruding Report, 1992, p. 12) and the detailed and far-reaching proposals for corporate tax harmonisation (for example, Genser, Schaden and Steinhart (1993)). Given the significant changes in national schemes of corporate income taxation that occurred during the 1980s (see Section II(2)), it was concluded that unilateral tax adjustments by EU Member States offer more flexibility to adjust to changing investment conditions world-wide than a harmonised EU corporation tax. The Council of Ministers also reacted cautiously to the report's recommendations. Reservations were held, in particular, against the harmonisation of national tax bases. Furthermore, while the idea of a minimum statutory tax rate was not explicitly rejected, a minimum rate of 30 per cent was considered to be too high (European Communities, 1992).

In view of this criticism, the recent agreement on a 'Code of Conduct for business taxation' (Council of the European Communities, 1998) focuses not on the harmonisation of 'regular' corporate tax schemes in the EU, but on the abolition (or at least reduction) of discriminatory tax breaks that apply only to some — usually foreign — investors. However, to the extent that the code is successful in raising the overall level of corporate taxation in Europe, its economic effects may be quite similar to the imposition of a minimum EU corporate tax rate. In the following, I will thus treat these two co-ordination measures jointly and look at the efficiency and revenue effects that they are likely to have.

To evaluate these co-ordination measures, it is important first to be clear about possible arguments in favour of corporate tax harmonisation in Europe. It was argued in Section II(2) that the moderate fall in effective marginal tax rates on capital may be explained by the fact that the corporation tax is partly a tax on national rents. Hence each country should be able to tax these rents by means of a corporation tax without causing mobile firms to leave. An argument for a

minimum corporate tax rate thus arises only when there is also a *common* location rent for investing in Europe. Such an EU rent can arise, for example, from access to the single European market. It has been shown that reducing internal barriers to trade increases the incentives of firms from outside the Union to build a branch plant in *one of* the EU countries, even if external trade barriers remain unchanged (see, for example, Norman and Motta (1993)). The total rent that a firm can obtain by setting up production in a particular European country is thus the sum of the country-specific national rent  $\pi^i$  and the common EU rent  $\pi^{EU}$  (that can be earned in any European country):

$$\pi = \pi^i + \pi^{EU} .$$

With non-cooperative tax policy between Member States, each Member State  $i$  will be able to capture the country-specific rent  $\pi^i$  by means of a national corporation tax, but competition between Member States will drive the taxation of the common EU rent to zero. In this case, there is a basic efficiency argument for a binding minimum corporate tax rate, since the EU share of the total location rent in any particular country can only be captured by a co-ordinated EU corporation tax (Keen, 1993).

In practice, however, the distinction between national rents and a common EU rent may not be a very clear one. As the discussion in Section II(2) has indicated, the empirical evidence of converging EMTRs in EU Member States can be interpreted as indicating that European integration has changed existing national rents (for example, by redefining the relevant 'home market') rather than creating an additional EU rent. One may then argue, on the basis of the relative stability of the EU average of EMTRs, that individual Member States seem to be able to extract at least part of the rents that arise to firms in the European internal market. On the other hand, it may be countered that existing EMTR measures do not fully account for discriminatory tax breaks and investment incentives used by individual countries. Therefore these aggregate measures may underestimate the forces of tax competition that are currently at work in the EU.

In any case, the rents earned from locating in Europe will not be the same for individual firms. Instead, in a way analogous to the treatment of portfolio investors in Section III(1), there is a continuum of firms which differ in their attachment to the EU and hence in the degree of international mobility that they exhibit towards increased taxation in Europe (see Osmundsen, Hagen and Schjelderup (1998) for such a modelling strategy). Any increase in EU corporation taxes — either through a rise in statutory tax rates or through a closing of tax loopholes — will thus have two counteracting effects. On the one



hand, to the extent that tax competition between EU members currently leads to an 'undertaxation' of corporate income, it will allow a more effective taxation of those firms that derive relatively high rents from locating in a particular EU country. On the other hand, the same measure will drive some internationally mobile firms (with low firm-specific EU rents) out of production in Europe and thus impose some costs on the Union as a whole. Which of these effects is the dominant one for a particular harmonisation proposal seems to be difficult to ascertain.

Another theoretical argument in favour of a lower bound on statutory corporate tax rates in the EU is based on the observed reforms of corporate tax structures. As was argued in Section II(2), one possible explanation for the reduction in statutory corporate tax rates could be the growing importance of transfer pricing in internationally integrated firms, which leads to highly elastic responses of 'paper profits' to nominal tax rate differentials, even if the real activities of firms are not very tax-sensitive. If this interpretation is correct, then there is a case for a minimum EU corporation tax rate in order to prevent competition for profit tax revenues (Devereux, 1992). This co-ordination measure would allow more generous depreciation allowances for any given level of corporate tax revenues and yield aggregate efficiency gains due to reduced distortions of the firm's intertemporal investment decision (Haufler and Schjelderup, 1999).

However, the case for corporate tax co-ordination in Europe is again weakened by the additional arbitrage opportunities open to firms that simultaneously invest in third countries. If profit shifting in multinational enterprises becomes an increasingly relevant constraint on tax policy, then this also applies to a minimum EU corporation tax or a binding 'Code of Conduct'. In particular, it is possible for multinational firms to locate in Europe and benefit from access to the single market as well as national infrastructures, but to avoid high EU corporate tax rates through profit shifting to other, low-tax jurisdictions in which the firm operates. In this case, the firm's real decisions would be fundamentally unaffected by the EU corporation tax, but the firm would be able to appropriate most of the location rent by manipulating its EU tax base.

A minimum EU corporate tax rate is not the only measure to combat profit-shifting strategies by multinational firms. One possible alternative would be to follow the US example and supplement the traditional arm's-length-pricing rule with the 'comparable profits method'. This regulation, in effect since 1994, gives US tax authorities the right to correct corporation taxes on the grounds that the profitability of a firm has been lower than the profitability of comparable firms in the same branch over a longer time period (see Schjelderup and Weichenrieder (1999)). A more systematic, but also more ambitious, solution would be an EU-wide application of formula apportionment (or unitary taxation), as is currently employed by the US for domestic firms operating in several states. Clearly, each of these alternatives has its own set of problems and

drawbacks. However, if the shifting of paper profits should turn out to be a more important problem in Europe than the relocation of physical investment, then these measures are clearly closer to the source of the underlying co-ordination problem than a harmonisation of corporate tax rates.

#### IV. CONCLUSIONS

This survey of the prospects for a co-ordinated EU tax policy in the field of capital income taxation has focused on two specific sets of measures. First, the imposition of a minimum withholding tax on all interest income earned by EU residents was discussed. This co-ordination proposal seems to be a suitable response to the fact that interest income earned in the EU currently escapes taxation to a large extent, not least because of the existence of small countries acting as tax havens. The distributional effects between EU Member States make it difficult to obtain the required unanimous support to enact a co-ordinated EU withholding tax. However, even apart from these political difficulties, the restricted coverage of the co-ordination measure — both geographically and with respect to the types of portfolio incomes taxed — significantly limits its effectiveness. While a basic argument for such a policy can be made on the basis of differential transaction costs for portfolio investments within and outside Europe, large-scale investors will be likely to be able to avoid the tax by investing either in third countries or in untaxed financial derivatives. Hence an EU withholding tax on interest income can be expected to turn into a tax on small savers.

The second co-ordination measure this paper has discussed is an increase in the effective rate of corporate taxation in Europe, brought about either by a closing of current tax loopholes (caused by discriminatory tax breaks) or by a minimum corporate tax rate in the EU as proposed by the Ruding Committee. An important difference from the case of interest income taxation is that internationally mobile firms generally make profits on their foreign direct investment. This offers countries the possibility of taxing location-specific rents, even if firms do not face any mobility costs internationally. A case for a minimum corporate tax rate in Europe may nevertheless exist, either because an EU location rent will be competed away if Member States' corporate tax policy remains uncoordinated or because competition for 'paper profits' causes Member States to distort their corporation tax structures in the direction of lower statutory tax rates. However, multinational firms may react to tax harmonisation measures in Europe either by relocating production to non-member states (if they derive low firm-specific rents from locating in Europe) or by shifting profits to low-tax countries outside the Union.

Comparing the prospects for a minimum withholding tax on interest income on the one hand and higher effective taxation of corporate profits on the other, it emerges that tax-base flight to third countries is the most important restriction

for capital income tax co-ordination in the EU. In my view, it is this ‘third-country problem’ which forms the crucial difference from the harmonisation of indirect taxes, where tax-base mobility is confined to the EU. This is not to deny that the co-ordination of capital taxes in the EU is an important task, and there are good arguments for it. However, in the presence of world-wide mobility of tax bases, the limits of tax policy co-ordination at the EU level must be clearly recognised.

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