Cross-Border Leakages in Community Support Frameworks. The case of Andalusia (Spain).

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Key Words: Structural Funds; Evaluation; Convergence; Input-Output; Cross-border leakage.

Summary

The main aim of this paper is the ex-post evaluation of the CSF 1994 – 1999 in Andalusia, with special emphasis placed on the effects of said funds outside of Andalusia. The expansion of the European Union implies an accentuation of territorial inequalities, and that the relative position of Andalusia will improve with regard to the European average, which may imply a reduction in financing from structural funds. Without going into the possible long term advantages of investment policies carried out in this and previous CSFs, some consideration of its effects seems indispensible in the short term, both from a quantitative and a conceptual perspective, and related with the most qualitative aspects of the investments and with their effects on the current Andalusian productive structure. In the final analysis, the long term future cannot be immune to the conflicts and results of the present.That is the focus of this paper.

With the new Input-Output framework for Andalusia MIOAN95, the direct and indirect effects, as well as cross border leakage are analysed. We aim to compare stimulus induced from sructural funds in the rest of the national economy with those of the Andalusian community. If the effects on the rest of Spain were important in relative terms, the central idea of regional policy which decides community convergence tools would be questioned, in spite of the undoubted positive effects they may have on the objective region in absolute terms.

In view of the results obtained, there is evidence to corroborate this hypothesis in the case of Andalusia, given the importance of the effects generated in the rest of Spain and the bias of CSF investments towards sectors with a high need for imports, some of which, are characterized by an intensive use of the region's natural resources.

Introduction

The expansion of the European Union implies improvements in the relative position of the present Objective 1 regions, such as Andalusia, with regard to the new Community average, which, due to some extreme figures, has undergone changes. This increase in regional inequalities will require a restructuring of the tools and financing of regional policy.

In the framework of this expansion process and with the idea of promoting a real convergence among regions, the changes being introduced in regional policy are focused towards a specialization of the existing tools in the transport, urban, and enviromental fields.

From this perspective, Objective 1 regions still absorb the largest part of the structural funds, practically a third of the Community's budget, but the development strategies dependent on European financing, reflected in the Regional Development Plans, must be re-formulated in the face of this new competition in the receipt of structural funds produced by the expansion of the European Union.

The strategy that regional Commmunity policy has traditionally used (Taylor and Armstrong, 2000) is to provide incentive for development through investment ("push effect") to produce structural changes in key sectors which pull on the growth of regional economy ("pull effect"). From a practical point of view, this policy has always had to deal with the difficult balance between economic efficiency and equity (Okun, 1975) when it comes to assigning funds and modifying factor localization tendencies. In the key 1988 Structural Fund Regulations reform, the so-called Delors 1 Package introduced the restructuring of regional policy through the creation of tools for the planning and management of regional deveopment policy, the Community Support Frameworks (CSF 1989–1993), for each region. However, various studies question the generosity of European regional policy (Bachtler and Turok, 1997; Cuadrado and Parellada, 2002). As Boldrin and Canova (2001) point out, the aim of the CSFs should not be the present encouraging demand stimuli aimed towards establishing policies of redistribution and rent maintenance, but rather helping self-sustained development in the least developed regions.

Since the Structural Funds reform of 1993 (EEC, 1993) regional policy continued to support the CSFs for the 1994 – 1999 period, but reducing the number and budget of the Community imitiatives. The total budget linked to structural funds was 145.099 million euros for 1999, of which 98.662 million euros go towards Objective 1 regions, distributed between the FEDER (the basic funding tool), the FSE (policy of employment and human capital), the FEOGA-O (improvement in agrarian structures and rural development) and the IFOP (aimed at the fishing sector).

The specific aims of the CSF 94-99 for Objective 1 regions in Spain approved by the European Comission are (EEC, 1996):

- Improvement in production
- Utilization of human resources and improvements in the quality of life.
- Integration and territorial organization
- Sufficient aid for basic water and energy resource infrastructure.

1. Precedents in the evaluation of regional Community policy.

Studies on the evaluation of regional Community policy have increased notably in recent years, especially on a national level. However, in the regional sphere, and more specifically in the South, these evaluations were of little impact or even non-existent up until very recently. Faced with initial problems of heterogeneity and subjectivity in methods of evaluation of the impact of the funds, the major part that the Regional Policy Head Office has played in co-ordination and information of applying appraisal of structural funds since the reform in 1998, cannot be underestimated (1).

The importance of establishing methods of evaluation and investment monitoring has increased alongside the importance of regional Community policy (2). Before the Structural Funds reform of 1998, and given that there was little experience in regional policy, in addition to its reduced comparative budget, appraisal of the application of funds was very deficient, both in investment monitoring and appraisal of its effects. The lack of effective co-ordination from the Comission, plurality of methodologies and subjectivity did not make these tasks easy (Gray, 1995).

The 1988 regulations demanded ex-ante and ex-post evaluation for the CSFs of the different regions regarding the five main objectives. The evaluation of impact works on three levels concerning projests: Community, regional and individual. At the same time, an annual evaluation of the application of funds is demanded by the Comission when it comes to monitoring implantation.

Criticisms of the excessive bureaucracy and inflexibility of these annual documents, the increase in the budget for structural funds as well as special valuation in terms of the economic and social cohesion of the integration efforts after the Maastricht Treaty, led to the inclusion of evaluation guidelines in the Regulations of funds for the period 1994 – 1999, with special emphasis on Objective 1 regions. Monitoring Committees, ex-ante and ex-post valuation all gained strength after this ruling. From the very beginning of the Regional Development Plans (RDP) both objectivity and homogeneity of information have been important goals. It is a duty of the States and member regions to provide the Commission with sufficient information on the current state of development in the region, and on the impact of the participation of the Community regional policy. In 1998 an intermediate evaluation of the structural funds for 1994 – 1999 was carried out (EEC, 1998), and with information from which funds have been redirected – especially in Italy and Spain.

Efforts to statistically quantify advances in terms of cohesion or convergence, are designed to strengthen regional statistics (REGIO) in EUROSTAT. Among the advances in this sense we must highglight the MEANS (3) programme (*Methods for Actions of a Structural Nature*) and the series of annual conferences on evaluation of structural funds, the last being in June 2003 in Budapest.

The general problems in any approximation to the evaluation of structural policies of the European Union are, due to (Bachtler and Michie,1995):

- The multiplicity of measures, different concepts of the same and availability of information.
- The confluence of various financing bodies and actuations from various institutional levels (national, regional, local) and evaluation (projects, programmes, global CSFs). Also, distance divergencies do not facilitate the process.

- The principle of financial divergency, where political and technical problems are created on calculating the exact cost that the EU has to pay; this always depends on the nation's contribution.
- The recent setting up of the CSFs. The inexistence of historical series to analyse the trend hinders the application of econometrically adequate analysis techniques.

Faced with these limitations, most evaluations are of a macroeconomic type and on a national level. However, this task has been approached from various methodological standpoints, which are basically, the following (Mairate and Hall, 2002):

a) Demand Models based on input-output techniques. Among these, numerous applications stand out (for example, Beutel, 1993;1995). Input-output analysis is one of the most common techniques used in impact studies and evaluation of regional policy, modelling a demand shock which affects investment and consumption with short term effects. It is a model of conditional prediction and it assumes, among other things, that before economic stimulus whose repercussions we want to value, the economy is in a state of equilibrium.
b) Supply Models (for example, Pereira, 1994; Rodríguez-Pose and Fratesi, 2002; Mancha, 2002). Parting from the definition of a function of adjoined production with various inputs, an optimum intertemporary growth model has been allowed for, analysing long term convergence. Simulations of the impact of structural funds have been carried out for various European regions. In many cases a convergence analysis β is carried out with panel data.
c) Mixed supply and demand models (for example, Bradley, Herce and Modesto, 1995). These models, among them HERMES; HERMIN and QUEST II, are widely accepted and used from the European Commission. The HERMIN model, a reduced version of HERMES, has been applied in several countries (4). QUEST II, an updated version of QUEST, is the official model for economic predictions used by the European Commission (Roegel and Veld).

In the case of Spain, ex-ante evaluation of the CSF 1989 – 93 was carried out parallel to an Input-Output model for Objective 1 regions and with the QUEST econometric model which includes all of Spain. Equally, there is a computer system "Fondos 2000", which was launched for the Objective 1 collective in Spain. Among other evaluations carried out for Spanish regions (Herce and Sosvilla, 1995; Coronado, 1995; Correa et al., 1995), we must highlight González Páramo and Martínez (2001), who on a panel database and a model offer, evaluate the convergence of Spanish regions from 1965 – 1995, as well as DeLa Fuente (2003), who utilises a panel data model to carry out a previous evaluation of the effects on employment and growth of the CSF 1994-999 for Spanish Objective 1 regions.The results point towards an increase of one point in average regional growth derived from structural funds.

Among the evaluations on the impact of structural funds carried out in Andalusia, we can highlight:
- The ex-ante evaluation carried out by Fontela and Morillas (1991) on the CSF 1989–1993 through an input-output demand model.
- The ex-post evaluation by González et al. (1997) on the CSF 1989–1993 in Andalusia.
- The ex-ante, intermediate, and ex-post evaluations carried out by the Consejería de Economía y Hacienda (CEH) of the Junta de Andalucía. In particular the ex-post anlysis (CEH, 2001) focuses on the function of production, in which the contribution of funds channelled through the CSF 1994–1999 in Andalusia is quantified,

determining the impact of these contributions on regional product from their weight in added contributions of the different factors of production and the relevant product-elasticities.

- The ex-post evaluation carried out by Castro, Moniche and Morillas (2002) and CEH (2001) of the CSF 1989-93 through an input-output demand model.
- The ex-post evaluation by Murillo and Sosvilla-Rivero (2003) for the CSF 1994-99 through a supply model.

On the other hand, in Andalusia the regional administration has at its disposal a subsystem which specialises in programming, monitoring and controlling European Funds, called EUROFON, which is linked to the general system of institutional accounting. Monitoring of actuations is carried out through physical indicators. For each region a Monitoring Committee is set up which assures the monitoring of all types of actuation relative to that region, given that the co-ordination between actuations is a priority in the CSF 1994-99.

2. Statistic information support of the analysis.

To carry out a correct evaluation of the direction pointed out by the impact of the investment of Structural Funds, it would help to have a matrix of interindustrial technical coefficients for each year of the CSF 1994-1999. As this information does not exist, we will use only the Input-Output Framework for Andalusia for 1995 (MIOAN95). Specifically, the symmetric table, and for the whole of Spain the symmetric input-output table for 1995 (TIOE95) (5) The results of the calculation of the effects must be interpreted as if the entire investment had been made in that year.

Only the investment in the CSF (CEH, 2001) (6) has been taken into account, since there is not complete information about Community Initiatives. On the other hand, since Andalusian and Spanish input-output tables as well as the main reference figures are expresed in 1995 pesetas, all the figures have been translated to pesetas from that year, using the general Price Index published by the INE (National Statistics Institute). However, the tables in this paper are finallly expresssed in millions of euros from the year 1999.

To apply the accions of the CSF to the various branches in the input-output tables, we have adhered to the proposal of a BIPE report for the old DG XXII, of Co-ordination of Regional Policies (BIPE Conseil, 1991; Fontela and Morillas, 1991; Commission des Communautés Européennes, 1991; pp. 73-74) (7). In this report the investments of funds on eight diefferent axes connected with activity branches of R44 NACE-CLIO, which are different to the classification by the CSF. It was necessary, therefore to establish a new correspondence between both classifications. This double exercise necessitated adding the matrixes which contain the original tables (the symmetrical MIOAN95 of 89 branches and the TIOE95 also of 70 branches) to 40 branches of activity (see Annex 1). With regard to this, it must be reflected that, as is widely known, the results obtained for the multipliers calculated in the Leontief model are not neutral to the number of branches used in the addition. (8)

Finally, this matrix has been updated to estimate the possible variations its coefficients could have experienced. With this aim we took into account rates of variation occurred in the indexes of industrial prices, of consumer prices and salaries, as well as specific

construction and agriculture prices, during the period 1991-1995. Logically this is an approximation based exclusively on changes in relative prices, which obviates possible variations in quantity (9).

3. Evaluation of the CSF 1994-1999.

In this paper we have used a demand model (input-output) for evaluation of the CSF 94-99, which aims to evaluate the impact of funds in the short and medium term. We used intermediate typology of the BIPE, with the previously outlined adjustments, to define the axes of development, and to distribute spending between the different productive branches. The distribution by branches is reflected in Appendix 2, which also includes territorial distribution of funds (Andalusia, rest of Spain, rest of the world), in agreement with the criteria we will expound upon later.

Based on the information on quantities spent (CEH, 2001), as can be seen in Table 1, the total investment in Andalusia exceeded 4,600 Meuros This amount, taking into account the evolution of prices, is very similar to the amount destined previously in the CSF89-93 in Andalusia for the FEDER and FEOGA-O funds, totalling an average of 0,64% of the GDP of the Autonomous Community in the period 1994-1999.

TABLE 1. Distribution of Structural Funds by axes of development of the CSF 94-99
1990 millions euros

AXES OF DEVELOPMENT	**FEDER**	**FEOGA**	**FSE**	**IFOP**	**TOTAL**
1.Territorial integration and organization	*1518.676*	*0*	*0*	*0*	***1518.676***
2. Development of the economic fabric	*464.767*	*175.946*	*0*	*0*	***640.713***
3. Tourism	*127.941*	*0*	*0*	*0*	***127.941***
4. Agriculture/rural development	*20.480*	*400.833*	*0*	*0*	***421.313***
5. Fishing	*4.686*	*0*	*0*	*147.374*	***152.060***
6. Suppoert infrastructure for economic activities	*1244.113*	*0*	*2.500*	*0*	***1246.613***
7. Valorization of human resourcess	*217.532*	*0*	*335.300*	*0*	***552.832***
8. Technical assistence, accompaniment and information	*19.479*	*0*	*0*	*0*	***19.479***
TOTAL	***3617.674***	***576.779***	***337.800***	***147.374***	***4679.627***

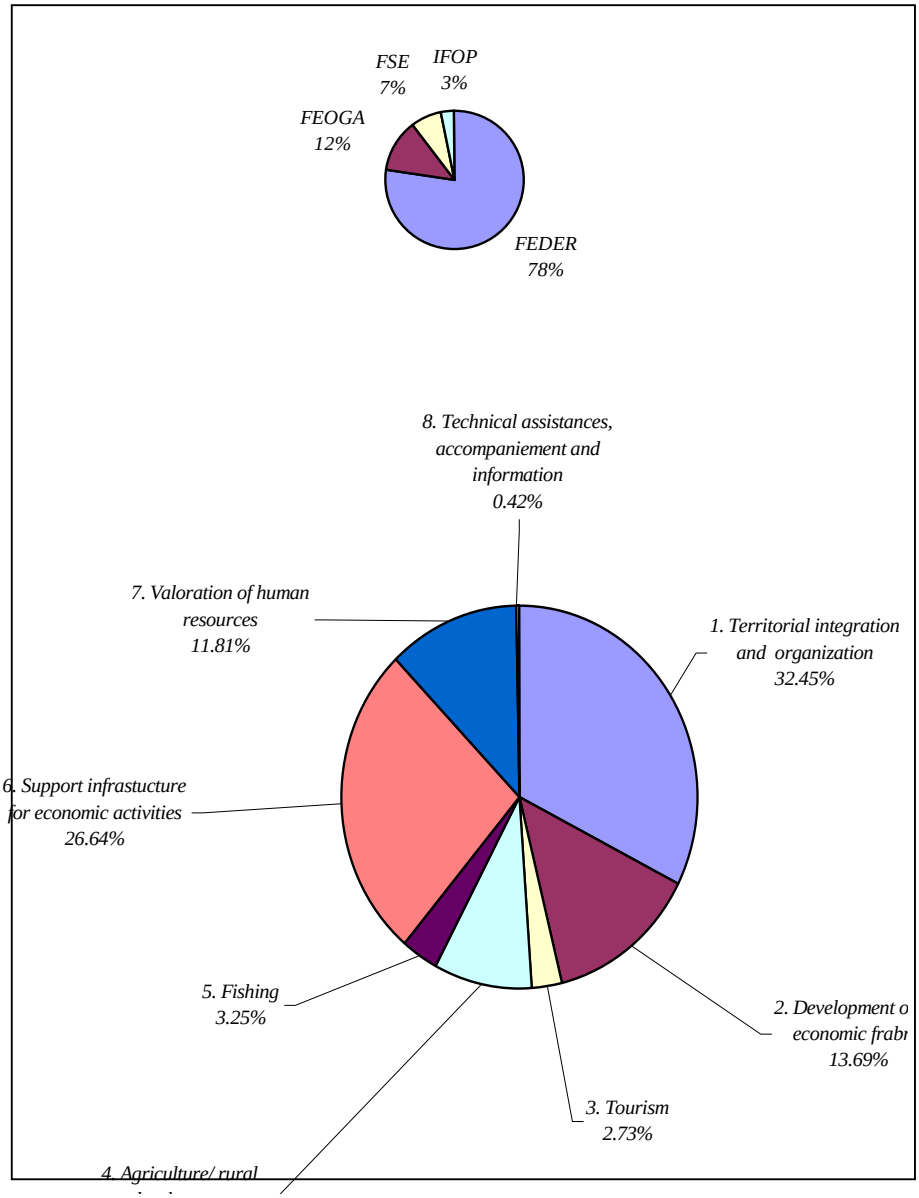
Source: CEH (2001)

The structure of the participation of each one of the funds in total public spending, as well as the corresponding application of the same through axes of development, is presented in Chart 1. Funds from the FEDER are clearly the most important, and represent 78% of the total investment. The FEOGA occupies second place with a 12% of the total, and is concentrated fundamentally in axis 4, "Agriculture and rural development"; although there is a significant amount – a bit higher than 3% which represents the IFOP, orientated towards the fishing sector – directed towards axis 2, "Development of the economic fabric". The European Social Fund represents 7% of the total and is destined almost entirely for axis 6, "Valoration of human resources."

From a finalist perspective, it can be seen in Axis 1, that " Territorial Integration and Organization" is still the one which receives most resources from the FEDER (32%), although in a far lower proportion than the axis called "Territorial Social Overhead Capital" in the previous framework (84.1%), which played a crucial role in the policies of

the Andalusian government of the time. This was, as is well known, large investments in infrastructure, basically roads and railways. The second axis which benefitted from greater investment (27%), is "Support infrastructure for economic activities", which with the14% for "Development of the economic fabric", reaches a significant figure (41%) and highlights the emphasis of regional policy on fomenting productive activity.

Chart 1: Structural Funds and their distribution by axes



Source: Authors' own from Table 1.

In Appendix 2 the distribution via branches of activity and the territorial application of funds finally assigned to the different axes can be observed. The most important branches in this respect are the Non-metallic industry (14%), Construction (12,49%) and Services to businesses (10,83%). These three branches absorb 37,40% of the total of the funds between them. Elsewhere, the branches where the spending in the rest of Spain is more important, which represents 20,19% of the total, are in Non-metallic industry, Metallic

industry, Non-electric machinery, and Office machinery. Finally, the ones with the greatest repercussion in the rest of the world, with a percentage which reaches 6,39% of the total, are by far Service companies for business and other transport material. In Andalusia, then, only 73% of the funds contemplated in the Community framework would remain.

3.1 *Impact of the CSF 1994-99 in Andalusia.*

The development and justification of the methodology followed and of the calculations we ended up using, can be seen in a previous study (Castro, Moniche and Morillas, 2002). We quote here, exclusively, the final formula to calculate the variations in the VAB and in imports.

1. Calculation of the increase of the regional gross added value: we take the coefficients of the gross added value at the MIOAN95 market price (v Rj) and apply said coefficients to the new increase of the calculated regional production

$$\Delta VAB^R = \hat{v}^R \Delta x^R = \hat{v}^R (I - A^R)^{-1} \Delta y^R, \quad \text{for/to give} \quad v_j^R = \frac{VAB_j^R}{x_j^R}$$

Where ΔVAB^R is the vector of the increase of the gross added value, the VAB_j^R are the added values of the MIOAN 95 for the sector *j* and, ultimately, $\hat{v}^R$ is the diagonal matrix composed of the coefficients of the added value taken from the MIOAN95.The coefficients of the added value are taken as remaining constant.

2. Calculation of the increment of the imports, from both the rest of Spain and from the rest of the world:

The first are obtained through the sum of intermediate imports from the rest of Spain and from the equivalent imports, Δy_m^{RE}:

$$\Delta m^{RE} = M^{RE} \Delta x^R + \Delta y_m^{RE} \Rightarrow \Delta m^{RE} = M^{RE} \left(I - A^R\right)^{-1} \Delta y^R + \Delta y_m^{RE}$$

We assume the matrix of coefficients of intermediate imports from the rest of Spain is constant.

The second ones, imports from the rest of the world, are determined by the sum of the intermediate imports from the rest of the world and from the equivalent imports from the same place, Δy_m^{RM}:

$$\Delta m^{RM} = M^{RM} \Delta x^R + \Delta y_m^{RM} \Rightarrow \Delta m^{RM} = M^{RM} \left(I - A^R\right)^{-1} \Delta y^R + \Delta y_m^{RM}$$

We assume the matrix of coefficients of the intermediate imports from the rest of the world is constant.

Therefore, the total imports would be calculated in the following way:

$$\Delta m^R = M^{RE} \Delta x^R + M^{RM} \Delta x^R + \Delta y_m^{RE} + \Delta y_m^{RM} = \left[\left(M^{RE} + M^{RM}\right)\left(I - A^R\right)^{-1}\right] \Delta y^R + \left(y_m^{RE} + y_m^{RM}\right)$$

The final demand imports, $\left(y_m^{RE}, y_m^{RM}\right)$, are obtained by applying to the global funds investment, the coefficient that corresponds to the Gross Capital Formation (GCF) table, which we also take as invariable.

With the hypothesis of territorial application of the expenditure detailed in Appendix 2, where, as we have said, following the structure of the TIOAN95, 73.42% of the total is assigned to Andalusia, 20.19% to the rest of Spain and the remaining 6.39% abroad, the previously detailed procedures have been applied. Table 2 summarises the effects on production and added value within Andalusia as well as the need for imports, which causes an investment of 4,679.63 million euros of 1999, and which we assume are directly applied to Andalusia. The global growth of production and added value is slightly above 4%. If we assume a lineal distribution, the average annual growth generated by the funds in the period 1994-99 can be valued at around 0.7%, for both magnitudes. This is quite a higher figure than that obtained in Murillo and Sosvilla-Rivero (2003), appraising a supply model, from the so-called Aschauer effect (10), which we feel lacks credibility because of what is unappreciable (only 0.010 additional points for annual economic growth in Andalusia are obtained), in light of the amount of investment represented by the MCA in relation to the VAB in Andalusia. However, as has been refered to earlier, this is only three tenths lower than the average value obtained in De La Fuente (2003), which does not take into account any deviation from spending towards other regions.

From a sectoral perspective, the branches where the impact is greatest in absolute terms, are construction, non-metallic industry, and services to businesses. These three branches total 36.4% between them. As we can observe, the effects can be noted, on the one hand, on branches connected to activities related to construction and its materials (in Construction and non-metallic industry), and on the other, on services to businesses, which includes a wide range of activities of growing importance in developed economies and, in particular, in the Spanish economy. Non-metallic industry, Metallic industries, electrical machinery and services to businesses are the ones which generate a great number of imports (about 50% of the total). Non-metallic industry and services to businesses standout in terms of relative increase, surpassed only by Other transport material. Elsewhere, the activities related to metallurgy, Metallic industries and machinery, also reflect higher values in the rest of Spain (presumably in the more developed regions which specialize in these products) than in Andalusia.

TABLE 2

Effects of Structural Funds in Andalusia, by branch of activity

(Increases in 1999 emillions of euros)

	Branches of Activity	*Prod.*	*%*	*VAB*	*%*	*Impor.*	*%*
1	*Agriculture, livestock and fishing*	225.075	3.06%	144.491	3.06%	38.621	1.92%
2	Coal, cokeries and radioactive material	8.623	10.34%	3.052	10.34%	32.854	12.29%
3	Oil	273.384	7.91%	35.138	7.91%	167.908	7.35%
4	Water, gas and electricity	364.112	12.04%	140.842	12.04%	66.812	12.03%
5	Basic Metal industries	23.089	1.20%	6.163	1.20%	96.535	5.25%
6	Non-metallic industries	539.761	25.74%	203.515	25.74%	356.044	36.55%
7	Chemical	188.189	10.97%	64.303	10.97%	82.648	2.36%
8	Metallic industries	197.242	20.05%	80.323	20.05%	248.921	22.38%
9	Non electric machinery	30.539	7.90%	13.043	7.90%	245.957	12.07%
10	Office machines and treatment	32.605	11.98%	10.738	11.98%	118.441	15.15%
11	Electric material and accessories	9.511	1.73%	4.034	1.73%	71.038	2.63%
12	Vehicles, cars and engines	0.842	0.15%	0.491	0.15%	5.274	0.31%
13	Other materials for transport	245.580	31.64%	120.163	31.64%	151.912	45.30%
14	Meat processing	1.441	0.11%	0.364	0.11%	1.350	0.36%
15	Dairy indusrties	0.215	0.04%	0.061	0.04%	0.246	0.07%
16	Other food industries	12.932	0.19%	2.964	0.19%	12.692	0.73%
17	Drinks	3.569	0.20%	1.183	0.20%	2.607	0.44%
18	Tobacco products	0.003	0.00%	0.001	0.00%	0.372	0.14%
19	Textile and clothing	11.578	0.90%	4.011	0.90%	6.928	0.47%
20	Leather goods and footwear	0.040	0.03%	0.014	0.03%	0.111	0.03%
21	Wood and wood furniture	8.292	2.33%	2.858	2.33%	10.821	1.96%
22	Paper, paper arrticles and printing	16.951	1.59%	5.199	1.59%	26.804	2.22%
23	Rubber and plastic products	7.559	1.93%	2.111	1.93%	18.187	2.56%
24	Other manufacturing	3.246	0.35%	1.109	0.35%	1.867	0.45%
25	Construction	732.461	5.48%	298.777	5.48%	0	0.00%
26	Commerce	136.094	0.83%	92.860	0.83%	6.832	2.37%
27	Hotel and catering	42.540	0.72%	20.250	0.72%	0	0.00%
28	Land Transport	126.123	3.29%	70.270	3.29%	133.698	12.55%
29	Maritime, air transport and related activities	73.330	5.46%	26.798	5.46%	25.359	7.32%
30	Communications	249.861	15.51%	209.167	15.51%	13.327	11.13%
31	Credit and Insurance institutions	169.672	4.27%	14.752	4.27%	5.557	5.34%
32	Services for Businesses	505.623	10.82%	372.003	10.82%	204.833	36.34%
33	Renting of immovable assets	97.391	1.76%	90.615	1.76%	0	0.00%
34	Services for Education – sale	346.909	42.82%	250.658	42.82%	0	0.00%
35	Services for Health – sale	1.159	0.05%	0.607	0.05%	0	0.00%
36	Recreational and cultural services	2.930	0.17%	1.100	0.17%	0.381	0.78%
37	General services for Public Administration	0.726	0.02%	0.529	0.02%	0	0.00%
38	Services for Education – not sale	198.028	5.85%	185.919	5.85%	1.088	0.00%
39	Services for Health, non-profit	0	0.00%	0	0.00%	0	0.00%
40	Domestic services and others, not sale	1.394	0.28%	1.091	0.28%	0.001	0.00%
	TOTAL	**4888.618**	**4.4%**	**2481.564**	**4.2%**	**2156.024**	**7.0%**

Sourcee: Author's own.

**Increases in relation to the total values of the symmetry of the MIOAN95*

The global figure for necessary imports is 44.1% of production in Andalusia, and it surpasses by more than 10 points the results we obtained in the evaluation of the previous Community framework (Castro, Moniche and Morillas, 2002), which was 33.6%. Observe, besides, that in Table 2 while production and added value increase by more than 4%, imports increase by 7%. In this way, we can state that four and a half euros of every ten invested in Andalusia (nearly half) has an effect in other areas outside the region. If the absolute figure is important, no less is the fact that this drain of activity on the Andalusian economy (rent and employment, in other words) has been accentuated with this new framework.

As a conclusion, it could be stated that the quantitative effects of the funds in relation to the weight they have in the context of the Andalusian economy, is still very important. However, there are two points which should not be forgotten:

- From the results obtained, both in quantity and type of imports, it would seem that they do not help to paliate the patent lack of integration of the regional productive structure, one of the main problems facing the Andalusian economy, nor the objective of helping towards a self-sustainable development (Boldrin and Canova, 2001).
- The drain of activity towards industrial sectors located in more developed regions as a result of this lack of coordination, is very significant, so the possible compensatory effect of funds could be severely distorted. This is a standpoint which is seldom used, both in political discussion concerning the relevance and usefulness of aid to less developed regions, and its effects on convergence. In the epigraph below we make an approximation of the quantification of these effects.

TABLE 3
Effects of Structural Funds in Andalusia, according to axes of development of the CSF94-99

(1999millions of euros)

AXES	*Prod.*		*VAB*		Imports	
	Increase	%	Increase	%	Increase	%
1. Integration and territorial coordination	1613.085	33.0%	710.729	28.6%	793.362	36.8%
2. Development of economic fabric	390.643	8.0%	228.611	9.2%	234.374	10.9%
3. Tourism	107.536	2.2%	62.932	2.5%	64.519	3.0%
4. Agriculture/rural development	23.279	0.5%	11.590	0.5%	8.702	0.4%
5. Fishing	5.326	0.1%	2.652	0.1%	1.991	0.1%
6. Support infrastructure for economic activities	1321.454	27.0%	582.236	23.5%	649.929	30.1%
7. Valuation of human resources	250.521	5.1%	186.067	7.5%	28.649	1.3%
8. Technical assistance, accompaniment ande information	16.955	0.3%	11.986	0.5%	7.379	0.3%
Total FEDER	3728.799	76.3%	1796.803	72.4%	1788.904	83.0%
2. Development of economic fabric	147.885	3.0%	86.545	3.5%	88.727	4.1%
4. Agriculture/rural development	455.615	9.3%	226.842	9.1%	170.310	7.9%
Total FEOGA-O	603.500	12.3%	313.387	12.6%	259.037	12.0%
6.Support infrastructure for economic activities	2.655	0.1%	1.170	0.0%	1.306	0.1%
7. Valuation of human resources	386.148	7.9%	286.801	11.6%	44.159	2.0%
Total FSE	388.804	8.0%	287.971	11.6%	45.465	2.1%
5. Fishing	167.516	3.4%	83.403	3.4%	62.618	2.9%
Total IFOP	167.516	3.4%	83.403	3.4%	62.618	2.9%
TOTAL	**4888.618**	**100%**	**2481.564**	**100%**	**2156.024**	**100%**

Source:Authors' own.

3.2. Impact of the CSF 1994-99 on the rest of Spain.

To calculate the effects on the rest of Spain, we estimate, via the RAS method, the matrix of coefficients for the region "rest of Spain" (RE), and apply later, a final demand impulse the same as $y_m^{RE} + \Delta m^{RE}$. That is to say, the demand formed by direct GCF imports from the rest of Spain and by the variation in intermediate import needs stimulated by the growth in interior production in Andalusia. The increase in production in the rest of Spain would be, therefore:

$$\Delta x^{RE} = (I - A^{RE})^{-1}(y_m^{RE} + \Delta m^{RE})$$

To calculate the TIO of the rest of Spain (11) we begin conceptually from a model of two regions (Blair and Miller, 1983), in which Spanish production is considered to be made up of Andalusian production and production from the rest of Spain. The RAS method is applied beginning with the structure of coefficient input-output from the Spanish table. Production of the fictitious region, "rest of Spain" and the total of intermediate consumption in rows and columns are calculated by the differences in the figures from the Spanish and Andalusian tables.

Below we approximate the table of input-output coefficients of Spain, A^E, to said totals by the iterative RAS process, in such a way that the new matrix obtained, A^{RE}, is concordant with the figures calculated for the rest of Spain (Pulido and Fontela, 1993).

It is clear, that with this process, we are using a matrix of estimated coefficients, whose results could be questioned. However, it is a much less restrictive supposition than considering that the coefficients of the table for the rest of Spain are merely differences between the Spanish and the Andalusian coefficients. This last process imposes a more concrete structure on the table than the previously exposed method. As in any of the other processes mentioned before the effects of feedback between one region and another are ignored, although empirical evidence states its importance as minimal (Isard, 1971), never above 14%, supposing that the rest of Spain imports little from Andalusia in this investment context. Finally, we must remember that there is a great additional methodological weakness in obtaining the most significant of the two addends, (Δm^{RE}), applied to the corresponding inverse. The matrix M^{RE}, from which this addend derives, is not only unstable from year to year, but the difficulty in a statistic "estimation" for a region throws up more than reasonable doubts as to the final results. In any case, this solution seems more acceptable than using differences in the symmetry of the MIOAN95 regarding the TIOE95. The results obtained can be found in Table 4.

The global production figure generated in the rest of Spain is 2858.89 million euros of 1999, which makes up a bit more than 58% of the figure for Andalusia. The added value surpasses 50% of the figure for Andalusia. It can be seen that as a result of investments made in Andalusia from Community funds, the higher values in the rest of Spain are the industrial sectors 4 to 13, with 60.2% of the total, followed by services to businesses (7.41%) and land transport (7.17%).

It is not rash to suppose that being industrial and qualified service sectors, this

production, in reality, arises sporadically in clearly defined areas – the most developed in the country. That is to say, the activity drain should be pinpointed to far more reduced areas and regions than the region here known as “rest of Spain.” It is hoped, therefore, that the real multiplying effect on these areas, in addition to fomenting the development of industrial, commercial and service activities, be in relative terms even higher than that obtained for the region “rest of Spain”. It is clear, on the other hand, that as regards quality and from the perspective of development, it is very different from what occurs in Andalusia.

To this effect on these more developed regions, we would have to add the effect of the rest of the Objective 1 regions in Spain, whose dynamic will undoubtedly be very similar to the one here. The necessary imports of industrial articles and services stimulated by Community funds, due to a weak productive fabric, also come from the same more developed areas (north east of Spain and Madrid). It would be interesting to quantify the combined effect of investments in the whole of the Objective 1 regions, on the more developed regions of Spain, but it is not difficult to guess what would happen; the discriminating effect of funds would dilute and disparities remain, effectively, the same.

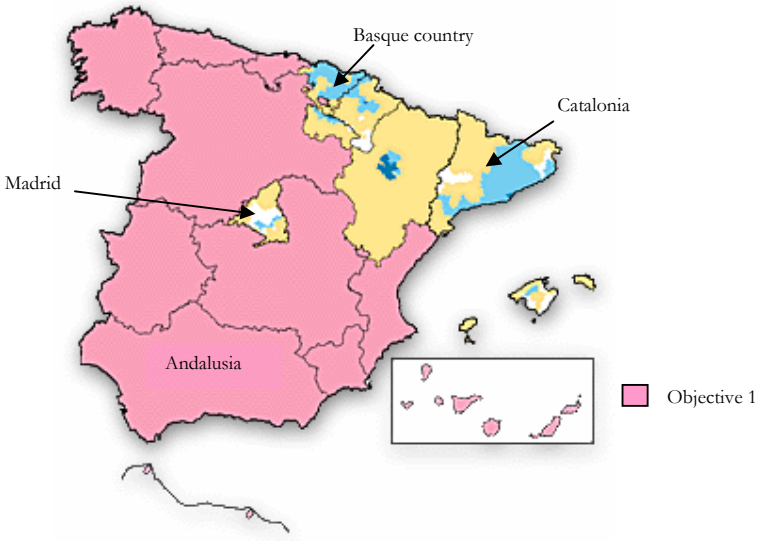
The arguments above may be seen more clearly on the map and in the data in the table in Chart 2. Catalonia, leading the way in industry (25.3% of the industrial VAB of Spain), and Madrid are – along with the Basque Country at a slightly lower level – by far the Autonomous Communities which most specialize in industry and services. The probability that the main cross border leakage effects previously outlined are concentrated in these three regions, is from what can be seen, very high. We can be virtually sure of it. See, besides, how each of these three Communities separately – even the three together – represent a minimal part of the national territory, which is nothing comparable to the Objective 1 regions. So, it is not only that the combined effects may be important, but that besides, they must be concentrated in the most developed regions, stimulating a negative effect for convergence.

TABLE 4
Effects of Structural Funds on the Rest of Spain by axes of activity
(1999 millins of euros)

Branch of activity		*Prod. Rest Spain*		*VAB Resst Spain*	
		Increase	*%*	*Increase*	*%*
1	Agriculture, livestock and fishing	39.798	1.39%	22.152	1.77%
2	Coal, cokeries and radioactive material	34.437	1.20%	24.207	1.93%
3	Oil	42.727	1.49%	9.814	0.78%
4	Water, gas and electricity	145.126	5.08%	87.593	6.99%
5	Basic metal industries	193.017	6.75%	54.116	4.32%
6	Non-metal industries	380.742	13.32%	159.648	12.73%
7	Chemical	120.462	4.21%	35.154	2.80%
8	Metallic industries	338.281	11.83%	124.209	9.90%
9	Non electric machinery	263.736	9.23%	99.861	7.96%
10	Office machines and treatment	94.743	3.31%	30.972	2.47%
11	Electric material and accessories	100.437	3.51%	34.639	2.76%
12	Vehicles, cars and engines	20.136	0.70%	4.585	0.37%
13	Other materials for transport	64.923	2.27%	24.274	1.94%
14	Meat processing	2.974	0.10%	0.508	0.04%
15	Dairy industries	1.123	0.04%	0.225	0.02%
16	Other foods	24.986	0.87%	5.897	0.47%
17	Drinks	5.076	0.18%	1.721	0.14%
18	Tobacco products	0.368	0.01%	0.099	0.01%
19	Textile and clothing	20.154	0.70%	6.787	0.54%
20	Leather goods and footwear	1.383	0.05%	0.300	0.02%
21	Wood and wood furniture	28.511	1.00%	9.425	0.75%
22	Paper, paper aticles and printing	78.416	2.74%	25.329	2.02%
23	Rubber and plastic products	49.636	1.74%	17.578	1.40%
24	Other manufacturing	3.836	0.13%	1.333	0.11%
25	Construction	27.374	0.96%	10.968	0.87%
26	Commerce	100.168	3.50%	68.135	5.43%
27	Hotel and catering	16.608	0.58%	9.405	0.75%
28	Land transport	204.880	7.17%	135.219	10.78%
29	Maritime, air transport and related activities	72.338	2.53%	37.114	2.96%
30	Communications	38.565	1.35%	31.756	2.53%
31	Credit and insurance institutions	78.397	2.74%	5.213	0.42%
32	Services for businesses	211.905	7.41%	132.425	10.56%
33	Renting of immovable assets	28.670	1.00%	23.685	1.89%
34	Services for Education - sale	2.072	0.07%	1.571	0.13%
35	Services for Health – sale	3.902	0.14%	2.804	0.22%
36	Recreation and cultural services	5.520	0.19%	3.682	0.29%
37	General services for Public Administration	1.488	0.05%	1.060	0.08%
38	Services for Education – not sale	11.977	0.42%	10.551	0.84%
39	Services for Health – not sale	0	0.00%	0	0.00%
40	Domestic services and others, not sale	0.001	0.00%	0.001	0.00%
	TOTAL	***2858.891***	***100%***	***1254.012***	***100%***

Source: Authors' own

Chart 2: Probable spatial concentration of the effects of cross border leakage



VABpb95	Agriculture %	Industry %	Construction %	Services %
Aragón	4.7%	3.8%	3.0%	3.0%
Baleares (Islas)	1.0%	1.1%	2.0%	2.9%
Cataluña	7.6%	25.3%	16.6%	17.7%
Madrid (Comunidad de)	0.9%	13.6%	16.0%	19.2%
Navarra (Comunidad Foral)	2.0%	2.6%	1.5%	1.4%
País Vasco	2.9%	9.0%	5.1%	5.7%
Rioja (La)	1.6%	1.0%	0.6%	0.6%
Regiones objetivo 1	79.4%	43.7%	55.1%	49.5%
Total*	18,649	93,240	31,909	259,718

* 1995 Millions of euros current

Source INE Regional Accounting base 95

4. Conclusions.

Faced with the effects derived from the progressive implantation of the single market, as well as the natural tendencies towards expansion shown by the European Union, which will reach 25 members from 2004, the interest in an efficient regional policy is gaining renewed impetus.

To evaluate the results it is necessary to begin from an agreed definition of the concept of cohesion, with the aim of determining if advances have really been made towards that objective. The European Union considers a GDP *per capita* as the main indicator of monitoring. However, regional differences must also be studied in connection with other aspects more related to qualitative questions: differences and efficiency in productive structures, disparities in labour markets, and differences in infrastructure and social

overhead capital. At the same time, it is convenient to bear in mind that according to the variables and sources consulted to measure the convergence, just how near the objective of cohesion has been reached will vary considerably. Nevertheless, the great majority of studies carried out in this sense remark not only on the slow nature of the processes of convergence (Armstrong and Vickerman, 1995) but also that in some of these, the current regional Community policy is questioned as well as the possibility that regional convergence may have reached its limits (Marcer and Canova, 1995) or be concentrated in certain areas or clusters (Quah, 1996).

Traditional criticisms (13) of the Union's distributive policy have been aimed at the direction and intensity of regional policy, more concretely on the effects of the market on the spatial, social and sectorial concentration of wealth (Cuadrado and Suárez-Villa, 1992). Structural Funds are the Union's main instrument for reducing inequalities in the development of regions. However, their effects are weakened by the application of the rest of Community policies, fundamentally the PAC, and by deficiencies in application. The scarcity of resources destined to diminish regional disparities in comparison with other Community policies, and the need to co-finance investments, require a very great effort for Objective 1 regions, and this often impedes reaching the threshhold of desired minimum profitability.

Investment in transport infrastructure, one of the main recipients of the funds, has a double effect which has been widely analysed. On the one hand, it is undeniable that for local economies and on private productive factors (14) generally it has been a boost, creating the necessary conditions for the localisation of businesses and the export of merchandise. Also, it has been a great benefit for the most developed regions, opening and creating new markets, as well as encouraging productive resources, which can provoke the opposite effect to that desired.

In this paper we have outlined and quantified another possible external effect which can throw doubt on the efficiency pursued by regional policy, especially in the first stages of integration and development of the objective region, now that a new expansion is with us. By trying to stimulate economic growth in a territory with a weak and unbalanced productive structure, significant activity drain occurs from the objective region to the national economy. Therefore, what must be measured is the relation between investment which is effective in the productive sectors that can serve as motors of the change towards the development of the regional economy, and investment that, in practice, gets redirected to national economic centres, to "import" development, or concentrate on local sectors very often related to the exploitation of the natural resources of the region, with the consequent negative effects on the environment. In the future the effects of the single market will encourage this interaction to occur in a more flexible way with developed regions outside of the state which receives aid.

In conclusion, taking into account existing limitations, in both available statistical information and those derived from the input-output model used, there is no doubt about the quantitative importance and the real impact that European funds have on the Andalusian economy and some of its most significant macromagnitudes. On the other hand, thanks to them, it has been possible to improve, principally, transport infrastructure, in spite of there have been certain deficiencies as in its priorities as in its execution. The funds have also brought about a good number of resources to social policies and on the environment in Andalusia. However, there are shadows which should make us reflect seriously, from a local, national and European perspective.

First of all, investment in this new framework 94-99 is, as in previous SCF, centred on the public construction sector, something which is completely necessary yet which reproduces and reinforces the disorganized productive structure in Andalusia, which is probably dependent on excess construction and exploitation of natural resources (Delgado, 1995; Morillas, 1995). As we have just said, this type of investment was and is vital and necessary. .But maybe, as has been stated (Marquez, 1991), and facts would appear to back this up, the infrastructure designed, and especially the priorities given, has served more to improve relations with the exterior than to integrate the space and economy of the Andalusian region. Expounding on this idea, it is widely known in regional policy (the *Mezzogiorno* effect) that the development of a good transport infrastructure is a necessary, yet not sufficient, condition for development. What is more, at times it can act as an element of invasion and domination of the regional market by foreign products, which with the creation of new transport infrastructure, have increased opportunities to compete with local products.

Secondly, the funds do not appear to contribute to any significant degree towards a more balanced and interdependent development of the services and industrial sectors which could help towards a solution for the serious problem of excess regional specialization, limited productive integration, and consequently, the fight against unemployment. As Rodríguez-Pose and Fratesi say (2002), European integration can be favouring an unbalanced development over the base of concentration of activities of a high added and technological value in the centre, while the peripheral regions specialize in low added value sectors.

Finally, as has been seen in this paper, regional growth stimulated by funds produces development in industies and services to businesses in the most industrialized areas of the rest of Spain, repeating and accentuating the scheme of classic productive dependence of the Andalusian economy (Delgado, 1981; Morillas, 1983). As a consequence of this, with the results obtained for Andalusia and the similar results which are sure to come for the other Objective 1 regions, there are sufficient indications to believe that the positive discrimination the funds pursue is weakened by cross border leakage, which occurs in the most developed areas of the country.

This fact, along with the help received by these developed areas through other regional policies of the European Union, may be causing the real effects on convergence in Andalusia, and probably in the rest of the Spanish Objective 1 regions, to be practically nil, if not the opposite of the desired effect. In fact, different studies (Hall, 1999; Biescas, 1999; Cuadrado, 2001; Boldrin and Canova, 2001) seem to confirm that this convergence has not been happening, independently of the fact that the contribution of the funds towards a better socioeconomic situation in Andalusia, specifically, could not be called into question.

All of these aspects, the consideration of which is vital for a broader understanding of the long term future of the assisted regions, are frequently forgotten in the processes of evaluation of the impact of European funds, to be replaced by formalizations, supposedly more scientific, which predominate over the economic-conceptual reality of these regions. Unfortunately, after many years of Community aid, official statistics lead us to conclude that these questions are much more important than some analysts think (15). With regard to this, and without underestimating the positive effects the funds produce in Andalusia, it must be pointed out that the average annual growth rate, in nominal terms, of the GDP per inhabitant in the years of the CSF94-99, was 6 points in the region. That is, less than the

yearly average for the rest of the Spanish economy; a 6.3% increase (16). In terms of national convergence, at least, it can be argued that the distance between the country's most dynamic regions and Andalusia has not only not been reduced, but it has widened over this period.

Footnotes

(1) It must be pointed out that the Regional Policy Head Office has explicit orders to co-ordinate evaluation of regional policy in Objective 1 and 2 regions.

(2) See Molle and Cappellin (1998), Bachtler & Michie (1995), Nijkamp and Blaas (1995), McEldowney (1991), among others.

(3) The aim of the MEANS (EEC, 1999) work group is to promote a "Culture of Community evaluation" to establish this type of process and to increase the use(fulness) of structural policy evaluation processes.

(4) See Bradley, Whelan and Wright (1995), Herce and Sosvilla-Rivero (1995), Modesto and Neves (1995), Christodoulakis and Kalyvitis (2000).

(5) Information does not exist for the region we will call "rest of Spain."

(6) To evaluate the impact of the CSFs it is also necessary to consider Spanish Public investments as they are complementary. In this way, when Structural Fund investments are mentioned, those made both by the EU and the Spanish Public Sector will be included.

(7) This document allows us to pass the investments of the different projects included in the CSF to a sectorial classification structured in axes. To achieve this it adds a percentage of the investment of the funds of each of the eight axes to the different branches of activity of R44. The problem of disintegration of the investment between the 44 branches is solved then by classifying each of the projects and actions of the Structural Funds on one concrete axis of the eight budgets in this document.

(8) For an evaluation of these effects based on the statistical theory of information, see García and Ramos (2001).

(9) See Cañada and Toledo (2003) and Prado (2003).

(10) See Aschauer (1989)

(11) The first paper on the construction of a regional table based on a national one was carried out by Czamanski and Malizia (1969) and developed further by McMernamin and Maring (1974).

(12) For example, in the evaluation of the CSF 1994-99 for the Objective 1 regions of Spain in De La Fuente (2003), the idea that all spending is carried out if the territory defined by said regions is implicit, yet this seems unrealistic.

(13) According to neoclassical theory, the free mobility of factors finishes sooner or later in regional convergence. However, reality is very different, as it has been shown that mobility is not as high in Europe as in some countries – USA – and neither does it depend so heavily on strictly economic aspects such as salary or qualifications.

(14) See Aschauer (1989) or Draper and Herce (1984).

(15) In this sense, the different methods used need not be considered conflicting or eclusive, rather that they can be complementary and mutually enriching.

(16) Source: INEBase (2003). We have to take into consideration the change of method that ocurred with the implantation of the SEC95, which is why the GDP

per capita figure for Andalusia for the year 1994 is an approximation from the provisional data for that year.

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APPENDIX 1

Agregation of symmetric tables of Andalusia and Spain to 40 homogneous branches

R40	*Concept*	*CNAE93*	*Branches TSIO95*	*Branches MIOAN95*
1	*Agriculture, livestock and fishing*	*A, B*	*1-3*	*1-6*
2	Coal, cokeries and radioactive material	*10*	*4*	*7*
3	Oil	*11, 12, 23*	*5 y 8*	*8, 9 y 27*
4	Water, gas and electricity	*40, 41*	*9-11*	*47-49*
5	Basic Metal industries	*13, 27*	*6 y 29*	*10 y 34*
6	Non-metallic industries	*14, 26*	*7, 25 - 28*	*11, 31-33*
7	Chemical	*24*	*23*	*28 y 29*
8	Metallic industries	*28*	*30*	*35*
9	Non electric machinery	*29*	*31*	*36*
10	Office machines and treatment	*30, 33*	*32 y 35*	*37 y 40*
11	Electric material and accessories	*31, 32*	*33 y 34*	*38 y 39*
12	Vehicles, cars and engines	*34*	*36*	*41*
13	Other materials for transport	*35*	*37*	*42 y 43*
14	Meat processing	*151*	*12*	*12*
15	Dairy indusrties	*155*	*13*	*15*
16	Other food industries	*Resto de 15*	*14*	*13, 14, 16 y 17*
17	Drinks	*159*	*15*	*18 y 19*
18	Tobacco products	*16*	*16*	*20*
19	Textile and clothing	*17, 18*	*17 y 18*	*21 y 22*
20	Leather goods and footwear	*19*	*19*	*23*
21	Wood and wood furniture	*20*	*20*	*24*
22	Paper, paper arrticles and printing	*21, 22*	*21 y 22*	*25 y 26*
23	Rubber and plastic products	*25*	*24*	*30*
24	Other manufacturing	*36*	*38*	*44 y 45*
25	Construction	*45*	*40*	*50 y 51*
26	Commerce	*50, 51, 52, 37*	*39, 41- 43*	*46, 52-55*
27	Hotel and catering	*55*	*44*	*56 y 57*
28	Land Transport	*60*	*45 y 46*	*58 y 59*
29	Maritime, air transport and related activities	*61, 62 y 63*	*47- 49*	*60-62*
30	Communications	*64*	*50*	*63*
31	Credit and Insurance institutions	*65, 66*	*51 y 52*	*64 y 65*
32	Services for Businesses	*67, 71, 72, 74, 911*	*53, 55, 56 y 58*	*66, 68, 69, 71-76*
33	Renting of immovable assets	*70*	*54*	*67*
34	Services for Education – sale	*80 p*	*59*	*79*
35	Services for Health – sale	*85 p*	*60*	*81 y 83*
36	Recreational and cultural services	*92p, 93*	*62 y 63*	*86-88*
37	General services for Public Administration	*75, 90*	*61, 64 y 67*	*77 y 84*
38	Services for Education – not sale	*80 p, 73*	*57 y 65*	*70 y 78*
39	Services for Health, porivate, non-profit	*85 p*	*66*	*80 y 82*
40	Domestic services and others, not sale	*95, 912, 913, 92p*	*68, 69 y 70*	*85 y 89*

APPENDIX 2

Distribution by branches of activity and territorial applications of Structural Funds (millions euros 1999)

BRANCHES OF ACTIVITY	*Andalucía*	*%*	*R.Spain*	*%*	*RWorld*	*%*	*T. Branch*	*%*
1 *Agriculture, livestock and fishing*	205,874	5,99%	15,721	1,66%	8,120	2,71%	229,716	4,91%
2 Coal, cokeries and radioactive material	0	0,00%	0	0,00%	0	0,00%	0	0,00%
3 Oil	192,244	5,60%	0	0,00%	0	0,00%	192,244	4,11%
4 Water, gas and electricity	211,971	6,17%	0	0,00%	0	0,00%	211,971	4,53%
5 Basic Metal industries	0	0,00%	0	0,00%	0	0,00%	0	0,00%
6 Non-metallic industries	390,150	11,36%	246,675	26,11%	20,976	7,01%	657,801	14,06%
7 Chemical	144,899	4,22%	0	0,00%	0	0,00%	144,899	3,10%
8 Metallic industries	169,411	4,93%	201,656	21,34%	3,757	1,26%	374,824	8,01%
9 Non electric machinery	18,268	0,53%	177,718	18,81%	32,487	10,86%	228,473	4,88%
10 Office machines and treatment	30,117	0,88%	91,765	9,71%	14,944	4,99%	136,826	2,92%
11 Electric material and accessories	0	0,00%	0	0,00%	0	0,00%	0	0,00%
12 Vehicles, cars and engines	0	0,00%	0	0,00%	0	0,00%	0	0,00%
13 Other materials for transport	219,640	6,39%	55,666	5,89%	79,968	26,73%	355,274	7,59%
14 Meat processing	0	0,00%	0	0,00%	0	0,00%	0	0,00%
15 Dairy indusrties	0	0,00%	0	0,00%	0	0,00%	0	0,00%
16 Other food industries	0	0,00%	0	0,00%	0	0,00%	0	0,00%
17 Drinks	0	0,00%	0	0,00%	0	0,00%	0	0,00%
18 Tobacco products	0	0,00%	0	0,00%	0	0,00%	0	0,00%
19 Textile and clothing	0	0,00%	0	0,00%	0	0,00%	0	0,00%
20 Leather goods and footwear	0	0,00%	0	0,00%	0	0,00%	0	0,00%
21 Wood and wood furniture	0	0,00%	0	0,00%	0	0,00%	0	0,00%
22 Paper, paper arrticles and printing	0,763	0,02%	2,180	0,23%	0	0,00%	2,943	0,06%
23 Rubber and plastic products	0	0,00%	0	0,00%	0	0,00%	0	0,00%
24 Other manufacturing	0,835	0,02%	0	0,01%	0	0,00%	0,887	0,02%
25 Construction	584,292	17,01%	0	0,00%	0	0,00%	584,292	12,49%
26 Commerce	24,915	0,73%	0	0,00%	0	0,00%	24,915	0,53%
27 Hotel and catering	27,135	0,79%	0	0,00%	0	0,00%	27,135	0,58%
28 Land Transport	24,383	0,71%	88,161	9,33%	8,932	2,99%	121,476	2,60%
29 Maritime, air transport and related activities	36,411	1,06%	0	0,00%	6,052	2,02%	42,463	0,91%
30 Communications	213,688	6,22%	0	0,00%	0	0,00%	213,688	4,57%
31 Credit and Insurance institutions	28,759	0,84%	0	0,00%	0	0,00%	28,759	0,61%
32 Services for Businesses	317,888	9,25%	65,161	6,90%	123,970	41,43%	507,019	10,83%
33 Renting of immovable assets	54,785	1,59%	0	0,00%	0	0,00%	54,785	1,17%
34 Services for Education – sale	341,671	9,94%	0	0,00%	0	0,00%	341,671	7,30%
35 Services for Health – sale	0	0,00%	0	0,00%	0	0,00%	0	0,00%
36 Recreational and cultural services	0	0,00%	0	0,00%	0	0,00%	0	0,00%
37 General services for Public Administration	0	0,00%	0	0,00%	0	0,00%	0	0,00%
38 Services for Education – not sale	197,567	5,75%	0	0,00%	0	0,00%	197,567	4,22%
39 Services for Health, porivate, non-profit	0	0,00%	0	0,00%	0	0,00%	0	0,00%
40 Domestic services and others, not sale	0	0,00%	0	0,00%	0	0,00%	0	0,00%
TOTAL	***3.435,666***	***100,00%***	***944,751***	***100,00%***	***299,211***	***100,00%***	***4.679,627***	***100,00%***
% s/ total funds	***73,42%***		***20,19%***		***6,39%***		***100,00%***	