# HOW MUCH EUROPE? SUBSIDIARITY, CENTRALIZATION AND FISCAL COMPETITION

Hans-Werner Sinn\*

#### I EUROPE AT THE CROSSROADS

This is Europe's hour. Western Europe's prosperity and democratic achievements have overcome communist ideology and have contributed to the fall of the Russian empire. The iron curtain that went right through the European heart lands has been removed, market economies have been established in the East, and it has finally proved possible for Eastern Europe to leave the road to serfdom. Despite some set backs, European development is still going forward with breathtaking speed. On January 1st, 1993, the barriers between the West European states were physically lifted and the four basic economic liberties were granted: goods, services, capital, and labour can now migrate between the countries without major legal obstacles. In the years to come the Community will widen and deepen at the same time, and by the year 2000 a common European currency will be used. Much to the concern of the United States of America, the united states of Europe will become a political power that follows its own goals and pursues its own interests.

Centralization of decision making and expansion of the community budget will be instrumental to this development. The same process that took place within the nation states in the last century and the beginning of this century, the process that Popitz (1927), Wagner (1876), Peacock/Wiseman (1961) and Timm (1961) discussed in their fascinating essays, will happen once again on the European level. There will be European taxes, international fiscal sharing rules, central public expenditures, more powerful European institutions and, eventually, a European federal state with a common European government. Since it is unlikely that the process will come to a halt, the question is no longer whether or not European unification will take place. The question now is rather how will it take place, and what functions the new layer of government should perform. How much Europe and what kind of Europe do we need?

At this stage, the European countries have to make the choices (and indeed, with the Maastricht treaty, they have already made some of them). Will Europe become a trade fortress whose main functions are to protect itself from foreign competitors and to serve the industrial pressure groups that have made their way to Brussels? Will it be a means to extending planification beyond the boundaries of France and thus undermine the working of the market mechanism? Or will the new Europe be one that serves the preferences of the people and

<sup>\*</sup>CES, University of Munich

performs central economic functions that cannot meaningfully be taken over by the single nation states?

The fears that the wrong choices might be made were strong among some of the parties that negotiated the Maastricht compromise, including Denmark, the United Kingdom and Germany. To calm these fears, the subsidiarity principle was introduced into the contract (for reasons of etiquette President Mitterand was allowed to make the proposal). Only those issues that cannot reasonably well be handled at lower levels of government are to be decided at the Community level. All others are to stay under the competence of the states, provinces and municipalities that currently oversee them. The main function of the subsidiarity principle is that it places the burden of proof on those who want more centralization. However, apart from that it is empty and meaningless. It does not say anything about which of the government's functions should be centralized and which should be kept with lower levels of government.

To date, the political discussion of Europe's future suffers from a surprising lack of foundation in terms of economic theory. The contributions include long philosophical debates about normative legal principles; they make use of superficial analogies between the competition of firms and the competition of systems; or they concentrate on very practical implications for the distribution of resources among the countries involved. However, the straightforward theory of fiscal federalism, which has been well developed in a vast body of literature, has been largely neglected. This paper tries to help fill the gap. It tries to see Europe's development through the glasses of economic theory and to help draw the borderline between activities that should be shifted to the Community level and those that can be left within the nation states. The paper will first criticize current developments in Europe and clarify which of these should be categorized as policy failures. It will then sketch the obvious reasons for centralization. Thirdly, and most importantly, it will discuss the implications for centralization that result from the four basic liberties on which Europe has irrevocably agreed.

The paper will not discuss the issue of currency union, because an extensive literature on this subject already exists. Despite the excessive public interest, the currency union may not be crucial for the true living conditions in Europe twenty years from now. Abandoning the Deutschmark is the political price Germany has to pay for its internal unification, and it is a straightforward step towards a European integration. However, there are other issues that may turn out to be more important for the future of Europe, and these issues are the topic of this paper.

#### II WHERE EUROPE MAY FAIL

### Corporate Europe

Many of the EC's policies cannot easily be understood in terms of economic efficiency arguments, but can be explained by the democratic power vacuum

and lack of political control that characterizes the EC decision centres. It is true that the EC Commission has been elected by the governments and thereby, implicitly, it has a democratic legitimation. However, the European Parliament has very limited rights of control over the Commission's activities. It has not even been granted the right of the purse, the most important power a parliament normally has.

It is not surprising that the democratic power vacuum has been filled by industry lobbies. Brussels has developed a complex and uncontrolled bureaucracy that has attracted rent seekers from all community states. In line with Olson's (1965) theory, these rent seekers are producer rather than consumer lobbies. Due to their smaller numbers, producers typically are better organized than consumers. They determine the tone of the political discussion in the EC, and they create an equilibrium of pressure for the Commission that makes it difficult for this body to take consumer interests adequately into account.

Unfortunately, there is the risk that a corporate Europe might develop in which the European citizens have little to say and the major policy decisions are formulated behind closed doors in the inner circles of top ranking politicians and corporate managers. The corporate interests may occasionally lead to wise decisions that are compatible with the public interest, but all too often they do not. The strengthening of the European Parliament is an essential step in filling the power vacuum with legitimate interests and in ensuring that the policy of the European Community serves the will of the peoples of Europe.

# Industrial policy

Industrial policy is one of the most frequently criticized aspects of the Community's activities and it is one of the most obvious signs of the bias towards producer interests. The Single European Act (Sec. IV) explicitly allowed the Community to subsidize industries in a number of cases, and the European Union Treaty (art. 130 n.) has added a new dimension to this by emphasizing the community's role in supporting new technological developments. The official documents pay lip service to the idea that all of this is supposed to support unbiased competition and stimulate structural change. However, it is fairly clear to any critical economist that there is little chance that this will be the case.

In the past, most of the Community's funds for supporting industry went into activities like agriculture, textile production, coal mining, steel production or ship building. They supported declining industries and areas and, if anything, have slowed down the speed of structural change. In the future, according to EC commissioner Pandolfi, things like microelectronics, flat screen technologies and genetic engineering will be included in the Community's subsidy program. It is true that this sounds a little better; however, even here it is hard to see how government intervention could improve the market allocation. If these activities promise high profits, there is every reason for private capital to risk an engagement. And if they do not, it would be a social waste for the Community to use its resources, unless we believe that the

Brussels bureaucrats have a better knowledge of what the good investment chances are than the investors themselves.

One argument in favour of a new and more aggressive industrial policy is the presence of community wide externalities from innovative production and incentives. The Japanese MITI is often cited in this regard as an example of a successful encouragement of promising enterprises. Although the externality argument has some merits, it seems to overlook the fact that there is a market for patents and licences. In principle, this market should be able to create strong incentives for private research and innovation, and it is unclear whether a bureaucratic intervention by the EC will really be able to compensate for the remaining externalities. Also, MITI's role is very ambiguous. The high subsidization of Japanese exports has provided the world with cheap consumer electronics, cars and other industrial products. It has thus increased world welfare. Whether this activity has also contributed to Japanese welfare is open to doubt. The Japanese export industry has withdrawn scarce resources from domestic sectors like services and construction, and it may have contributed to the astonishingly poor living standard of the typical Japanese household relative to countries with a similar level of GDP per capita. The European MITI which some commissioners seem to have in mind may likewise not contribute to economic welfare.

# Protectionism

A second example of evident policy failure is Europe's trade policy. The Treaty on the European Union emphasizes the goal of internal trade liberalization (art. 3). Neither tariffs nor quantity controls will be allowed between the European countries. However, the treaty is silent about the liberalization of world trade and it even calls explicitly for a common European trade policy (art. 3 b) and for measures to support the competitiveness of European industries (art. 3 l). This is very much in the tradition of the previous EC trade policy. Internal trade liberalization was possible because it was seen as reciprocity between the nations' leading industrial interests: if you allow us to serve your customers, we will be equally generous and open our borders to your products. Agreements to keep foreign suppliers out of the European markets followed from the same logic and were easily reached: Europe's markets belong to European firms, and unless similar transcontinental agreements can be reached, foreigners are to be kept out of these markets!

The policy failure is obvious if seen from the viewpoint of consumer sovereignty. If the EC really had been interested in the well-being of its citizens the reciprocity should have been the other way around: if you allow us to buy your products we will allow you to buy ours. According to this logic the EC would have deliberately opened its markets to foreign suppliers, and there would have been no agricultural policy, no quotas on Japanese cars and no ban on dollar bananas. Clearly such views have never played any role in Brussels, the rent seeking centre of Europe.

European trade policy has been a major impediment to the development of

the international division of labour. In particular, it has imposed an intolerable burden on the economies of developing countries which are not allowed to buy Europe's technological products in exchange for agricultural goods in which they have a competitive lead. The burden may be significant. According to a study by Whalley (1984), the OECD countries' trade barriers impose a welfare loss on the less developed countries that exceeds the volume of the official development aid they receive. Certainly, the European Community is no exception to this rule.

Recently a similarly inefficient policy has been formulated vis à vis the countries of the former Soviet Empire. The European Community defined a set of so-called sensitive sectors where imports from the East are deemed to hurt EC producers and where, therefore, quantitative trade restrictions are to be imposed. (See Rollo and Smith, 1993, for a discussion.) The products comprise ores and metals; chemicals; textiles, clothing, leather, footwear; agriculture; and food processing; and they are the only ones in which the Eastern countries might have some comparative advantage. Apart from the fact that this policy risks a serious backlash in the political liberalization of the East, it risks hurting the EC itself. While there are circumstances in which import tariffs may create an overall welfare gain for a large importing country, mere quantity constraints on imports are likely to be detrimental. Quantity constraints on imports create big losses for the consumers that cannot be outweighed by the profits for the competing domestic producers. Nevertheless, the mechanisms of corporate Europe ensure that they are being introduced in the European Community. Consumer losses do not count, only producer profits matter.

It is true that modern trade theory offers a few reasons why protectionist measures may be profitable after all. The infant industry (e.g., Clemhout and Wan, 1970) or the strategic trade policy arguments (Brander and Spencer, 1985) must be mentioned here. However, the protected European industries—the sensitive sectors—are adult if not senile industries, and the Eastern firms are certainly not large enough, and there are too many of them, to be able to behave like oligopolistic players that can be out-manoeuvred by Stackelberg leadership strategies induced by European trade policy measures. The Eastern countries are just the competitive fringe of Europe's gigantic market, and rent shifting arguments are not applicable.

# Social dumping

One of the major concerns of the EC has been the erosion of social standards in a more competitive Europe. In 1987 the countries of the European Community passed the Social Charter defining a set of minimum social standards, and in the Treaty on the European Union (art. 117–129) they added a large variety of detailed measures aimed at harmonizing health conditions, safety

<sup>&</sup>lt;sup>1</sup>The statement would have to be qualified if EC importers rather than Eastern exporters were able to capture the rents from the price divergence between the EC and the Eastern countries.

standards, social security systems, cultural conditions and the like. The EC has opened a battle against the social dumping which it is feared free trade will bring about.

The fear of social dumping has two dimensions. One refers to the increased difficulties of carrying out redistributive policies via the government budget if the factors of production are internationally mobile. This dimension will be discussed below, and we will see that these fears are well founded and legitimate.

The other dimension refers to the increased competition in terms of the indirect wage cost resulting from government imposed health and safety standards and even in terms of the monetary wage level itself. It is a frequently expressed concern that free trade will favour countries with low effective wages and destroy efficient industries in high-wage countries. Since the industries in the high-wage countries are typically more productive than the industries in the low-wage countries, it is maintained that the competitive allocation process makes the wrong selection and needs to be corrected by compensating EC interventions.

This argument against social dumping can hardly be accepted as a guideline for policy intervention, because it undermines the whole idea of increasing Europe's prosperity by creating a free trade area. Free trade brings welfare gains because countries specialize in products for which they have a comparative advantage, not because they specialize in products for which they have an absolute advantage. The comparative advantage of the low wage areas is the lever by which Europe's overall productivity and welfare will be boosted. It is also the lever by which the direct and indirect wage costs will eventually be equalized across the EC countries. The competitive advantage of the low-wage countries increases labour demand and raises the wage level until, in the long run, the advantage vanishes. Any attempt to artificially impose more and faster factor price equalization than the market forces themselves would bring about will result in unemployment and welfare losses. These welfare losses would not only involve a disadvantage for the poorer countries and regions. They would also hurt the richer countries that would have to foot the bill for social transfers necessary to prevent political tension and social unrest resulting from the bankruptcies and dismissals which a high wage strategy would create in the currently poorer European countries.

The risks involved are very much like those that are at present threatening Germany. In order to prevent social dumping, this country imposed its high social standards on the new Länder which originated from the collapsing GDR. The result has been a disaster. East Germany is suffering from the deepest recession in the history of the industrial world, and West Germany is and will be suffering from an enormous fiscal burden imposed by the transfers it has to pay for compensation. There is every reason to believe that a vigorous European social policy that effectively imposes minimum wage, safety and health standards on the poorer countries will have similar consequences.

The EC policy against social dumping can be seen as an implication of Europe's strong trade unions and leftist movements, but it can also, and once

again, be explained in terms of the mechanics of corporate Europe. The potential new competitors in the low wage countries do not yet exist, and so the powerful old industries of Europe's heartlands still have the say. They unanimously agree with the trade unions that social dumping must be prevented. Any form of low wage competition from Europe's less developed regions, be it via lower market wages, lower safety standards or inferior working conditions, risks destroying their jobs, reducing their profits and depreciating their assets.

In the light of the political power vacuum in Brussels it is not surprising that it was easy for coalitions against social dumping to be formed. However, it is one of the ironies of European history that the parties to this coalition seem to have succeeded in convincing the poorer countries that this was a wise policy, in their own interest.

### III WHERE MORE EUROPE IS NEEDED: SOME OBVIOUS REASONS

In dealing with the problems with the EC just described, many economists want to throw the baby out with the bathwater. They simply argue for a pause, or even a permanent halt, in the EC development. This paper adopts a more constructive approach by defining the useful and necessary scope for economic policy activities on the Community level. The present section concentrates on the obvious reasons; the next section will discuss the less obvious, but certainly no less important ones.

# Defence policy

An obvious reason for community activities is public goods whose benefits are not confined to national boundaries. One example is military expenditure and, closely connected with this, foreign policy. Given that military conflicts among the West European countries no longer seem likely, military spending by one of these countries provides protection against outside enemies which is of benefit to them all. As a result, independent decisions on military spending imply under-investment (from a European point of view), creating strong incentives for the single countries to take free rider positions. The low level of per capita military spending in the smaller European countries is a clear indication of this incentive.

To overcome the free rider problem, but also because they had to accept a pax americana, a number of European states decided for NATO after the war. This organization has been a successful model which contributed to Western Europes victory in systems competition with the East. It remains to be seen whether this will also be a model for the future. There are many voices arguing that NATO should, in the long run, give way to the West European Defence Union, and the Treaty on the European Union calls for active steps towards a revival of this union (declaration 30), though as a complement of, rather than a substitute for, NATO. Europe's military weakness has become all too obvious in its inability to stop the war in former Yugoslavia. The mass expulsions and cruelties in Bosnia make it utterly obvious that military unification

of Europe is necessary. On the other hand, the common interests with the United States of America suggest close cooperation and integration with NATO, too. A NATO that does not comprise all EC countries and that exists independently of the European Community would be an alien and destructive element in the European unification process, but one that is integrated with the West European Defence Union could have survival chances.

# Transfrontier pollution

Another example of European public goods is the quality of the common parts of the European environment. These include the quality of the air, because air drifts freely across the geographical boundaries, or, for a similar reason, the quality of the water of a river that passes through more than one country or the quality of Mediterranean or Atlantic water. Not included are local living conditions or local public goods such as the quality of drinking water; these will be discussed further below.

It is obvious that the single states have an insufficient incentive to avoid transfrontier environmental pollution. They have to bear 100% of the avoidance cost, but, because of the common nature of the environment or, to be more precise, the transnational spillover of environmental pollution, their share in the resulting benefits is much less than 100%, if not close to zero. The under-representation of the benefits from environmental protection again makes it likely that the single countries will choose free rider positions, waiting for other countries to take protectionist measures. (See Long and Siebert, 1991, for a theoretical analysis.)

While the argument seems obvious, some economists have recently put forward an ingenious counter argument (e.g., Wellisch, 1992). Free migration, they maintain, will equalize the overall utility from income and environmental quality everywhere in the community, regardless of the kind of environmental policy a national government chooses. The national government, knowing this, will therefore choose an environmental policy that maximizes the utility of a representative European household and will thus adequately take into account all the benefits resulting from its own actions. No free rider provision has to be feared.

Undoubtedly, this counter argument is interesting from an intellectual point of view. However, it rests on strong assumptions. One is that there are no migration costs. If there are, the utilities will not be equated across the regions, and negligent environmental policies will indeed be able to generate national utility gains at the expense of one's neighbours. The other assumption is that the single national government is somewhat myopic. In the models that produce the optimality result, it is assumed that the single government chooses its policy independent of the other government's actions, conjecturing in a Nash fashion that it cannot influence them. In fact, however, the equilibria investigated are such that if one government deviated from the presumably optimal behaviour by choosing less environmental protection, the others would compensate by increasing their protection efforts. A clever government that

knows about this reaction will choose not to make any efforts, and if there are enough governments of that kind, the protective equilibrium may break down, leaving the environmental goal unreached.

In the light of this, in principle, the Treaty on the European Union is justified in giving the European Commission the right to introduce pollution taxes (art. 130 r and s) and to establish a so-called Cohesion Fund to finance European environmental projects (art. 130 d). There is a role for centralized environmental policy.

The pollution tax the Commission has in mind is a tax on CO<sub>2</sub> emissions. While this tax would be an effective measure against global warming, it has strong redistributional implications. It is primarily a tax on the northern EC countries that, for obvious reasons, have to burn more fossil fuels than the southern countries and it largely exempts France because this country produces most of its electricity in nuclear power plants. A tax on fossil and nuclear energy consumption, like the one currently considered in the United States of America, would be more balanced than a mere fossil energy tax and it would avoid a hazardous incentive to return to nuclear power production. To avoid the redistributional implications the tax revenue could be rechannelled to those countries in which they were generated.

# Cultural heritage

A third example of European public goods is the common cultural heritage. There is a role for a central European agency to support and preserve this heritage. Neither the private willingness to pay nor the national willingness to pay may adequately represent the overall European interest. There is a benefit from French paintings, German music and Italian ruins that is not captured in the budgets of the national authorities that try to preserve these treasures. And the modern culture that develops in the lee of commercial advertising is fraught with such massive externalities that efficiency of competitive pressures cannot be expected. Anyone who shares the anger about the negligence of Italian authorities in preserving the relics of Roman culture or the anger about the flood of primitive sex and crime movies that is currently sweeping into Europe's living rooms will understand what is at stake. Articles 3 p and 128 of the Treaty on the European Union show that the European countries are prepared to take care of this issue. At a time where the production and consumption of culture are international activities, national regulatory solutions are simply outdated. There is a long way to go, however, before an active European cultural policy can be reached. At present, the expenses of the EC's 'action culturelle' are no more than 0.00016% of the EC budget.2

# European networks

European trade and cultural cooperation require transnational traffic, energy, and communication networks. High speed trains should not stop at the borders

<sup>&</sup>lt;sup>2</sup> See Satorius (1992).

<sup>©</sup> Scottish Economic Society 1994

because of different electric current systems; <sup>3</sup> a dense net of freeways should connect the economic centres; Danish firms should be able to buy natural gas from Holland and electricity from France; German trucks should not get stuck under Italian bridges; and Irish computers should be able to communicate with those in Greece. Obviously there is a need for large scale coordination and harmonization that can be satisfied by EC institutions. The Treaty on the European Union (art. 129 b-d) recognizes this need explicitly.

Why do we need a centralized decision authority anyway in these cases? It is true that, in all cases mentioned, uncoordinated action of pure market solutions or committee agreements of the interested nations might also lead to a creation of networks. However, both decentralized solutions have their drawbacks.

Markets, for one thing, may fail to reach the necessary amount of coordination for a network or they will at least create too small networks—as it is typical in the private provision of public goods. One could not expect that privately managed railroad companies would have an incentive to agree on unique gauges or electric current system; instead the prevailing diversity enables them to earn profits in locally separated markets.

For another thing, committees that consist of representatives of national interest may fail in another direction. It is true that committees may succeed in the creation of networks, but such a solution can be extremely complicated and time consuming. Given the tedious democratic decision procedures the strategic interaction between the single countries can take many years without finding a solution as to how to create the network. National governments do not act in a way that is comparable to the way private market agents make decisions. They do not sufficiently care about the opportunity cost of a time consuming bargaining process. 4 Europe has failed at least once using this way to create networks. In 1966 the attempt of the CCIR (International Radio Consultative Committee) failed to standardize the colour television systems. The European countries adopted different and incompatible systems. France chose SECAM (Sequentiel Couleur Avec Mémoire) in 1967; Germany and the United Kingdom committed themselves to PAL (Phase Alternation Line). 5 For 25 years it has not been possible to create a common standard for this important technology and even current attempts (HDTV) became stuck in a blind alley.

The problems of insufficient coordination in markets and of delayed agreements in committees enforce a different solution for the European networks in the future. New centralized European decision bodies are necessary to achieve

<sup>&</sup>lt;sup>3</sup> The list of technical imcompatibilities between the European railways is much longer than this and currently contains problems as the track gauge, the signalling systems or the braking systems. See ECMT (1989, p. 49).

<sup>&</sup>lt;sup>4</sup>On the different effects in market vs. committee solution see Farrell and Saloner (1988). <sup>5</sup>And even the PAL system differs slightly between the UK and Germany; see Pritchard and Gibson (1980). For a survey see Pelkmans and Beuter (1987).

the necessary amount of standardization, minimize the bargaining cost between the national states and thus help speed up Europe's integration.<sup>6</sup>

### International redistribution

The redistribution of funds from the richer to the poorer European countries has long been a central aspect of EC policy. In 1990 the net flow of funds into the community budget was 6.6 b. ecu from Germany, 2.46 b. ecu from France, 1 b. ecu from Italy, and 3.4 b. ecu from the United Kingdom; and the net receipt of funds from the community budget was 1.9 b. ecu each for Spain and Ireland.

As the redistribution goes from richer to poorer countries, it is understandable that economists from richer countries tend to be skeptical about this aspect of EC activity. Nevertheless, there are at least two reasons why even they could accept it.

One is that the richer countries may deliberately decide to buy the poorer countries' participation in a European political union. Take Germany as an example of one of the richer countries. It is often feared that the EC's function is to help Germany dominate Europe's economy. Regardless of how dubious such a fear may seem from a German perspective, the true aspect of it is that a manufacturing country like Germany needs large markets to fully exploit the economies of large scale production. In addition, of course, the funds flowing to the poorer countries can be seen as a premium the richer countries are paying for peace and stability in Europe. Even if the poorer countries benefit more from Europe than the richer ones do, the premium may well be worth paying if it avoids the risk of returning to Europe's horrible past. The saving in military expenditure alone dwarfs the EC expenditure. Currently, the EC budget is 0.9% of EC GDP, but the overall military expenditure is 3.2%, not counting the resource cost of the draftees.

The other reason is that international European redistribution can be seen as an insurance device. No one knows what the economic development of the European regions will be, and the currently wealthy states are not safe from economic decay and poverty in the future. Firmly installed European redistribution rules that are defined in terms of objective criteria are a protection for all countries, including those that are currently the richer ones. To some extent,

<sup>6</sup>Critics will raise the objection that centralization—especially in the standard setting process—enhances further the power of bureaucracy. Rent seeking from lobbyists and officials may even lead to too many standardization activities; see Blankart and Knieps (1992). However, it is obvious that any government activity needs democratic control and an appropriate design of decision mechanisms.

<sup>7</sup>Net flows are calculated as payments of member states minus receipts from agricultural and fishery funds and from funds for regional and social policy. Although the figures do not embody all advantages of member states, these represent 78% of all community expenditures. The remaining 22% of EC expenditures is not attributable to member states and is not reflected in the net flows and net receipts of funds. See Amtsblatt der Europäischen Gemeinschaften L31, 36, February 8th, 1993, and Statistisches Bundesamt, Statistisches Jahrbuch für das Ausland 1992, pp. 141–144.

Germany has already been able to experience this protection. Although it still is a net payer into the community budget, its new Länder have been able to receive support from the EC through a variety of aid programs.

Despite these arguments, the actual redistribution policies carried out by the EC also deserve severe criticism, because much of the redistribution is hidden and carried out in a way that produces welfare reducing distortions in Europe's allocation of resources. One example for this is agricultural policy. The EC subsidies paid to French and Italian farmers are one thing. The other is that import charges and many of these subsidies themselves are aimed at reducing the quantities supplied and increasing the price of agricultural products above the market clearing level. This results in huge welfare losses and substantial redistribution flows from the North to the South that are not captured in any statistics.

Unfortunately, the Maastricht agreements seem to extend this policy in a very problematic direction. Articles 3 r and 131-136 of the new Treaty with the European Union and Declarations 25 and 26 of the Maastricht Treaty make it very clear that the overseas regions of the European community (French overseas departments, Azores, Madeira and Canary Islands) will receive extensive rights of association including them in the customs fortress the treaty is building. Declaration 26 even postulates that these regions should reach the current average Community living standard. In the light of these provisions, there is every reason to believe that the EC Commission will try (and it has indeed begun) to implement an EC wide customs policy that will effectively protect the overseas regions. Until recently the EC allowed for free trade in those products that could not be produced in Europe, and fortunately this included a number of products in which the developing countries had specialized. In the future, the set of commodities which EC citizens are not allowed to buy in the world markets is likely to include the items the overseas regions can produce. Bananas are only one example. It would be much cheaper for all parties involved if this strange kind of redistribution policy were to be replaced by open income transfers to the inhabitants of the overseas regions.

# IV IMPLICATIONS OF THE FOUR LIBERTIES

While the previous section described widely known reasons for European centralization, this section will discuss less well known reasons that result from the four basic liberties which constitute the EC as such: the free migration of labour and capital, and the free trade in goods and services. The reasons discussed in this section have in common that they do not rest in any trivial way on international spillover effects or on community-wide interests and public goods. They result rather from the ability of taxed goods and factors to migrate across the borders and the constraints on government behaviour imposed thereby.

The migration possibilities imply that the European governments will find themselves in an intense competition for tax paying citizens, capital, and enterprises, and will be forced to choose their tax and expenditure policies in a way that satisfies their voters and budget constraints. Of course, this in itself is no bad thing. It has been argued by Tiebout (1956) and others that institutional competition will have favourable educational effects on the governments, just as private competition has on firms that serve the same market. Under ideal circumstances institutional competition may scale down a country's government sector to its efficient size and induce the government to optimize the range of public goods it offers to its citizens and firms. However, a great deal of caution is appropriate with superficial analogies between the two kinds of competition. Private competition works under a number of plausible and well-defined conditions, but in many respects these conditions are not even approximated by the competition among governments. The deviations are so large that very inefficient government actions may result from unbridled competitive confrontation.

A rather safe way of avoiding the inefficiency wherever institutional competition does not work is to replace it with centralized actions at the EC level. An alternative, but at this stage highly speculative, remedy would be the search for a constitutional framework under which government competition can be expected to work. A third remedy would be the abandonment of the four liberties and the return to autarky of the European states. As even the strongest opponent of European unification is not willing to pay the price of autarky, this third option will not be considered here. However, some tentative thoughts about the appropriate constitutional framework for institutional competition will be offered.

### Internal income redistribution

As was seen, international income redistribution requires central government action. Interestingly enough, internal income redistribution within the single European countries also requires this. The reason is the breakdown of national redistribution schemes under institutional competition.<sup>8</sup>

Consider a world with competitive countries whose factors of production are partly mobile and partly immobile. Think of capital and skilled labour on the one hand and land and unskilled labour on the other. A country in such a world will be able to attract as much supply of a mobile factor of production as it wants at a given (or only slightly increasing) net of tax factor reward. Under the reasonable assumption that the country wants to maximize its domestic income net of the reward of the mobile factor—i.e. that it wants to maximize the tax revenue plus the income of the fixed factors—it will not try to make the mobile factor more expensive than it really is by artificially adding a tax cost to the required factor reward. If it did, firms would choose to employ the factor up to the point where the output increase from an additional unit of factor use exceeds the true factor cost—the required factor reward—by

<sup>&</sup>lt;sup>8</sup> The subsequent discussion concentrates on direct taxes. For a discussion of the problems involved with indirect taxes see Smith (1993) and Sinn (1990).

<sup>&</sup>lt;sup>9</sup>The argument will not change if some of the capital is owned domestically and the country tries to maximize the domestic income net of the capital income earned by the imported capital.

an amount equal to the tax rate. This would be optimal for the firms but not for the country. Maximizing the domestic income net of the factor reward clearly requires setting the tax rate equal to zero, for then firms expand their factor employment to the point where the last unit employed generates as much revenue as it costs. Since all countries behave that way, a tax on a mobile factor of production cannot survive in a process of institutional competition. Only taxes on the immobile factors of production will be chosen. Basically, this implication of fiscal competition has been known since MacDougal (1960), Richman (1963) or Musgrave (1969), and it has been confirmed by many authors including Diamond/Mirrlees (1971), Oates (1972) or Razin/Sadka (1991) in various contexts.

Figure 1 illustrates the argument when capital is the mobile factor of production. The interest rate (net of a potential foreign witholding tax) is fixed in the world capital market at the level i, and unlimited amounts of capital are willing to enter the country if they earn an equivalent rate of return net after paying a domestic source tax on capital. In the figure the domestic source tax is assumed to be charged at the rate t. The factor cost to a domestic firm of employing one unit of capital is i + t. Given this factor cost the profit maximizing amount of capital employed is OA since here the marginal product of capital, MPC, equals i + t. The domestic income net of the capital income and including the tax revenue is the area under the MPC curve left of A and above i. As indicated this area can be decomposed into one area that reflects the income of the immobile factors and one that reflects the tax revenue. By reducing the tax rate t to zero, the employment of capital increases from OA to OB, and the sum of the two areas—the domestic income net of the capital income—increases by the shaded area.

The story changes only slightly if the government incurs costs for supplying public goods to the mobile factor. In this case, competition will drive the tax

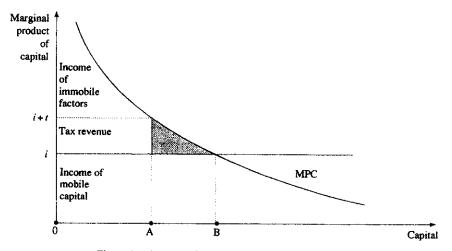


Figure 1. The suboptimality of taxing a mobile factor.

rate on a mobile factor down to a level that equals the marginal cost of hosting this factor. The factor tax reduces to a mere benefit charge, and again no redistributive taxation is possible. 10

To avoid this implication, the tax rates have to be harmonized across all countries or chosen by a centralized agency. If the political goal is to collect revenue from a particular factor, the agency will then be able to choose the preferred tax rate. It need not be afraid that the factor will be able to escape the taxation, and, instead of being confronted with a fixed net of tax factor reward, it can reduce this reward through the tax it imposes.

Whether the impossibility of redistribution policy is an advantage or a disadvantage is subject to debate. Those who see this policy as the deed of Leviathan will of course welcome the result and favour institutional competition, and those who accept it as welfare enhancing will opt for centralization of the redistribution function. Of course, an ultimate judgement cannot be made here. However, it should at least be pointed out that redistribution policy can potentially be interpreted as an efficiency enhancing activity of the state.

In order to illustrate this point, think of a stochastic world, where people make career decisions not knowing how successful they will be. In such a world, income redistribution can be interpreted as insurance against bad luck. 11 Risk averse individuals may well be willing to favour redistribution because they know that the high taxes they have to pay if successful have their counterpart in the tax reliefs or even subsidies they receive if their luck is bad. Redistribution and insurance are two sides of the same coin; the two concepts just differ with regard to the time period under consideration. Normally, contracts that ex ante can be interpreted as insurance, involve redistribution from an ex post perspective, and what we call redistribution can often be seen as insurance from an ex ante perspective. Redistribution can therefore be a useful government activity that generates benefits similar to those provided by the insurance industry. It increases the expected utility of risk averse citizens because it makes their life safer, and it may have the additional advantage of inducing them to engage in risky and profitable activities which they would not have dared to undertake without government protection. 12

Even such beneficial redistribution would not be able to survive in a Europe where the single countries compete with one another. A Europe with free migration is like an insurance market where the customers can choose the company ex post, after the insurance period is over and everyone knows whether he has incurred a loss or not. The lucky who have not had a loss and whose income has stayed high will choose to buy no or low coverage: they move to the night-watchmen states. And the unlucky whose income stayed low will seek full coverage insurance, they prefer a leftist redistributive regime. Clearly the private market must break down, since the companies will not be interested in serving the remaining bad risks, and the market for governmental

<sup>&</sup>lt;sup>10</sup> The case will be discussed in more detail in the next section.

<sup>&</sup>lt;sup>11</sup> See Friedman (1953) or Buchanan/Tullock (1962 Ch. 13) for such an interpretation.

<sup>&</sup>lt;sup>12</sup> See Sinn (1981, 1985) for extensive discussions of this interpretation under the heading 'Risk as a Factor of Production'.

redistribution policies cannot persist for a similar reason. The redistribution states will find themselves with a selection of needy people and face the risk of bankruptcy. To avoid this fate, they will change their policies. They will begin to reduce the taxes on the rich to prevent them from leaving and they will cut the benefits to the poor in order not to attract more of them from abroad. In the end, all countries will settle at an equilibrium where only benefit taxes are charged, and no redistribution policies are carried out.

The analogy with the insurance market is not only useful for evaluating the equilibrium. It also helps define a constitutional setting under which the competition of redistributive systems might work despite the difficulties described. Let us play with Hayek's two chamber system and borrow from Musgrave, too. 13 Suppose in each country there is a redistribution chamber and an allocation chamber. The latter is regularly elected by all age groups and decides on everything except for redistribution matters. The taxes it can impose are benefit taxes, free from redistributive elements. The redistribution chamber is periodically elected by the cohort of young citizens which is in a certain, well-defined age span, say 20-25 years. These citizens are in the ex ante phase where they do not know what kind of careers they will have. The redistribution chamber determines an income tax schedule which has negative average tax rates for low incomes and positive average tax rates for high ones. The schedule is applied to all members of the age group living in the country. Foreigners of the same age can opt for participation with or without immigration. It is impossible to leave the program later. The program continues to be applied even in the case of emigration, because a strict nationality principle for redistributive taxation is applied. The income tax schedule will never be revised except for trend adjustments designed to balance the budget.

A constitutional setting along the lines designed would be compatible with institutional competition in Europe and a continuation of redistributive policies. It could even help select the optimal redistributive system, since bad schedules would find no customers. Admittedly, however, the necessary constitutional provisions would be radically new. If they seem too radical the conclusion can only be that the EC must be concerned with the personal redistribution function or that a gradual but certain erosion of the national redistribution systems is to be accepted.

# Local public goods

While we have seen that international public goods will be underprovided by independently acting governments, at first glance the analysis of the last section seems to suggest that there is no problem with the provision of local public goods whose benefits are confined to the frontiers of a single country. Examples of such public goods are the road system, the police, the law system or national protection measures such as, for example, frontier guards or dykes. If tax competition drives the taxes down to the marginal cost of hosting the

<sup>&</sup>lt;sup>13</sup> See Hayek (1968) and Musgrave (1959).

<sup>©</sup> Scottish Economic Society 1994

mobile factors, then it seems that the competition of governments can be compared to the competition of firms. Governments which try to attract customers produce those goods for which there is sufficient demand, and they extend their output to the point where the customers' marginal willingness to pay equals the marginal cost of being served with public goods. This is the story put forward by Tiebout (1956) and extended and popularized by many authors. <sup>14</sup>

While this story at first glance seems convincing, closer scrutiny reveals a severe problem. This problem results from the very nature of the goods provided by the governments. If the local governments do what they ought to do, they supply a selection of goods whose production cannot be organized privately since they are characterized by cost functions where the marginal cost of production is below the average cost. Private competition fails with such cost functions since competition drives prices down to marginal cost, but marginal cost prices force the firms into bankruptcy.

Not only private competition, but government competition, too, will have problems with such goods. Taxes that equal the marginal cost of providing a public good do not cover its intramarginal cost and will therefore create a public deficit. 15 To avoid the deficit higher taxes would be needed, but these are not sustainable in a competition between the countries. As long as the tax rate is above the marginal cost there is always an incentive to undercut the rivals because this will bring more 'customers' and, temporarily, increase the government tax revenue. However, if everyone acts this way, the only implication of the competitive tax cuts is a loss in revenue and ultimately a deficit from producing the goods in question. This deficit must be covered by taxes on immobile factors or it will be avoided by not producing the public goods at all. In the former case, it is not only true that mobile factors cannot be taxed for redistributive purposes. What is more, there is a redistribution from the immobile to the mobile factors themselves. Given that the mobile factors often belong to richer individuals this exacerbates the redistribution problem discussed in the last section.

Figure 2, which differs from Figure 1 by incorporating the marginal cost of hosting the factor capital, illustrates the argument. The marginal hosting cost is represented by the vertical distance between the flatter of the two downward sloping curves and the horizontal line with height i. The flatter curve itself measures aggregate marginal cost of capital which is the sum of the marginal hosting cost and the interest cost i which the country takes as given in the world market. Assume that the domestic country wants to maximize its domestic income net of the income of the mobile factor (capital) and net of the hosting cost of this factor. The domestic country will then try to induce a capital employment equal to OB, because, with this employment, the marginal product

<sup>&</sup>lt;sup>14</sup> For an overview of the Tiebout literature see Zodrow and Mieszkowski (1986).

<sup>&</sup>lt;sup>15</sup> Bewley (1981) argued that Tiebout's (1956) result was derived by implicitly assuming constant returns to scale. Break (1967) was among the first expressing the fear that fiscal competition with public goods could result in underprovision. For discussion of the issue from Tiebout's perspective see also McLure (1986) and Zodrow and Mieszkowski (1986).

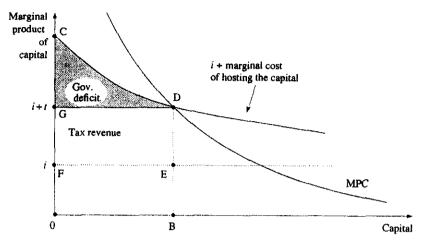


Figure 2. Inverse redistribution with benefit taxation.

of capital just equals the aggregate marginal cost of capital. Knowing the firms' profit maximizing responses the government can implement this allocation by selecting the source tax t such that the firms attempts' to employ capital up to the point where MPC equals i + t lead to the quantity OB. This is the solution illustrated in the figure. With an optimally chosen source tax the government's revenue is GDEF, while the cost of hosting the mobile factor is CDEF. There is a fiscal deficit of size CDG from providing public services to the mobile factor which has to be financed with taxes on the immobile factors.

To avoid this unattractive conclusion, a community-wide harmonization or the imposition of genuine Community taxes is necessary whose revenue can then be shared by the individual countries. Eventually, not only redistributive taxes have to be lifted to the community level when the four liberties are to be granted, to some extent even benefit taxes for local public goods must be too.

The argument becomes weaker when the marginal hosting cost increases with capital at higher levels of operation, perhaps because congestion costs have to be taken into account. In this case it is possible, but by no means guaranteed, that the fiscal deficit can be avoided. If the marginal hosting cost is above the average cost the government is not, in effect, providing public goods. Goods with this property can, should and will normally be provided by private markets. They do not belong to the category of goods on which governments specialize.

### Quality standards

One of the great achievements of the European Court was the Cassis de Dijon decision. Since this decision, Europe has adopted the origin principle for quality norms and standards. Whenever a product has been legally produced in an EC country according to the rules prevailing there and thus satisfies the national standards of the country of origin, it can be exported without restric-

tions to any other country of the Community. There is no doubt that the origin principle has helped destroy trade constraints between the European countries that otherwise would have been erected for protectionist reasons by means of exaggerated national quality standards.

Based on this judgement, a competition of national quality standards could be welcomed. Ideally consumers would buy those commodities whose price quality characteristics they like best, and countries would set their standards so as to maximize the success of their firms and, implicitly, the benefit of the European consumers.

Again, however plausible this view may appear at first sight, it cannot withstand closer scrutiny. If the national quality standards and controls have been introduced to correct market failure, then we cannot hope that reliberalizing the market via governmental competition can do any good.

To be more specific we have to identify the market failure that justifies government intervention by setting quality controls. Why wouldn't the firms' own, independent decisions lead to an equilibrium where they sell the qualities which the customers want? Why do they have to be constrained by government intervention?

The economic reason is the lemon problem—the presence of asymmetric information between firms and their customers. 16 Suppose the firms know more about the qualities of their products than the customers do, and suppose acquiring the information would be too costly for the consumer relative to the value of the product considered. Think of food which has dozens of chemical ingredients which may or may not be hazardous to the consumers and whose proper evaluation would require studying food chemistry. Or think of building a family home where thousands of quality and safety criteria have to be distinguished to assess the value of the final product. Under such circumstances an equilibrium where firms produce the qualities that consumers want cannot persist. The reason is that the single producers have an incentive to reduce quality, because this lowers their production cost. The ignorant consumers cannot properly react to this because they cannot realize what is being done, and the firm is not punished by losing customers. What will happen is that all firms reduce quality, and eventually the market settles in a situation where the quality reaches a bottom line where further cost reductions are not possible without the consumers noticing it. In the new equilibrium the consumers have no illusion about what they are buying, and competition ensures that they are not exploited: the product price equals the low marginal cost that corresponds to the low quality. Nevertheless, the situation is inefficient and unacceptable, since the consumers would like to buy a higher quality and are prepared to pay for it, but cannot get it. There are welfare losses, because markets for high-quality products are non-existent or overly thin.

Of course, one can argue that the single firm could offer a higher quality and charge a higher price for it. But, in the cases considered, it cannot. Since it

<sup>&</sup>lt;sup>16</sup> See Akerlof (1970). See also Vahrenkamp (1991) for a more recent discussion of the policy issues involved.

cannot convincingly reveal the higher quality to the consumers, it will not be able to charge higher prices.

It is not argued that these problems apply to all or even most existing products. In many cases consumers will be able to learn from repeated purchases, information via consumers' agencies and warranting rules will be able to prevent the quality decline. However, this is not so in all cases. If a product is hazardous or rarely bought, the consumer is not able to learn, and if warranting rules lead to substantial moral hazard problems with the purchasers, they are no solution either. In these cases, government quality controls are appropriate. The government can draw a bottom line for quality that is above the asymmetric information equilibrium or, even better, it can define and control quality categories with a well defined meaning and leave it to the consumer to choose which category to buy from.

Suppose the single European governments reacted this way and we now allowed the Cassis de Dijon principle to become operative. Then the consumers would have to learn 12 times as many quality categories, or they would be confronted with 12 different minimum quality standards among which to choose, and this separately for every good controlled. To find their way through this jungle they again would have to overcome the information asymmetry and become experts on the products under consideration. This, however, might be prohibitively difficult and indeed it would be, if, as assumed, the national standards were caused by asymmetric information problems in the first place. The single countries therefore have an incentive to undercut the quality standards of their rivals or at least they would not dare to have higher standards. The market would settle to a low-regulation, low-quality equilibrium that does not satisfy the preferences of European consumers.

Community-wide quality controls, quality categories and minimum quality standards can therefore, in principle, be justified by economic theory. Admittedly, the hard part is then to recognize those products that should be quality controlled. Perhaps the theory explained can help develop appropriate criteria in specific cases. The consumers' cost of acquiring knowledge might be used as the criterion for deciding on the optimal degree of European intervention.

### Internal pollution

While it is obvious that transborder pollution flows imply too few incentives for national environmental policy, there seems to be every reason to believe that a country has sufficient incentives to control its internal pollution. Pollution is like a factor of production. If the national government imposes a Pigou tax whose revenue is distributed to the domestic voters then the voters will choose that level of the tax rate which equates the marginal product of the right to pollute with the marginal cost of environmental damage. Even a country whose firms face fierce international competition from countries with low environmental standards will not neglect the environment.<sup>17</sup>

<sup>&</sup>lt;sup>17</sup>The Pigou tax was analysed by Long and Siebert (1991) and Wellisch (1992).

Things are very different, though, if countries impose environmental standards instead of collecting Pigou taxes. Setting standards leaves the implicit factor reward on environmental pollution with the firms. With a perfectly integrated capital market—one of the four basic liberties—the owners of these firms will often be foreigners whose interests are not represented by the domestic voters. By way of contrast the (median) voters are typically domestic workers who bear the burden from environmental damages but do not share in the implicit rent from environmental pollution.

This asymmetry can create severe distortions in the national decision-making process. When deciding on a tightening of the environmental standards, the workers will compare the benefit from an increased quality of the environment with the resulting change in their wage income resulting from a change in the scarcity of the factor of production they offer, and, typically, this comparison will not lead to a social optimum. In fact, when the demand curve for pollution rights is elastic so that the tightening of the standard reduces the implicit rent from polluting the environment then the workers have a too strong incentive to protect the environment. Because they neglect the disadvantage of the firms' owners, they push the standards beyond the social optimum. <sup>18</sup>

A centralized European decision making process would not suffer from similar distortions in the incentive structures because, in principle, more of the transnational interests in national pollution policies would be represented. A distortion would only remain to the extent that non-European firm owners are affected by the choice of pollution standards. Thus there is a case for European environmental policy even if the pollution does not spill over the national boundaries. <sup>19</sup>

### V CONCLUDING REMARKS

Politicians have their own logic, their own views and their own interests. They are driven by the pressures of the political system which is short sighted and places little weight on economic rationality arguments. The German debate over unification has shown what can happen if overly activist policies, which take no account of the advice of economists, are chosen, and there is no guarantee whatsoever that European politicians will not similarly be guided by unrealistic illusions when they design the new Europe.

This paper is one economist's attempt to shed some light on the crucial issues that will determine Europe's destiny. The Maastricht treaty in itself leaves plenty of scope for alternative paths to be taken. There are dangerous elements

<sup>&</sup>lt;sup>18</sup> The technical condition for this result is that pollution and labour are Hicksian substitutes. If they are complements, then tightening the standards will increase the implicit rent from pollution and the workers' wage-damage comparison will imply too low environmental standards. However, Hicksian complementarity is not a plausible assumption.

<sup>&</sup>lt;sup>19</sup> A very different result is derived by Oates and Schwab (1988). However, these authors implicitly assume that all imputed pollution rents are paid out to the domestic worker-voters because in their model the pollution rights are granted in strict proportion to the number of workers employed. This unrealistic, though seemingly innocous, assumption drives all the results of the paper.

and promising policy choices alike. The provisions about the monetary union may be among those aspects whose importance has been dramatically overstated in the political debate. Europe's industrial policy, its protectionism. its environmental decisions, its social policy, its tax system and its central expenditures will be much more important for the well-being of its inhabitants than the question of whether a common currency will be used as a medium of exchange. Hopefully the research on the important issues will lead to clear-cut results and policy recommendations before the die is cast, and hopefully the politicians will then listen to what economists have to say about the matter.

### ACKNOWLEDGEMENTS

Comments by Pasi Holm, Ronnie Schöb, Marcel Thum and Alfons Weichenrieder are gratefully acknowledged.

### REFERENCES

AKERLOF, G. A. (1970). The market for 'lemons': quality, uncertainty and the market mechanism. Quarterly Journal of Economics, 84, pp. 488-500.

BEWLEY, T. F. (1981). A critique of Tiebout's theory of local public expenditures. Econometrica, 49, pp. 713-740.

BLANKART, CH. B. and KNEIPS, G. (1992). State and Standards. Mimeo, TU Berlin. BRANDER, J. A. and SPENCER, B. J. (1985). Export subsidies and international market share rivalry. Journal of International Economics, 18, pp. 83-100.

Break, G. F. (1967). Intergovernmental Fiscal Relations in the United States. Washington, DC: The Brookings Institution.

BUCHANAN, J. M., and TULLOCK, G. (1962). The Calculus of Consent. Ann Arbor: University of Michigan Press.

CLEMHOUT, S. and WAN, H. Y. (1970). Learning by doing and infant-industry protection. Review of Economic Studies, 37, pp. 33-56.

DIAMOND, P. A. and MIRRLEES, J. A. (1971). Optimal taxation and public production, part I and II. American Economic Review, 111, pp. 8-27 and 261-278.

ECMT (European Conference of Ministers of Transport) (1989). Rail Network Co-operation in the Age of Information Technology and High Speed. Paris: OECD.

FARRELL, J. and SALONER, G. (1988). Coordination through committees and markets. Rand Journal of Economics, 19, pp. 235-252.

FRIEDMAN, M. (1953). Choice, chance, and the personal distribution of income. Journal of Political Economy, 61, pp. 277-90.

HAYEK, F. A. V. (1968). Die Verfassung eines freien Staates. Ordo, 19, pp. 3-11. LONG, N. V. and SIEBERT, H. (1991). Institutional competition versus ex-ante harmonization: the case of environmental policy. Journal of Institutional and Theoretical Economics, 147, pp. 296-311.

MACDOUGALL, G. D. (1960). The benefits and costs of private investments from

abroad: a theoretical approach. Economic Record, 36, pp. 13-35.

McLure, Ch. (1986). Tax competition: is what's good for the private goose also good for the public gander. National Tax Journal, 39, pp. 341-348.

MUSGRAVE, P. B. (1969). United States Taxation of Foreign Investment Income: Issues and Arguments. Cambridge Mass.: Harvard Law School.

MUSGRAVE, R. A. (1959). The Theory of Public Finance. New York: McGraw-Hill. MUSGRAVE, R. A. and MUSGRAVE, P. B. (1984). Public Finance in Theory and Practice. New York: McGraw-Hill.

- OATES, W. E. (1972). Fiscal Federalism. New York: Harcourt, Brace and Jovanovich. OATES, W. E. and SCHWAB, R. M. (1988). Economic competition among jurisdictions: efficiency enhancing or distortion inducing? Journal of Public Economics, 35, pp. 333-354.
- OLSON, M. (1965). The Logic of Collective Action. Public Goods and the Theory of Groups. Cambridge, Mass: Harvard University Press.
- PEACOCK, A. T. and WISEMAN, J. (1961). The Growth of Public Expenditures in the United Kingdom. Cambridge Mass: National Bureau of Economic Research.
- PELKMANS, I. and BEUTER, R. (1987). Standardization and competitiveness: private and public strategies in the EC color TV industry. In: H. L. Gabel (ed.), Product Standardization and Competitive Strategy. Amsterdam: North-Holland, pp. 171-214.
- POPITZ, J. (1927). Der Finanzausgleich. In: W. Gerhoff and F. Meisel (eds). Handbuch der Finanzwissenschaft, Vol. II, Tübingen: Mohr. 338-375.
- PRITCHARD, D. H. and GIBSON, J. J. (1980). Worldwide color television standards—similarities and differences, SMPTE Journal, 89, pp. 111-120.
- RAZIN, A. and SADKA, E. (1991). Vanishing tax on capital income in the open economy. National Bureau of Economic Research, Disc. Paper No. 3796.
- RICHMAN, P. B. (1963). Taxation of Foreign Investment Income: An Economic Analysis. Baltimore: Johns Hopkins University Press.
- ROLLO, J. and SMITH, A. (1993). The political economy of Eastern European trade with the EC: why so sensitive? *Economic Policy*, 16, pp. 139–181.
- SATORIUS, J. (1992). 0.00016% für Kultur. dem EG-Koloß fehlt der Mut. Ein Tatschenbericht aus Brüssel. In: O. Müller and M. Sicking. Auf dem Weg zur europäischen Einigung. Aachen: Alzno-Verlag, pp. 186-200.
- SINN, H.-W. (1981). Die Grenzen des Versicherungsstaates: theoretische Bemerkungen zum Thema Einkommensumverteilung, Versicherung und Wohlfahrt. In: H. Göppl, and R. Henn (eds). Geld, Banken und Versicherungen. Königstein: Athenäum, pp. 907-928. Reprinted in: G. Rolf, P. B. Spahn and G. Wagner (eds). Sozialvertrag und Sicherung Zur ökonomischen Theorie staatlicher Versicherungsund Umverteilungssysteme. Frankfurt: Campus, 1988.
- SINN, H. W. (1985). Redistributive taxation, risk-taking and welfare. University of Munich Discussion Paper, 85-13.
- SINN, H. W. (1990). Tax harmonization and tax competition in Europe. European Economic Review, 34. pp. 489-504.
- SMITH, S. (1993). Subsidiarity and the co-ordination of indirect taxes in the European Community. Oxford Review of Economic Policy, 9, pp. 67-94.
- Tiebout, Ch. M. (1956). A pure theory of local expenditure. *Journal of Political Economy*, 64, pp. 307-326.
- TIMM, H. (1961). Das Gesetz der wachsenden Staatsausgaben. Finanzarchiv, N.F. 21, pp. 201-247.
- VAHRENKAMP, K. (1991). Verbraucherschutz bei asymmetrischer Information. München: V. Florenz.
- WAGNER, A. (1876). Allgemeine oder theoretische Volkswirthschaftslehre: Erster Theil, Grundlegung. Leipzig: Winther'sche Verlagsbuchhandlung.
- WELLISCH, D. (1992). Dezentrale Umweltpolitik. Mobilität von Kapital, Haushalten und Firmen und grenzüberschreitende Schäden. Zeitschrift für Umweltpolitik und Umweltrecht, 15, pp. 433-458.
- WHALLEY, J. (1984). The north-south debate and the terms of trade: an applied general equilibrium approach. Review of Economics and Statistics, 66, pp. 224-234.
- ZODROW, G. R. and MIESZKOWSKI, P. (1986). Pigou, Tiebout, property taxation, and the underprovision of local public goods. *Journal of Urban Economics*, 19, pp. 296-315.

Date of receipt of final manuscript: 1 June 1993,