

# **Tax Harmonization and Tax Competition in Europe**

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## TAX HARMONIZATION AND TAX COMPETITION IN EUROPE

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### 1. When the barriers fall

On new year's day 1993 a period of accelerated European integration will begin. The physical border controls will be eliminated and the last political obstacles to free migration of capital and labor will be removed. The liberalization is expected to improve the allocation of resources significantly and to boost the European economy. The famous Cecchini report prophesies that the improved allocation of resources will increase the level of European GDP each year by 4–6% beyond what it otherwise would have been.<sup>1</sup>

The removal of trade barriers will not, however, be free from problems. It may exacerbate existing distortions resulting from non-harmonized tax systems and may even create new distortions. Capital flight into low-tax countries and changes in patterns of international trade caused by differing value added tax (VAT) rates are among the consequences that may occur. To avoid such consequences, fiscal harmonization must follow the fall of the barriers. It may be preferable to allocate Europe's scarce resources according to the principle of comparative economic advantage rather than the principle of tax minimization.

Tax harmonization does not necessarily require centrally coordinated actions by the European governments. The competition of tax systems might also, via a process of iterative adjustment, bring about the required harmonization. For many economists, Tiebout's idea of voting with one's feet is the preferred solution to the harmonization problem.

This paper considers some of the fundamental issues involved. It investigates the cost of non-harmonization and tries to identify those aspects of the tax systems where the effects of a lack of harmonization will be greatest. In

\*The author gratefully acknowledges useful comments by Julian Alworth.

<sup>1</sup>See Cecchini (1988).

its final section it also comments on the attractiveness of a Europe that has settled to a Tiebout equilibrium.

## **2. Two devices for tax neutrality**

Economic reactions to differences between Europe's fiscal systems include commodity trade, capital movements, labor migration, and the location decisions of firms. This paper places most emphasis on the first two items since they are clearly the most important ones in terms of sensitivity to tax differentials.

In response to the high tax sensitivity, two protective devices have been developed in the past to prevent international commodity and capital flows from being governed by tax considerations. The need for harmonization can only meaningfully be studied when these protective devices are taken into account.

The first device is the destination principle for indirect taxes. According to this principle, commodity exports are exempt from the exporting country's tax and are instead subjected to the tax of the country of import. The principle underlies the GATT and is used by most countries in the world. It also applies to the European VAT where it is currently implemented by a system of border tax adjustments. The destination principle ensures that firms compete on the basis of 'producer' prices; i.e., of prices net of the taxes. Despite international tax rate differences, there is a tendency to equate the producer price ratios of any two commodities in all the countries that participate in the market. Under competitive conditions this implies that the sectoral structures of the national economies satisfy the requirement of an efficient international specialization. Given the respective national factor endowments, no other pattern of sectoral structures would yield higher levels of aggregate outputs.<sup>2</sup>

The second protection device is the residence principle for border crossing interest income flows. This principle says that interest income is not taxed in the country where it is earned, but in and by the lender's country of residence. It was recommended by the OECD Model Double Taxation Convention of 1977 and is, in theory, applied by most OECD countries, including the countries of the European Community. The residence principle makes investors indifferent between domestic and foreign assets when the gross or pre-tax interest rates are the same. Despite international differences in income tax rates, it ensures under ideal conditions that market forces equate gross interest rates and allocate the available stock of capital

<sup>2</sup>For a pioneering discussion of the two principles, that time only called 'System a' and 'System b', see Tinbergen Committee (1953). Further discussion of the basic issues involved can be found, e.g., in Schulte (1966), Möller (1968), Andel (1971, 1972) or, to choose a more recent publication, Cnossen and Shoup (1987).

efficiently to the different countries. Given this stock, no other allocation of capital would yield higher levels of aggregate outputs.<sup>3</sup>

The residence and destination principles complement each other well. Ideally, they enable the European countries to live with a large variety of direct and indirect tax rates without having to fear tax-induced distortions. However, there are a number of difficulties which have to be overcome before an approximation to this ideal result can be expected in Europe. The next few sections will comment on some of them.

### **3. Why the clearing house approach is incompatible with the destination principle**

An urgent European problem is that the current border adjustment system of the VAT can no longer be used after the removal of border controls. To preserve the destination principle without border controls the European Commission adopted the so-called clearing house approach.<sup>4</sup> The basic idea of this approach is simply to extend the invoice method which is currently applied within the countries of the European Community to cross-border sales. For example, a German firm buying a French product will reclaim the French VAT contained in the price from the German revenue office and pay the German VAT on its sales instead. Since the importing rather than the exporting country gives a credit for the prepaid VAT, a clearing mechanism is necessary to redistribute the tax revenues between the jurisdictions involved.<sup>5</sup> Ideally, the clearing house approach will continue to equate the producer prices across countries and to protect the international division of labor from being distorted by tax rate differences.

The problem with the new solution is that it rests on the assumption that all trade occurs between firms. This assumption is neither realistic nor does it fit the Commission's declared goal of allowing unrestricted consumer purchases in all countries of the community. Unless the VAT rates are sufficiently harmonized, massive waves of cross border purchases in low tax countries must be reckoned with.

<sup>3</sup>For an economic discussion of the residence and source principles see Sinn (1984, pp. 225–227; 1987, ch. 7).

<sup>4</sup>See the 'White Paper', EC (1985, sec. 3), and COM (87), 323. From the viewpoint of private market agents, the system is basically Biehl's (1969) 'Gemeinsamer-Markt-Prinzip', An alternative would be the deferred payment approach that is currently used by the Benelux countries. See Cnossen (1981, 1983).

<sup>5</sup>It has been argued against this approach that it provides incentives for the countries to underestimate their exports and overestimate their imports. To overcome these and other related problems, the European Commission recently suggested that data provided by the revenue offices should not be relied on exclusively, but that existing foreign trade statistics should also be used. See Lee, Pearson and Smith (1988, pp. 22–23).

The purchases will not necessarily take the form of shopping trips or make use of existing types of mail order firms. Little imagination is necessary to visualize the growth of new types of firm that inform the consumers about foreign products and offer transportation services without being formally categorized as sellers. As Boiteux (1988) puts it, we will see 'un nouveau métier, celui d'importateur-transporteur, par opposition à l'importateur-revendeur'. It can also be imagined that consumers will make extensive use of all the new fast communication media – telephone, telefax, BTX, and the like – to communicate directly with any firm in a low-tax country and to buy wherever the best bargains are.

The Commission has thought about mail order firms, car sales, and a few other aspects of the problem. However, the solutions it can offer are clearly not suited to coping with the dimensions of the problem.<sup>6</sup> In order to really exclude the household sector from international trade, extensive controls and regulations would be necessary compared to which current border controls seem attractively cheap solutions. The idea of a Europe without frontiers would be made ridiculous.

With direct consumer purchases, the destination principle becomes ineffective, and elements of the origin principle apply. Under the origin principle, indirect taxes are producer rather than consumer taxes and there is a tendency to equate gross, rather than net, commodity prices.

The only way to limit cross border purchases and to ensure that net of tax prices continue to be equated across borders seems to be a harmonization of tax rates. When the rates lie in a band sufficiently narrow to make gains from tax arbitrage lower than transportation and transactions costs, the origin and destination principles will roughly coincide and the incentives for direct consumer purchases should disappear. The Commission suggested<sup>7</sup> reducing the band for normal consumption goods from the current 13 percentage points to 5. It thereby accepted the view that the clearing house approach is unable to maintain the destination principle and implicitly admitted that Europe without frontiers would be a Europe where the origin principle applies – a late, but strong confirmation of the views which the Neumark Committee (1963) had expressed more than 25 years ago.

The resistance to harmonization is stronger though than the Commission anticipated. Countries like Denmark and Ireland are rightly afraid of serious revenue losses, and low-tax countries like Germany expect strong political opposition to tax increases. In view of these difficulties the Commission has recently replaced its recommendation of a 5 percent band by simple recommendations of minimum tax rates.<sup>8</sup> However, even these have not

<sup>6</sup>See COM (89) 260.

<sup>7</sup>See COM (87) 321 and 324.

<sup>8</sup>See COM (89) 260.

generally met with approval. The effects of non-harmonized tax rates under the origin principle therefore may become relevant for Europe.

#### 4. The fallacy of the exchange rate argument

Contrary to first appearances, the probable switch to the origin principle does not necessarily imply that the allocative virtues of the destination principle must be sacrificed. After all, the economic allocation of resources depends on relative rather than absolute prices. Whatever the national levels of tax rates, as long as the rates are uniform within the countries, the domestic gross and net price ratios of any two commodities are identical. It therefore should not make a difference for the real allocation of resources whether competition equates gross or net prices across the countries. In a monetary economy, price level or exchange rate adjustments alone would be sufficient to compensate for the switch from the destination to the origin principle.

This popular observation, known as the exchange rate argument, was first made by the Tinbergen Committee (1953). Although the Committee referred to an unspecified indirect tax, the exchange rate argument has often been explicitly applied to the European VAT,<sup>9</sup> and it has even been used to dispel the fears that the planned elimination of border controls will induce tax distortions. Unfortunately, however, there is little reason to be optimistic. Even an ideal VAT of the European type – one that does not impose a higher burden on luxury goods and allows no exceptions in the case of food, children's clothing, and the like – would be non-neutral under the origin principle.

The reason for non-neutrality is that the European VAT is a consumption tax and exempts investment goods.<sup>10</sup> With a zero tax rate on investment goods, the gross and net price ratios between consumption and investment goods are not identical. It therefore does make a difference whether the destination or the origin principle applies.

To identify the distortion, consider a simple model of pure exchange with two countries, France (F) and Germany (G), where both countries produce a homogeneous consumption good (C) and a homogenous investment good (I). Let  $P_C^G$  and  $P_C^F$  be the country-specific producer prices of consumption goods,  $P_I^G$  and  $P_I^F$  the corresponding producer prices of investment goods, and  $\tau_G$  and  $\tau_F$  the respective VAT rates, where  $\tau_F > \tau_G$  is a realistic assumption. Free trade in investment goods implies an equilibrium where

<sup>9</sup>Cf., e.g., Whalley (1979), Berglas (1981).

<sup>10</sup>For other criticisms of the exchange rate argument see Cnossen (1983, pp. 240–241). An income type VAT would allow the deduction of prepaid taxes only on a pro rata basis. See Shoup (1955).

$$P_1^G = P_1^F, \quad (1)$$

and, with the destination principle, trade in consumption goods implies

$$P_C^G = P_C^F, \quad \text{or} \quad (\text{destination principle}) \quad (2)$$

$$P_C^G/P_1^G = P_C^F/P_1^F. \quad (\text{destination principle}) \quad (3)$$

On the other hand, under the origin principle (i.e. with direct consumer purchases)

$$P_C^G(1 + \tau_G) = P_C^F(1 + \tau_F). \quad (\text{origin principle}) \quad (4)$$

Together with the assumption  $\tau_F > \tau_G$ , (1) and (4) imply that

$$P_C^G/P_1^G > P_C^F/P_1^F. \quad (\text{origin pr., invoice method}) \quad (5)$$

A comparison of (3) and (5) reveals that the destination, but not the origin principle, is compatible with efficient sectoral structures in France and Germany.

The nature of the distortion is illustrated in fig. 1 which uses a diagram familiar in the foreign trade literature. The inner concave curve is the German, and the convex the French, transformation curve between consumption and investment goods. The slopes of the transformation curves – measured inversely, from right to left – are the country specific rates of transformation from consumption to investment goods. Under competitive conditions they can be identified with the producer price ratios  $P_C^G/P_1^G$  and  $P_C^F/P_1^F$  that appear in the formulae.

Efficiency requires, and the destination principle ensures, that the available factors of production are allocated to the two sectors such that the rates of transformation between consumption and investment goods are the same in both countries. The two transformation curves are tangent to one another and the joint production of the two countries is characterized by a point on the aggregate transformation curve  $XX$ .

By way of contrast, the origin principle produces an allocation like that at point  $Z$  where, as shown by (5), the transformation curves intersect. Aggregate output is now indicated by a point such as  $A$  which is on the inferior transformation curve  $YY$  rather than on the technologically feasible curve  $XX$ . The German producer price of consumption goods in terms of investment goods is lower than its French counterpart and, while Germany overspecializes in the production of consumption goods, France produces too many investment goods. Without the distortion, it would be possible for the two countries to produce more consumption and more investment goods without using more factors of production.

In all likelihood, the Europe after 1992 will be subject to the distortions

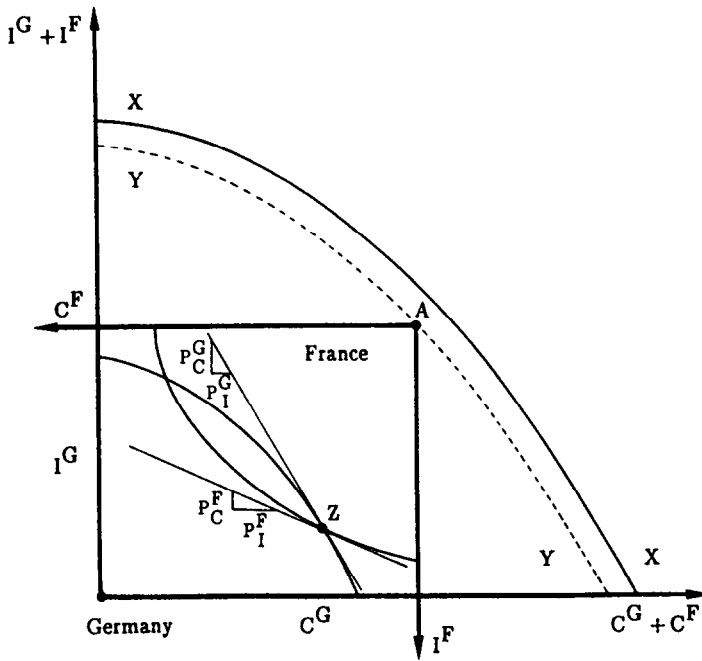


Fig. 1. The nature of the deadweight loss under the European VAT and the origin principle: The cost of non-harmonization.

described. Low-tax countries such as Germany and the U.K. will experience a boom in their consumption goods industries at the expense of their investment goods industries. The latter will suffer from the probable revaluation or inflation this boom will generate. Government officials in the low-tax countries who prefer to wait and see should be aware of these consequences.

Admittedly, there are reasons why the distortions may not be quite as large as they appear in the model. On the one hand, there are transactions costs that limit the effect of direct consumer purchases. On the other, firms in high-tax countries can avoid losing customers to the low-tax countries simply by serving these customers via the retail industries in the low-tax countries, perhaps even without physically shipping any commodities there.<sup>11</sup> The full domestic VAT accumulated in the product would then be refunded, and only the tax of the low-tax country would have to be paid. In the extreme case, the high-tax jurisdictions would cease to collect any revenue and the distortions described would not occur. Transactions costs and political

<sup>11</sup>For example, a French firm can deliver a refrigerator it produces to a French customer by first selling it to a German retailer who then resells it to the French customer, both these transactions taking place only on paper. This point was also made by Majocchi (1989).



obstacles of various kinds will, however, prevent this extreme case. Some revenue in the high tax countries and some welfare loss in terms of a reduced aggregate output will certainly remain. This may calm the tax collectors, but it does not confirm the optimistic predictions of the Cecchini report that were cited in the introduction. There is a cost of Europe.

### 5. An alternative method

One way of avoiding the cost of non-harmonized VAT rates would be to replace the invoice method which the European Commission recommended for border crossing commodity flows with the subtraction method favored by the German Council of Advisors to the Ministry of Economics.<sup>12</sup> With the latter, an importing firm would not be able to get a refund for the foreign VAT paid, but would instead be able to deduct the purchase price from its taxable sales revenue. It is obvious that this would prevent the revenue loss from tax arbitrage, but, what is more important, it would also prevent the welfare loss.

The reason for this virtue is that the subtraction method implicitly imposes a tax on the high-tax country's export of investment goods (or offers a subsidy for the low-tax country's export of such goods) that just compensates for the effects which the low-tax country's inflation or revaluation would otherwise create.<sup>13</sup> To demonstrate the neutrality suppose that, in the model set up above, a French firm sells an investment good to a Germany investor at the price  $P_I^F(1 + \tau_F)$ . The German investor can deduct this price from his taxable sales revenue just as he can deduct the price  $P_I^G(1 + \tau_G)$  of a German investment good, and analogously for a French investor buying in Germany. In contrast to eq. (1), an equilibrium in the investment goods market therefore requires that

$$P_I^F(1 + \tau_F) = P_I^G(1 + \tau_G), \quad (6)$$

Together with eq. (4), which characterizes the equilibrium in the consumption goods market, this would imply the efficiency condition

<sup>12</sup>See Wissenschaftlicher Beirat beim Bundeswirtschaftsministerium (1986) and Boss (1989). For a discussion of the administrative differences between the invoice and subtraction methods see McLure (1972).

<sup>13</sup>The subtraction method is meant to apply exclusively to border crossing commodity flows. Internal trade continues to be subjected to the invoice method even if part of the value of the traded commodity was created abroad. For example, if a second firm buys an imported commodity from a domestic importer, it would be entitled to a credit equal to the product of the domestic VAT rate and the full price of the commodity. Thereby the neutrality properties of the method would be preserved even with further trade between firms. For a criticism of the subtraction method see, however, Andel (1986) and Biehl (1986).

$$P_C^G/P_I^G = P_C^F/P_I^F \quad (\text{origin pr., subtraction method})$$

Obviously, the exchange rate argument would be correct with the subtraction method, but not with the invoice method.

It seems that the European Commission has made an irrevocable decision against the subtraction and for the invoice method. Given this decision, only a harmonization of VAT rates can prevent the distortion.

## 6. Direct taxation: Tax base before tax rate adjustments

As argued above, the residence principle tends to equate interest rates across countries despite different capital income tax rates, and, under ideal conditions, this implies an efficient international allocation of capital. One of the ideal conditions necessary for this outcome is that each country uses the strict Schanz-Haig-Simons definitions of capital income. Distortions from accelerated depreciation, non-taxed capital gains, and other divergences from correct accounting must be excluded.

To illustrate the point, assume that credit contracts are the dominant channel of international capital movements, that the residence principle applies to the taxation of interest income, and that, within a country, all kinds of capital income are taxed at a uniform rate.<sup>14</sup> Let  $t_F$  and  $t_G$  be the capital income tax rates of France and Germany in the model set up above and let  $\alpha_F$  and  $\alpha_G$  be the respective national depreciation parameters which measure a tax system's proximity to full expensing. (True economic depreciation corresponds to  $\alpha = 0$  and expensing, or immediate write-off, to  $\alpha = 1$ .) Then French firms invest to the point where their pre-tax return to capital equals  $(1 - \alpha_F t_F)r^F$ , where  $r^F$  is the French market rate of interest, and analogously German firms invest until the pre-tax return equals  $(1 - \alpha_G t_G)r^G$ . Moreover, because of the residence principle, there is an international capital market equilibrium where a unique international interest rate  $r$  emerges. The overall condition for an equilibrium in the international capital market which links the pre-tax returns of the consumption and investment goods sectors in the two countries is

$$\frac{MPC_i^F P_i^F / P_I^F}{1 - \alpha_F t_F} = r^F = r = r^G = \frac{MPC_i^G P_i^G / P_I^G}{1 - \alpha_G t_G}, \quad i = I, C \quad (\text{residence principle}). \quad (8)$$

<sup>14</sup>An analysis focusing on the problem of non-uniform taxes can be found in Sinn (1987, chapters 7 and 11). For a careful analysis of the tax effects on European direct investment see Alworth (1987).

Only if

$$\alpha_F t_F = \alpha_G t_G, \quad (9)$$

will this condition coincide with the efficiency requirement that capital's pre-tax rate of return be the same in all countries:

$$MPC_i^F P_i^F / P_i^F = MPC_i^G P_i^G / P_i^G, \quad i = I, C. \quad (10)$$

In general, however, there is a distortion.

The Schanz-Haig-Simons case is  $\alpha_F = \alpha_G = 0$ . In this case, efficiency prevails despite diverging tax rates. With other definitions of tax base, efficiency is also possible, but a fine tuning of the tax rates to compensate for the base divergence would be necessary.

Note that the fine tuning does not mean heading towards equal tax burdens. One of the sins which politicians regularly commit is to focus on the aggregate tax burden on capital income alone. Eq. (9) reveals that, from an allocative point of view, this is useless and even misleading. Obviously, a reduction of the tax base, i.e., a higher value of  $\alpha$ , calls for a lower, rather than a higher, capital income tax rate. It is one of the fundamentals of a capital market equilibrium under the residence principle that a policy of a tax-cut-cum-base-broadening cannot be neutral but is mutually reinforcing and drives capital out of the country.<sup>15</sup>

While eq. (8) was based on the assumption of uniform national capital income tax rates, more complicated formulae apply when corporate and personal tax rates are distinguished. Differences in the composition of capital income tax rates can, in principle, add distortions. As a rule, however, the distortions resulting from non-harmonized rate structures are weaker, the higher the firms' flexibility in choosing their means of finance. With a high financial flexibility, non-harmonized rate structures are relatively unimportant since the firms can avoid the sources of finance against which the tax systems discriminate most. The financial decisions then serve as a buffer that cushions the real economies against the blows imposed by the tax systems. With financial flexibility, eq. (8) would continue to hold if  $t_F$  and  $t_G$  are reinterpreted as corporate tax rates.

An aspect of the existing capital income tax systems, which for these reasons is far less important for the allocation of resources than politicians tend to believe, is the degree of integration of corporate and personal taxation. The frequently blamed double taxation of corporate dividends imposes a high tax burden on the returns of existing capital, but new capital

<sup>15</sup>See Sinn (1989).

which, because of the double taxation, is predominantly financed with debt and retained earnings is not affected. A European harmonization of the overall tax burdens imposed on dividends may only generate modest efficiency gains.

If the residence principle is to be maintained and perfected, then the first goal of harmonization of direct taxation in Europe is to implement the Schanz–Haig–Simons definitions of capital income and profits, most prominently, true economic depreciation.<sup>16</sup> With true economic depreciation mere rate differentials do not matter all that much for the allocation of capital and there is reason enough to hope that this allocation will not diverge greatly from efficiency.

### 7. A world with source taxation of capital incomes

One problem with the residence principle is that it does not work well when wealth owners are dishonest and can more easily conceal their foreign than their domestic interest income. Under these circumstances a domestic tax on interest income has elements of a source tax and thus tends to induce capital flight. The recent failure of Germany's experiment with a withholding tax on interest income – a tax that would have been fully credited against the declared interest income – demonstrates the dimensions of the problem.<sup>17</sup>

In order to avoid the problem, strict notification would have to be introduced. Banks would have to send statements of their customer's interest income to the revenue offices of the respective countries of residence. A good notification system is not impossible to implement; after all it exists in the United States. However, in the light of the European bank secrecy laws and the tax loopholes offered by Luxembourg and Switzerland, it cannot easily be perfected.

A feasible alternative is a system of source taxation. Under the source principle, there is a tendency to equate the net of tax rather than the gross market rates of interest across the borders. Let  $r_n$  be the common international net of tax interest rate. Then, in our two country model, the French and Germany interest rates would be linked by the arbitrage condition

$$r^F(1 - t_F) = r^n = r^G(1 - t_G), \quad (\text{source principle}) \quad (11)$$

while the first and the fourth equality signs in (8) would continue to hold. The overall condition for an international capital market equilibrium that

<sup>16</sup>This confirms the Commission's decision to currently concentrate on the harmonization of business tax bases. See Kuiper (1988).

<sup>17</sup>See Nöhrbaß and Raab (1989) for an econometric investigation of the effects of the German source tax.

shows how the pre-tax returns to capital of the four sectors distinguished are interrelated becomes:

$$\frac{MPC_i^F P_i^F / P_1^F}{1 - \alpha_F t_F} (1 - t_F) = r_n = \frac{MPC_i^G P_i^G / P_1^G}{1 - \alpha_G t_G} (1 - t_G),$$

$$i = I, C. \quad (\text{source principle}) \quad (12)$$

Obviously, this reduces to the efficiency condition (10) if, and only if,

$$(1 - t_F) / (1 - \alpha_F t_F) = (1 - t_G) / (1 - \alpha_G t_G). \quad (13)$$

Again, there are many constellations of tax rates and tax base definitions that ensure neutrality. However, while under the residence principle true economic depreciation was required to make the allocation of capital invulnerable to tax rate differences, an immediate write-off is needed when the source principle applies.<sup>18</sup> With  $\alpha_G = \alpha_F = 1$ , (13) will hold for any tax rates, and (10) results. Again, tax rate harmonization is not urgent when the tax base is appropriately defined. Again, base harmonization comes before rate harmonization.

Before the German debacle the European Commission had favored a system of source taxation and conventional definitions of profits, presumably along the lines of the Schanz-Haig-Simons concept where  $\alpha_F = \alpha_G = 0$ . It is obvious from (12) that this would have been a system, which would have maximized the vulnerability of the European economy to international tax rate differences. Hopefully, the Commission will reconsider the problem.

## 8. Tiebout and the death of the insurance state

While the previous sections clarified why tax harmonization is needed to avoid distortions, the problem of how to achieve this harmonization was not addressed. Most European economists seem to favor a decentralized solution via a competition of tax systems of Tiebout type.<sup>19</sup> This may be useful for speeding up the process of integration. However, the future scope for efficient tax policy will be unduly reduced.

The basic lesson from the theory of optimal taxation is that a country cannot, and should not, impose high taxes on activities whose supply and demand are price elastic. Elastic activities can escape taxation and thus imply a high excess burden relative to the tax collected. This is Europe's new problem. The fall of the barriers will increase the possibility of tax avoidance

<sup>18</sup>For related discussions of such a system see Sørensen (1988) and Sinn (1987, ch. 11).

<sup>19</sup>The original article is Tiebout (1956). Recent discussions of the issue which do not, however, take up the insurance argument put forward in this section, include McLure (1986), Frey (1989) and Peggy and Richard Musgrave (1989).

and provide more elasticity to a number of economic activities. Those who perform these activities will in future be handled with kid gloves. They will be the winners in an uncoordinated process of tax harmonization, for they cannot be forced to pay more than simply benefit taxes.

The group of winners will include the mobile part of the labor force and, regardless of whether the source or the residence principle applies, will also include the owners of capital. Source taxes are investment taxes that can be avoided by investing abroad. Residence taxes are savings taxes which can be avoided by emigration. Admittedly, most savers will not consider such a radical solution. However, large savers like corporations and rich individuals, will not find it very difficult to change their country of residence, if only by buying post office boxes in Liechtenstein.

Consumers will also belong to the winners group. As argued above, they can easily escape the domestic VAT by buying foreign products or by simply purchasing domestic products via foreign retailers. The competition of tax systems will exert strong downward pressures on European VAT rates.<sup>20</sup>

The losers of tax competition will be those who cannot escape and those who benefit from a large government sector. The first group includes immobile workers and landowners. They are the natural victims of the Tiebout equilibrium, since they will serve as the lenders of last resort to Europe's impoverished governments. The second group consists of the poor. The poor will lose because governments will no longer be able to maintain their current scales of redistribution.

On the one hand, for the reasons explained and with the exceptions mentioned, it will be difficult for a single country to extract the required funds from the rich. On the other hand, net benefits being given to the poor in one jurisdiction will attract poor people from everywhere and so make this policy unsustainable. The New York city effect will be the death of Europe's welfare states if the unmitigated competition of tax systems is allowed.

Those who see redistribution policy as the greed of Leviathan, will welcome this outcome. However, redistribution is more than that. It can be seen as an efficiency enhancing government activity which compensates for a lack of risk markets; to a large extent it may simply be insurance against the risks of lifetime careers. After all, many young people vote left and welcome the protection of the insurance state, because they do not know how the dice of destiny will fall. It is true that middle-aged managers who know that the dice have been cast in their favor tend to object to redistribution. However, this observation is not a good argument against the insurance interpretation. It may simply indicate a time consistency problem.

Time consistency will be one of Europe's biggest problems when the

<sup>20</sup>This point was also made by Smith (1989).

barriers are down. Even if all Europeans were equally risk averse and would prefer government redistribution to laissez-faire, competitive and decentralized governments would not be able to satisfy their needs. Any country that tries to establish an insurance state would be driven to bankruptcy because it would face emigration of the lucky who are supposed to give and immigration of the unlucky who are supposed to receive. Voting with one's feet would only work if it could be limited to the young and if the middle-aged managers and successful entrepreneurs could be prevented from migrating, a rather awkward idea. A Europe with competing tax systems and unrestricted migration would be like an insurance market where the customers can select their company and pay the premium after they know whether or not a loss has occurred.

There are only two options for avoiding this dilemma. One is to introduce binding redistribution contracts with the government of choice. This would, for example, mean that income taxation is based on a nationality, rather than residence, principle and that only young people would be allowed to change their nationality. Older people could change their residence, not their citizenship. The redistributive taxes they pay and the benefits they receive would continue to be determined by the country they chose when young.

The other, more practicable, option is simply to harmonize tax rates via collective agreements between the European governments or, more or less equivalently, to allocate all redistributive activities to a central European government. With a collectively planned harmonization, rather than one enforced by the competition of tax systems, Europe would not have to give up its social achievements, and it would not have to suffer the tax-induced distortions described. For such a Europe, the optimistic predictions of the Cecchini report might indeed be correct.

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