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CAPITAL FLIGHT AND TAX COMPETITION:
ARE THERE VIABLE SOLUTIONS TO BOTH PROBLEMS?

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ABSTRACT

This paper discusses a model corporate tax system based on the application of the residence principle. This tax system, while preserving national sovereignties, minimizes the distortions from international capital mobility. The paper is motivated by an analysis of European capital income tax systems, and of the distortions they might give rise to as obstacles to international capital flows diminish. The alternative system we analyze has two main properties: it exploits the territoriality of law enforcement, and allows countries to set the corporate tax rate - and the extent of double taxation of corporate income - independently from their partners. The paper concludes with some suggestive evidence of the potential revenue effects among European countries of this tax system.

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1. Introduction

The history of European capital taxation is a history of 12 disparate systems, competing for revenue not only with each other but also - and sometimes dramatically - with their own taxpayers. With the imminent arrival of 1992 the fiscal landscape will change significantly: if current capital tax systems are left untouched, European governments are likely to find it very hard to collect revenue from internationally-mobile capital. Indeed, Europe may transform itself into a single (large) tax haven.

In this paper we perform an exercise in applied positive economics: we design a model of residence-based corporate taxation that, while preserving national tax sovereignties, minimizes the distortions arising from international capital mobility. This type of exercise is in our view especially useful because in the current debates over tax reform in Europe there is much confusion between administrative problems and political constraints.¹ Analysis of models of taxation like ours can help clarify where administrative issues end and political issues begin.

To motivate our study, we begin in section 2 with a look at the data on revenue from capital income taxes and a brief discussion of the role of the history of capital taxation in shaping the fiscal institutions and private practices that are visible today. After listing in section 3 the (often unintended) distortionary incentives embodied in current tax treatments of international income, we analyze in section 4.1 a plan for a system of corporate income taxation that is consistent with the goal of minimizing the distortions arising from the international mobility of capital. The plan is a inspired by the full application of the residence principle of taxation of

¹For analyses of administrative problems associated with current tax systems and proposed reforms, see the discussion in Tanzi and Bovenberg (1989) and Schlesinger (1989).

international capital income. The plan is further discussed in sections 4.2 and 4.3.

2. Capital income tax revenue: International comparisons and their interpretation.

Table 1 reports the revenue from capital income taxes in the 12 EC countries and in the United States, for the year 1987. These revenues include those of the central government and of state and local governments. Capital income taxes are defined as the sum of corporate income taxes, of taxes on capital gains to individuals and, when available, any other taxes on capital income accrued to individuals,² plus taxes on net wealth, property, inheritance and gifts, and financial transactions ("wealth taxes" in the OECD classification). The latter have been included since they might stand for taxes on certain types of capital income that are difficult to estimate in practice such as the value of owner-occupied housing (hence authorities use wealth as a basis to compute the tax due). The numbers in parentheses contain the same computations when wealth taxes are excluded. The revenues from capital income are reported as a fraction of total income taxes (excluding wealth), total tax revenue, and gross domestic product, respectively.

The table reveals a number of important facts. As a percent of GDP, capital income taxes are relatively low in Europe, despite the fact that the ratio of taxes to GDP is higher in the EC than in the United States (40.62 percent versus 30 percent in 1987). This is further highlighted by Figure 1, reporting the revenue from (the two definitions of) capital income taxes as percent of GDP. The ratio of capital income taxes to GDP is equal to 6.81

² For example, in the case of Belgium, the *pricompte immobilier* and the *pricompte mobilier* have been added.

percent in the US, but only 5.16 on average in the 12 members of the EC. Excluding Luxembourg and the UK, the only two countries with a ratio of capital income taxes to GDP higher than the US, the European average falls to 4.21 percent. Among the countries with less capital income tax revenues than the US (and Luxembourg and the UK), Belgium and the Netherlands both exceed 5.5 percent of GDP, Denmark France and Italy are in the "middle tier" from 4 to 5 percent, while Portugal, Spain, Ireland, Greece and, surprisingly, the Federal Republic of Germany are all below 4 percent.

Since in the United States property taxes are an important source of revenue to local authorities, we repeat the calculations subtracting all wealth taxes (results in parentheses). In this case the ratio of capital income taxes to GDP decreases to 3.75 percent in the United States, and to 3.32 in the EC12. The average for the EC excluding the UK and Luxembourg is only 2.8 percent of GDP. The distribution of the revenue across EC countries (also reported in figure 1 in the black histogram) broadly resembles the one obtained by including wealth taxes.

The first column of the table reports the ratio of capital income taxes to total income taxes. It shows that the menu of taxes on income is not uniform across the EC12 countries. Capital income taxes account for as much as 66 percent of income taxes (31 percent when wealth taxes are excluded) in the United Kingdom, as little as 17 percent of income taxes in Denmark. The second column, reporting capital income taxes as a fraction of total tax revenue, highlights the important role of taxes on goods and services in European countries: in the US the fraction of capital income taxes to total tax revenue is almost twice as large as in Europe.

Figures 2 and 3 show the historical trends in capital income tax

revenue, and in the revenue from corporate income and capital gains taxes, respectively. The difference between the UK and Luxembourg and the other European partners is highlighted by the plots of both the average across the 12 EC countries and the one excluding the UK and Luxembourg. Both figures indicate the presence of a positive but small trend in Europe and wide fluctuations in the United States, even though, on average from 1965 to 1987, the U.S. revenue from capital income taxes exceeds that in Europe. When wealth and property taxes are included, we find that the revenue in the US starts as high as 8 percent of GDP to drop to 5 percent of GDP in 1983 and end at roughly 7 percent of GDP. In Europe, there is a stable and small growth from 4 percent in 1965 to 5 percent in 1987. Corporate income taxes and capital gains taxes (in figure 3) start in the US at 4.5 percent in 1965, relative to just 2 percent in Europe. The figure shows that the fluctuation of capital income tax revenue in the U.S. is due to the fluctuation of corporate tax revenue, while property taxes and wealth taxes are, as a percent of GDP, relatively stable over the sample.

In summary, the data presented in this section suggest that the revenue from capital income or wealth taxes is, and has been, significantly lower in Europe than in the United States. In countries like West Germany, the revenue from capital income taxes is only a fraction of that in the US. Of course, the revenue from capital income taxes is the product of average tax rates times the assessed tax bases. The lower European numbers could be either due to lower effective rates, or to lower assessed bases, or to both. Except for specific cases like Luxembourg - whose economy relies heavily on the business of financial intermediaries, and whose high revenue from capital income taxes is due mostly to the high fraction of capital income in total income - the

data we present cannot, by itself, tell us what exactly determines these differences.

Knowledge of the political preferences of European governments can, however, help to interpret the evidence. Socialist and socialdemocratic ideologies that influenced economic policymaking in Europe after the second world war should have favored heavier taxation of capital income than would U.S. administrations. It seems safe to rule out explanations of lower European capital income taxes based solely on the political inclinations of governments facing the same elasticities of capital income to taxes. This leaves us with two alternatives:

a) Effective tax rates are high but assessed bases are low because of higher avoidance or evasion than in the U.S.

b) Both effective rates and assessed bases are low because the high elasticities force governments to keep rates low, both to ensure some tax revenue collections and to prevent large distortions.

Cases (a) and (b) both point to the following, related, phenomena:

- In Europe the costs of administering or enforcing capital income taxes are higher than in the United States (this might explain the data for Greece, Spain, Portugal and Ireland);

- In Europe the elasticities of capital income tax bases to tax rates are higher than in the United States.

These phenomena find a likely explanation both in the geographical structure of European countries and in the historical experience of capital income taxation on the two continents. Consider the geographical constraints first: the fraction of population living close to national borders is much higher in Europe as a whole than in the U.S. European residents are thus more aware of the potential for tax avoidance offered by international transactions. Furthermore, the cost of exporting capital abroad, both legally and illegally, are likely to be lower in Europe, since proximity increases the frequency and the ease of border crossings and lowers the probability of detection.

The historical experience provides additional potential explanation for the apparently higher elasticity of capital flows to capital income taxes in Europe.³ The financial burden of World War I was proportionately much higher in Europe than in the United States, because of the difference in the size of the war effort. As a result, government indebtedness grew so much in Europe that in the immediate postwar period a large fraction of the public opinion, including leaders of the middle class liberal parties, favored extraordinary taxation of capital - a capital levy - to restore the public finances.

Capital levies have been fiercely debated in the United Kingdom and France, and were actually imposed, with mixed success,⁴ in Italy, Germany, Austria, Hungary, and Czechoslovakia. There is to date no systematic study of

³We do not examine carefully the historical American experience with capital taxation. In the more restricted realm of corporate taxation, Auerbach and Poterba (1987) find that secular declines in the share of corporate in overall taxation over the period 1959-1985 were more due to changes in corporate profitability than to statutory tax changes, suggesting in fact that the U.S. corporate income tax base responds inelastically to tax changes.

⁴See Eichengreen (1989).

the effects of these capital levies on international capital flows, and the way the private sector attempted to avoid these extraordinary taxes, in part because good data on balance-of-payments transactions in the capital account are very difficult to obtain. Indirect evidence together with descriptive accounts, however, suggest that capital flight in response to the announcement of the capital levies could have been significant.⁵

The rearmament further increased the fiscal burden on capital income. These demands were met by higher taxes in most countries and by new capital levies in Italy (1937 and 1938) and in Hungary (1938). Furthermore, in other countries capital levies were contemplated but not implemented.⁶

Finally, the two world wars had additional, and more dramatic, differential effects on private wealth: they were fought on European soil, not in North America. European savers had to bear extraordinary taxes not only from their governments, but also from by the armies of occupation; they had to escape political persecutions and deportation; and they suffered directly from the deterioration and the destruction of their investments in physical capital.

In conclusion, the geography of the European continent, the two world wars and the extraordinary taxes that they brought along, are likely to have

⁵Giovannini (1988) argues that a large fraction of the dramatic devaluation of the lira in 1919 and 1920 could be explained as a reaction to the announcement of the levy. Italian observers of the time suggest that the greatest effect of the levy was capital flight to countries like Switzerland.

⁶See Hicks et al. (1941). There are, of course, many ways to tax capital in place other than through explicit capital levies. For example, raising the rate of tax on sales or on value added serves in part as a capital levy. (Though a VAT that is constant over time does not tax capital, and for that reason VATs are not included in capital income taxes in table 1 and in figures 1-3.) We do not include in our calculations these and certain other taxes the incidence of which may be partly on owners of capital.

left profound markings on the attitudes of savers toward tax authorities. They suggest the presence of higher responsiveness of European savers to current or anticipated taxes on capital income, and explain their demand for privacy, and the attendant success of European tax havens. At the same time, the evolution of national tax systems also reflects the recent history. National tax systems are characterized by provisions designed to avoid double taxation, and tax authorities have created a number of bilateral tax treaties designed to grant reciprocal advantages in the imposition of withholding taxes on interest and dividend payments. Yet, as we show in the following section, in view of substantial international capital mobility, the current regime is characterized by almost nonexistent cooperation among tax authorities, and in fact, by its very nature, it exerts on them strong pressures to compete with each other.

3. Capital Income Taxes in Europe

In this section we briefly sketch the current regime of taxation of capital income, paying special attention to the treatment of foreign-source income. The purpose of this exercise is to highlight the way the current regime introduces distortions in the allocation of international investment and in the level of taxation.

3.1 Corporate Taxes

3.1.1 Tax Rates

The countries of Europe currently tax corporate income at different rates; Table 2 summarizes the statutory corporate income tax rates in the 12 EC countries. The table suggests that there is considerable variation in

these rates; the differences in corporate income bases, discussed below, further complicate the analysis of investment incentives in different European countries.

An interesting phenomenon observed in the recent past is the weak tendency of corporate tax rates to converge. In 1977 the average corporate rate in the EC12 was 43 percent, while the standard deviation of corporate rates was 8 percent. In 1989 the average rate was 40 percent, and the standard deviation 6.5 percent. This convergence towards lower rates is in the direction advocated by the 1975 draft directive on corporate income taxes (a directive that was not passed by the European Parliament), and might also have been prompted by the worldwide tendency towards reduction in corporate rates, documented, for example, by Whalley (1989).

3.1.2 Tax Bases

Prior to taxing income governments must define it, but all governments face the difficulty that there is seldom such thing as well-defined annual corporate income, even by their own national accounting standards. In addition, accounting methods all differ.

The most important differences arise in the depreciation of capital expenditures for tax purposes. Table 3 reports differences among EC countries in depreciation practices for fixed investments. As the table indicates, there is considerable variation among countries in the acceptability of declining-balance depreciation methods (generally more favorable for investors) in place of straight-line methods. In addition, there is considerable variation even within countries but especially between them in the depreciable lifetimes of new investments, differences that are not easy to

summarize in simple tables.⁷ Some of these differences reflect variation in nominal interest rates (depreciation allowances are seldom indexed), and some may be related to historical differences in usable capital lifetimes, but more generally they reflect differing desires on the part of central governments to encourage investment through tax incentives.

Other differences in tax bases have more obscure origins. EC countries differ in the number of years tax losses can be carried forward and back, in the treatment of inventory gains and losses, and in the rules that govern transactions between related parties.⁸ There are also very substantial discrepancies in the treatment of foreign exchange gains and losses, the most important turning on distinctions between short-term and long-term, and realization and accrual. Again, the choice of tax base definition reflects partly the historical experience of a government and partly a contemporaneous decision of which activities to encourage and which to discourage.

There are three types of problems created by the failure of governments to harmonize their concepts of tax basis. The first is straightforward: base differences encourage tax-avoiding behavior that may be inefficient. Countries offering accelerated depreciation of new investment expenditures attract investment capital away from countries that do not. Differences in effective tax rates on new investments summarize these incentives.⁹

The second problem concerns the coordination of tax systems for taxing international income. For example, when British multinationals claim foreign

⁷Devereux and Pearson (1989) and Tanzi and Bovenberg (1989) offer some summary statistics on asset lifetimes in EC countries.

⁸See Kuiper (1988) for a brief summary of some of the important differences.

⁹See, for example, King and Fullerton (1984).

tax credits for taxes paid by their French subsidiaries to the French government, it is necessary for those companies to establish exactly how much income they earned in France, when it was earned, what French taxes were paid on that income, and when it was paid. The mechanics of this computation typically affect the attractiveness of real and financial decisions of the French (and other) subsidiaries. Unusual incentives typically emerge due to the differences between home-definition and host-definition taxable income.¹⁰

The third problem stems from the inability of governments to coordinate intermediate charges between multinational parent companies and their related affiliates; the partial solutions that governments adopt create incentives for firms to respond inefficiently to national tax differences. Enforcement of transfer-pricing regulations is often imperfect; cognizant governments have introduced *ad hoc* measures in response. This phenomenon is particularly acute in the cases of cross-border charges for intangible goods such as patent royalties and interest charges, but is not limited to these; if the post-1992 regime in Europe in fact involves porous and unmonitored borders between countries, then international transactions between related parties will offer opportunities for tax arbitrage.

3.1.3 Measures to Avoid Double Taxation

Table 4 reports the tax treatment of intercompany dividends from domestic sources: all countries have provisions to avoid double taxation of group income. The treatment of income from the same firms' foreign subsidiaries is,

¹⁰Problems also arise if home governments explicitly accord foreign investments ungenerous tax basis treatment, as is standard. See Hines (1988a, 1989) for details of the likely impact of this aspect of the U.S. system on international investment incentives.

however, quite different.

Table 5, reporting the treatment of income from foreign subsidiaries, shows that all countries except France follow the worldwide (or residence) principle. This is in accordance with the OECD Model Double Taxation Convention (1977), which aims at achieving a sort of "capital export neutrality." Since foreign income becomes taxable both by the authorities of the host country (where the income is produced), and by the authorities of the country of residence of the parent company (or the individual owner), taxes paid to foreign authorities are credited against domestic taxes by most countries that follow the residence principle.

In practice, foreign taxes are credited by computing domestic taxes owed on foreign-source income grossed up by foreign taxes, and then subtracting foreign taxes paid. In some countries, like the F.R. of Germany and Ireland, investors have the option of deducting from taxable income foreign taxes paid.

Double taxation relief can take other forms. Some of the countries applying the residence principle allow exemptions of special kinds of foreign-source income. In Belgium, if a foreign corporation is a "permanent investment" of a domestic corporation, 95 percent of its dividend income is exempted from the Belgian tax.¹¹ In the Netherlands, dividends of companies that qualify for the "Participation exemption"¹² are exempted from Dutch taxes: this rule extends the treatment of group income to foreign-source income.

The application of the residence principle, however, is subject to two

¹¹ This proportion is 90 percent if the Belgian parent company is a holding company.

¹² See Table 3.

important exceptions:

- Countries impose a *limitation* on foreign tax credits. The calculation of tax credit limitations varies significantly across European countries. In Belgium, the foreign tax credit for "nonpermanent" investments is 15 percent. In Denmark, the limit is either 50 percent of the Danish income tax attributable to the net income of the foreign affiliate (in the case where the parent is jointly taxed with the subsidiary) or the equivalent of the Danish tax rate applied to foreign income (in the case where the parent is not jointly taxed with the subsidiary). In Germany the tax credit is 36 percent of the foreign income. In Greece and Spain the limitation is based on the domestic corporate tax rate. In Luxembourg, any foreign taxes in excess of the domestic rate are deductible as expenses. As a rule of thumb, the limitation is normally equal to the domestic tax rate applied to foreign-source income. It is justified by governments' reluctance to subsidize foreign investments by domestic residents, by paying their foreign taxes in excess of the domestic rate applied to foreign-source income. The limitation has two effects: (a) whenever investors accumulate excess tax credits (foreign taxes paid exceed the credit limitation)¹³ income from domestic and foreign

¹³ And whenever these credits cannot be offset against future or current taxes.

investments is taxed at different rates (domestic and foreign investments end up being taxed at the domestic and foreign tax rates, respectively); (b) whenever excess credits in some countries¹⁴ can be offset against excess limitations in other countries, the allocation of foreign investments among high- and low-income-tax countries can also be distorted.

- The concept of foreign-source income differs from the one used in the computation of the corporate income tax. Most countries require that domestic taxes be levied when the dividends are paid by the foreign subsidiary to the parent company, and not when the dividend income is produced. Hence, the deferral of dividend payments amounts to a deferral of the payment of domestic taxes, while foreign taxes are regularly paid as income is produced. Deferral - when allowed - defeats the main purpose of the worldwide principle: foreign subsidiaries pay only the foreign tax as long as dividends are not repatriated.

For these reasons, the treatments of foreign subsidiaries' incomes differ significantly from those of domestic subsidiaries. These differences affect corporate financial policies, the cost of capital, and investment decisions. Deferral and the tax credit limitation are the two features that, despite the

¹⁴ In the United Kingdom, however, the tax credit limitations are based on averaging within countries, but not across countries. See Alworth (1988).

formal adoption by most EC countries of the residence principle, make the current regime look more like a regime of territorial taxation.

As long as corporate income is taxed in the location in which earned, and tax rates differ, then corporations have incentives to manipulate the prices they use to record international transactions. In particular, firms can be expected to declare that income was earned in low-tax locations rather than high-tax locations. Two problems result. The first is that European governments as a whole fail to collect the taxes they would otherwise be due on income truly earned in Europe. Those taxes actually collected may accrue to the "wrong" governments, that is, tax havens rather than the governments in whose country income actually was earned.

The second problem is that the course of facilitating transfer price manipulation can involve resource misallocation by firms attempting to cover trails of fictitious trades. This problem already faces European tax systems. It is, however, likely to grow in magnitude as cross-border trades become easier with the removal of customs barriers.

One manifestation of this problem is very real yet generally ignored in analyses of the inefficiencies that accompany current European tax systems. As just mentioned, the treatment of transfers of intangible goods like patents is especially problematic: intangibles typically have unique features that make them hard to price on a world market and difficult to value even within a firm.¹⁵ The nature of regulation seems to be that governments are able only in extreme cases to enforce their arm's-length pricing legislation.

As a result, most governments have adopted rule-of-thumb requirements

¹⁵Hines (1988b) suggests a new method of appropriately valuing intangible goods provided by affiliates of the same firm.

for allocating some intangible costs and profits. But rules like the one applied by the U.S. - according to which U.S. multinationals with foreign sales are not allowed to deduct 100% of their research and development costs against domestic-source income - end up discouraging productive activities like research and development. This occurs because foreign governments, in turn, do not permit their resident U.S.-owned subsidiaries to deduct the remaining part of the research and development expenditures.

International differences in taxation also create incentives to locate productive and financial activities in low-tax countries. This encourages national governments to lower their taxation of internationally-mobile capital in order to attract it from abroad. Indeed, countries can attract foreign capital by subsidizing foreign residents' tax avoidance and tax evasion. In equilibrium this process leads to undertaxation of capital income.¹⁶

3.2 The Integration of Corporate and Individual Taxes

Table 6 illustrates the taxation of corporate income accruing to individual shareholders, in the form of dividends and capital gains. As far as dividend taxation is concerned, countries adopting the *classical* system tax income both at the firm level and at the individual level. Countries adopting the *split rate* system tax distributed profits at a lower rate than undistributed profits. Finally, countries adopting the *imputation* system provide individuals with credits for the taxes paid by the corporations they own. The table shows that, even though many countries provide some credit for corporate taxes paid by firms, perfect integration between individual and

¹⁶For formal elaborations of this process see Giovannini (1989) and Razin and Sadka (1989).

corporate taxes is not achieved. Capital gains receive preferential tax treatment at the individual level in almost all countries.

The treatment of corporate income from abroad accruing to individuals, however, is again different. In this case governments are unwilling to grant credits for taxes paid to foreign governments by corporations owned by domestic residents. This reluctance stems in part from the reporting burden that crediting would impose on corporations. If individuals were eligible for credits on the taxes paid by the corporations whose shares they own, then it would be necessary for those corporations to calculate the appropriate credits, since individuals do not have access to firms' detailed financial and tax records. But given the current hodgepodge of national accounting rules, European corporations would have to compute credits with 12 different methods to accommodate just European shareholders' needs; many more such calculations would be necessary throughout the world. Instead European governments deny individuals the credit, thereby making multiple complicated calculations unnecessary, and discouraging (relative to a credit system) individual ownership of foreign shares.

The absence of perfect international integration of individual and corporate taxes would induce, in the current regime, an additional distortion, even if the worldwide principle were perfectly applied at the corporation level. Multinational corporations would have the incentive to locate their parent companies in low-tax countries in order to minimize double-taxation of their own shareholders. In this case the location of investments by corporations would not be affected by differences in tax rates, but tax revenues would be affected, compelling governments to rely on alternative sources of funds.

3.3 Withholding Taxes

Withholding taxes are the most typical sign of the inefficiencies of the current tax regime. They are levied at different rates by the source country, depending on the country of residence of the payees, and on the nature of the investment income (see tables 7 and 8). Withholding taxes arose in part due to governments' (in some cases well grounded) lack of faith in their own ability to enforce their domestic tax laws against clever international avoidance and capital flight; by taxing capital income as it leaves the country, governments feel that they limit their exposure to avoidance. The lack of uniformity of withholding taxes across European countries is due to a number of bilateral tax treaties, whereby countries grant reciprocal lowering of rates. Differences in tax rates then lead, naturally, to their own distortions in the pattern and magnitude of capital flows.

Withholding taxes are often fully credited by domestic tax authorities, since strictly speaking they represent the obligation of the payee and not the payer, the payer being merely the withholding agent.¹⁷

3.4 Summary

This brief description of European tax systems suggests a general conclusion: there is a wide gap between the general tax principles that most countries agree with, and the imperfection of day-to-day practice. This gap is mostly due to the lack of cooperation among tax authorities, as well as to

¹⁷And hence the name withholding taxes. Part of the idea behind the design of such taxes is to maximize the available foreign tax credit, which is obtained by making the payee liable for the tax, while enforcing the tax in the payer's country, which is obtained by making the payer responsible for withholding the taxes.

inconsistencies in the tax systems that slowly evolve behind the rapidly changing international financial markets. In particular, three main points stand out:

- Countries rely on territorial taxation and withholding taxes in order to insure some tax revenue in the presence of high international capital mobility. In particular, the corporation tax is the typical territorial tax, and, in the presence of integration between corporate and individual income taxes, it works as a withholding tax on individual incomes. This situation has evolved partly because of the remarkable absence of cooperation among tax authorities in industrialized countries, mirrored by strategic use of bank secrecy laws to attract foreign tax evaders.
- The application of the worldwide principle at the firm and at the individual level is ineffective in the presence of deferral, tax-credit limitations, and imperfect integration of corporate and individual income taxes. This gives rise to distortions in the geographical allocation of investment.
- The increased integration of goods and assets markets increases the difficulties in administering such a system, which requires a determination of the territorial distribution of income produced by multinational corporations.

4. Reforming Capital Income Taxes

The advent of 1992 will be accompanied by a number of contemplated and proposed reforms in European practices of taxing capital income. It appears that the various reform movements draw their impetus from two sources. As the argument in section 3 illustrates, those who seek efficiency in the taxation of capital income have every reason to be dissatisfied with current practices, and while these inefficiencies are not new, the general spirit of reform and agreed goal of intra-European efficiency in 1992 offer the opportunity to repair a system long in need of fixing. The second source concerns the harmonization of value-added taxes in view of the elimination of border controls. In the absence of these controls 1992 is likely to represent a watershed in tax arbitrage unless new measures are taken.

The European Commission as long ago as 1975 proposed a scheme of corporate tax harmonization throughout Europe that envisioned uniform tax rates and integration of corporate and personal taxes. More recently, the Commission in 1988 prepared an "avant project" for a draft directive to harmonize definitions of tax bases for corporate income. Both proposals have attractive features, though the first foundered in practice on its implied reduction in overall tax revenue and the removal of countries' abilities to set tax rates at whatever level they choose. In the absence of coordinated actions such as those potentially provided by the Commission, the EC countries find themselves engaging in *de facto* uncoordinated harmonization via corporate tax reductions. The question facing Europe, then, is whether there is an efficient and acceptable coordinated alternative.

There are several alternatives on the table. After reviewing many of the possible tax arrangements, Devereux and Pearson (1989) argue in favor of

corporate taxation on the basis of residence of parent companies, or, failing that, corporate taxation at source.¹⁶ McLure (1989) reviews the experience of unitary state-level corporate income taxation within the United States, and while careful not to offer unitary taxation as a panacea for Europe, at the same time urges its consideration as an alternative to other schemes that fail to address more directly problems related to cross-border trade after 1992. Tanzi and Bovenberg (1989) favor harmonization of tax bases around an agreed reasonable standard, along with at least partial uniformity in statutory tax rates. Musgrave (1987) and Cnossen (1989) also recommend base harmonization and rate equalization in view of firms' abilities to transfer profits to low-tax jurisdictions; in addition, Musgrave favors harmonization on the grounds of interjurisdictional equity, while Cnossen fears the alternative of intergovernmental tax competition.

Any proposal for reform must confront the reality that raising revenue distorts resource allocation. The direction of reform consistent with the goals of recent EC proposals is one that minimizes revenue loss over the transition, preserves the double taxation of corporate income, offers incentives that are as efficient as possible, and at the same time permits a wide degree of national tax sovereignty. We analyze one such scheme: a plan providing for international corporate taxation under the residence principle and with no deferral. In particular, we consider a system in which each

¹⁶They describe altogether seven different approaches to reforming European corporate taxation, including taxation on the basis of shareholder residence. The method they choose to implement residence-based taxation is, as they note, administratively cumbersome and they reject it partly on that basis (and also because they feel it too greatly reduces national sovereignty). Another serious problem with the scheme they describe is that European firms would continue to face incentives to invest (and reinvest) in low-tax European locations, since their tax accounts are settled only upon payment of dividends from corporations to their shareholders.

country collects tax revenue on the *corporate* income earned by its *individual* residents. The system is effective if the definition of this income is harmonized among states of Europe and if the appropriate coordinating practices are adopted. Fortunately, many of the necessary apparatuses are similar if not identical to those already contemplated.

4.1 A Model Corporate Tax System

1. Corporate tax rates

- Under this plan corporations would be taxed throughout Europe at a uniform high rate, such as 50%. Taxes would be due on a territorial basis, to the government of the country where earned. There would be no distinction for the purposes of this tax between a local branch of a foreign corporation and a separately incorporated entity.

- A separate system of country-specific rebates would apply to owners of corporate shares. Individual governments would set their own tax rates on corporate income, subject to the constraint that every country's rate must be less than the overall European rate (50% in the previous example). Owners of corporations would receive rebates from their home governments for the difference between 50% and their local rate.

2. Tax basis

- The definition of taxable corporate income would be for each country the outcome of mutual agreement. The presumption is uniformity of tax basis according to Haig-Simons principles as practically implementable. Hence, corporations investing in plant and equipment would deduct from their

taxable income depreciation allowances that reflect (as closely as possible) actual capital lifetimes and decay patterns. Expenditures on research and development and on advertizing would be deductible quickly, but in a manner consistent with the capital nature of these investments. Inventories would be treated for tax purposes in LIFO fashion and indexed for inflation. International transactions between related parties would be recorded at arm's-length prices.

- Host governments would be permitted to subsidize firms, industries, and particular industries (such as investments in new structures or in research and development), but the subsidy would be includable in the tax base. Thus if the UK government were to offer a 5% investment incentive for new manufacturing structures, the total value of the incentive payment (since it is a part of before-tax profits) would be taxable at the overall European rate (e.g., 50%). Subsidies could of course take the indirect form that governments collect taxes at rates lower than the European rate; those subsidizing governments would then be responsible to make up the difference between what all European firms must pay (e.g., 50% of profits, inclusive of subsidies) and the taxes they collect from the firms they subsidize.

3. Measures to avoid double taxation

- Foreign income within Europe would be exempt from direct corporate taxation by the country of corporate residence. The profits of a French subsidiary of an Italian parent company would be taxed at the corporate level only once, by the government of France; there would be no additional tax due to Italy. Of course, if the shareholders of the parent company were Italian, then they would be eligible for rebates from Italy as described in section

one.

- Foreign income outside of Europe would be taxed at the full 50% rate, but a credit allowed for foreign income taxes paid directly by European owners or indirectly by their subsidiaries. The credit would be subject to a limitation represented by the 50% rate applied to extra-EC income.

4. Corporate/personal integration

- Corporate income would be attributed to individual shareholders without deferral, and therefore subject (potentially) to taxation at the individual level and the corporate level. Governments would have great flexibility in choosing the rate of personal and corporate taxation, subject only to the restriction that the rate of residence-basis corporate taxation not exceed the European maximum (e.g., 50%).

- Individuals would receive rebates from their home governments equal to the difference between the taxes paid by the corporations they own and the individuals' national tax rate on corporate income. It would be incumbent on individuals to file for their own rebates; this process is facilitated by vouchers provided for shareholders at yearend by corporations.

5. Withholding taxes

Governments would not be permitted to impose withholding taxes on corporate financial flows between European countries.

6. A clearing system

- A clearing system would be established to reallocate corporate income taxes from source countries to the countries of shareholder residence.

For example, suppose that the corporate tax rate in Denmark is 30%, and consider the case of a Greek company 50% owned by Greek citizens and 50% by Danish citizens, earning profits of 200 in Greece. The firm pays 100 in taxes to the Greek government, and the Danish shareholders receive 20 $[200 \times 0.5 \times (0.5 - 0.3)]$ in rebates from the government of Denmark. The clearing system then reallocates 50% of the tax revenue collected by the Greek government to the Danish government. The clearing mechanism can be based on corporate records, and can use the vouchers submitted by individuals to their national governments as an indirect check and a mechanism to identify non-compliance. Notice that this type of clearing system would be much less burdensome than the one envisioned for value-added taxes by the Cockfield plan (draft directives presented in August 1987), which required a record for every transaction subject to the tax. Under this plan, there is a set of records for every corporation annual income statement: the whole system of tax clearing is unlikely to exceed, every year, a few hundred thousand entries.

- There are several alternative modes of operation for the tax clearing system, each of them consistent with its general purpose. The system could be either destination-based or source-based. In the former case countries compute the difference between rebates paid and taxes received, thus obtaining the net credit position vis-a-vis the clearing fund. In the latter case corporations provide information to their tax authorities about their foreign ownership during the tax year, thus enabling tax authorities to compute their net debit position vis-a-vis the clearing fund. The two systems could of course work in parallel.

- The clearing system would be likely to face severe demands from stocks that are heavily traded. There are a few methods that might be used to

handle multiple short-term ownership of stocks during reporting periods. One method would require individuals who file for rebates to declare the dates of their ownership and prorate corporate tax payments during, say, that quarter. Alternatively, governments could establish de minimis rules for ownership - stocks must be held for whole quarters in order for owners to be eligible for rebates, for example. The de minimus approach purchases administrative simplicity at the expense of "throwing sand in the gears" of financial markets by locking investors into their stocks in order to get rebates; but a number of commentators have recently proposed such measures in order to reduce volatility in stock markets.¹⁹ Alternatively, tax payments could be assigned to particular (quarterly) dates and the owners on these dates; while such an approach is likely to create short-term clienteles for stock ownership in low-tax countries, the problem seems unlikely to be any more severe than the rather mild problem that already exists with stock ownership on dividend days.

- The clearing system would retain source taxation of corporate income earned by non-Europeans. Suppose an American company owns an Italian subsidiary that in turn has a 100%-owned second-tier French subsidiary, and the French subsidiary earns 150 in profits; which government would collect the 75 in tax revenue? It is envisioned that the tax revenue would be divided according to arm's-length principles, but these are subject to agreement.

7. Openness to other governments

Whenever an "ideal" system of international taxation is considered, it is necessary to tackle the issues raised by its adoption only by a limited group of countries, while in the rest of the world tax havens and other

¹⁹See, for example, Summers and Summers (1989).

loopholes survive. We envision a structure in which only the rules that do not require changes in foreign laws are extended to the rest of the world. This system maintains the general regime currently in place: foreign tax credits and tax-credit limitations would be applied using the 50% rate and foreign corporations are taxed at the 50% rate on the income they produce in Europe. However, foreign source income produced in the rest of the world would be taxable when produced and not only when remitted (deferral is eliminated).

At the same time, every country willing to join this system would be allowed to do so. In other words, it should be possible to extend the exemption of income produced by investors residing in a country, in exchange for the same privilege allowed on income produced by investments in that country that are owned by domestic residents, and the application of the 50% rate and the system of clearing and rebates.

Figures 4 and 5 illustrate the practical working of this system. Figure 4 shows an example of a structure of cross-country investments owned both by corporations and individuals. The source of income is the corporation in country A. That corporation is taxed at the 50% rate, and pays after tax profits to a corporation in B, and to direct owners in A and B. The corporation in B is in turn owned by country B's residents and by residents in country C. The calculation of tax rebates is performed by computing the difference between the taxes paid by the corporation in A pro-rated to the individual owner, and the taxes owed (obtained by applying the tax rate in the country of residence). Since the corporation in B is exempted from taxes on income received from the corporation in A, indirect ownership shares are

computed by multiplying the shares of ownership in the various corporations in the chain. Hence the residents of C, owning 40% of the corporation in B which owns 25% of the corporation in A, end up owning $(0.4) \times (0.25) = 0.10$ of the corporation in A. Hence the tax payments to country A attributable to country C's residents are 5 (50% of 10% of the total profits of the corporation in A), and the calculation of the rebate follows directly.

4.2 Why residence-based taxation of international corporate income?

The scheme described in section 5.1 permits European governments to tax twice the returns to corporate capital investments: once at the corporate level, and a second time at the individual level. What could possibly be the rationale for such a system?

It is not our intention to consider carefully the full range of questions raised by the taxation of corporate income. These questions include issues of whether and to what degree the corporate income tax really is a tax, by whom the burden of the tax is borne, what distributional effects the tax has, what are its effects on incentives to invest, and what is the likely magnitude of its efficiency cost.²⁰

Instead, we start from the observation that every European country taxes the income of its resident corporations. These taxes serve the function of taxing the saving of individual residents, if they own domestic corporations, and also taxing foreign residents on their shares of corporate ownership. The

²⁰While an exhaustive list of references on these and related questions would fill a paper rather than a footnote, recent contributions to understanding these questions include Auerbach (1979, 1983), Auerbach and Hines (1988), Bradford (1981), Gravelle and Kotlikoff (1989), Harberger (1962), King (1977), Krzyzaniak and Musgrave (1963), McLure (1979), Sinn (1988), and Stiglitz (1973, 1976).

scheme described in section 4.1 satisfies the first of these functions, and not the second: in return for excluding foreign-owned corporations from the tax base, home governments would tax the foreign earnings of their domestic residents.

Classical public finance theory offers two governing principles of tax design: taxation according to ability to pay, and taxation according to benefits received.²¹ The first concept views taxation as the government's primary redistributive instrument and may justify progressive taxation, while in the second governments act as might firms that sell public goods and may or may not be consistent with taxes falling more heavily on the rich. In addition to these general goals of the tax system, it is necessary to incorporate the incentive effects of tax rates and tax enforcement; governments that raise tax revenues with anything other than lump-sum instruments distort the economy. The existence of these distortions need not change the goals of taxation, though it must change their implementation.

On what basis, then, do governments justify their corporate taxes? The corporate tax imposed at source is sometimes viewed as a benefit tax.²² Corporations use resources in the jurisdictions in which they have profitable operations; their profits may arise in part from the characteristics of those locations. Since government activities constitute important attributes of a location, and governments make (costly) expenditures on intermediate goods like roads and port facilities, the corporate tax is, in this framework, fair exchange for the profit opportunities provided to corporations without charge by the government.

²¹See, for example, Musgrave (1959).

²²See, for example, the arguments surveyed in Musgrave and Musgrave (1972).

This benefit tax interpretation of corporate income taxation is, however, troubling in its implication that in the absence of corporate taxation countries would prefer that corporations not locate business operations within their boundaries. What, after all, is the social cost of corporate business activity? While externalities no doubt limit the attractiveness of hosting some businesses, the benefits of employment, indirect and wage tax revenue, and raising the general level of economic activity impel most governments to welcome new corporations, even if they need to offer generous tax holidays to do so.²³

The benefit interpretation of the corporate income tax further requires a specification of why only incorporated businesses are subject to this tax. The benefit of incorporation is, of course, the limited liability that corporate shareholders enjoy. This is a crucial aspect of certain businesses. But incorporation is not particularly costly to governments, or at least the cost of providing it is certainly not equal to 35% of annual corporate profits.

One might argue that the benefit principle underlies corporate taxation even though governments can provide incorporation at relatively little cost: corporations earn profits through operations they could not undertake without limited liability, and governments in providing that opportunity are entitled to some of its rents. This argument, which is not compelling even in a domestic context, offers little support for systems of source-based international corporate taxation. Since multinational firms can in many cases choose their own countries of residence, the benefit of country-specific

²³Consider, for example, the tax holiday (until the year 2000) offered by the government of Ireland to all new manufacturing firms.

incorporation *per se* is limited to the difference in profitability with the next most desirable corporate home. This is unlikely to represent 35% of profits.

Taxation according to ability to pay offers weaker support for source-based corporate taxation. This application of the ability to pay principle requires that the incidence of corporate taxation falls on high-income individuals. Without evaluating the merits of this empirical argument, accepting it is only the first step in evaluating international source-based corporate taxation as a redistributive tax. Do tax collections from foreigners further the redistributive goals of a national tax system? A positive conclusion would take the usual understanding of redistributive taxation far beyond its boundaries. If redistribution is understood literally, then residence-based corporate taxation is clearly more consistent with this goal. Source-based taxation of foreigners looks much more like rent extraction than redistribution; in contrast, the proposed system redistributes income only among the residents of the country.

There remains another possibility: that the corporate income tax satisfies neither principle, but instead represents a compromise to the practical reality of the excess burden of taxes. Given the efficiency cost of tax collections, the corporate tax may offer an attractive method of raising (at least some) revenue. But there is no agreement on this view, either. In particular this view does not explain why corporate income should be taxed differently than noncorporate business income, and if corporate income is to be taxed, why it is not better to offer corporations efficient investment incentives with a cash-flow tax instead of a classical income tax.

The efficiency argument for corporate income taxation relies on the

existence of some form of rents to incorporation. Certain businesses earn pure profits, of course, and these businesses if large may require the liability protection available to corporations. By taxing the rents governments avail themselves of distortion-free tax revenue.

The corporate income tax typically does not, however, tax only pure rents. Corporate taxes discourage investment by taxing incomes without allowance for the opportunity cost of equity capital; for equity-financed investments this lowers the after-tax rate of return on new investments. By contrast, the cash-flow tax represents an alternative scheme that taxes only pure rents.²⁴ Under this system the tax base is corporate profits calculated as cash-flows; firms deduct 100% of their investment expenditures immediately, but are not allowed deductions for interest payments or dividends. It is straightforward to show that the cash-flow tax does not discourage investment; the base of the tax in present value is simply abnormal returns earned in the corporate sector. These abnormal returns are rents to incorporation, and by taxing them the government obtains a fraction r of them in revenue. From the standpoint of efficiency this tax may be very attractive indeed.²⁵ The flip side of its efficiency is, however, that the cash-flow tax may not raise very much in revenue.

The attractive features of the cash-flow tax illustrate a limitation at the same time. If the cash-flow tax really taxes only rents, then its optimal level presumably is 100%, or nearly so. But as the tax rate approaches 100% one would hardly expect very many businesses to stay incorporated, or many new firms to incorporate. Put differently, the benefits of incorporation are

²⁴For a recent description and analysis of this tax see King (1987).

²⁵As, for example Hubbard (1989) has argued before a wide audience.

limited. These benefits may, however, be related to firm size: the larger is the firm, the greater the monitoring costs of each owner and the more (potentially) costly the unlimited liability of individual owners. Larger and more profitable firms might therefore be willing to endure higher corporate taxes in return for the corporate protection. Hence the taxation of corporate income may offer just the kind of differentiation that optimal tax theory recommends.

The plan we describe contains a number of features that are consistent with the efficiency goals of current national tax efforts while at the same time preserving, and even, in some instances, reinvigorating, the national sovereignty of some tax systems that are drained by competitive pressures currently. Corporate taxation on the basis of residence of ownership rather than location of income immediately removes tax incentives to locate business in one European country versus another. It also removes the incentive to claim that income was earned in European locations in which it was not; since tax rates are the same whether income was earned in Germany or in Luxembourg, firms have no incentives to misrepresent the prices at which international transactions take place. Naturally, there will still be ordinary business reasons to locate plants in particular places. And one of the factors affecting such decisions will be the (pre-tax) wages firms are required to pay indigenous labor, wages that may be influenced by local income tax policies. Other government policies such as expenditures on complementary goods are likely to affect the desirability of various locations, but not to distort location decisions any more than subsidies that governments are free to make

would distort them.²⁶

Furthermore, if governments set tax rates independently in a residence-based corporate tax system like the one we describe, the distortions arising from non-cooperative policies are likely to be much smaller than those in a system - like the present one - of source-based taxation. In the latter system, the high responsiveness of the tax base to the tax rate, due to international capital mobility and the opportunity to shelter income by exporting capital, forces governments to set tax rates that are too low. In the former case, by contrast, the distortion arises from the effect of these taxes on the rate of interest prevailing in the system, and on investments. But these effects, which depend on the elasticity of saving to the rate of interest, are likely to be very small.²⁷

There is a separate issue concerning the common level of the "fictitious" European corporate tax rate, which was set at 50% in the exposition of the scheme in section 4.1. In practice governments might want to set this rate at a level higher or lower than 50%. This common rate represents the tax rate that non-European corporations must pay; setting a high rate yields one-time revenue from their capital already in place, making high rates potentially attractive to European governments. This revenue comes, however, at the cost

²⁶Gersovitz (1987) analyzes the incentives governments face currently to tax subsidize foreign investors only with indirect and possibly inefficient means, in order to exploit the foreign tax credit mechanism. This type of consideration lead Tanzi and Bovenberg (1989) to argue that tax harmonization should be accompanied by restrictions on government expenditure levels and patterns. An efficient alternative is residence-based corporate taxation.

²⁷See Giovannini (1989) for an elaboration of this argument.

of possibly discouraging new investments from non-European sources.²⁸ In addition, the managers of European corporations are likely to be disquieted by high "fictitious" rates, since the differences between the common rate and national rates represent distributions to shareholders that corporate managers might not otherwise choose to make.²⁹

The choice of "fictitious" tax rate might also depend on the proclivity of European taxpayers to evade taxes on their capital income earned within Europe. One method of doing so currently is for individuals simply not to declare income from their ownership of shares of corporations based in foreign countries; the magnitude of this type of evasion is unknown.³⁰ Under the system described in section 4.1, individuals would of course still be able to evade taxes in this way, but their inclination to do so would diminish sharply since they lose the rebate to which they would otherwise be entitled. Hence individuals purchase anonymity in their foreign holdings at prices that rise with the "fictitious" tax rate, and governments, which cannot in any case eradicate tax evasion, would at least be able to tax it by imposing high

²⁸Governments might want to adjust the common "fictitious" tax rate over time, and they could do so, subject to the restriction that the common rate exceed the highest national tax rate. This restriction could prove to be important, since as Gordon (1986) argues, the optimal tax rate on foreign direct investment is zero for a small country. Europe is not small, but could in some instances face very elastic foreign investment schedules. Another important feature of the "fictitious" tax rate is that it represents the foreign tax credit limit for European corporations investing outside of Europe; the choice of appropriate limit may be complicated by the circumstances of individual firms and the bilateral nature of relations between home and host countries.

²⁹The desirability of forced distributions depends on what firms would do with undistributed cash. For the view that internal funds stimulate corporate investment, see Fazzari et al. (1988) and Hoshi et al. (1990). For a more sanguine view of the likely uses of free corporate cash flow, see Jensen (1986).

³⁰See OECD (1987) for a general discussion of issues and practices related to international tax evasion.

common rates.

4.3 Revenue Effects

The plan described in section 4.1 removes countries' abilities to tax directly the corporate income earned within their borders by firms owned by nondomestic Europeans. This represents a significant break from the current practice and potentially a serious stumbling block for governments inclined to do exactly that. It is worth considering, then, the consequences of this limitation along three lines: what are the efficiency consequences, the distributional consequences, and the implications for national sovereignty that would ensue from the scheme.

Efficiency and distribution are linked by the allocational consequences. The scheme retains the current double taxation of corporate income, so that old capital already in place can be expected to generate rents that governments will continue to capture.

A more fundamental question is whether location-specific rents that accrue to individuals from ownership of corporate shares represent a sufficient basis for double taxation of corporate income throughout Europe. Indeed, under the proposed plan the application of the same corporate rate to distributed and undistributed profits could, in the absence of corrections in tax rates, result in heavier taxation of corporate profits. This induces two effects: on one side a generalized tendency towards bond financing on the part of firms, and on the other side increased pressure on governments to compete for corporate ownership by lowering the corporate tax rate, that is, decreasing the extent of double taxation of corporate income. Put concretely, would the emergence of a European haven for corporate ownership - say if the

UK declared corporate income to be untaxed at the individual level - undermine the system by concentrating all corporate ownership in Britain? Such an outcome appears unlikely. As it currently stands individuals within countries face different marginal tax rates on different investments, and yet one never observes anything like the kind of tax clienteles that a tax-arbitrage story would predict.³¹ Diversification and possibly the existence of heterogeneous expectations are forces that consistently overwhelm pure tax considerations for all but very specialized financial instruments. As long as individuals have strong desires to hold corporate shares, the government can successfully exploit their demands with corporate taxes.

The plan envisions that governments would voluntarily forego their rights to retain corporate tax revenue from foreign shareholders; is this a politically viable scenario? It should be recalled, of course, that governments simultaneously obtain the right to tax in full their own citizens' nondomestic corporate income, a right not currently enjoyed. Furthermore, governments as a whole are likely to enrich themselves from this scheme since taxes are less distortionary and the current pressure to lower capital tax rates is likely to abate significantly. Governments can still, if they want, encourage investment or employment through direct subsidies (though some of the subsidy is lost to foreign tax authorities). But nonetheless the plan requires governments to relinquish a power they hold currently. Their willingness to do so would seem to depend on the relative benefits and costs.

The important positions of foreign multinationals in some European

³¹See for example the evidence presented in Feldstein (1976); while he finds individual tax rates to influence the types of assets individuals hold, a great deal of the variation in individual portfolios is unexplainable just on the basis of taxes.

economies makes the benefits and the costs of tax system reform potentially quite large. Table 9 presents some indicators of the extent to which host countries are currently affected by the multinationals of other European countries. Belgium, France, Greece, Ireland (and presumably Spain) owe more than 20% of their employment in manufacturing to foreign multinationals (though not all of the employing firms are European). These governments as well as others might be concerned about any reforms that could reduce their abilities to use various tax incentives to attract and retain investment from abroad. Alternatively, these governments might welcome reforms along the lines of the tax system described in section 4.1, since greater capital mobility might promise additional investment and employment even in the absence of costly incentives.

Table 10 presents a rough picture of government tax revenue exposures under the reform presented in section 4.1. Absent all the allocational effects that would be likely to ensue from the tax change, the treasuries of governments that are currently capital exporters to the rest of Europe would be likely to benefit in the reform relative to other EC members, while capital importers would lose revenue. Examination of what figures are available in Table 10 suggest that the gainers would be Germany, the Netherlands, and the United Kingdom; the losers would be France, Italy, and Spain.³² One way to reconcile all parties to the reform would be, therefore, a system of reallocating some of corporate tax revenue in early years to those countries that sustain revenue losses from the switchover; alternatively, the capital-importing EC states could be assigned greater-than-source-basis shares of the

³²Available sketchy evidence suggests that the other EC countries, Belgium, Greece, Ireland, and Portugal, are all net capital importers from the EC as well and therefore likely to lose revenue.

non-EC corporate tax revenue collected by member states.

There remains the potentially dangerous problem posed by tax competition among EC members: what happens to this system under unbridled competition or even secession from the system? This issue turns on governments' abilities to enforce the true concept of individual residence. As long as every European owner of capital cannot declare the lowest-tax jurisdiction to be his home, then countries can compete for their residence in the same way that they do now: by offering the most attractive package of taxes and benefits. Under residence-based capital taxation there is no inconsistency between the interests of different governments, and all could ultimately share the benefit of more efficient allocation of capital.

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The Revenue from Capital Income Taxes

Figure 1:

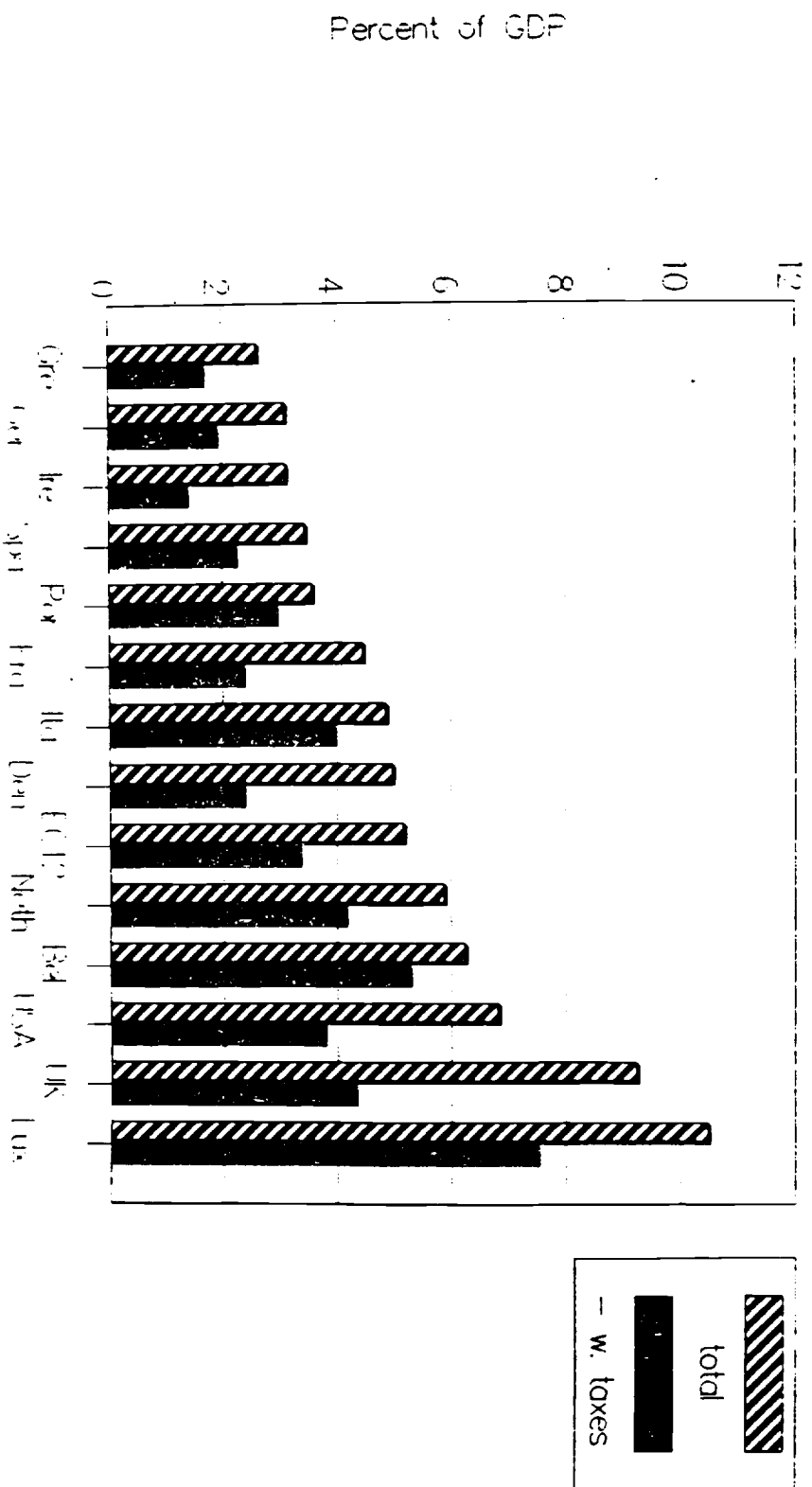


Figure 2:
Capital Income Taxes in Europe and the US

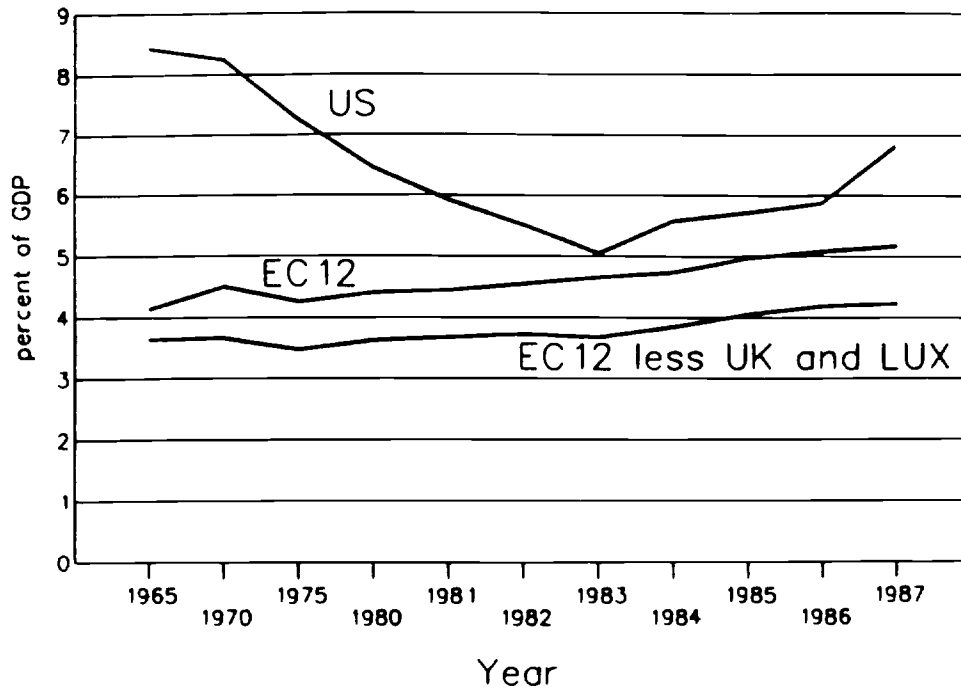


Figure 3:
Capital Gains and Corporate Income Taxes
in Europe and the US

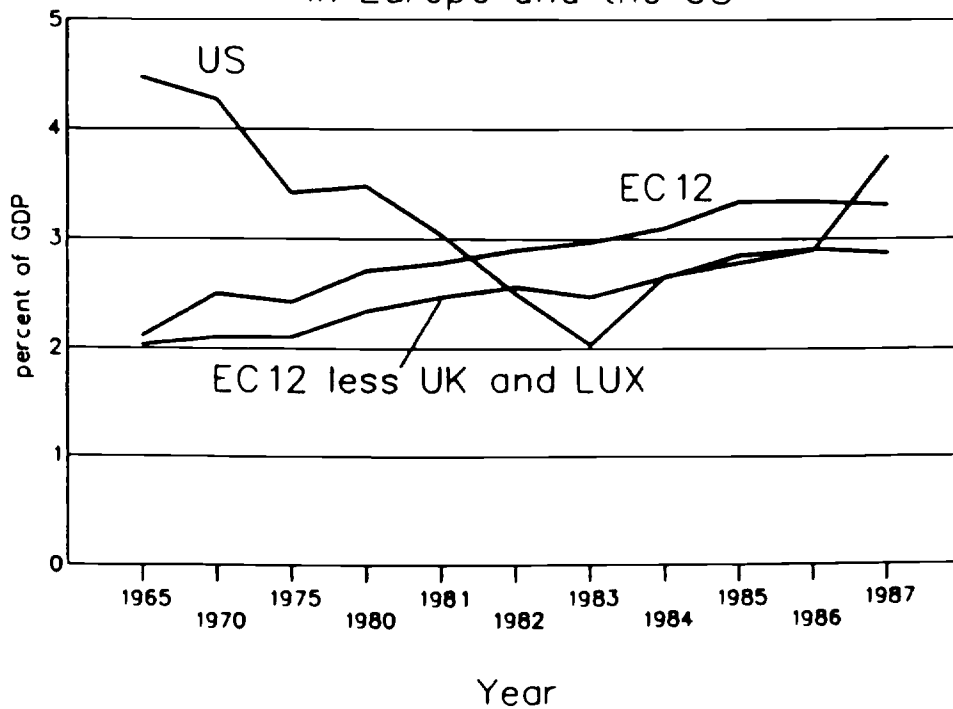


FIGURE 4

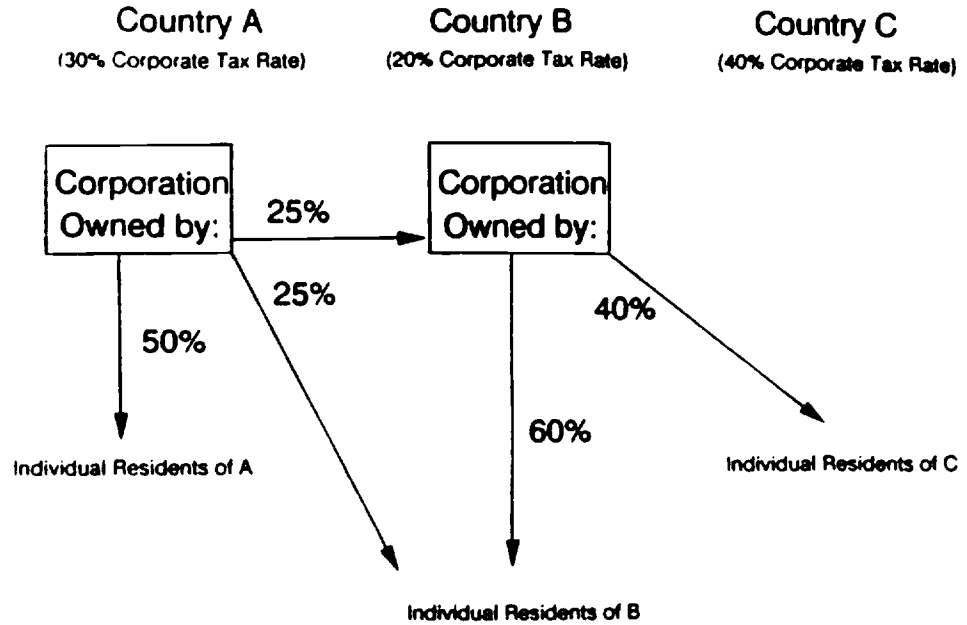


FIGURE 5:
Calculation of Rebates

Country A's Residents (30% Corporate Tax Rate)	Country B's Residents (20% Corporate Tax Rate)	Country C's Residents (40% Corporate Tax Rate)
Corporation paid 25	(Owners of B's Corp.)	Corporation paid 5
They owe 15	Corporation paid 7.5	They owe 4
Rebate = 10	They owe 3	Rebate = 1
	Rebate = 4.5	
	(Owners of A's Corp.)	
	Corporation paid 12.5	
	They owe 5	
	Rebate = 7.5	

Notes: The corporation in A has earned 100.
The corporation in B is exempted for income from A.

Table 1:
The Revenue from Capital Income Taxes, 1987

Country	Revenue from Capital Income Taxes As Percent of:		
	Income Taxes	Total Tax Revenue	GDP
Belgium	34.4 (29.1)	13.5 (11.4)	6.2 (5.3)
Denmark	17.0 (8.0)	9.56 (4.5)	5.0 (2.3)
France	55.4 (29.1)	10.0 (5.2)	4.5 (2.3)
Germany	24.2 (14.7)	8.2 (5.0)	3.1 (1.9)
Greece	40.8 (25.9)	7.0 (4.1)	2.6 (1.7)
Ireland	20.6 (9.0)	7.8 (3.4)	3.1 (1.4)
Italy	37.2 (30.0)	13.4 (10.6)	4.9 (3.9)
Luxembourg	56.5 (40.4)	23.9 (17.1)	10.5 (7.5)
Netherlands	44.7 (31.4)	12.2 (8.6)	5.9 (4.1)
Portugal	58.4 (48.0)	11.3 (9.3)	3.6 (2.9)
Spain	35.2 (22.7)	10.4 (6.7)	3.4 (2.2)
United Kingdom	66.3 (30.7)	24.7 (11.4)	9.2 (4.3)
EC Average	40.9 (26.6)	12.7 (8.1)	5.2 (3.3)
United States	51.3 (28.2)	22.7 (12.5)	6.8 (3.8)

Source: Authors' calculations based on data in OECD (1989).

Note: Figures in parentheses represent calculations in which capital tax revenues exclude revenues from wealth taxes.

Table 2:
Statutory Corporate Tax Rates, 1989
(in percent)

	Central Government	Central and Local Government ^{1/}
Belgium	43	43
Denmark	50	50
France	39	39
Germany	56/36/ ^{2/}	62/45/ ^{2/}
Greece	35 ^{3/}	35 ^{1/}
Ireland	10 ^{4/}	10 ^{4/}
Italy	36	46
Luxembourg	37 ^{5/}	43
Netherlands	35	35
Portugal	36.5	40
Spain	35	36 ^{6/}
United Kingdom	35	35

Source: Tanzi and Bovenberg (1989).

^{1/} Net rates.

^{2/} Split rate system: first rate applies to retained earnings, second rate to distributed earnings.

^{3/} Rate for industrial companies quoted on the Athens Stock Exchange.

^{4/} Rate for industrial companies, to remain into effect until the end of the year 2000. The standard rate for other companies is 43 percent.

^{5/} Including a 2 percent surcharge (deductible) for the employment fund.

^{6/} Includes the surcharge for the chamber of commerce.

Table 3:

Depreciation Methods Currently Applied by EC Countries

COUNTRY	STRAIGHT-LINE	DECLINING-BALANCE
Belgium	allowed for all assets	allowed for all assets purchased after 1 January 1977 (maximum rate twice the straight-line rate)
Denmark	normally applied to buildings and intangible property	normally applied to other fixed assets (on a pool basis)
France	normal method	optional for most assets (except for buildings - other than hotels - , automobiles, telephones and typewriters)
Germany (Fed.Rep.)	allowed for all assets	not available for buildings (unless specifically elected by the "Bauherr") and for intangible assets; if available, the maximum rate is three times the straight-line rate with a maximum of 30%
Greece	normal method	not available
Ireland ¹	normal method for buildings	normal method for other fixed assets
Italy	normal method	not available
Luxembourg	allowed for all assets	not allowed for buildings and intangible property
Netherlands	allowed for all assets	allowed for all assets except buildings other than hotels
Portugal	allowed for all assets	allowed, subject, however to the approval of the tax authority
Spain	allowed for all assets	only allowed for certain new, qualifying assets
United Kingdom ²	available for buildings	available for plant, machinery and patents

Source: Kuiper (1988).

¹ Intangible assets are depreciable in Ireland.

² A 100% first-year allowance is available for capital expenditure on scientific research.