IMF WORKING PAPER

WP/91/65

INTERNATIONAL MONETARY FUND

Fiscal Affairs Department

Structural Funds and the 1992 Program in the European Community

Prepared by James Gordon 1/

Authorized for Distribution by George Kopits

June 1991

Abstract

Equity and efficiency justifications are found for the Community's Structural Funds which are discovered to be carefully targeted at depressed regions, albeit with some horizontal inequities. If Fund transfers displace national assistance, then they may be misallocated by being tied to regional indicators. The recent doubling in size enhances the Funds' ability to assist losers from the creation of a single European market in 1992. However, they fall short of constituting a safety net since they provide little automatic assistance to regions suffering negative shocks. Compensation of losers from the 1992 program would require an overhaul of the present allocation system, if not a further increase in scale.

JEL Classification Numbers:
H30; H72; H77

1/ Research on this paper was conducted under a departmental project on tax harmonization in the European Community. The author wishes to thank George Kopits and Antonio Cabral for detailed comments and suggestions. Helpful comments were also received from Tam Bayoumi, Edward Gardner, and Jerry Schiff.

Contents

Summary

This study examines the rationale and operations of the Structural Funds of the European Community (EC). Compared with those of most federations, the Community's fiscal powers are quite limited; its budget is smaller than national budgets, and member countries retain a high degree of fiscal sovereignty. Some of the fiscal federalism arguments for intergovernmental transfers, such as those arguing for compensation for differences in taxable capacity and those urging redistribution of income in order to foster economic stabilization, may not therefore be entirely relevant. Nevertheless, both vertical equity and efficiency arguments can be made for Structural Fund transfers; indeed, the Community's commitment to promoting convergence and social cohesion requires an active regional policy. Given that some regions may lose from the completion of the single European market, the Structural Funds also represent a potential means of providing compensation. Furthermore, after 1992, full factor mobility in a Europe free of internal frontiers will constrain the ability of member countries to pursue independent redistributive policies, which may imply a greater redistributive role for Structural Fund transfers. However, this would imply countries' ceding a greater fiscal role to the central EC authorities than they have hitherto been willing to have them play.

Analysis of the actual regional allocation of the Structural Funds in 1988 suggests that they are carefully targeted to meet their objectives of assisting depressed regions and removing structural rigidities from labor markets. Nonetheless, particularly with regard to the European Regional Development Fund (ERDF), the results show horizontal inequities in the treatment of regions in different countries. It is argued that for the ERDF these inequities result from the ranges within which assistance to each country has to lie.

There is some suspicion that expenditure financed with the Structural Funds may not be additional to national expenditure. If Fund transfers simply displace regional assistance that the member country would otherwise have provided, then they benefit the entire country, rather than deserving regions, and tend to be misallocated because they are tied to regional indicators. In this light, the complex process of drawing up Community support programs on the basis of regional need may be seen as open to question.

The recent doubling in their size gives the Structural Funds the resources to assist any regions adversely affected by the completion of the internal market. However, in their present form, the Structural Funds should not be thought of as providing a safety net, since the automatic increase in transfers which would go to a region experiencing a negative shock would appear to be very small. For the Structural Funds to be given responsibility for compensating regions which lose from implementation of the 1992 program would require changes to the present system of allocation, if not a further increase in their scale.

I. Introduction

The Structural Funds of the European Community (EC) comprise the European Social Fund (ESF), the European Regional Development Fund (ERDF), and the Guidance component of the European Agricultural Guidance and Guarantee Fund (EAGGF) (Table 1). Although the cost of the Common Agricultural Policy (CAP) dominates the EC budget, Structural Fund disbursements have become increasingly important in recent years; under the reform completed in 1989, they are to double in size, rising from ECU 7.7 billion in 1988 to ECU 14.5 billion by 1993, with a total allocation over the period 1989-93 of close to ECU 60 billion (Table 2). By 1993, it is envisaged that total disbursements will represent one fourth of the EC budget and 0.3 percent of Community GDP.

Reform of the Structural Funds in the mid-1980s was particularly timely. The accession of Spain and Portugal in 1986 significantly increased the degree of inter-regional inequality within the Community, 1/ and hence the need and scope for regional intervention. Structural measures gained added priority with the emphasis in the Single European Act on promoting economic and social cohesion. The Act explicitly commits the Community to reducing regional disparities and the backwardness of less favored regions. 2/ Larger Structural Funds were regarded as necessary to complement the other initiatives being taken to further cohesion, in particular, the convergence of countries' macroeconomic policies and the completion of the internal market coupled with tax harmonization.

It is possible to interpret the doubling of the Structural Funds as an attempt to compensate those who stand to gain least, or even to lose, from European integration. However, the possible emergence of losers from integration, although raised by the Padoa-Schioppa report, 3/ does not appear to have received explicit official attention until April 1989, when a motion passed by the European Parliament recognized the likely negative regional consequences of completion of the internal market and questioned whether the Structural Funds, even at the new levels, would prove adequate to offset them. 4/

Besides increasing their resources, the 1989 reform rationalized and streamlined the different Structural Funds, pursuant to the following objectives: (1) promotion of development and structural adjustment in less developed regions, (2) rehabilitation of areas affected by industrial

---

1/ Commission of the European Communities (1987).
2/ Commission of the European Communities (1986).
3/ Padoa-Schioppa et al. (1987).
4/ Commission of the European Communities (1989c).

Table 1. European Community: Structural Fund Commitments, 1989-90

(In billions of ECU)

	1989	1990
EAGGF Guidance	1.4	1.7
ERDF	4.5	5.4
ESF	3.4	4.1
Other	0.2	0.3
Total	9.5	11.5

Source: Commission of the European Communities (1989a).

Table 2. European Community: Projected Structural Fund Commitments, 1989-93

(In billions of ECU at 1988 prices)

Objective 1/	1989	1990	1991	1992	1993	1989-93
Objective 1	5.6	6.6	7.4	8.2	9.2	37.0
Objective 2	1.0	1.2	1.3	1.4	1.5	6.4
Objectives 3 and 4	1.2	1.2	1.4	1.6	1.8	7.2
Objective 5	0.9	0.9	1.2	1.4	1.6	6.0
Other	0.3	0.4	0.3	0.3	0.4	1.7
Total	9.0	10.3	11.6	12.9	14.5	58.3

Source: Commission of the European Communities (1989b).

1/ Objectives under the 1989 reform: (1) promotion of development and structural adjustment in less developed regions, (2) rehabilitation of areas affected by industrial decline, (3) reduction of long-term unemployment, (4) occupational integration of the young, (5a) speed-up of agricultural adjustment, and (5b) promotion of rural development.

decline, (3) reduction of long-term unemployment, (4) occupational integration of the young, (5a) speed-up of agricultural adjustment, and (5b) promotion of rural development. 1/ For 1989-93, more than one half of total resources have been allocated under objective (1), as shown in the breakdown by objective in Table 2.

Financial assistance from the reformed Structural Funds consists of grants supplemented by loans, which means coordination not only among the three Funds, but also with the EC lending facilities, namely the European Investment Bank and special loan instruments. Because the Funds only partially finance different forms of intervention--primarily operational programs--the emphasis is on partnership, with recipient countries and the private sector responsible for the remainder of the financing. The proportion of the financing provided by Structural Fund grants depends on the type of investment and the extent to which it would be profitable without a subsidy. 2/ Along with partnership, the reform stresses the principle of additionality, which requires that an increase in regional Fund assistance lead to at least an equal increase in the total structural aid (including the national contribution) to the region. 3/

The plan of the paper is as follows. Section II reviews the arguments for transfers among member countries of a federation in general and of the EC in particular, highlighting the differences between the Structural Funds and more conventional federal transfer schemes. Section III provides a brief description of the operations of each Fund and assesses the accuracy with which expenditures are targeted at deserving regions. Some limitations of the Structural Funds are discussed in Section IV. Section V concludes the paper.

1/ Objective (1) regions are defined as those with GDP per capita less than 75 percent of the Community average. Objective (2) regions are those with above average unemployment plus industrial employment which is above average but declining.

2/ Grants from the Structural Funds for investment in firms may not exceed 50 percent of the costs in objective (1) regions and 30 percent of the costs in other regions. For infrastructure projects, there are ceilings on grants which vary inversely with the expected profitability of the project (Commission of the European Communities (1989b)).

3/ The reform also specifies the procedure guiding the allocation of the Funds; member states submit their own plans and then negotiate with the Commission, culminating in a Community-wide ranking of different programs across member states (the Community support framework).

II. The Case for Intra-Community Transfers

1. Standard arguments

a. Equity

Arguably, integration of the economies of EC countries should involve reductions in regional income inequality. In terms of GDP per capita, there was significant convergence within the six-member EC during the 1960s and early 1970s, but the process was arrested and reversed by the accession of Denmark, Ireland, and the United Kingdom in the mid-1970s and of Greece, Portugal, and Spain over the following decade. 1/ Regional inequality within the EC is now considerably greater than that which exists, for example, within the United States. 2/ Wilson et al. (1981) argue that the equity case for transfers to poor regions is stronger the more immobile are resources; indeed, regional economics is sometimes called the economics of factor immobility. Moreover, if the most able and productive factors move out of a less-developed region, there is an equity argument for helping those who remain behind. 3/

Whereas considerations of vertical equity underlie the use of Structural Funds to promote convergence, the standard case for intergovernmental grants is that they should be used to ensure horizontal (also called fiscal) equity within a federal system. 4/ Fiscal equity is violated if the net effect of government activity (including both expenditure and tax revenue) differs between individuals or households who would be equally well off in the absence of government. It is possible to distinguish between a broad and narrow view of horizontal equity, depending on how much government is assumed to be absent in the before-after comparison. 5/ The broad view compares the actual situation with that which would obtain without either federal or lower-level (national) government, while the narrow view attempts to isolate only the effect of federal government. The potential for broad horizontal inequities is endemic to a federal system, because even if member countries attempt to provide the same level of services, different size tax bases will imply different tax rates across countries. This establishes a role for federal

---

1/ Commission of the European Communities (1990b) and (1990c).

2/ See Commission of the European Communities (1990b). The recognition that regional differences required positive intervention at the Community level led to the formation of the ERDF in 1975 (Sutherland (1986)). More recently, the reform of the Structural Funds has made regional development a priority objective. For a history of EC regional policy, see Nevin (1988).

3/ Relevant upon completion of the single market, this viewpoint would support a tax on emigration--a suggestion made by Bhagwati (1988) in a different context.

4/ Buchanan (1950).

5/ Boadway and Flatters (1982).

government grants to equalize taxable capacity, a practice which is widespread in federal systems.

Implicit in the narrow view, by contrast, is the principle that individuals have a right to the net fiscal benefits derived from national taxes and expenditures. It is this more restricted notion of horizontal equity which seems applicable in the EC context; there is no mention in the Single European Act of fiscal equalization, nor is there any measure to prevent individual income tax and benefit systems from differing across countries, so that, for example, an unemployed German is better off than an unemployed Greek. Thus, while a vertical equity case for Structural Fund transfers can be made in terms of convergence, it is not clear that there is also a broad horizontal or fiscal equity argument in support of it.

That the EC should be concerned only with the restricted principle of narrow horizontal equity is inevitable given that countries retain national sovereignty, as the EC is a looser type of federation compared to the United States or Canada, for example. Nevertheless, the possibility must be considered that unemployed Greeks will autonomously rectify the broad horizontal inequity by moving to Germany. This raises issues of allocative efficiency which are familiar from the tax harmonization debate, given the distortionary effect of nonharmonized taxes and benefits once barriers are removed. However, it will be seen in Section III that, at least up until 1988, Structural Fund transfers appeared to violate even the narrow principle of horizontal equity.

b. Efficiency

Although equity considerations are clearly present, allocative efficiency arguments are fundamental to each of the five objectives of the Structural Funds enumerated above. The efficiency case for transfers to disadvantaged regions under objectives (1) and (2) is market failure; productive opportunities exist, but for some reason--imperfect information, shortages of capital or skilled labor, or externalities--they remain unexploited or are slow to be exploited by private agents. Expenditures under the other objectives are primarily aimed at improving the allocative efficiency of European labor markets; reducing variations in unemployment rates within the Community is another way in which the Funds attempt to achieve convergence.

Regional policy aside, the standard efficiency case for intergovernmental grants arises from the existence of interjurisdictional spillovers. These may be conventional externalities (for example, one country showers acid-rain upon its neighbor), in which case federal government grants are analogous to Pigovian taxes and subsidies to correct market failure within a national economy. While the Structural Funds have no mandate for pursuing environmental concerns, a new initiative (ENVIREG) will link regional development and environmental policy. 1/

Other externalities are fiscal in nature. For example, Padoa-Schioppa et al. (1987) recognize the leakage of the benefits of Portuguese and Irish educational spending to countries to which their citizens migrate and therefore recommend that the Structural Funds be used to provide general education in poorer regions. More generally, fiscal externalities occur when there is factor movement for reasons other than differences in marginal productivity, such as access to resource rents or more favorable welfare benefits. Consider Meade's (1955) example of two countries with identical marginal but different average product of labor, both providing the same level of government services. The difference in tax base means that tax rates will be higher in one country than the other, inducing rent-seeking migration. Alternatively, free mobility can lead to inefficiency because migrants fail to fully take account of the effect they have on both the country they leave and the country they join through changes in congestion costs. 2/

Such inefficiencies will not arise if differential fiscal residuals (benefits from national government services net of taxes) are capitalized in asset values. 3/ For example, lower taxes will be insufficient to attract labor if house prices and rentals are commensurately higher. 4/ However, it is unlikely that capitalization will be perfect, since this requires zero elasticity of asset supply, and in the absence of capitalization, there is an efficiency argument for equalizing transfers to poorer or less populated jurisdictions in order to discourage factor movement. 5/

c. Stabilization

Central government grants can be used to redistribute aggregate demand between regions, thus cushioning the impact of both positive and negative region-specific exogenous shocks. For example, Sachs and Sala-i-Martin (1989) find that a one-dollar negative shock to the average U.S. region only reduces local income by 62-65 cents once the effect of federal tax and benefit systems are taken into account. Stabilization is a role which as yet does not form part of the Community's mandate, although implicitly it is already an issue in the context of the European Monetary System and which may assume some importance with the establishment of the European Monetary Union. 6/

1/ Commission of the European Communities (1990a).

2/ As regards (quasi) public goods for which the average cost of provision falls with population size (see Buchanan and Goetz (1972)).

3/ Boadway and Flatters (1982).

4/ For evidence of such capitalization within one European country, see Bayoumi and Gordon (1991).

5/ Wilson et al. (1981).

6/ Mortensen (1990).

2. Additional arguments under the 1992 program

a. Welfare effects of the single market

If the integrated European market is inhabited by larger firms, reaping economies of scale, then it seems inevitable that some firms will have had to shut down. 1/ When failing firms are concentrated geographically, the regional consequences for income and employment may be severe. However, the Cecchini (1988) study makes no attempt to trace the distributional implications of the 1992 changes, arguing that difficult as it is to estimate the aggregate gains, the task is relatively manageable compared to forecasting the distribution by country or region. 2/

Subsequent analysis of the likely regional consequences of the 1992 initiative is mostly conjectural. On a priori grounds, the regions most likely to lose are those that are noncompetitive already, or competitive only under the protection of nontariff barriers, or which have poor infrastructure and vulnerable sectors. 3/ However, a study of which regions fit this description has yet to be performed. 4/ Lack of evidence

---

1/ For example, Smith and Venables (1988) predict that one sixth of firms in the European electrical industry will cease operations after integration.

2/ Emerson et al. (1988), p. 9. The Cecchini Report identified direct and gains from market integration totaling between 4 1/4 percent and 6 1/2 percent of Community GDP. Due to data limitations, only the aggregate effects on the larger countries were considered. Community-wide estimates were made by scaling up the estimate for the included countries by a factor reflecting the omitted countries' share in Community GDP. This linear extrapolation clearly does not entertain the possibility that an omitted country might be a net loser and illustrates how far the study was from being able to break down the economic effects of the 1992 program by country, let alone by region.

3/ Begg (1989b).

4/ The work that has been done is at the country level. For example, Neven (1990) identifies labor-intensive industries in Spain and Portugal and skilled labor-intensive industries in the United Kingdom as likely beneficiaries and Spain in general as a gainer from economies of scale. Neven's thesis that only Southern Europe stands to gain significantly is contentious. In global terms, Spain and Portugal do not have a comparative advantage in labor-intensive industries, so classical gains from trade will not materialize should future liberalization with the rest of the world be anticipated. Moreover, Baldwin (1989) argues that France (not Spain) has most to gain from economies of scale. In addition, the thesis contradicts the Cecchini findings of sizable gains for Northern Europe (Norman (1990)) and the commonly encountered argument that transport cost disadvantages and general isolation make the periphery of a federation least likely to gain from integration. There thus appears to be little agreement about the distributional effect by country. The 1992 program will also have important effects on labor markets, although even if qualifications are standardized aside, it must be recognized that creation of the single market is only potentially Pareto improving; for it to be actually Pareto improving requires that those who gain from the completion of the single market compensate those who lose and the Structural Funds can be viewed as an appropriate means of effecting such compensation. The equity argument is obvious, but an analogy can also be drawn with making side payments in order to attain a cooperative outcome.

b. Revenue effects of tax harmonization

The revenue effects accruing to specific member countries from tax harmonization can give rise to claims for compensation, as for example, a switch is made from residence-based to source-based income taxation. 1/ While harmonization of taxes on capital income within the EC would have limited budgetary implications for a number of countries, few of the original harmonization proposals have been retained and it is not clear that those which remain (e.g., the elimination of double taxation of intra-EC investment income) will create much of a need for compensation.

By contrast, commodity tax harmonization is expected to have significant adverse budgetary consequences for some countries, notably Denmark and Ireland. In theory, a simple option is available which would give such countries time to adjust; as a transitional arrangement those who gain revenue from tax rate increases could compensate those who lose from rate cuts. Although such a scheme is feasible because total revenue gains are similar to total revenue losses, 2/ it would encounter difficulties because it would be inconsistent with the Community's vertical equity objectives; Denmark, for example, who would be a recipient, is one of the richest countries.

4/ (Continued from p. 8) and social security and pension rights made transferable, labor movement will continue to be inhibited by language and cultural barriers. For example, the liberalization of labor movement when the six-member EC was formed does not appear to have stimulated intra-EC migration (Straubhaar (1988)), which is consistent with the classical trade theory prediction that commodity trade and factor movements are substitutes. Labor is likely to move in the 1990s in response to skill shortages in particular regions rather than because of different factor proportions (Krugman (1987)). This would cause labor to move simultaneously in different directions, with no reason to expect major changes in population densities or any major regional impact. As noted earlier, there may also be migration in response to fiscal variables (Sinn (1989)), but as with higher factor rewards, this will be discouraged if variations in after tax incomes are capitalized into property values.

1/ Canada, for example, redistributes from provinces who gain revenue from taxing nonresident firms and factors to those where they are resident.

2/ See Table 4 in Center for European Policy Studies (1988).

c. Constraints on fiscal or regulatory instruments

The harmonization of taxes and the removal of nontariff barriers reduces the ability of individual countries to achieve their own regional objectives (for example, attracting investment with tax incentives, or indirectly protecting certain industries through selective excises). This suggests an increased role for Structural Funds or similar transfers after 1992 as a substitute for the tax instruments subject to removal. Moreover, those instruments over which countries retain discretion may become impotent. To illustrate the dangers that removing barriers to factor movement pose for national regional policy, note that in a barrier-free Europe, any attempt by the United Kingdom to use zoning regulations to encourage a firm to locate, for example, in Yorkshire rather than London runs the risk of the firm setting up instead in France. 1/ This is similar to the point made earlier that migration induced by fiscal externalities constrains the ability of individual countries to pursue independent distributional objectives; any country offering high benefits financed by high taxes risks the emigration of productive citizens and the immigration of unproductive foreign citizens. 2/

These examples suggest increased responsibility at the EC level after 1992 for both regional and redistributional policy. Increased regional responsibility may involve further expanding the Structural Funds; likewise, increased redistributional responsibility may involve creation of an EC-wide unemployment insurance scheme in the framework of a uniform social charter. 3/ However, these are issues which impinge on the very assignment of authority between the EC and the members countries, and while the 1992 program effectively reassigns some of these to the supra-national level, the final assignment remains largely unresolved.

III. Operations of the Structural Funds

1. European Social Fund

Steinle (1988) documents how the priorities of the ESF have changed since 1960 when it was founded. Whereas an original intention was to provide income support to the unemployed, the present focus is almost exclusively on supply-side measures. The post-reform ESF attempts to combat long-term and youth unemployment in accordance with objectives (3) and (4) of the Structural Funds. It finances training (particularly with respect to new technology), vocational guidance, job placement, and self-employment initiatives. All told, about four fifths of expenditure serves to promote vocational training. The addition of a regional emphasis, incorporating measures which benefit the unemployed in less favored regions under

---

1/ Bird (1967).
2/ Sinn (1989).
3/ A suggestion made by Bean et al. (1990).

objectives (1), (2), and (5b), has represented a second change in the orientation of ESF operations.

Total ESF commitments for 1990 were budgeted at ECU 4.1 billion (Table 1). In real terms, this will increase considerably by 1993 (Table 2). On a yearly per capita basis, Community-wide commitments are modest, amounting to not much more than ECU 10 in 1990. However, for 1988, the year before the reform of the Structural Funds, but the most recent year for which a detailed breakdown is available, the allocation amounted to ECU 225 per unemployed person and ECU 1,175 per assisted person, with the total number assisted close to one fifth of Community unemployment. The breakdown of the 1988 commitment by country is given in Table 3. In contrast to the ERDF, most regions received some assistance, with Ireland (including Northern Ireland) receiving most. In 1988, Ireland as a whole received about ECU 800 per unemployed person, almost four times the Community average. Of the total commitment, about 40 percent was allocated to region specific rather than global programs, although the region-specific proportion varied sharply across countries (Table 3).

Each year, applications for ESF transfers exceed the amount available by at least a factor of two and econometric analysis can be used to assess the extent to which the screening process gives priority to programs meeting Community goals. Accordingly, the ESF commitments made to 151 basic EC administrative regions in 1988 were regressed on indicators of regional need, using the following equation:

$$s_i = \sum_j a_{0j} + \sum_j a_{1j}u_i + a_2y_i + v_i \qquad (1)$$

for region i in country j, where s_i is the per capita region-specific ESF commitment, u_i the unemployment rate, y_i a GDP per capita index, and v_i the error term. 1/ The j subscript allows the intercept and coefficient on the unemployment variable to differ according to the country in which the region is located.

The results of estimating equation (1) using 1988 data indicate that despite the concern with priority regions, GDP per capita does not appear to directly affect regional ESF commitments (Table 4). F-tests support the hypothesis of a common coefficient on the unemployment variable across

---

1/ Regional data are available on overall unemployment, youth (i.e., those under 25 years in age) unemployment and long-term (i.e., in excess of 12 consecutive months in duration) unemployment. The three series are highly collinear in 1988, with correlation coefficients of 0.88 between youth and overall unemployment, 0.93 between long-term and overall unemployment, and 0.90 between youth and long-term unemployment. As a result, only overall unemployment, the most general, is included in the regression.

Table 3. European Community: Structural Fund Commitments by Country, 1988

	ESF (In millions of ECU)	ESF per Capita (In ECU)	ERDF (In millions of ECU)	ERDF per Capita (In ECU)	Global ESF 1/ (In percent of country commitment)	GDP per Capita Index (EC12=100)	Harmonized Unemployment Rate (In percent of labor force)
Belgium	45.7	4.7	25.3	2.6	62.0	100.9	11.3
Denmark	30.7	6.0	13.1	2.6	--	108.6	6.1
Germany	175.0	2.9	111.6	1.8	58.9	113.1	6.3
Greece	242.8	24.5	340.6	34.4	--	54.5	7.4
France	373.1	6.8	309.1	5.6	71.8	108.5	10.4
Ireland	214.0	59.4	147.9	41.1	--	65.1	18.1
Italy	592.2	10.4	939.7	16.5	24.3	103.8	10.6
Luxembourg	1.7	4.4	0.7	1.8	--	120.9	2.7
Netherlands	69.6	4.8	25.2	1.7	58.0	102.6	9.7
Portugal	330.8	32.7	348.6	34.4	45.4	54.0	7.1
Spain	495.5	12.8	701.1	18.1	0.7	74.7	20.8
United Kingdom	607.3	10.7	562.0	9.9	57.1	107.4	11.1
EC 12	2,935.7	9.1	3,525.0	10.9	...	100.0	10.1

Source: Commission of the European Communities (1989d, 1990a) and data provided by the Commission.

1/ Proportion of ESF commitments which is global (benefits more than one region) rather than region specific, out of total commitments for country.

Table 4. European Community: Estimates of ESF Commitments, 1988 1/

Variable	Estimated Coefficient	t-statistic 2/
Intercept: 3/		
Belgium	-3.48	-1.28
France	-3.07	-1.15
Germany	-1.41	-0.64
Italy	5.45	1.61
Netherlands	-2.20	-0.78
Portugal	9.72	2.38
Spain	1.64	0.42
United Kingdom	-0.21	-0.09
GDP per capita	-0.01	-0.04
Unemployment rate	0.58	3.04
Summary Statistics:		
Number of observations	151	
R^2	0.49	

1/ Results of OLS estimation of equation (1) with common coefficient on the unemployment variable; the dependent variable is per capita ESF commitment by region.

2/ The t-statistics are based on standard errors adjusted to be robust to heteroskedasticity.

3/ Denmark, Greece, Ireland, and Luxembourg excluded because of lack of regional data.

countries, but the hypothesis of a common intercept is rejected. Re-estimation of the equation with a common unemployment coefficient shows that a one point rise in a region's unemployment rate would have elicited an additional ECU 0.58 per capita in annual ESF commitments or about 6 percent of the EC-wide per capita average in 1988. Given that the regression excludes global ESF commitments which affect more than one region, and that the proportion of such commitments varies across countries, the rejection of the hypothesis of a common intercept is unsurprising. Moreover, the inverse relationship between the estimated country intercepts and the proportion of assistance for global aid programs is the expected one. 1/ Nonetheless, Portuguese regions still seem to have been allocated relatively large commitments. The observed differences in allocations among countries may reflect differences which emerge at the planning and negotiation stages of the allocation process and/or the interaction of the various rules guiding total allocations. 2/ As regards the latter factor, for example, Portugal has comparatively low unemployment but a large proportion of regions which receive priority under objective (1).

Overall, the regression results suggest careful targeting of the pre-reform ESF. The significance of the unemployment rate is precisely in accordance with the ESF's objectives, while the pattern observed in the country intercepts indicates, in part, that the presence of global aid from which a region may benefit reduces its share of region-specific aid.

2. European Regional Development Fund

As noted in Section II, the ERDF is of more recent origin than the ESF, having been established in 1975. Its operations are geared toward objectives (1), (2), and (5b) of the Structural Funds, and in particular to objective (1), to which up to four fifths of its resources can be allocated. The ERDF tends to finance large-scale infrastructure investment (representing over 90 percent of total commitments in 1988) and to a lesser degree industrial investment projects. 3/

The ERDF is larger in size than the ESF, with total commitments in 1990 budgeted at ECU 5.4 billion (Table 1). The latter hides considerable regional variation; for example, in per capita terms some regions received ten times the average in 1988. In comparison to the wide geographical spread of ESF operations, the ERDF is more narrowly focused. Of the

---

1/ This relationship was confirmed by including the proportion of global aid by country in the regression instead of the country dummies; the coefficient on this variable was negative and significantly so. However, this restriction on the country dummies was rejected by an F-test.

2/ For example, before the reform, there was a regulation which required that 44.5 percent of ESF funds be reserved for priority regions.

3/ Commission of the European Communities (1990a). Again, 1988, the year before the reform, is the most recent year for which a regional breakdown is available.

86 basic administrative regions for which a breakdown is given, almost one quarter received no ERDF assistance at all in 1988. There is a corresponding variation at the country level; commitments to Greece, Ireland, and Portugal were between ECU 30 and ECU 45 per capita in 1988, while commitments to Germany, Denmark, and the Benelux countries were less than ECU 3 per capita (Table 3). In contrast to the ESF, almost all ERDF commitments are region specific, so in a regression of ERDF commitments on indicators of regional need, there is no reason to expect country effects of the type observed when estimating equation (1). Nevertheless, country effects are still likely, because ERDF allocations are bound by a system of ranges within which assistance to each country has to lie, 1/ and it is possible that these ranges are determined by factors other than each country's regional needs.

As with the ESF, a linear explanation of commitments in 1988 was estimated as follows

$$(2) \qquad r_i = \sum_j b_{0j} + b_1 u_i + \sum_j b_{2j} y_i + e_i$$

where, in addition to the terms already defined, r_i is the per capita ERDF commitment. 2/ The specification of equation (2) indicates that the emphasis in explaining ERDF commitments is expected to be on GDP per capita rather than the unemployment rate, whereas with equation (1), it was the other way round.

As a result of the large number of zero values for r_i, Tobit analysis was used. 3/ The hypothesis of common slopes but country-specific intercepts was accepted by a likelihood ratio test. The results of re-estimation with a common GDP coefficient are reported in Table 5. In contrast to the estimate of equation (1), GDP per capita is now significant and the unemployment rate is not; the results indicate that a one point fall

---

1/ Prior to 1985, ERDF allocations were bound by a system of national quotas (Croxford et al. (1987)). These were replaced by a system of indicative ranges for the period 1985-87, which defined maximum and minimum allocations for each country. This system was extended for a further year into 1988 (Commission of the European Communities (1989d)) and continues to apply to the post-reform ERDF.

2/ Within the constraints imposed by the national ranges, ERDF resources are actually allocated on the basis of a synthetic index, a weighted average of various indicators of regional need such as GDP per capita and unemployment. Rather than using the 1985 index, which is the most recent available, the principal objective ingredients were included in the regression.

3/ There is only a limited regional breakdown of ERDF assistance for Belgium, Denmark, Greece, Ireland, Luxembourg, and the Netherlands and these countries are excluded from the regression. Nevertheless, as noted above, 86 regions remain.

Table 5. European Community: Estimates of ERDF Commitments, 1988 1/

Variable	Estimated Coefficient	t-statistic
Intercept: 2/		
France	125.52	4.93
Germany	136.61	4.99
Italy	144.93	5.45
Portugal	111.77	5.94
Spain	115.47	4.34
United Kingdom	137.13	5.14
GDP per capita	-1.25	-5.80
Unemployment rate	-0.22	-0.32
Sigma	21.94	11.24
Summary Statistics:		
Number of observations	86	
Percent positive	0.76	
Log of likelihood function	-303.20	

1/ Equation (2) estimated using Tobit analysis with common coefficient on GDP per capita; the dependent variable is the per capita ERDF commitment by region.

2/ Belgium, Denmark, Greece, Ireland, Luxembourg, and the Netherlands are excluded because of a lack of regional data.

in a region's GDP per capita index would have led to an ECU 1.25 rise in its per capita ERDF entitlement. However, independent of per capita GDP, regional assistance also appears to have depended on country of location.

Dividing the estimated country intercepts in Table 5 by the coefficient on GDP, yields country-specific cut-offs of the GDP index--the value of the index above which a region has less than a 50 percent chance of receiving ERDF assistance--these are Germany, 109.3; France, 100.4; Italy, 116.0; Portugal, 89.4; Spain, 92.4; and the United Kingdom, 109.7. This variation suggests that some of the constraints imposed by the ranges within which assistance to each country has to lie must have been binding in 1988; in particular, Portugal and Spain appear to have been up against the upper limits of their ranges, while Italian and German regions appear to have benefited from the need for their national totals to satisfy the lower limits. 1/

The following picture, therefore, emerges of the process whereby the pre-reform ERDF was allocated: within each country ERDF assistance went to regions which were most deserving in terms of GDP per capita, while the total going to each country was determined by considerations other than vertical equity, namely the ranges. Nonetheless, the amount of aid channeled to regions with below average need, and which could conceivably have been reallocated if the horizontal inequities were to have been rectified, was small; for example, in 1988, assistance to regions with GDP per capita above the EC average was only about 7 percent of the total.

3. Guidance component of the EAGGF

Structural measures funded by the EAGGF are tiny in comparison with the guarantee expenditures which constitute the CAP; in 1990, commitments under the guidance component were budgeted as ECU 1.7 billion as against a guarantee component of ECU 29.6 billion. 2/ As a structural fund, the EAGGF is therefore small in comparison to the ERDF and the ESF, although it should be noted that only about 8 percent of Community employment is in agriculture. The EAGGF finances structural adjustment on individual farms, investment in agricultural infrastructure, and measures to improve farming and marketing in poorer regions. There has been an increasing orientation in recent years toward helping small farmers and regions which suffer a natural handicap. 3/ In per capita terms, the principal beneficiaries from EAGGF structural assistance are Greece, Ireland, Luxembourg, and Portugal, with the rest of the Community receiving minimal assistance.

1/ Evidence that the country effects do not simply represent lumpiness in ERDF commitments caused by large projects being undertaken in particular countries in 1988, was provided by estimating equation (2) using data from earlier years which yielded a similar pattern of country effects (results not reported).

2/ Commission of the European Communities (1989a).

3/ Commission of the European Communities (1987).

IV. An Assessment of the Structural Funds

While the analysis above indicates that Structural Fund transfers are generally targeted quite accurately in terms of the stated objectives, two factors suggest that they may not be adequate in their present form to solve the Community's regional problems, particularly if these worsen after 1992.

1. Additionality

When grants are made to lower levels of government within a federal system, an important issue arises as to whether the expenditure financed is truly additional, in the sense that the recipient would not have made the expenditure in the absence of the grant. Although additionality is a declared objective of the post-reform Structural Funds, doubts have been raised as to the past success achieved in this regard. Steinle (1988) is skeptical of the ESF's record, arguing that the programs which it has financed would have been carried out anyway. Croxford et al. (1987) have similar reservations about the additionality of ERDF financed expenditure. That historically Structural Fund assistance has been fungible is supported by the dispute in the 1970s about the United Kingdom's contribution to the EC budget, where the United Kingdom's willingness to contribute appeared to be conditional on the amount of Structural Fund transfers it would receive in return. 1/ If these concerns about fungibility are well-founded, and continue to be so after the reform, the Structural Funds do no more than provide budgetary and balance of payments assistance. 2/

Additionality, however, is an issue which is very difficult to resolve empirically since it rests on a counterfactual scenario. There are, however, theoretical grounds for doubting whether the Structural Funds achieve much additionality. In the language of consumer theory, federal grants can have both an income effect and a substitution effect on local expenditure, but the substitution effect depends on there being a reduction in the marginal tax price. 3/ An ERDF grant to a region which covers 30 percent of the cost of a highway project, reduces the tax price of the highway in question to 70 percent, but only reduces the marginal tax price of highway construction if that was the only highway planned for the region. If more highways had been planned, then the ERDF grant reduces the tax price on an infra-marginal unit of expenditure and is equivalent to a lump-sum

---

1/ Begg (1989a) and Wildasin (1990).

2/ With regard to the guidance component of the EAGGF, Sutherland (1986) argues that it is simply too small to counter the increases in regional inequality caused by the CAP.

3/ The proportion of the marginal dollar of expenditure borne by the lower level of government.

transfer which will only have an income effect. 1/ Expenditure on the preferred activity (highway construction) would be expected to rise because of the income effect, but only by the marginal propensity to spend on highways, and although budgetary pressure or "flypaper effects" may make this quite large, it will nevertheless be significantly less than one. In this sense, the targeting of Structural Fund assistance is open to question, since a proportion of the grant equal to one minus the marginal propensity to spend on the preferred activity may be used by the country to increase other expenditures (in other regions), cut taxes or even reduce the national budget deficit. This is not to say, however, that (i) Structural Fund assistance is insubstantial, (ii) it is not progressive in its impact at the country level, or (iii) the EC Commission is unaware that ensuring additionality is a problem. 2/

The suspicion that the Structural Funds are in general quite fungible would imply that they tend to be misallocated using criteria of regional need; for example, to the extent that transfers to the Mezzogiorno are fungible, they benefit all of Italy and the national need rather than the Mezzogiorno's should be the basis for determining their magnitude. From this perspective, the extent of the possible misallocation of the ESF and the ERDF are reflected in Charts 1 and 2, which compare the actual country allocation of per capita commitments in 1988 with that which would have prevailed if allocations had been based on national rather than regional need. Chart 1 illustrates the earlier suggestion that Portugal does better from the ESF than its unemployment rate would warrant. 3/ Note too that Greece and Ireland (which also have a high number of objective (1) regions, but were not included in the regression) appear to be similarly favored. With regard to Chart 2, it is not possible to distinguish which part of the

---

1/ A substitution effect would require a matching categorical grant, whereby the ERDF stood ready to finance 30 percent of <u>every</u> highway the region built. However, even this might not be sufficient if member countries anticipate that such a scheme would inevitably lead to increases in national contributions to the EC budget (see Boadway et al. (1989)).

2/ To illustrate (i), note that the ERDF is committed to provide about half of the almost ECU 1 billion the Irish government proposes to invest in national road improvement over the period 1989-93 (Government of Ireland, 1989). With regard to (ii), Table 3 shows a strong inverse relationship between per capita ERDF commitments and national GDP per capita. As to (iii), it remains to be seen what steps will be taken to attempt to ensure the additionality of post-reform Structural Funds financed expenditure. One possibility currently being explored by the Commission is that real national spending by objective and by region will be required to remain constant over the period during which Fund transfers are received.

3/ The entitlement line shows what each country would get from the ESF if allocations depended on the national unemployment rate. It is derived using the estimated coefficient on the regional unemployment rate shown in Table 4 with the intercept adjusted to go through the sample means (an ESF commitment of ECU 10 per capita and an unemployment rate of 10.8 percent).

difference between actual ERDF aid and the country's entitlement is due to the fungibility of the Structural Funds and hence the extent of regional inequality within each country and which part is due to constraints imposed by the ERDF country ranges. 1/ Nevertheless, under the fungibility hypothesis, for example, it seems that Italy has benefited from its high degree of regional inequality while Spain has lost from its more equitable regional distribution.

2. Adequacy as a social safety net

Given that little is known about the distributional consequences of the 1992 program, the potential adequacy of the Structural Funds as a means of compensating any regions which lose is difficult to judge. Begg (1989b) argues that the losses of adversely affected regions may be many times larger than the available Structural Fund support. Nevertheless, a total allocation of almost ECU 60 billion (1.5 percent of Community GDP) for 1989-93 (Table 2) does not compare unfavorably with the ECU 175-255 billion estimated as total gains from the 1992 program by the Cecchini Report. 2/

Although the increase in the Structural Funds as part of the reform seems significant in comparison to the expected gains in Community GDP, the present orientation of the Structural Funds is toward manpower programs and infrastructure, which yield benefits in the long term, whereas in the aftermath of the single market, there may well also be a need for short-term income support. 3/ More generally, it should be recognized that the Funds lack the flexibility to react to regional problems as they occur. This can be illustrated by calculating the compensation adversely affected regions would receive automatically from the Funds--without deliberate action by the EC to change the rules guiding allocation. To this end, it might be useful to contrast with Sachs and Sala-i-Martin's (1989) estimate of the net repercussions of regional shocks in the United States.

Eichengreen (1990) estimates that a one-dollar decline in an EC member country's national income reduces its contribution to the EC budget by less than 1 cent, as compared with the Sachs and Sala-i-Martin estimate of 30 cents for the United States. 4/ The results of Section III allow estimation of the increase in Structural Fund transfers which would follow automatically from such an income loss assuming that, but for a scale

---

1/ The entitlement line is derived using the coefficient on GDP per capita shown in Table 5 with the intercept adjusted so as to exhaust the total 1988 ERDF commitment.

2/ It should also be noted that the ECU 3 billion allocated to the regions previously constituting East Germany for 1991-93 is additional to the amounts shown in Table 2.

3/ Bean et al. (1990).

4/ The Community's major revenue source is 1.28 percent of each member's VAT base (capped at 55 percent of GDP). Other sources are customs duties and agricultural levies.

Chart 1

European Community: ESF Commitments Under Alternative Entitlement Criteria, 1988

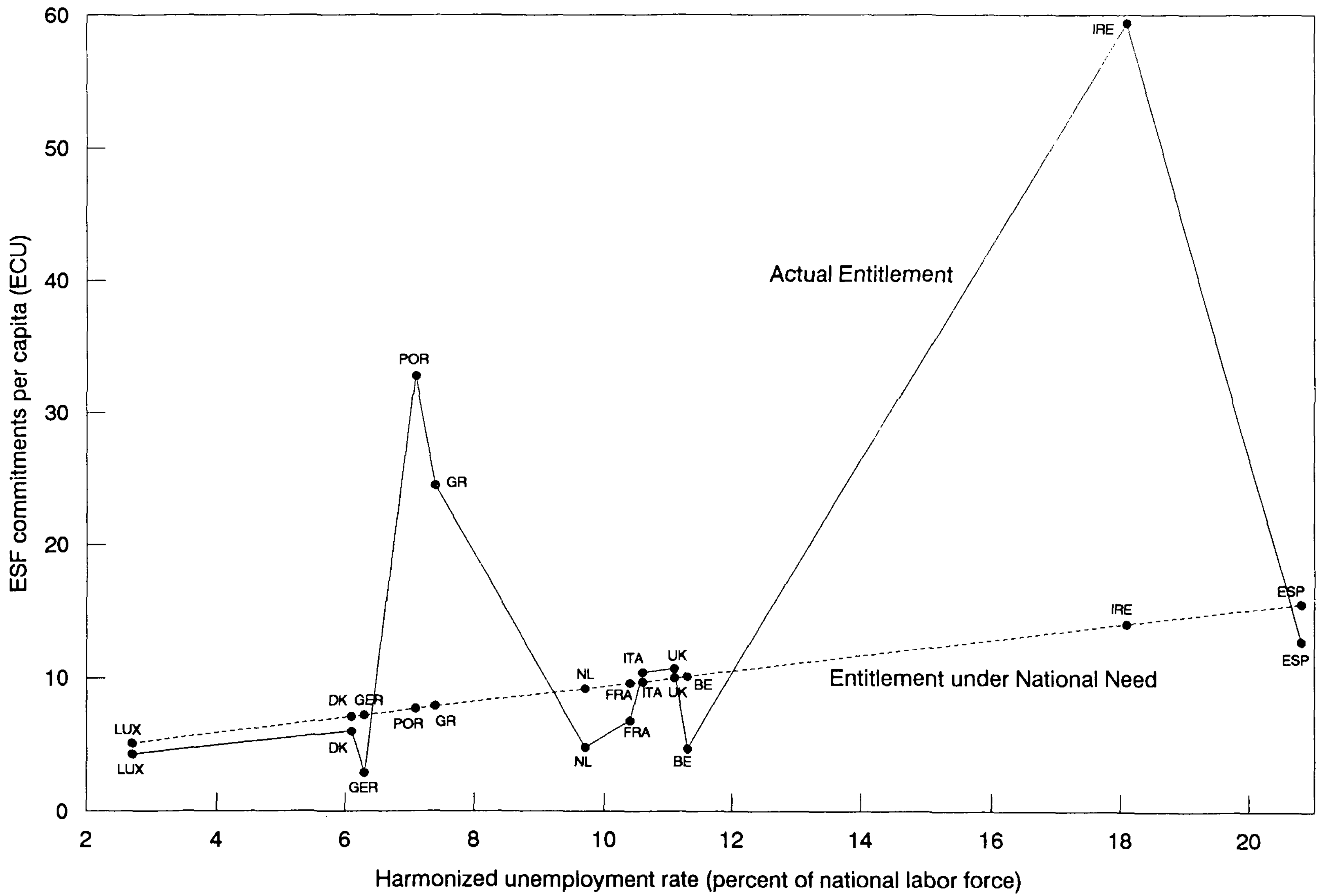
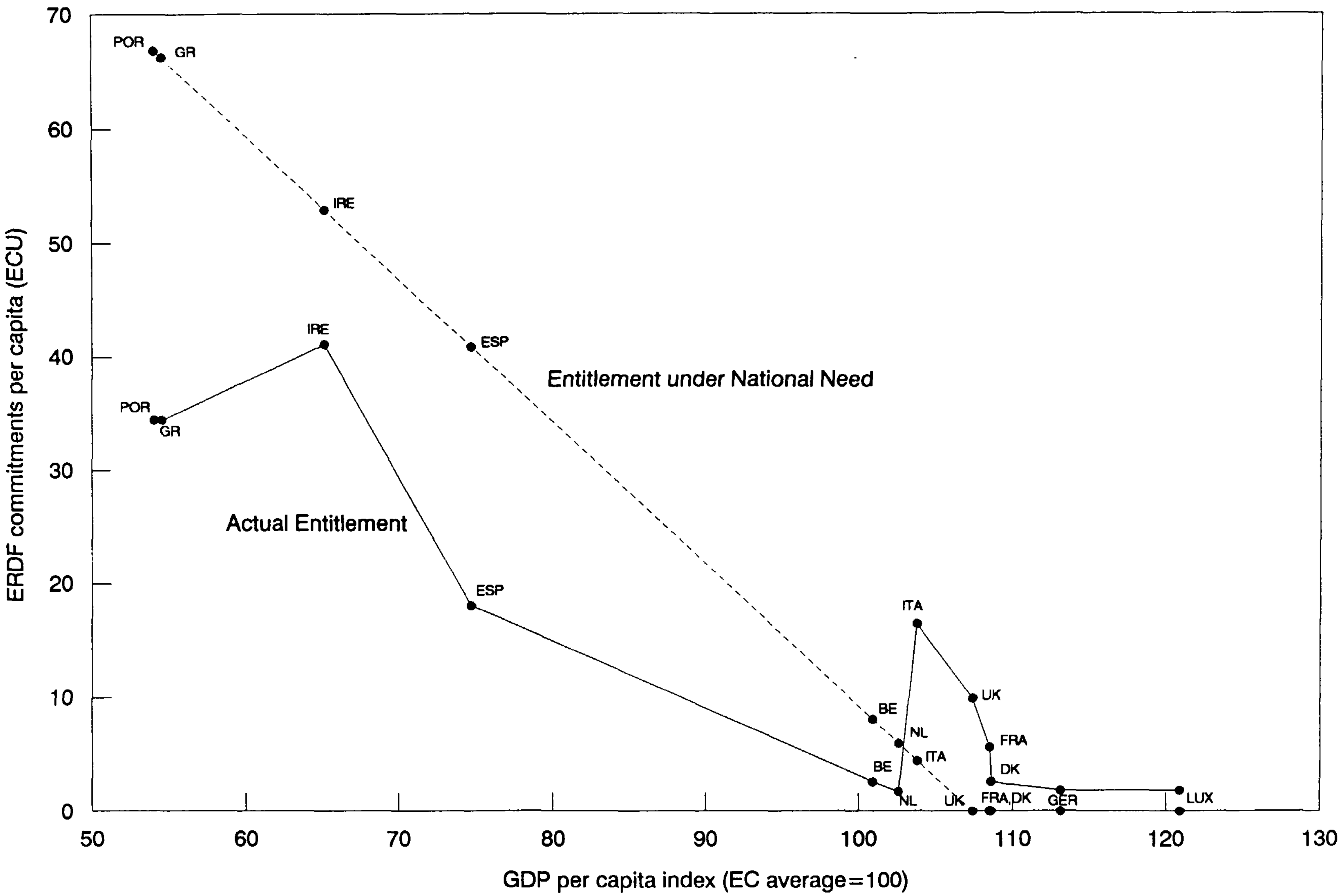


Chart 2

European Community: ERDF Commitments Under Alternative Entitlement Criteria, 1988



- 20b -

change, the allocation rules operating in 1988 continue to apply to the post-reform Funds. Consider an objective (1) region already receiving ERDF assistance. A one-dollar fall in its per capita income (equivalent to a 0.0063 fall in its GDP index), 1/ would according to the results presented in Table 5, lead to an increase in ERDF transfers of at most US$0.0095 per capita. 2/ By Okun's Law, the income fall would lead to a 0.0025 point rise in unemployment, which according to the estimates presented in Table 4, would result in increased ESF transfers of US$0.0018 per capita. The estimate for the total increase in Structural Fund transfers to the region (excluding the EAGGF) is therefore US$0.0113 per capita, which should be doubled since the analysis of Section III uses pre-reform data. A one-dollar fall in the region's income is thus estimated to lead to less than a cent in lower EC taxes and a little over two cents in additional transfers. In contrast to the U.S. region which is made to bear no more than two thirds of an income shock, an EC region has to bear about 97 percent--a comparison which touches on the very nature of fiscal federalism in each system, namely, far looser in the Community than in the United States.

The above example demonstrates that the Structural Funds in their present form cannot be thought of as providing an automatic safety net for regions within the Community. To be sure, those regions which experience income losses as a result of the completion of the single market will qualify for added Structural Fund assistance, but on too small a scale to be of much significance for most regions.

V. Conclusion

This study has examined the rationale and operations of the EC Structural Funds. There are well-established theoretical arguments for transfers between countries within a federation. However, compared to most federations, the Community's fiscal powers at the federal level remain quite limited; its budget is tiny in comparison to the national budgets and member countries retain a high degree of fiscal sovereignty. As a result, some of the fiscal federalism arguments for inter-governmental transfers, such as equalization of taxable capacity (fiscal equity) and those based on macroeconomic stabilization, may not be entirely relevant. Nevertheless, both (vertical) equity and efficiency arguments can be made for Structural Fund transfers, since the Community's commitment to promoting convergence and social cohesion among its members requires an active regional policy. Moreover, given the possibility that some regions stand to lose from the completion of the internal market, the Structural Funds can be seen as a

---

1/ The 1988 index is 100 at the then Community GDP per capita of ECU 15,828.

2/ The correct regression coefficient for regions already receiving ERDF assistance is the Tobit slope coefficient multiplied by the fraction specified in McDonald and Moffitt (1979). The effect implied by the Tobit coefficient can thus be treated as an upper bound on the true effect.

potential means of making compensation, particularly since they have doubled in size in connection with the 1992 program.

Upon completion of the internal market, member countries will have to recognize the constraints imposed by full factor mobility in an internally frontier-free Europe on their ability to pursue independent redistributive policies, which will be mitigated to the extent that taxes and benefits are harmonized, or differences in fiscal residuals are capitalized in immobile factor prices (e.g., real estate). As a corollary, a greater redistributive role may have to be assigned to inter-governmental transfers within the Community, implying that member countries cede a greater fiscal role to the central authorities than politically they have been willing to do so far.

An analysis of the actual regional allocation of the Structural Funds in 1988 reveals that transfers were carefully targeted toward meeting the objectives which have since been codified as part of the reform; namely, assisting less developed and declining regions and removing structural rigidities from labor markets. Nonetheless, particularly with regard to the ERDF, it was found that otherwise identical regions were treated differently depending on the country to which they belong and it was argued that this may have reflected binding constraints on allocations resulting from the ranges within which ERDF assistance to each country has to lie. Whether the reform has put an end to such horizontal inequities is an interesting subject for future research.

There are doubts about the extent to which Structural Fund expenditure is additional to, rather than a substitute for, national expenditure. While this is a difficult issue to resolve empirically, there is a suspicion that Structural Funds have historically done little more than provide budgetary support. If Structural Funds displace regional assistance that member countries would otherwise provide, then they benefit the entire population of those countries, rather than that of the deserving regions, and tend to be misallocated by being tied to regional indicators. Until it is demonstrated that the post-reform Funds will be better able to ensure additionality, the complex process of drawing up Community support programs and the targeting of disbursements to economically depressed regions remain open to question.

An assessment of the adequacy of the Structural Funds as a means of redressing any adverse distributional effects of the 1992 program suggests that their doubling in size as part of the reform makes them better able to assist regions which suffer such effects. However, in their present form, the Funds appear to lack the flexibility necessary to address regional problems as they emerge in the wake of 1992; the automatic increase in Structural Fund transfers to a region experiencing a negative shock under the existing allocation formula is calculated as being very small. Compensation of regions which stand to lose from the 1992 program would therefore require a departure from the current system of allocating the

Structural Funds, if not a further increase in scale. In the final analysis, however, any future overhaul of the Structural Funds must be undertaken in the context of the desired extent of fiscal federalism in the EC, which is likely to remain much looser than other federations, such as Canada and the United States.

References

Baldwin, R., "The Growth Effects of 1992," Economic Policy, Vol. 9 (1989), pp. 248-81.

Bayoumi, T., and J. Gordon, "The Determinants and Efficiency of Local Government Spending in England," Working Paper, WP/91/9 (Washington: International Monetary Fund, 1991).

Bean, C., et al., "Policies for 1992: the Transition and After," Center for Economic Policy Studies (1990).

Begg, I. (1989a), "European Integration and Regional Policy," Oxford Review of Economic Policy, Vol. 5, No. 2 (Summer 1989), pp. 90-104.

_____ (1989b), "The Regional Dimension of the '1992' Proposals," Regional Studies, Vol. 23, No. 4 (August 1989), pp. 368-76.

Bhagwati, J.N., "International Migration and Income Taxation," in E. Helpman, A. Razin, and E. Sadka (eds.), Economic Effects of the Government Budget (Massachusetts: MIT Press, 1988).

Bird, R.M., "Regional Policies in a Common Market," in C.S. Shoup (ed.), Fiscal Harmonization in Common Markets, Volume I: Theory (Columbia: University Press, 1967).

Boadway, R., and F. Flatters, "Equalization in a Federal State: An Economic Analysis," Economic Council of Canada (Ottawa: 1982).

Boadway, R., P. Pestieau, and D. Wildasin, "Tax-Transfer Policies and the Voluntary Provision of Public Goods," Journal of Public Economics, Vol. 39 (1989), pp. 157-76.

Buchanan, J.M., "Federalism and Fiscal Equity," American Economic Review, Vol. 40, September 1950; reprinted in R.A. Musgrave and C.S. Shoup, A.E.A. Readings in the Economics of Taxation (London: George Allen and Unwin, 1959).

Cecchini, P., The European Challenge: 1992, The Benefits of a Single Market (London: Wildwood House, 1988)

Center for European Policy Studies (CEPS), "Indirect Tax Harmonization in the European Community," Report of a Working Group, Brussels, Belgium (1989).

Commission of the European Communities, "Single European Act" (Brussels: EC Commission, 1986).

_____, "Third Periodic Report from the Commission on the Social and Economic Situation and Development of the Regions of the Community" (Brussels: EC Commission, 1987).

_____ (1989a), "The EC Budget; Facts and Figures, 1989" (Brussels: EC Commission 1990).

_____ (1989b), "Guide to the Reform of the Community's Structural Funds" (Brussels: EC Commission 1989).

_____ (1989c), "Report on the Implications of the Completion of the Internal Market for the Least Favored Regions of the Community" (Brussels: EC Commission 1989, No. 2-116).

_____ (1989d), "Seventeenth Report on the Activities of the European Social Fund (Brussels: EC Commission 1989).

_____ (1990a), "Fourteenth Annual Report on the European Regional Development Fund" (Brussels: EC Commission 1990).

_____ (1990b), "One Market, One Money," European Economy, No. 44 (Brussels: EC Commission 1990).

_____ (1990c), "Annual Economic Report 1990-91," European Economy, No. 46 (Brussels: EC Commission 1990).

Croxford, G.J., M. Wise, and B.S. Chalkley, "The Reform of the European Regional Fund: a Preliminary Assessment," Journal of Common Market Studies, Vol. 26 (1987), pp. 25-38.

Eichengreen, B., "One Money for Europe? Lessons from the US Currency Union" Economic Policy, Vol. 10 (1990), pp. 117-18.

Emerson, Michael, et al., "The Economics of 1992: The European Commission's Assessment of the Economic Effects of Completing the Internal Market" (Oxford: Oxford University Press, 1988).

Government of Ireland, National Development Plan 1989-1993 (Dublin: The Stationery Office, 1989).

International Monetary Fund, International Financial Statistics, 1990 (Washington: International Monetary Fund, 1989).

Krugman, P., "Economic Integration in Europe: Some Conceptual Issues," annex to T. Padoa-Schioppa, Efficiency, Stability and Equity: a Strategy for the Evolution of the Economic System of the European Community (Oxford: Oxford University Press, 1987).

McDonald, J.F., and R.A. Moffitt, "The uses of Tobit analysis," The Review of Economics and Statistics (1979), pp. 318-21.

Meade, J.E., Trade and Welfare (Oxford: University Press, 1955).

Mortensen, J., "Federalism vs. Coordination: Macroeconomic Policy in the European Community," Center for Economic Policy Studies (Brussels: 1990).

Neven, D.J., "EEC Integration Towards 1992: Some Distributional Aspects," Economic Policy, Vol. 10 (1990), pp. 13-62.

Nevin, E.T., "Regional Policy," in A. El-Agraa (ed.), The Economics of the European Community (New York: St. Martins Press, 1988).

Norman, V., "Comment on Neven," Economic Policy, Vol. 10 (1990), pp. 49-52.

Padoa-Schioppa, T., et al., Efficiency, Stability and Equity: a Strategy for the Evolution of the Economic System of the European Community (New York: Oxford University Press, 1987).

Sachs, J.D., and X.D. Sala-i-Martin, "Federal Fiscal Policy and Optimum Currency Areas," mimeo, Harvard University, 1989.

Sinn, H.W., "Tax Harmonization and Tax Compensation in Europe," European Economic Review, 1989.

Smith, A., and A.J. Venables, "Completing the Internal Market in the European Community," European Economic Review, Vol. 32 (1988), pp. 1501-25.

Steinle, W., "Labor Markets and Social Policies," in W. Molle and R. Cappellin (eds.), Regional Impact of Community Policies in Europe (Aldershot, Avebury, 1988).

Straubhaar, T., "International Labor Migration within a Common Market: Some Aspects of EC Experience," Journal of Common Market Studies, Vol. 27 (1988), pp. 45-62.

Sutherland, P.D., "Europe and the Principle of Convergence," Regional Studies, Vol. 20 (1986), pp. 371-77.

Wildasin, D., "Budgetary Pressures in the EEC: A Fiscal Federalism Perspective," American Economic Review (Papers and Proceedings), Vols. 2 and 80 (1990), pp. 69-74.

Wilson, L.S., M.B. Percy, and K.H. Norrie, "The Economics of Equalization Payments," mimeo, University of Alberta (1981).