

**REGIONAL DEVELOPMENT STRATEGIES OF A NEW REGIONAL
GOVERNMENT: THE JUNTA DE ANDALUCIA, 1984-90**

by

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ABSTRACT

The creation of the 'State of the Autonomies', embodied in the 1978 Spanish Constitution, brought to Andalucía the devolution of wide political powers and administrative functions, and with this, the possibility for the newly created Junta de Andalucía of implementing a development policy wholly different from that of the central government and from those of other autonomous communities. Different from other historical regions, such as Catalonia or the Basque Country, run by conservative and nationalist parties, the Socialist party in Andalucía from the first moment linked political autonomy and regional economic development. Underdeveloped, marginal from main national and international economic circuits, and run by a socialist regional government that wanted to repair the comparative wrongs suffered historically by the region, Andalucía enjoyed at the beginning of the 1980's optimal conditions for implementing a self-reliant strategy of regional development.

In order to identify, interpret, and analyse the evolution of the strategy of development of the Junta de Andalucía during the 1984-90 period, the thesis reviews policy and resource allocation in three policy-sectors: road, railway, and industrial promotion. In each case, a genuine self-reliant philosophy appears at the beginning of the period, which is, however, abandoned in the middle 1980's and substituted by a development strategy based on functional integration into larger-scale systems. Using policy documents and interviews with decision-makers and researchers, the thesis attempts to explain the observed shift and to interpret the logic of the regional development strategies pursued by the Junta de Andalucía during its first decade. Political legitimation, during the period of economic recession, and economic accumulation, when pressures to support the internationalization process of capital appeared, guided regional planning policy of the Junta during its first decade. The thesis ends by relating the evolution followed by the regional planning policy of the Junta to wider debate about decentralization and regional theory and policy.

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1. INTRODUCTION

The creation of the 'State of the Autonomies' —Estado de las Autonomías— after the death of General Franco and the restoration of parliamentary democracy, brought to Spain the most important programme of devolution of powers undertaken in Europe since the establishment of the Federal Republic of Germany. The legislative capacities and financial autonomy given to the newly created regional governments allowed them, for the first time, to adopt and develop policy options wholly different from one another and from those of central government.

In Andalucía, the constitution of the region as an autonomous community generated great expectations among the local population. It was considered that the lack of a regional institutional framework, which defended the Andalusian interests, had been one of the main limiting factors for the development of the region. Decisions were made throughout history 'from outside', and that brought about to Andalucía economic dependency, extroversion, and backwardness.

The first regional election (1982) brought the socialist party (PSOE) into power. Contrary to other historical Communities, such as Catalonia or the Basque Country, run by nationalist conservative regional governments, the socialist party in Andalucía rejected nationalism as the legitimating ideology. Whilst the nationalist parties in power tended to be conservative on economic and social matters, devoting most of their attention to cultural and educational questions, in Andalucía the socialist regional government from the first moment linked political autonomy and regional economic development.

The first objective of the new regional government —Junta de Andalucía—, was the elaboration of a regional economic plan (Plan Económico de Andalucía, 1984-86, PEA). Different from traditional top-down regional planning policy, the PEA was the result of a genuine from-below process. A planning commission and fifteen committees, where entrepreneurial associations, trade unions, professional bodies, researchers, and regional policy-makers and politicians were all represented, were commissioned to elaborate the regional plan. From that planning commission arose the idea of which had been the causes of the Andalusian underdevelopment: there was a huge gap between the natural wealth of the region and the value of the regional product (output). Despite its enormous potential, the region suffered from poorness, unemployment, and out-migration. Accordingly, the objective of the regional government should be that of removing the obstacles that impeded the full exploitation of all natural, human, and institutional regional resources.

The development strategy of the Junta, called endogenous development, is defined as a strategy of integrated regional development. It was considered that the failure of Andalucía, and that of most underdeveloped economies, to achieve growth with equity was largely due to their poorly articulated economic and spatial systems. Therefore, the main efforts of the regional government should be directed to combating these main problems of the regional economy; i.e. economic and territorial disarticulation.

The achievement of that integrated regional development, however, required major changes in the productive structure of the Andalusian economy. First of all, it was necessary to remove the main obstacle that hampered the most important economic sector of the region (agriculture) to function as the propulsive mechanism in the process of regional economic growth and capital accumulation. The technically obsolete and under-exploited latifundia had to be modernised or, in extremity, expropriated and the land leased out to impoverished and under-employed rural labourers; that is, an agrarian reform that allowed to modernisation and full exploitation of this crucial regional economic sector. On the other hand, it was necessary to develop a dense and diversified regional industrial sector. The development of the regional industry was considered as a necessary condition for surmounting the traditional disarticulation of the regional economy and for preventing the extraction of the regional surplus-value. Only this sector could generate the necessary backward and forward linkages that would allow the region to achieve an integrated economic development.

There was, however, a major problem with this objective and that was, precisely, the lack of regional industry and local entrepreneurship. The dependent role of Andalucía in the national division of labour had brought about the dismantling of the traditional industrial base and the specialisation of the region as an agricultural exporting area. Accordingly, the role of the regional government would have to be a rather interventionist one. As the PEA states, (Junta de Andalucía, 1984a, p.53), the lack of a spontaneous economic dynamism in Andalucía, and its structural underdevelopment requires a 'level of public intervention higher than that corresponding at national level [...] that is, a socialist type of intervention'. This meant a direct intervention of the public sector in the development of lacking inter and intra-sectoral linkages and the creation of public regional holdings that complemented existing structures and enterprises.

A fundamental prerequisite for the achievement of an integrated regional development was, according to the newly created regional government, the surmounting of the spatial disarticulation of the region. This required, on the one hand, the reversal of the centralist, exogenous, and radial character of regional transport networks that, by linking principally the region with the national capital and the rest of the country, had fostered regional economic disintegration and the parallel expropriation of regional wealth and potentials. On the other hand, it also required the development of an 'equilibrated' and articulated urban system, made up by settlements of various sizes, specialising in different economic and social functions and being linked to each other through a network of physical and economic interaction (Junta de Andalucía, 1984b). The development of this 'optimum' spatial system was regarded as the best instrument not only for the expansion of the system of regional production and exchange and for the full exploitation of the indigenous potentials, but also, for the satisfaction of wider social objectives. It was understood that the growing gap between the rich and poor areas in the region was rooted in inequitable access to productive activities and social services, and that by increasing the accessibility of the rural population to the main regional urban centres, greater social equity could ensue.

The economic and political project laid down for Andalucía by the newly created regional government was regarded by numerous political and non-political forces in Spain as a project to be launched at national and regional level alike. As Tamames and Clegg (1984, p.52) argued, 'Andalucía is the most interesting example of all the historical communities, in terms of revealing the new potential for social change inherent in the decentralization process'. With such a development policy, the new regional government wanted to demonstrate to the Andalusians that it was prepared to repair the comparative wrongs suffered historically by the region and that the demands for autonomy, for which it had struggled so much, were fully justified.

In the middle of the 1980's, however, the external economic and political conditions changed radically. Factors such as the national and international economic recovery, the Spanish entry into the EC, or the normalisation of the economic and political life of the country, among others, indicated that the situation that prevailed at the beginning of the autonomy was no longer the same. Gradually, the nationalist discourse, and that of underdevelopment, which had dominated until 1986-87, was replaced by another less aggressive discourse of modernisation and social vertebration. This message, subtly undermined the idea that only by making

laborious efforts with a long term perspective, carefully adapted to the specific local circumstances could the structural underdevelopment of the region be overcome' (Barzelay and O'Kean, 1989. p.65). Economically, the most radical projects on which the Junta de Andalucía had embarked at the beginning of the autonomy (e.g. the agrarian reform), were set at a halt, and words such as regional competitiveness and attractiveness, European integration, and economic openness, progressively replaced those of internal integration and regional resource mobilisation.

The economic and political conditions had, therefore, changed and there were sound reasons to believe that the strategy of endogenous development of the Junta had been abandoned. Nonetheless, this possibility was radically denied by the regional government, which emphasised the elements of continuity (Junta de Andalucía, 1987), and defended itself from the increasing number of voices that critically argued for the abandonment of the economic and political project born with the autonomy.

THESIS AIM, OBJECTIVES AND STRUCTURE

The aim of this thesis is to analyse the regional planning policy of the Junta de Andalucía in its first decade. The objectives are threefold:

1. to identify and interpret the development strategy of the regional government;
2. to examine whether there has been a shift in the strategy, and, in the affirmative case;
3. to explain the reasons for the shift.

The thesis is divided into three main parts. Part one is made up of Chapters 2 and 3. Chapter 2 presents a theoretical model that synthesises alternative development strategies during the 1980's. Owing to the novelty and vagueness of the so-called endogenous approach, particular emphasis has been put on the clarification of the concept and on the differentiation between its different versions. The second part of Chapter 2 describes the methodology and the sources of information used for the identification and analysis of the development strategy of the Junta. Finally, the geographical, economic and political characteristics of Andalucía at the beginning of the 1980's, are briefly described in Chapter 3.

The second part of the thesis describes and analyses the development strategy of the regional government during the decade of the 1980's, through the three policy sectors chosen: road development (Chapter 4), railway policy (Chapter 5), and industry promotion (Chapter 6). In each case, a genuine self-reliant philosophy appears at the beginning of the period, which is, however, abandoned in the middle 1980's.

Chapter 7 attempts to explain the observed shift and to interpret the logic of the regional development strategies pursued in Andalucía during the first decade of regional government. General economic and political implications of the shift on Andalucía are also highlighted. Finally, Chapter 8 formulates the conclusions of the thesis by relating the evolution followed by the regional planning policy of the Junta de Andalucía to wider debate about decentralization and regional theory and policy.

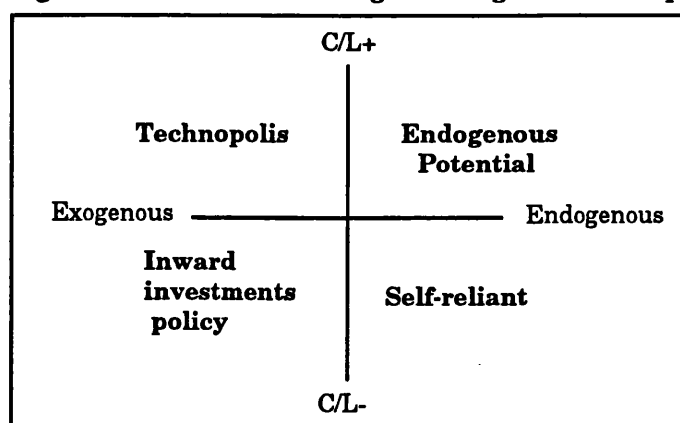
2. ALTERNATIVE STRATEGIES OF REGIONAL DEVELOPMENT DURING THE 1980'S

After two decades of economic prosperity and growth, the world economy entered in the middle of the 1970's into a period of recession and structural change. Regional theory and practice, a basic tool in the process of economic expansion, national strengthening, capital accumulation and globalization, and technological development (Becker, 1985), inevitably also fell into crisis. Criticisms and dissatisfaction with traditional theory became the general trend among regional theorists.

Nonetheless, at the beginning of the 1980's there was not yet as well-established alternative regional development 'paradigm'. New theoretical developments were taking place which emphasized the role of endogenous factors in regional development; so-called endogenous development, still a vague paradigm with many different versions and limited theoretical development (Brugger, 1990), enjoys increasing acceptance and seems to have the highest possibility for becoming the new regional development paradigm (Hadjimichalis and Papamichos, 1990; Kern, 1990). On the other hand, although more traditional strategies of development (exogenous strategies) are claimed to be less appropriate to the characteristics of the European regions and to the current state of economic and technological development (Wadley, 1986; Camagni and Capellin, 1985), they were by no means obsolete. Therefore, at the beginning of the 1990's, new models and old strategies made up the armoury of regional policy in Europe.

Following several authors (Camagni, and Capellin, 1985; Wadley, 1988) alternative regional policies can be classified into four main categories (see Figure 2.1).

Figure 2.1 Alternative Strategies of Regional Development



Classification is based on *development factors* on which regional policy might operate, and the *technological level* of the capital which might be promoted. Development factors may be broadly divided between those which are internal and those which are external to the region; thus, according to whether the internal or

external elements are emphasized, regional growth may be defined as endogenous or exogenous. The technological level of the capital relates to the capital/labour ratio (C/L) which characterizes the process of economic growth promoted; according to whether this ratio is high or low, the process of economic growth would be capital-intensive (technologically advanced and with high productivity), or labour-intensive (non-technologically advanced and lower productivity). The combination of development factors and the C/L ratio results in our four policy strategies: 'Self-reliant', 'Endogenous potential', 'Technopolis', and 'Inward investment policies'.

THE NEW PARADIGM: ENDOGENOUS DEVELOPMENT

As the idea of endogenous development has gained strength, the concept encompasses so much meaning that it seems to represent 'nothing more than an empty shell where everybody can wrap up his or her particular aims and ideas' (Brugger, 1990, p.161). It is, therefore, important to clarify the concept. First, it is necessary to differentiate between spontaneous development and development stimulated by public authorities. Cases of spontaneous endogenous development have been found, for instance, in the north-east and central regions of Italy and in some Spanish regions like Andalucía and Valencia where a diffuse industrialization has occurred within local, essentially agricultural communities (Camagni and Capello, 1990; Vázquez Barquero, 1990). One of the characteristics that has been most emphasized by researchers has been precisely the lack of direct state intervention in these processes of endogenous industrialization. Second, endogenous *regional* development should not be equated directly with *Local Development* or with the so-called *Local Development Initiatives* (Stöhr, 1990a; Novy, 1990). There are important characteristics which set them apart (see Table 2.1).

First of all, let us examine the scale. In general, the larger the area is, the stronger its economic and political potential and the more frequent and more dense the number of endogenous decision-making functions. Therefore, the potential for the theory of endogenous development (particularly for the self-reliant approach) to further develop depends on the scale at which the strategy can be pursued (Hahne, 1986; Quévit, 1986; Friedmann, 1986; Brugger, 1986). While local development initiatives refer always to localities, endogenous development may be suited to a concept of 'community development' (Friedmann, 1986; Clarke, 1986), alternative 'life-styles' and a set of personal beliefs and attitudes (Stöhr, 1990a; Friedmann,

1986; 1988; Brugger, 1986), which get confused with the notion of self-reliance which corresponded to more structural changes. Simultaneously, the regional scale has been progressively substituted by the locality, the economic objectives substituted by social ones, and the political project by the personal and the psychological ventures. The initial approach to self-reliant development has opened, however, a fruitful debate among regional researches and policy-makers which has not yet been concluded (Brugger, 1990).

Table 2.1 Main differences between Local Development and Endogenous Regional Development

Local Development	Endogenous Regional Development
• Locality	• Region (but also locality, nation)
• Community development	• Regional economic development
• Broad social and economic objectives	• Structural adjustment & reconvertig
• Reactive and voluntarist	• Proactive and 'offensive'
• e.g. Local Employment Initiatives (OECD)	• e.g. Self-reliant (Neo-regionalists) Endogenous Potential (EC)

It is possible to distinguish between two different approaches to regional endogenous development: (1) the bottom-up, self-reliant or from below development strategy, associated with the neo-regionalist school, and, particularly, with the names of Friedmann and Stöhr, among others; and (2) the 'endogenous potential' strategy, an outward-looking and innovation-oriented regional strategy, largely European inspired (Wadley, 1986) and widely implemented in the European Community (EC) during the last ten years.

In spite of the considerable differences that exist between them, they share common characteristics which result from current economic and political circumstances: the attack on traditional redistributive regional policies, the interpretation of regional economic development as an internally generated process, the proposal for decentralization, and the opposition to central planning and state intervention.

Traditional redistributive policies ('growth pole' and 'redistribution with growth' strategies), were suggested and implemented during a period (1950-70) characterized by aggregate economic growth, technological development and industrial expansion, economic internationalization, and the strengthening of the state apparatus as the necessary condition for the accumulation process which was

taking place. The 1973 oil crisis, however, set a turning point in that atmosphere of 'euphoria for growth'; the economic scenario radically changed: economic recession, declining aggregate economic growth, industrial restructuring, increasing unemployment rates and considerable reduction in the international and interregional mobility of production factors.

In the context of crisis, traditional strategies were clearly obsolete (Stöhr, 1985; Zacchia, 1986). There was no sense in suggesting a redistribution with growth strategy of development when there was no growth. It was useless to foster the mobility of production factors and the openness of the regional/national economies when profit rates and investments had sharply decreased. Industrial diffusion was a difficult regional objective when traditional industrial regions were declining, and when the availability of public funds for the spatial extension and redistribution of activities had been sharply reduced. New interpretative models and regional strategies which took the new circumstances into account were, therefore, strongly needed.

The immediate response was a shift in emphasis towards the role of endogenous factors in regional development. In this light, development is understood as an internally-generated process. Instead of being the result of external factors (mainly capital and technology) coming into the region, the endogenous approach sees development as the exploitation of indigenous resources and potentials. Under present economic circumstances, each region has to rely upon its internal growth potential. Contrary to traditional theories, which understand regional underdevelopment as the result of market failures or as the logical outcome of unequal centre-periphery relations, and therefore ask for a more effective central planning system or for the reform of the international economic system and the restructuring of dualistic underdeveloped economies and social structures, the apologists of endogenous development seek a bottom-up strategy of regional development. According to some of the exponents of the endogenous development, state intervention has led to poor resource allocation and, therefore, to a decline in the pace of economic growth; for others, on the other hand, the 'class-based capitalist state' (Weaver, 1984) through such measures as regional planning, has caused the disruption of regional economic circuits and the subjugation of regional and local communities to functional circuits (Friedmann and Weaver, 1979; Stöhr and Tödtling, 1977).

In any case, according to endogenous theory, central public-sector intervention should be reduced as much as possible; privatization of public corporations, the dismantling of public ownership, the reluctance to plan and regulate economic

activities (at least at a macro-level) together with a supply-led macro-economic policy should be the new policy guidelines. Decentralization and the reform of present institutional structures are seen as first and unavoidable conditions for regional and local development. Decentralization is supposed to bring not only radical socio-political changes, but also, and particularly, economic development, efficiency, and greater social equity (Friedmann and Weaver, 1979; Stöhr and Tödtling, 1977).

As Todaro (1989, p.530) puts it, 'if the decade of the seventies could be described as a period of increased public-sector activity in the pursuit of more equitable development, the eighties witnessed the reemergence of free-market economics and strict efficiency as opposed to equity criteria'. The redistributive approach to regional policy has come into crisis and a self-reliant, bottom-up and endogenous development is suggested in its place.

The Bottom-up, Self-reliant Strategy of Regional Development

The bottom-up, self-reliant strategy of development has its roots in various initiatives carried out by International Development Organizations. It has also been theoretically developed by the so-called Neoclassic Liberal Group (Becker, 1985). The aim of these initiatives was to define and implement alternative models of economic development for peripheral areas, which found themselves increasingly marginalized in an everyday more global and unequal international economic system. Their objective was to combat mass poverty; their strategy was directed at specific poverty groups. Among the initiatives, the best-known are the employment-oriented strategy of the ILO (ILO, 1976b), the redistribution-with-growth strategy of the World Bank (Chenery et al. 1974), the Agropolitan Development strategy (Friedmann, 1985) and the 'Basic-needs' approach advocated by the ILO (ILO, 1976a). The approach, initially designed for marginal, rural, isolated and out-of-the main international economic circuits areas of Asia and Africa, was then generalized to a 'territorially-based development' applicable as well to more urbanized regions (Friedmann, 1985). At the beginning of the 1980's, the concept of development from below was said to be a realistic strategy for advanced, post-industrial countries as well; a suitable strategy for the peripheral regions of Europe (Stöhr, 1983; Oström, 1983; Friedmann, 1986).

According to Stöhr and Taylor (1981, p.1), development from below is a new concept of development based primarily on 'maximum mobilization of each area's natural, human and institutional resources with the primary objective being the satisfaction of the basic needs of the inhabitants of that area. It must be directly oriented towards the problems of poverty and must be motivated and initially controlled from the bottom'. Development from below strategies are said to be 'basic-needs oriented, labour-intensive, small-scale, regional-resource-based, often rural-centered and argue for the use of appropriate rather than highest technology' (Stöhr and Taylor, 1981, p.1). Development from below argues essentially for a development which is determined at the lowest feasible territorial scale (Friedmann and Douglas, 1978; Friedmann, 1984). Territorial units containing as few as 30,000-80,000 people are said to be perfectly viable development entities (Stöhr and Taylor, 1981).

Inherent in development from below are certain basic values (Stöhr and Taylor, 1981):

First, it is a development determined from within by the people of that society themselves, based on their own resources [...] Each strategy is therefore unique to the society in which it evolves. Secondly, it is egalitarian and self-reliant in nature, emphasizing the meeting of the basic needs of all members of society. It is therefore communalist in nature [...] It involves selective growth, distribution, self-reliance, employment creation, and, above all, respects to human dignity. It is, at one and the same time, a new development strategy and a new development ideology. (p.454)

The objective of this development strategy is not to increase output (GDP) or employment per se, but to initiate a process of integral resource *mobilization in peripheral areas* and establish an ecological and *intraregionally-oriented production system* (Hahne, 1986).

The economic strategy of the self-reliant development paradigm has not been given by its exponents the prominence it deserves; it has been relegated, as we shall see later, to a second plane once the immediate programmatic objective —a shift of decision-making powers from today's mainly functional or vertical units to horizontal ones at various levels—, was achieved. Theory has concentrated on what is considered a strict precondition for all else: decentralization of decision-making power (Hebbert, 1984). Nevertheless, the economic aspects of political decentralization have received some attention. Curbelo, in his work 'Economic Restructuring

and Development Planning in a Stagnant Regional Economy: The Case of Andalucía', set up basic economic policy guidelines for an endogenous development. According to him, 'an endogenous strategy of development must be understood as the planned intervention of the regional *government* of an underdeveloped region in the constitution of an economic base that relies mainly, not only, on local initiatives and resources, but also on the eventual dynamism of the regional demand and the satisfaction of the perceived regional needs' (Curbelo, 1987a, p.78).

Ideally, the labour force would act as a productive factor as well as an object of public policy since its productive employment should provide the main source of regional demand. The production of wage goods and services, argues Curbelo, is comparatively more labour intensive than the production of capital or luxury goods. Meanwhile, such production would be relatively protected from interregional competition by tastes, spatial frictions, generalized technology, etc. Owing to the fact that the consumption of wage goods and services represents a substantial proportion of the total consumption of workers, income distribution would operate in their favour. Meanwhile, increases in their production would require further expansion of employment. Furthermore, their relatively high linkages with other regional economic activities would make the production of wage goods and services a suitable way to begin a process of self-reinforcing economic growth (a 'virtuous' circle) that is structurally more equilibrating than the extroverted strategies. According to the author, this strategy will eventually allow the regional economy to be able to compete in the international arena with the certainty that openness to the international economy does not mean social and economic disarticulation.

This process of self-sustained economic growth requires at least two conditions: first, an effective intensification and diversification of the local economic base, which at the same time strictly implies a significant and sustained increase of productive internal accumulation, and, therefore, of capital investments on the local economic base (Mattos de, 1990); and second, the protection of the local economy and local markets. Only by protecting the local economy against external competition and penetration could a local manufacturing base be created. Even so, the chances of success of a self-reliant strategy of development are considerably limited (Becker, 1985; Nikolinakos, 1985).

Nonetheless, the proponents of the new approach believe in the feasibility of self-reliant regional development and suggest two types of measures: decentralization of decision-making power and selective spatial closure at different levels, from the locality to the national territory. The devolution of political and economic powers to

lower tiers of government is supposed to bring not only radical socio-political changes, such as higher democracy in social processes, increased popular participation, reduction of social injustice, self-realization and so forth, but also, and more importantly, local economic development (Mattos de, 1990). Decentralization is seen as the necessary condition for local economic development mainly for two reasons: first, it is the only source capable of mobilizing the necessary indigenous natural, human and institutional resources for initiating a process of internal capital accumulation; and second, it is the only way of controlling today's widely uncontrolled economic, social and political functional integration (Stöhr and Tödtling, 1977). Only by devolving decision-making powers at various spatial scales may functionally organized (vertical) units be controlled by territorially organized (horizontal) ones. Only a strategy of 'territorial integrity' that entails the devolution of power to territorial communities can regulate backwash effects and reverse the process of disruption of regional economic circuits caused by functional integration and state intervention (Stöhr and Tödtling, 1977; Friedmann and Weaver, 1979; Weaver, 1984). As Friedmann suggests (1984), political community makes sense only insofar as it remains free from central government interference. The 'state' has become in fact, under the self-reliant approach, one of the most serious limiting factors for local/regional growth and development.

'Selective spatial closure' is the other prerequisite for local development. According to Stöhr and Tödtling (1977, p.158), 'satisfactory solutions of existing problems at intermediate and small social scales will be possible only if, along with the presently dominating strategies for system-wide spatial integration (and regional openness), explicit instruments for selective spatial closure at various scales are applied'. This requires the devolution of some of the decision-making powers which have become vested in functionally organized (vertical) units back to territorially organized (horizontal) units at different spatial scales. Ideally, the scale of the territorial decision-making level should be, according to the authors, 'the one within which a maximum of the repercussions of external effects of the respective decision can be internalized' (Stöhr and Tödtling, 1977, p.158). This means to short-circuit decision-making scales with spatial impact to the maximum degree possible. In case of doubt, the lower level should be given preference. Furthermore, if small scale (usually territorially-defined) conditions and comforts are heavily influenced and often disrupted by large scale functional processes, then national and international policies should provide for defence mechanisms by which small scale groups are enabled to fend-off consequences of large scale functional processes which they consider undesirable for their own living conditions. Such defence mechanisms

would increase the resilience of territorial systems to external shocks or provide the possibility to control regionally the consequences in order to maintain the functioning of integrated territorial systems (Stöhr and Tödtling, 1977, p.158).

The economic strategy of the bottom-up approach does not resist a consistent analysis (Blaikie, 1981; Gore, 1984; Hebbert, 1982, 1984; Becker, 1985; Mattos de, 1990; Nikolinakos, 1985). In spite of the emphasis on the economic aspects of the strategy, and its direct allusion to dependency theory and analysis, the strategy is in fact marginal to development economics (Bronfenbrenner, 1988; Ranis, 1988; Todaro, 1989). As Gore (1984) points out, it is in fact rooted *in an evaluation of regional policies* in both developing and developed countries; and in its 'European and American versions' the strategy was, in fact, transformed from functional and macro-economic planning to 'territorial' and regional planning. The innovation of the self-reliant regional development paradigm is, apart from its dependentist discourse, the substitution of a spatial fetishism (Gore, 1984; Lo & Salih, 1981) for the institutional one (Mattos de, 1990).

Accordingly, government reform, particularly the shift in the territorial distribution of powers from the national to sub-national levels, has become the fundamental objective for this school. Decentralization is a precondition for all else; only when this has been achieved, and the territorial government is equipped with powers and resources, can government decision makers proceed to pursue a strategy which is essentially the reversal of the growth pole doctrine (Hebbert, 1984).

In the end, the only firm proposal is decentralization and legitimation of the new regional governments, the biggest beneficiaries of the proposed redistribution of powers (Hebbert, 1984; Hahne, 1986; Quévit, 1986). Apart from that, as Stöhr and Taylor point out (1981, p.459), '[In pragmatic terms], development from below proponents will probably have to be satisfied with *modifications of existing practice to greater or lesser degrees*' (emphasis added). 'Development from below has the ideological underpinnings to give spatial planning in developing nations a new direction [...]. But the mechanisms for practical implementation at larger scale still have to be developed and tested under conditions of interacting national and international political systems' (Stöhr and Taylor, 1981, p. 461). In practical terms, therefore, the selective self-reliance regional strategy of development will be reduced first, to decentralization (the first condition for economic development), and thereafter to a shift on the evaluation criteria of regional programmes and projects which would consists of (Stöhr, 1983. pp.11-12):

- special incentives and support to the development and implementation of development projects serving the basic needs of broad regional population strata, particularly the poor ones;
- a shift in priority from large export-base projects (unlikely, anyway, to be feasible in slow growth periods) to the modernization and adaptation of existing regional enterprises as well as to local and regional service sectors;
- a change in emphasis of project evaluation criteria from the capital/output ratio to the expected increase in regional value added and other regional multipliers;
- the mobilization of regional resources in a wider sense, considering not only the number of new jobs created but also their qualitative structure, combined with the mobilization of regional entrepreneurial, institutional and natural resources. This, it is argued, would, on the one hand, contribute to the increase of aggregate (national) resources, and at the same time, reduce the back-wash effects on core regions which often accompany inputs of external resources;
- emphasis on the formulation of intersectoral development projects between industry, agriculture, tourism, etc.. In view of the usually narrow sectoral basis of peripheral areas, it is argued, it seems important not to orient policy instruments primarily to narrowly specialized projects. Such development on 'more than one leg' should increase the diversity and stability of employment opportunities, in part by restoring regional economic circuits which in many cases have been disrupted by recent large-scale functional economic integration;
- emphasis on the improvement of the intra-regional transport and communications system of and between peripheral areas in order to increase their competitiveness compared to other regions, through extension and better integration of the regional labour market, thereby increasing magnitude and diversity of labour supply available at particular locations; and extension of the range of intra-regional input-output relations;
- special policy instruments for the promotion of projects which —apart from other criteria mentioned— mobilize the region's sources of energy and improve its environmental quality;
- special policy instruments for promotion of the transfer of related research, development and decision-making functions, in order to broaden the qualitative structure of new employment offered and to reduce external dependence, when branch plants of extra-regional enterprises are established in less developed areas;
- promotion of technological innovation in peripheral areas to emphasize product innovation (orientation of existing resources towards newly-emerging demand) rather than primarily process innovation, i.e. rationalization of existing processes, usually by the substitution of regional labour by extra-regional capital.

The strategy defined as such seems not to deserve the criticisms of the naive and utopian which it has sometimes received (Hebbert, 1984; Nikolinakos, 1985). Quite the opposite, it might be an appropriate strategy of regional development at present, 'when aggregate economic growth is slow and when the amount of public funds available for the reduction of interregional disparities has declined' (Stöhr, 1983, p.11). The strategy *in principle* does not question any fundamental principle of the market mechanism; the measures suggested (political decentralization and a shift on the evaluation criteria of regional programmes), might be realized without overcoming major obstacles. This might be particularly so when selective spatial closure in the areas suggested for the implementation of the self-reliant strategy is more a reality than a goal; when those areas are already excluded from the main international and even national economic circuits and when the majority of their population live engaged in mainly non-capitalist economic activities, i.e., informal sector or subsistence economy.

This self-reliant strategy of regional development might even be considered an efficient strategy since it delegates the responsibility of local development from the State to the localities and regions themselves while it sets the basis, under particularly favourable macro-economic and political conditions, for a *better* integration of the regional economy into the international economic system, following a strategy described by Stöhr and Taylor as '*recouler pour mieux sauter*' (Stöhr and Taylor, 1981, p.460). The self-reliant strategy could be seen as the first stage in a process of local economic development that, following the Coffey and Polése stages model of local development (Coffey and Polése, 1984), would consist of: 1) the emergence of local entrepreneurship; 2) the 'take off' of local enterprises; 3) the expansion of these enterprises beyond the local region; and 4) the achievement of a regional economic structure that is based upon local initiatives and locally created comparative advantages. In essence, a particularly useful strategy when allowed from above (macro-economic and national and international political conditions), and demanded from below.

The Implementation of the Strategy

Knowledge about examples of self-reliant strategies of regional development in peripheral areas is not abundant. There is a limited survey of attempts toward such model of development in the Third World (Stöhr and Taylor, 1981), and some evaluations and prospect analyses for European countries (Bassand et al., 1986; Oström, 1983).

The implementation of the self-reliant strategy of development in Third World countries has been very limited. A pure self-reliant strategy has never been implemented or even suggested in these countries. As the authors of the survey (Stöhr and Taylor, 1981) suggest, there have been attempts which *approached* the concept of development from below or *contained important elements* of an agropolitan or basic needs strategy. However, in most of the cases, the growth-pole concept was still alive and the bottom-up attempts were marginal in spatial and economic terms. On the other hand, experiences generally occurred under rather restricted economic and political circumstances, being frequently subjected to periodic backlogs (Sutton, 1981; Penouil, 1981).

Despite the disappointing results, the authors of the survey reject an overall evaluation of the empirical observations of the functioning of the self-reliant strategy in Third World countries. According to them, this does not mean that the strategy is wrong but simply that it has never been tried for a sufficiently long period (Stöhr and Taylor, 1981, p. 473).

The success of the self-reliant strategy in Europe has not been greater than in Third World countries. In 1981 and 1983 two International Meetings were held, one in Lulea (Sweden) and the other in Sigriswil (Switzerland), with the aim of assessing the possibilities for, and examining experiences of, self-reliant development strategies in Europe. The conclusions from those conferences (Bassand, et. al. 1986, and Seers & Oström, 1983) can be summarized as follows:

- the self-reliant strategy of development has not been considered as a real alternative of development for peripheral regions in most of the European countries. The implementation of the strategy has been minimal, although the goal setting has in some cases —such as Finland, Sweden or North Ireland (Eskelinen, 1983; Oström, 1983; Teague, 1989)—, and under certain conditions, taken a clear orientation in the development process and the development policy of the region;
- when the strategy was implemented, its scope was very limited in spatial as well as in economic terms (Hahne, 1986; Bryden, 1986; Friedmann, 1986; Oström, 1983; Eskelinen, 1983). In spatial terms, it was reduced to 'small pockets' sometimes assisted by scientists but seldom supported by unions, authorities or politicians (Eskelinen, 1983). In economic terms, the strategy occurred in terms of marginal activities. The self-reliant development was tolerated only in so far as it did not begin to threaten the balance of spatial power (Bryden, 1986). In the Federal Republic of Germany these 'regionally adapted activities' —develop-

ment based on regional resources and abilities—, either conformed (energy supply for instance) or were complementary (social services) to the goal of increasing the efficiency of the economy as a whole, or they were settled in 'niches where the dominant values were not affected, i.e. ecological farming' (Hahne, 1986, p. 101). Such parallel strategy, however, will never achieve, according to most of the authors, regional economic self-reliance.

The reasons given for explaining such lack of European support to the alternative regional development strategy lie between those who stress subjective factors, particularly mistrust and lack of consideration by policy-makers, planners and politicians (Stiens, 1986; Lesage, 1983; Brugger, 1986), and those to whom more structural reasons are the determinant. For instance, the role of the country/region in the international division of labour and the advantages foreseen for the country as a result of present restructuring economic processes were some of the reasons suggested in the case of Finland (Eskelinen, 1983); for others, the limited economic potential of the region was the most important reason (Bryden, 1986; Eskelinen, 1983; Friedmann, 1986). In all the cases, however, one aspect has been particularly emphasized: the importance of political decentralization and devolution of decision-making powers.

Considered as a precondition for the implementation of a self-reliant strategy at the regional level, the prospects for future implementation and the evaluations of existing regional policies have been based in all the cases on the analysis of the decentralization processes in the respective countries. Pessimistic conclusions are drawn when the difficulty (Valente de Oliveira, 1983; Lesage, 1983, referring to Portugal and France) or the impossibility of the decentralization process under present economic, political and social circumstances (Stiens, 1986, for Germany) is assessed. In most of the cases, this aspect has been considered as the main obstacle for the implementation and further expansion of the self-reliant strategy.

The Spanish case, however, seems to be one exception (Seers and Oström, 1983). The creation of the State of Autonomies has brought the most important programme of devolution of powers undertaken in Europe since the establishment of the Federal Republic of Germany (Saenz de Buruaga, 1983). The legislative capacities and financial autonomy given to the Autonomous Communities allow them to adopt and develop policy options wholly different from one another and from those of the central government (Tamames and Clegg, 1984). The possibilities for implementing an alternative strategy of regional development seem, therefore, to be ample (Tamames and Clegg, 1984; Vázquez-Barquero, 1987).

The Endogenous Potential Development Strategy

The approach of developing endogenous potential evolved in Europe after the second oil crisis, post-1979. Within the framework of the so-called 'non-quota' section of the European Regional Development Fund, several specific measures were established for the reconverting of areas of industrial decline (shipbuilding, iron and steel, textile and clothing and fishing areas). It seemed clear that in a protracted period of recession or low growth there was little sense in regional policy relying on the traditional strategy of creating infrastructure and attracting one or more branch plants to a region, particularly to those regions with such obsolete economic and industrial structures. The alternative strategy was, thus, to mobilize factors already available in the region, i.e., endogenous potential.

The potential of the approach was soon realized, particularly by those (within Member Countries and the own Commission) who were most opposed to traditional redistributive approaches to regional policy (Hahne, 1986). With the revision of the ERDF on 1 January 1985, the strategy of endogenous potential was transferred from the 'non-quota' section to the general Fund section in order to allow for a broader application. Since then, its significance within European regional policy has progressively increased.

According to some authors (Camagni and Capellin, 1985; Capellin, 1988), regional policy has been traditionally justified on the basis of two different arguments: the equity principle and the economic compensation principle. Under the equity principle, regional policy is justified since the existence of wide disparities in regional well-being contrasts with the solidarity that should exist within a politically integrated area and, therefore, these disparities may endanger the development of economic and political integration. This redistributive approach may be politically desirable, it is argued, but it is not efficient. The second argument in favour of regional policy, the economic compensation principle, is justified because the progress of economic integration is believed to have negative effects on particular regions. Market forces inevitably determine the existence, and often also the intensification, of the spatial concentration of resources; moreover, industrial and macro-economic policies may discriminate against the economies of less developed regions. This approach, however, is inefficient, difficult to implement, and it does not even guarantee political stability.

There is, nonetheless, a third argument in favour of regional policy, which consists of an economic *efficiency principle*. According to the proponents of this approach, the

economic efficiency principle, by aiming at the full and efficient use of regional resources, enhances the growth of some areas while not hampering that of other areas. Under this approach, disparities in living standards are not the main index of the regional problem, but instead, the disequilibrium and disproportion in the use of local resources among the different regions. The effectiveness of a regional policy depends more on its capacity to maximize the regional product, increasing employment and regional productivity, than on the reduction of disparities in living standards among regions (Capellin, 1988; Vázquez-Barquero, 1990).

This approach rejects the idea, traditionally defended by redistributive regional policy, that economic development in an integrated area is a 'zero sum game', where the gains exactly equal the losses of the various areas. Contrarily, regional policy under a redistributive and complementary approach, it is argued, may actually threaten economic growth and expansion at a larger scale. The aim of the endogenous strategy is to help the structural adjustment of the European economy at its different scales (local, regional, national and Community), in order to increase global economic growth, productivity, efficiency and competitiveness. It is defined as a 'flexible strategy for economic restructuring' (Vázquez-Barquero, 1990), and its objective is to encourage and guide such a process from the bottom to the top. As Vázquez-Barquero points out, 'regional policy should help the market to work more efficiently in the peripheral regions of Europe' (Vázquez-Barquero, 1990, p.50).

The endogenous potentiality approach is claimed to be an efficient regional policy. The traditional dilemma between efficiency and equity has disappeared, it is argued, since the endogenous development strategy has been able to utilize development as an opportunity to enhance structural change (Camagni & Rabelloti, 1990). Regional policy can not be considered, therefore, as a subsidiary policy, but rather a structural policy for the reconverting of European problem regions which comprise at present much more diverse types of areas and a large proportion of the European territory and population.

The distinction between regional policy and other economic policies such as R&D policy, SME's, training and education, or industrial policy became a useless distinction. European regional policy, it is argued, should allow a better link between the Community's objectives for structural development or conversion of regions and the objectives of other Community policies (industrial restructuring, technological development, environmental and energy policies). Present economic circumstances call for a convergence of economic policies: 'common policies aimed at structural change and regional development' (Report about the Economic and

Monetary Union quoted by Rambow, 1989, p. 10). These policies, 'should enhance the process of resource allocation in those economic sectors and geographical areas where the working of market forces needed to be reinforced or complemented' (Report about the Economic and Monetary Union quoted by Rambow, 1989, p. 10). Therefore, regional policy under current worldwide economic structural change is asked to play a fundamental role: it should enhance the structural change of the regional/local economies, accelerate their technological development in order to maintain their international competitiveness, provide socially acceptable solutions to arising labour market problems, and, at the same time, appropriately consider environmental questions (Hesse & Schlieper, 1988). Finally, all this has to be done from the bottom through a decentralized economic policy (supply-led and micro-economic oriented). Under the potentiality approach, each local and regional authority should have to address its own economic, technological, and employment policies.

In coherence with this trend towards the involvement of lower tiers of government in the process of economic restructuring, the endogenous approach emphasizes the micro-local character of the development process (Sweeney, 1988; Camagni & Capellin, 1985; Capellin, 1988). The growth process, it is argued, may be described to a considerable extent as endogenous, since it is determined by the capability of local firms to fully and efficiently employ the resources which are available locally. Traditional theories of regional disparities have emphasized the role of the interregional flow of resources, such as capital and labour and of the location or relocation, decisions by interregional firms; however, varying rates of growth in employment, it is argued, are the result of differing birth, death and growth rates among existing firms rather than the effect of interregional firm movements.

The crucial process seems to be less the choice of the best location among the various areas by single economic activities, and more the adoption of the best feasible economic activities by the single areas. In fact, regional resources are rather spatially fixed and some basic characteristics of single regional environments such as the quality of the labour force, the level of technical and management know-how and the social and institutional structures are rather stable. Therefore, regional growth as well as sectoral location are largely determined by the endowment and productivity of the stock of regional resources rather than by the external flow of resources (Camagni and Capellin, 1985). Regional policy, it is argued, should remove the barriers which hamper the growth of particular economic activities in the different regions, not only in order to avoid a waste of resources —characteristic

of the redistributive and compensatory approaches—, but also to allow greater economic efficiency for the overall Community.

The concept of regional potential used by the endogenous approach is, however, quite different from that of classic theory. Traditionally, the concept of endogenous regional potential (factor endowment) was equated with locational characteristics of the areas, natural comparative advantages, mineral resources and so forth. The endogenous potential approach, however, does not emphasize this type of regional comparative advantages, but rather those called man-made comparative advantages which refer to the socio-cultural and behavioural attributes of the local population related to the development process (Coffey and Polése, 1984). The principal scarce factor of production is not the stock of capital or that of natural resources, as has been traditionally emphasized, but rather the stock of knowledge and the propensity of the local population to initiate business enterprises and to innovate. Regional policy therefore should be oriented towards identifying and analysing the strengths and weaknesses of the regions which are claimed to lie in factors such as the native entrepreneurial capability, the quality and skills of the labour force, the number and type of existing SME's, their likely capacity to innovate, management abilities, training facilities, sources of technical expertise, nature and extent of business development services, financial facilities, or national and international network opportunities (Mulcahy, 1990).

Regional development is, according to the proponents of endogenous development, the result of the intervention of many atomistic and autonomous local producers. It depends ultimately, on the individual local entrepreneurs and on their ability to specialize (by innovating in products and processes) and to become leaders in particular market segments. Regional economic specialization is a process of *natural selection* (Capellin, 1988); firms which manage to overcome the main 'barriers to entry' will succeed and the rest will die. Regional sectoral specialization will be the result of the specialization strategies of particular local firms.

Contrary to the self-reliant model suggested by the neo-regionalists, which recommends a strategy of selective spatial closure in order to control the negative consequences of large scale functional integration and to allow for an integrated regional development—an inward-looking and defensive strategy (Brugger, 1990)—, the proponents of the endogenous potentiality approach argue for an outward-oriented strategy and for the full openness and integration of local economies into international markets. Its goal is an 'offensive policy regarding relations with the rest of the world' (Brugger, 1990, p. 162).

Within the strictest neo-classical framework, it is supposed that free international trade will stimulate economic growth, will allow an efficient use of each region's, nation's and Community's resource endowments, will promote greater European and domestic equality; and will help regions to achieve development. As some authors have suggested (Rambow, 1989; Capellin, 1990), the European internal market would be a benefit to all member states alike and it might even have especially positive effects for lesser developed regions in the EC. Furthermore, it is argued that economic integration and internationalization may be particularly beneficial for peripheral regions and for SMEs. This is so because the process of economic internationalization is supposed to bring not only increased competitiveness but also growing collaboration between firms located in different countries. Accordingly, the Internal Market will probably allow technological diffusion, easier access to relevant information (other competitors and their strategies, markets, consumer tastes), and the end of oligopoly strategies; all of which may help SME's specialization, the diversification of local economies and their economic expansion.

In coherence with traditional free trade theory, the endogenous strategy of development assumes that the technology of production is freely available to all regions (factor endowment model) and that the spread of such technology works to the benefit of all; within regions, factors of production are perfectly mobile between different production activities. The strategy also assumes that the national and regional governments should play a minimum role in international economic relations, so trade would be strictly carried out among many atomistic and anonymous producers seeking to minimize costs and maximize profits. International prices would be set by the forces of supply and demand, and all economies readily able to adjust to changes in the international prices with a minimum of dislocation.

The model might be, nonetheless, highly interventionist in the sense that the process of economic restructuring, which is based on the shift from traditional to new activities, from less productive to more productive techniques, from old to new and innovative firms, can be guided; and it is certainly guided from the top (the European Community and the national governments) although it is insistently said to be a bottom-up approach. Strictly speaking, it is development from below because local economies have to rely on their own resources (local entrepreneurship and local capital) for their economic expansion and restructuring, and because it requires local authorities for its *efficient implementation and management*. It is not, however, development set up from within (Hahne, 1986) nor an inward-looking strategy.

Parallel to the *spontaneous* trend towards greater involvement of lower tiers of government, the endogenous approach to development argues also for decentralization and questions central planning and top-down (state) intervention. Contrary to the neo-regionalist school, which emphasizes the political aspects of decentralization, the proponents of the endogenous approach focus on the economic advantages of this process. Decentralization is suggested as a way of reducing public control and of eliminating the subsequent distortions in the market mechanism. Against central governments, local authorities are claimed to play a central role in the economic rejuvenation and reconversion of regions; the process of economic reallocation should be managed mainly by regional institutions (Camagni and Capellin, 1985). As Vázquez-Barquero points out, 'Under a problem of such magnitude as the restructuring of the European (and international) economic system, the most efficacious answer has been given by local and regional communities' (Vázquez-Barquero, 1990, p.60).

Several arguments have been given in support of such a view. Firstly, substantial internal differences exist within problem areas; therefore, centralized economic policies can not be diverse or comprehensive enough to deal with the specific configuration of regional problems. Secondly, as the objective of regional policy is to mobilize the indigenous potential and since development is understood as a micro-economic process consisting of the creation of an adequate environment for innovation and the stimulation of local entrepreneurship, this consequently can be more effectively done from the bottom. Local authorities, it is argued, will act more efficiently since they are, by definition, nearer to local entrepreneurs; they have a better understanding of conditions, problems, potentials and necessities; they have the possibility of collaborating actively and innovatively with the private sector, under the common objective of promoting and developing the locality (Ewers, 1990).

Thirdly, since the strategy of endogenous development is argued to be not merely the transfer of financial resources, but also a strategy of *real transfers* (Kern, 1990), which implies the direct provision of services such as information, advice, transfer of knowledge, transfer of personnel and so forth, this is best done by both, local authorities and the private sector. Financial transfers and the provision of basic economic infrastructure (e.g. transport infrastructure) are basically not privatizable since they are by definition government expenditures. Real transfers, however, may well be privately offered. This gives the strategy of endogenous potential the possibility of acting more efficiently and collaborating more closely with the private sector; for instance, by collaborating with the private sector, local authorities may increase their resources (input of private sector capital) for supporting local

initiatives, and this is particularly important when most of them are experiencing budget constraints (Nuttal, 1986).

Fourthly, the bottom-up approach is also more efficient because, as Kern has pointed out, by concentrating on real transfers with the subsequent possibility of offering them privately, such policy can bring the competition between regions back to its *natural* basis. It utilizes the existing, and therefore *natural*, resources of the region and tries to transfer them into comparative advantages to the other regions (Kern, 1990, p. 195). Therefore, the distortions caused by traditional government redistribution policies radically disappear.

Finally, this decentralized and bottom-up approach also gives more dynamism and efficiency to the system as it promotes competition among different public institutions and public or semi-public business-promotion agencies (Ewers, 1990; Capellin, 1988). Since development is not a zero-sum game, competition between them is guaranteed. Nonetheless, it is that force, competition, that makes the system work more efficiently as it stimulates the full mobilization of the endogenous resources from the locality to the nation, through the region.

Characteristics of the strategy of endogenous development

SME's Strategy

The endogenous potential strategy is a strategy directed towards SME's. Small business assistance policies have been pursued in advanced industrial countries for largely social and political reasons; recently, however, as advanced countries have experienced rapidly rising unemployment, recession and major structural economic changes, including the decline of large older manufacturing firms and the absence of mobile industry to buttress distressed areas, there has been increased interest and activity with regard to small business as an instrument of national, regional and local economic development. Small business development has also been integrated as a component of the strategy of endogenous economic development (Wadley, 1986).

SMEs are claimed to be major contributors to employment and job creation, to innovation, and particularly, to structural change. Whereas the contribution of SMEs to job generation and to innovation has been sometimes questioned (Wadley, 1986), their flexibility and capacity for structural adaptation is generally acknowl-

edged. SMEs are said to play a major role in lubricating the wheels of a dynamic economy (Wadley, 1986). This is done by the introduction of competition, which allows structural change to proceed more atomistically than if just large enterprises were involved; also, SMEs support large companies through subcontracting and so facilitate a division of labour in the economy. SMEs also, under difficult circumstances, have shown a remarkable flexibility in comparison with large firms; they have adapted more easily to increasing competitiveness, demand-shifts, technological innovations and market changes.

A regional economy based on a diversified tissue of SMEs, it is argued, seems to be less vulnerable, more autonomous, more dynamic and flexible. Although SMEs can not be considered as a source of major innovation, they may play, nonetheless, an important role in speeding up the development of products with industrial applications from discoveries or new concepts coming from large industrial, governmental or university laboratories, all of which make a large contribution to the technological upgrading of national and European economies. In conclusion, under present economic circumstances, the structural reconversion of local economies is best done by local entrepreneurs and in an *atomistic way* through SMEs (Wadley, 1988).

Innovation-oriented regional policy

The preoccupation for innovation and technological development arises from the recognition that, nowadays, in order to survive in a competitive world, there is no choice other than to increase regional productivity, innovation and technological development. These are said to be *condition sine qua non* for regional economic development (Camagni and Rabellotti, 1990). Regional policies, it is argued, should help the economic restructuring of the regions by stimulating local firms continuously to adapt to technological change. The objective is not so much to become technological leaders and to produce top-level technology (an unrealistic objective for distressed and backward regions anyway), but rather to increase regional productivity, efficiency and competitiveness by extending and diffusing the use of new technologies within the internal sector.

The concept of innovation under the endogenous approach is, however, a rather ample one. Innovation is sometimes understood as an extension of knowledge beyond that which already exists; this refers to most advanced technological innovations, and to those processes in which scientific and technological research goes hand-in-hand. Other times, it is understood as any change that does not involve advanced scientific knowledge, but simply requires good technological know-how

and a keen appreciation of clients' needs, and whose development consists of trials, measurements, tests, or a good method of value analyses (OECD, 1987). Innovation is also interpreted as any change with respect to the previous allocation of resources leading towards an increase in regional productivity; this affects technology as well as new activities or sectors (Camagni and Capellin, 1985, p. 16). In this respect, a shift of regional activities from less-productive sectors (e.g. agriculture or some type of service activity), to more productive ones (i.e. industrial activities), should be considered as a process of regional innovation. Furthermore, innovation, it is sometimes argued, 'must be understood in a wide sense, ranging from product and process innovation to management and organization' (Rico, 1988, p. 143). It does not only require research and financing but, principally, a favourable general environment. It is more a sociological phenomenon than a technological one (Sweeney, 1990).

The emphasis of the policy on one or another type of innovation depends on many different factors, such as the level of development of the region, its structural characteristics (traditional industrial region, backward area, or semi-industrialized region), the technological and entrepreneurial development of the area, the more or less comprehensive approach of the policy towards the technological upgrading of the area, the more or less interventionist character of the policy, or its emphasis on the supply or on the demand side of the technology policy. According to that, policy guidelines and the instruments used in its implementation will vary widely: from emphasis on the first stages of the innovation process (promotion of local entrepreneurship and detection of innovative entrepreneurs) characteristic of backward areas, to the enhancement of R&D and its industrial application more frequently found in central areas and agglomerations ('Berlin Model' of innovation, Allesch, 1990), or from the creation of centres for technology transfer and technology parks, to education and vocational training programmes, or to the creation of sector-based research institutes for local SMEs.

Nonetheless, in the basis of the endogenous potential approach lies the idea of innovation as a diffusion process. It sees innovation according to technology dissemination models, and therefore focuses on the modalities of technology transfer and its perception by the various regions. Accordingly, the concept of innovation that has received more attention within the approach has been that of process and product innovation (Camagni and Capellin, 1985). The technological upgrading of regional economies, it is argued, occurs mainly by innovating existing production processes or by developing new products —via imitation, diversification

or bifurcation (traditional products and high-technology ones). The most successful endogenous development experiences were always the result of innovative changes on the existing process and products. The success was based on the ability of local economies continuously to adapt their resources to the most modern and productive activities: from traditional sectors to modern ones, from old to new firms, and from traditional products to those that are in high international demand.

Innovation, however, requires the introduction and extension of new technologies, and this raises the question about which technology is the appropriate. Should indigenous, soft, intermediate technologies be the appropriate as the proponents of the self-reliant development suggested, or, on the contrary, should the best and newest technologies be used in the process of regional technological upgrading? The proponents of the endogenous approach advocate 'for a more advanced conception of appropriate technologies, calling for an appropriate design and adaptation of best technologies to the production needs and vocations industrielles of the individual areas, and relying on the flexibility and pervasiveness characteristic of microelectronics and biotechnologies' (Camagni and Rabellotti, 1990, p. 244). The argument is that intermediate technology development may be useful for coping with severe unemployment problems; this, however, is suboptimal as a catching-up strategy; in the medium and long-run, the productivity gains it allows are not sufficient for standing up to international competition on advanced markets. Consequently, the appropriate strategy for development of least-favoured regions within an advanced area (therefore benefiting from important externalities with respect to Third World countries), is that of forcing leading-edge technology practices into local specialization sectors. A strategy superior to 'the intermediate technology, pauperistic and mainly assistential alternative approach' (Camagni and Rabellotti, 1990, p.245).

The importance of the 'networks'

Particularly important in the strategy of endogenous development is the concept of *network* and *network economies*. Network economies refer to the 'scale economies', which SME's can obtain through integration into telecommunication networks. The development of regional/local networks is a critical factor for the success of endogenous development for several reasons. First, endogenous development is development based on SMEs. Second, it is an outward-looking and offensive development regarding relations with the rest of the world (Brugger, 1990). Third, it is export-oriented. And finally, it is suggested, among others, for peripheral areas. These conditions make the development of regional networks a necessary prerequisite in the move towards competitive endogenous development.

The creation of networks is essential for local SMEs; it is the only possibility in which SME's can reach the necessary scale economies in order to gain access to international markets and to compete against large scale production units. Network economies allow quicker and easier diffusion of products and process innovations, collaboration between firms for research and development activities, the sharing of marketing facilities, the identification of market niches, etc. Network economies arise from the input side as well as from the output side. From the input side, regional networks give local SMEs access to information (about competitors, possible collaborative firms, available technology, new products, etc.), new technologies, and different common services such as marketing facilities, computing and technological advisory, etc.; from the output-side, the existence of such networks allow local firms to identify market niches and to collaborate with other firms in commercial activities. The advantage of network economies lies in the fact that as the network becomes larger by the integration of new firms, its usefulness and efficiency increases. Furthermore, it is argued (Stöhr, 1990b), the ability of individual entrepreneurs to define new markets, introduce innovations, overcome barriers to *entry*, and gain access to capital depends largely on those support structures available in their vicinity. Consequently, local authorities should be active in the creation of such networks, and develop the necessary infrastructure to allow them to take place.

Particularly active in this respect has been the European Community, which has developed several initiatives such as the creation of the European Business Innovation Centre Network, the European SMEs annual meeting (Europartenariat), or the establishment of programmes like STAR or STRIDE for the technological development of SMEs in peripheral areas. In fact, numerous local authorities throughout Europe have relied on the EEC for the development of such networks and also, for the implementation of the endogenous strategy as a whole (Dyson, 1988).

Education and vocational training

It has already been pointed out that the technological upgrading of local economies is, at present a necessary condition not only for succeeding, but for surviving. Nonetheless, the expansion, diffusion, introduction, and use of new technologies has frequently found a major obstacle: i.e. labour availability. Curiously, it has been found in some cases that the failure of local economies to adapt to the new economic and technological circumstances has not been due to lack of accessibility to information or to new technologies, or to lack of receptiveness towards the new

technologies. Rather, it has been due, to the lack of a labour force ready to adapt to, and to be able to use these new technologies (Gaudemar, 1990). Consequently, the development of local and regional networks, and the creation of environments receptive to innovation seem not to be sufficient conditions for the technological upgrading of the local economies. The quality of the labour force is the most important comparative advantage of local and regional economies, but it may be also the main obstacle. Broad-based vocational education and the upgrading of the technological level of the local population, the modernization and creation of local universities, higher education institutions and research centres, and the creation of technology transfer agencies for linking the scientific and technological spheres with the productive ones, are some of the major components of the strategy of endogenous development.

Agglomeration economies

As opposed to the bottom-up approach to development, which emphasizes the role of rural and medium-sized urban areas, the proponents of the endogenous strategy stress the importance of urban agglomerations. The role of cities is particularly emphasized in those old industrial regions and backward areas where the innovation dynamic is considerably poor; their importance is, however, less significant when the policy is addressed to the so-called industrializing regions like the Mediterranean Spanish regions or those of the Third Italy, the development of which has been mainly rooted in small and medium-sized cities.

It is generally argued that metropolitan areas are the main centres for the articulation and diffusion of economic growth; the highest economic potentials of the regions are found fundamentally in urban areas. In fact, development takes place first in the main urban centres and, therefore, public policy should take advantage of these spontaneous stimuli and support them. Furthermore, the most dynamic economic sectors (those that will allow the reconversion and restructuring of the regional economies) demand an urban location as the required infrastructure (technological infrastructures, high-transport corridors, etc.), research institutions and universities, and qualified labour force can only be found there. Urban agglomerations present advantages, such as markets, suppliers, information, infrastructural endowment, capital, conditions for synergy or instability, 'incubation' facilities for high-tech small and medium-sized enterprises, which do not exist in rural areas (Malecki, 1990). Accordingly, it is important to formulate urban policies within the regions and to redress development funds toward urban areas

in order to optimize the use of those factors of growth which only exist in urban agglomerations (Camagni, et.al., 1991; Landaburu, 1990).

Sectoral priorities

The process of economic restructuring and technological change is assumed to bring radical shifts on traditional productions. Environmental protection is suggested as an appropriate sectoral policy for the reconverting of local economies, which may specialize now on activities technologically more advanced such as alternative energies (Landaburu, 1990).

The clearest sectoral option, however, of the endogenous strategy is the producer service sector. Contrary to traditional regional policies, which emphasized the role of the industrial sector in regional growth, the endogenous approach considers the producer service sector as a strategic element for the development of a region (Cuadrado Roura & Del Río, 1989; Serradell, 1990; Pascual i Esteve, 1990; Bade, 1990). This emphasis on the service sector arises from the evidence of the dynamism, in employment and output terms, of the sector in most advanced economies during the last two decades. Accordingly, much emphasis has been put on the role of producer services activities on regional development: it is considered to be a guarantee for local competitiveness and efficiency, a source of economic growth, a basic element for the integration of the regional economy into the international economic system, a necessary condition for attracting foreign industrial enterprises (which have externalized many activities such as marketing, design, research and development) and for allowing technological transfer (via subcontracting or the creation of joint ventures).

Technological change and innovation will never occur and/or diffuse locally, it is argued, if there is not a minimum level of development of the local producer service sector which may evaluate, adapt, integrate and develop such technology into local productive processes. Furthermore, producer services require by definition a direct contact between the supplier and the client. In a context of fierce competitiveness and economic globalization this peculiarity of the service sector as opposed to the industrial one may provide peripheral areas (whose productivity and competitiveness lies far below that of the most advanced areas), with a chance for economic development as a result of the market protection that local businesses may enjoy against their potential competitors, distant from local markets.

The Implementation of the Strategy

Contrary to the self-reliant strategy suggested by the neo-regionalists, experiencing rather limited implementation in Europe, innovation-oriented and outward-looking endogenous development seems to be the new regional development 'paradigm' (Brugger, 1990; Kern, 1990). Different from traditional regional policies as well as the self-reliant approach, the strategy of endogenous development is not a strategy for underdeveloped or backward regions, but a strategy suitable to most local and regional economies. This is so because the main problem to solve now is not that of economic dualization but economic restructuring and technological development at a global scale. Accordingly, the strategy has been implemented in old industrial regions in the United Kingdom, France, Spain and in Federal Republic of Germany (Stöhr, 1990a; Hesse, 1988; Ewers and Allesch, 1990; Musto and Pinkele, 1985), in peripheral and backward areas such as Ireland or Scotland (Sweeney, 1990; Bryden and Scott, 1990), in developing regions like Emilia-Romagna, Italy (Gabriel, 1990) and the Autonomous Community of Valencia, Spain (Vazquez-Barquero, 1990; Rico, 1988), and also in agglomerations which already enjoy remarkable dynamism, such as Berlin (Allesch, 1990) or Milan (Camagni, 1986). As a result of that, the range of policy endeavours and the instruments of implementation of the endogenous strategy have been as diverse as the number of regions which have implemented it, and as wide as their specific regional opportunities and potentials have allowed (Hesse & Schlieper, 1988).

Generally speaking, two factors have affected the character of the policy: first, the political and ideological positions of affected public institutions and agencies; and second, the economic situation —structure and potentials— of the regions. As far as political position is concerned, it conditions the level of intervention of public development agencies: i.e. interventionist vs. market reinforcing. Most local and regional authorities in Europe have stressed the non-interventionist stance. They usually limit themselves to the provision of the required scientific and technological infrastructures and to the creation of the so-called adequate innovation environments. Comprehensive sectoral or technological policies are scarce, and the most common picture is that of a proliferation or even inflation (not always in a coordinated way), of instruments and measures for technological development.

In an opposing position, one of the most remarkable and exceptional interventionist approaches found has been that of the West Midlands County Council (WMCC) and West Midland Enterprise Board (WMEB), (Marshall, 1990). The sector-based

industrial strategy of the WMCC-WMEB, derived from the recognition that neither central government, through its industrial/sectoral policy or through regional policy, nor the market mechanism by itself was going to solve the structural problems of the regional economy. It was believed also that a horizontal strategy which supported the start-up of new business (mainly SMEs) and the development of new sectors like high-tech or producer services sectors could only have marginal results for the economic regeneration of the region. On the contrary, a sensible strategy, it was thought, should be based on a direct public policy intervention on specific firms and sectors in order to restructure them and to allow a continuity in the historical pattern of industrial development of the Midlands, the unique alternative for the region. This strategy, it is argued, is the opposite of a *piecemeal* approach, and it would be a mistake to regard it as a 'purely regional strategy of *self-help*' (Marshall, 1990, p.194).

The second factor which has been suggested as primarily affecting the type of policy implemented, is the economic situation (structure and potentials) of the regions. In this respect, we may distinguish between three basic types of problem region: industrial declining regions, backward or peripheral areas, and *developing* areas or regions with high potential. Generally speaking, the policy response to this differing regional pattern has been twofold, depending on the more or less structural character of the policy: sectoral reconversion and regional economic restructuring. Whereas efforts in the former are directed to enhance radical shifts on previous monosectoral economic structures (agriculture, coal, iron and steel, etc.), the regional economic restructuring strategy puts emphasis on modernization and upgrading, via process or/and product innovation, of the existing sectors and industries.

The so-called old or traditional industrial areas, such as the Ruhr, Saarland, Lorraine, Nord-Pas-de-Calais, the Midlands, Yorkshire, Wales, parts of Scotland and Wallonia, the Pittsburg or the Basque country, among others, are areas that developed during the process of industrialization, but have lost their industrial and economic significance for the economy as a whole as a result of the process of structural change and technological development that has been taking place during the last decade. At present, these areas offer a paradoxical situation for while they continue to keep a respectable income per capita and a considerably high production level with respect to the averages for depressed areas of their respective countries and/or the EEC, their development follows a more pessimistic path than the national averages. At the same time, their rates of unemployment, investment,

vegetative growth and so forth have begun to generate a picture typical of regions considered depressed or underdeveloped.

The structural conditions of these old industrial areas go back to the first industrialization wave based on mass production of standardized commodities and on what today is termed Taylorist or Fordist production technology, making maximum use of economies of scale. Consequently, these areas were usually dominated by a small number of large firms producing commodities pertaining to late phases in the product cycle. The corresponding production processes seldom rely upon recent technological innovation and employ a work force that although relatively highly qualified, is often (because of the special structural orientation of the local economy), very closely connected with the requirements of the dominant sectors of industry or even of individual companies. Some of these regions, such as County Durham in England, Swansea in Wales (Roberts, Collis and Noon, 1990), or the heavy-industry areas in the Basque country (Castillo del, 1985), were already persistent problem areas in the 1930's crisis period. Others were among the most prosperous economic regions of their respective countries during the Second World War and the subsequent reconstruction period, and were hit by drastic decline only in the early 1970's. Examples of this kind include the West Midlands (Marshall, 1990; Young, 1988; Smith, 1988) and the German Ruhr (Petzina, 1988).

Decline in these regions has been mainly due to sectoral and industrial crises. The sectoral crisis has particularly affected the mining, iron and steel, shipbuilding, and textiles sectors. Its causes include shifts in world demand for their products, the introduction of other new materials, and the generalization of new technologies which have led to important changes in the order of importance of different sectors and industries. The industrial crisis is due to capacity cutbacks, shutdowns or displacement of previously existing firms as a result of the competition of newly industrialising countries (NICs) and the restructuring processes of large multinationals, among other things. While the symptoms are rather similar in the areas affected by these two type problems, their potential and development prospects seem to be significantly different.

For the former, those areas affected by sectoral crisis, serious structural problems exist such as lack of local entrepreneurship, undiversified economic structures, small development of the producer services sector, environmental and urban problems, and inflexible labour markets. Factors that limit the possibility of any endogenous process of economic revitalization. Areas affected by industrial crisis, however, may still have the resources necessary to revitalize their production

systems (Maillat, 1990). These traditional industrial fabrics have the possibility of innovating by direct continuity; for them, innovation could be connected to what exists. In this case, the success of innovation would be based on elements of continuity with the experience acquired from the milieu. In these regions the territorial systems conceal traditional resources and skills that may be recombined with new elements. These skills are crystallized in the form of know-how; this know-how comprises all the practical and intellectual skills needed to master technologies within the production system. Thanks to these skills that have been built up over time, such regions have resources which enable them to relaunch the territorial innovation dynamic. Examples of regions experiencing sectoral crisis are, for example, the Basque Country in Spain (Castillo del, 1985; Barroetabeña, Díez López and García Artetxe, 1990), Swansea in Wales (Roberts, Collis and Noon, 1990) or the German Rhur (Petzina, 1988). Examples of industrial crisis are the Swiss Jura Arc (Maillat, 1990), the West Midlands (Marshall, 1990; Nicholls, 1990), or Baden-Württemberg (Gabriel, 1990).

A second type of regions are the so-called semi-industrialized areas among which the north-eastern and central Italian regions (Third Italy: Trentino, Friuli, Veneto, Emilia-Romagna, Umbria, Marche and parts of Lazio), some southern French regions like Languedoc-Roussillon, Midi-Pyrenees or Aquitanie, or some Spanish Communities like Valencia or Murcia, are perhaps the most significant. After having been considered for decades or even centuries as peripheral areas, these regions have *recently* experienced an extraordinary endogenous growth process, curiously, in a context of world-wide economic integration, fierce international competitiveness, technological revolution and more importantly, when old industrial regions were showing acute deindustrialization and job-loss processes.

The predominant model of production organization of these areas has been completely different from that of central areas. Production is based on very small enterprises, and organized in *system areas* (Camagni and Capello, 1990). This production model is characterized by sectoral specialization, physical proximity of firms and a non-metropolitan or mainly semi-rural environment. The homogeneity of such productive structures in restricted geographical areas guaranteed the achieving of rapid technological innovation and high degrees of labour skill, allowing at the same time benefits from scale economies at the district level, and productive flexibility. In most of the cases the new industry concentrated on those types of products that did not present insurmountable problems for small sized firms; specialization focused on types of production using local craft traditions. At

the beginning of the industrialization process, production was concentrated on relatively few branches of consumer goods, such as furniture, shoes and leather products, other articles in the clothing field, pottery and some metal products. Capital goods were not however, completely absent (Zacchia, 1986). Subsequently, the product-mix diversified and gradually the quality improved; with time, the most successful areas improved their technical and managerial know-how, their organizational capacities and their information and economic networks, becoming even driving economic forces in their national contexts (Camagni & Capello, 1990).

As Camagni and Capello have suggested (1990), public support and the implementation of endogenous policies during the 1980's, have given these areas *another reason of success*, but they can not be considered as the only forces, or even the main ones, which explain such developments. These areas did not only have high potentials when public policy was set in motion at the beginning of the 1980's, but their economic growth and the exploitation of their endogenous potentials had already started spontaneously (Vázquez-Barquero, 1987). Economic growth processes have been specific to each locality and the factors suggested for explaining such local economic developments during the 1970's include from structural elements, such as changes in migratory movements, exchange rates and balance of payments constraints (Zacchia, 1986), to specific spatial conditions of the local context or to the nature of the relationships involved (lower labour costs, traditional entrepreneur expertise, production flexibility, local synergies, political and social cohesion, and traditional values and mentality).

Finally the traditional peripheral and backward areas. Their situation has not radically changed during the current process of worldwide structural economic change. The post-1973 crisis only worsened the already precarious situation of these areas. They have the highest unemployment levels in their national contexts, the lowest levels of income per capita and productivity, and the lowest GDP growth rates. Social services development and infrastructural endowment levels lie usually far behind the rest of the regions including old industrial regions. They suffer from economic, technological, political and social dependency.

Evaluation

The review of the examples of endogenously oriented development strategies shows two main things: first, the proliferation of the strategy throughout Europe, and second the wide variety of approaches implemented. In very few cases, regional policy has been reduced to the exclusive implementation of one of the prototype

strategies: reconverting or restructuring. A general characteristic of the endogenous strategies has been the combination of elements of both of them. Accordingly, it is normal to find a strategy that promotes the creation of new firms while trying to keep the traditional industries competitive; or the promotion of new sectors (service sector, high-tech industries), together with policies for the maintenance of the old ones. In most of the cases also, the mobilization of endogenous potentials has been complemented with measures for attracting foreign firms trying to reindustrialize the local economy on all fronts (Maillat, 1990). The case of Dortmund in the Ruhr area, is perhaps significant in this respect. As Hennings and Kunzmann (1990) have explained, a three-phase strategy for today, for tomorrow, and for the day after tomorrow has been implemented, which consists of: consolidating the existing economic structure and securing the local steel basis, supporting new and existing indigenous firms and their efforts in the adoption of new technologies, and finally attracting to the city new high-tech firms in the micro-electronic, communication and biotechnology sectors.

Despite the variety of approaches, there are, nonetheless, common characteristics between them, such as the bias towards the segment of SMEs, the technology-led character of the strategy, the shift of importance from financial transfers to real transfers, the common implication of private sector in local development initiatives and a strong collaboration between public or semi-public organizations. A considerable large proportion of the examples analysed consisted of a description of the strategy and corresponding policies; quantitative data were not yet available. There are however, known stories of success and also less successful ones. Among the former stand the cases of Baden-Württemberg (Gabriel, 1990), Valencia (Rico, 1988; Vazquez-Barquero, 1990), Dortmund (Hennings and Kunzmann, 1990), Emilia-Romagna (Camagni and Capello, 1990; Gabriel, 1990), the French Montpellier region and the Swiss Jura Arc (Maillat, 1990). These experiences were characterized by:

- the endogenous potential of the areas was not totally destroyed; that is, there was always a high share of locally based enterprises, entrepreneurial capacity, a technical local culture compatible with and, in some ways, receptive to new technologies, intensive multiple communications and exchange networks between commodity and non-commodity sectors, formal and informal activities which helped to produce, retain and diffuse specific territorial powers. In all of the cases, industry was a traditional activity of the area;
- the strategy of endogenous development was mainly a strategy of restructuring and modernization; in no case did it require a radical transformation of the

previous local economic structure. Policy was mainly directed towards the mobilization of existing indigenous potentials and towards the expansion of local synergies and the development of territorial innovation milieu. The strategy was, in most of the cases, a sector-based industrial strategy. In Valencia (Spain), for instance, technological institutes specialized by product (from food production, machinery, metal products, and ceramics to biomedicine and optics), and deeply rooted within the Valencian industrial tradition were developed (Rico, 1988; Rico et. al. 1988). In the case of the Swiss Jura Arc the economic restructuring of the region was based on the modernization and technological upgrading of the watchmaking industry. The introduction of new processes and products led to the expansion of the sector and to the creation of new firms, although, simultaneously, small enterprises specializing in the traditional watchmaking parts (hands, faces, etc.) had to close down (Maillat, 1990).

- technological innovation was also understood as an endogenous process, in the sense of being rooted in the milieu. Innovation was addressed as the progressive technological upgrading of existing and new firms linked to the industrial tradition of the locality. Rather than a mere change in social attitudes or on the local environment, innovation under the restructuring strategy always implied direct economic effects: i.e. an increase of local output, the conquest of new markets, or evident process and product innovations. Innovation occurred through three different and simultaneous processes: creation of new high-tech firms producing in the local traditional sectors; quick adoption of process innovations and high investments in modern equipment; and qualitative improvements that implied the adoption of product innovations and a greater integration between industrial firms and modern sector activities, which improved the access of local firms to new technologies and markets. Robotization and the introduction of new technologies in the production processes allowed local SMEs to easily adapt to demand shifts and to produce in quantity and quality as required by an ever changing and sophisticated market of consumer-goods;
- initial favourable conditions plus a strategy based in many cases on an analysis both of the structure and development of the region/locality, were associated as well to favourable external and more structural conditions; for instance, changes in migratory movements among regions and between urban and rural areas inside each region; the diffusion of industry towards the rural areas as a consequence *inter alia* of labour and space availability, cost differences due to congestion in urban areas and progress in telecommunications; the development

of new technologies; the amazing diversification of product-mix (especially but not only for consumer goods), which made relatively easier for newcomers to enter the market with components parts of sophisticated products (Zacchia, 1986). All these circumstances led to economic growth processes that, although heavily supported by public institutions, had already started in a spontaneous way.

Less successful stories have been that of Ireland (Sweeney, 1990; Smyth, 1985) or that of the Basque Country in Spain (Barroetabeña, Díez López and Artetxe, 1990). Several reasons might explain such lack of success. Firstly, both regions, one because of its backwardness and the other because of its undiversified and rigid economic structure, really lacked any endogenous potential. As Sweeney explained for the Irish case (Sweeney, 1990), the strategy failed because the preconditions for indigenous development did not exist, and they can not be created overnight. Mobilizing the indigenous potential is not the same as creating it from the outset, particularly if a strategy of 'market-reinforcement' is followed. Secondly, the strategy might also have failed because of an incomplete analysis of the reality and of the reasons that may have led to that situation of crisis. As Camagni and Capello argue (1990, p.333), 'interpretations of local success stories [referring to the paradigm of endogenous development —Third Italy] have so far been based mainly on micro-economic and micro-spatial elements'. The strategy of endogenous potential focuses on endogenous and subjective factors such as local entrepreneurship while misconsidering the objective ones; therefore, it fails to recognize that the situation of each region or locality is the result of overlapping internal and external factors, both micro and macro-economic.

Despite the general plea for further regional openness and integration into international economic circuits, the proponents of the approach seem to ignore that there is a national and an international division of labour, and that the role played by each territory can not be modified according to personal wishes (Nikolinakos, 1985). Because of that, the failure of endogenous strategies is usually explained as the result of the sociological conditions internal to the regions and localities (Sweeney, 1990). Structural conditions are frequently ignored and therefore the proposed *soft* policies can hardly solve the long-lasting and deep-rooted problems of these old industrial and backward areas.

Conclusions

The outward-looking, innovation-oriented strategy of endogenous development might be an appropriate strategy for the so-called industrialising regions and for those traditional industrial areas affected principally by industrial crisis. Only these areas may fulfil the preconditions for responding to current restructuring worldwide economic processes in an endogenous way. The strategy is not geared towards the needs of depressed areas (backward and old industrial regions affected by sectoral crisis), with very limited capacity for innovation.

The problems of backward and mono-structured industrial areas are not entirely of a technological nature, but derive from, for example, the characteristics of its sectoral composition, its non-competitive small firm base, the problems associated with branch plant development and takeover by large corporations of local firms (Amin and Pywell, 1989). The extent to which these long-standing and deep-rooted problems could be resolved by this innovation-oriented strategy appear questionable. The strategy of endogenous development may be more or less successful in *mobilizing* the endogenous potentials of some regions, but it can not create them from zero. The clearest proof of that, is that only those areas and firms that are to some degree intrinsically innovative really do benefit from the strategy (Amin and Pywell, 1989).

The non-interventionist approach has frequently prevailed over the interventionist one; this has led to several characteristics commonly found in the case-studies. Firstly, no overall plan existed at national, local or regional level for economic development except that of increasing the technological level of the area; secondly, even the objective of technological development and innovation has sometimes been addressed in a piecemeal way. Hence, the complex relationships and linkages between scientific knowledge, invention, innovation, adoption, corporate and environmental contexts and economic development have been poorly perceived by those responsible for policy development and implementation, and this has led to specific policies that addressed some parts of the process in an un-coordinated way. Finally, the strategies have been generally biased towards selected high-tech sectors and technologies which were in many cases irrelevant or totally un-connected to the industries existing in the areas.

Even in those cases where the strategy has been highly successful, fears about the future have not disappeared (Camagni and Capello, 1990; Gabriel, 1990). The strong orientation towards external markets of all these successful cases of

endogenous development has become a major source of risk and instability for future economic growth in these areas. First of all, in periods of high aggregate economic growth and increasing aggregate demand, this external orientation used to lead to growth of such indicators as regional product and employment. A reduction of aggregate economic growth rates, however, may well lead to an inverted negative export-basis multiplier for these areas. Secondly, it has been argued that the main source of competitiveness of these areas has been based on their flexible strategy of production which allows the prompt supply of the smallest markets with highly sophisticated products (Gabriel, 1990). This flexible strategy, however, requires a continuous process of technological upgrading and innovation which very few small local firms can follow. The investments, information, capacity and ability required for retaining such levels of international competitiveness usually surmounts the capacities and financial means of many small business. Finally, even if aggregate economic growth continues and local firms manage to keep themselves on the top of the technological wave, success is not guaranteed for ever. As the case of the Spanish autonomous community of Valencia has shown (Martínez and Pedreño, 1990) export crisis may well come associated with factors such as a market saturation for their high-quality and sophisticated products, or owing to the so called 'Dutch disease'—exchange rates—(Camagni, 1986) or by the negative impact of central government monetary and fiscal policies over local exports.

EXOGENOUS APPROACHES TO REGIONAL DEVELOPMENT

The Technopolis policy

The decade of the 1980's witnessed the proliferation of technopolises throughout the world, from the USA to Japan, from Australia to the whole Europe. Technopolis was a word coined to fuse the idea of technology and the polis of the ancient Greek city state, thus proposing an amalgam of scientific, industrial and urban development. They are said to be the new centres of technological and capital accumulation (Gilly, 1987), and also a new version of traditional growth-poles (Goldstein, 1991; Masser, 1990).

The technology-led model of development based on technopolises is the policy replication of some high-technology industrial complexes developed during the last three or four decades, principally in the United States (Silicon Valley, Boston's Route 128, North Carolina), but also in some European countries like the United Kingdom (Cambridge) or France (Sophia Antipolis). Science parks and technological development were rather a dead issue till the late 1970's. Nonetheless, the concurrence of several circumstances such as the post-1973 crisis, the decline of many old industrial areas, the overall loss of competitiveness of some previously leading industrial countries, the increasing competition between technology pioneer countries and backward ones, and the recognition of technology as the fundamental element for economic growth and prosperity has led to scrutiny of those *spontaneous* high-technology growth processes as models to be followed and imitated everywhere (Wadley, 1986, p. 107). Accordingly, since the late 1970's a growing literature has come up, which tries to explain how development occurred in those complexes, what do they have, and which conditions have allowed them to become the technological leaders and the fastest growing areas of the world.

Four different factors have been generally acknowledged as the main source of growth in the development of those industrial complexes (Wadley, 1986): a) the growth of indigenous firms and their spin-offs; b) the existence of universities and research centres; c) the impulse given by high-technology firms attracted to the area from outside; and d) the role of large expenditures of public funding. The contribution of each source of growth to the development of each complex has been different. The development of Boston's Route 128 or that of Cambridge in the U.K. for instance, has been largely due to the growth of indigenous firms and their spin-offs; whereas, government defence contracts and the existence of a well-developed science and technology research infrastructure were main sources of growth in the cases of Silicon Valley (USA) and Sophia Antipolis (France) respectively. These sources of growth, however, are by no means mutually exclusive. Furthermore a combination and/or succession of them seems to be the general characteristic of most of them. As Wadley explains (1986, p. 100) the Ottawa complex in Canada, for example, 'began as early as 1920 as a fledgling research milieu (type b), the driving force being the Canadian National Research Council. Government funding for the sake of indigenous research and development capability during the Second World War was characteristic of type d development. After 1960 manufacturing facilities (type c) began to show interest in the area, spawning various offshoots throughout the 1970's (type a)'.

The most significant characteristic of these complexes is their capacity for endogenous technological re-production and self-regeneration. In all the cases, there was some kind of initial advantage (growth pole of research activity, local technical expertise in some high technologies, or sectoral specialization in some of the high-tech industries), from which a territorial innovation dynamic was set in motion. As Gilly (1987, p.789) described it, *'les technopoles constituent donc des systèmes productifs locaux ou se réalisent, de manière privilégiée, les processus contemporains de création de nouvelles technologies'*; they constitute the centres of articulation between the scientific sphere and the productive sphere. This process requires the development of an intermediate level, which is the technological sphere where scientific knowledge and industrial knowledge fuse together. This intermediate sphere develops through multiple communication networks (formal or informal, material or non-material, commercial or non-commercial) between the different elements that made up the industrial complex: research centres and universities, SME's, multinational plants, firms in the service sector, etc.

None of these high-tech industrial complexes offers, however, the whole range of new technologies, or is simultaneously a pioneer in most of the leading technologies. Specialization is a main characteristic of these technopolises, and also the *raison d'être* of their prosperity and dynamism. Silicon Valley, for instance, is strongly identified with microcomputers (personal computers), Cambridge Science Park, however, has specialized in computer hardware and software, instrumentation, biotechnology and general engineering. Sophia Antipolis, on the other hand, has developed information processing, fine chemistry, pharmacology, solar energy and water research. It is precisely this sectoral-technological specialization what has permitted that process of 'cumulative causation', as innovation has been connected to what existed allowing the creation and development of *full and coherent territorial production systems*. Full, because they comprise manufacturing and service activities organized from the upstream end (research and development) towards the downstream end (the market); and coherent because they have been able to generate specific regional skills and technological know-how. It is that cooperation between the upstream and downstream functions and the collaboration between the different and complementary phases —basic and applied research, development, preparation of prototypes, industrial investment and production, marketing and so forth—, on a sectoral basis that makes it possible to attract from the outside and to develop inside the region the scientific and technical knowledge suited to the milieu.

High locational requirements and the importance of agglomeration economies and advantages are some other characteristics of these high-tech industrial complexes. Contrary to the general picture of industrial footlooseness of the early 1970's (Oakey and Cooper, 1989), the new high-tech industries show a strong tendency towards clustering into agglomerations (Route 128, Silicon Valley, or the M4 and M11 corridors west and north of London). Contrary also to producers of earlier agglomerations where cost (cheapness), quantity and supply (market) were more important, the value of the agglomeration for high technology firms lies rather on the input side (material as much as non-material; i.e. information) and on sophistication, high specification, and quality. The availability of highly-qualified labour markets, of those services necessary for assisting their levels and requirements of innovation and production, and the existence of adequate environments for the creation of the innovation milieu and for speeding up the process of technological development, seem to be prerequisites for the establishment of high technology firms (Brugger, 1990; Malecky, 1990; Maillat, 1990; Oakey and Cooper, 1989).

From a spatial point of view, these high technology industrial complexes are, at present, the privileged sites where technological and capital accumulation take place (Gilly, 1987). They are, according to some authors, the clearest expression of the new spatial division of labour, based on polarized growth and selective development, which reflects in international dependency, inter-regional cleavages, intra-metropolitan dualism and the simultaneous life and death of cities and regions (Castells, 1987).

Implementation of the Technopolis policy

As suggested before, the technology-led model of development based on technopolises was a rather dead issue till the late 1970's when the successes of dynamic regions such as Silicon Valley, Route 128, and North Carolina, became more widely known. Since then, the development of technopolises has become a general phenomenon throughout the world.

While the concept of technopolis has been similar in most countries, the overall objectives of technopolis development, the strategies, and the processes differ widely. First of all, technopolises have been developed with the purpose of enhancing regional economic development; with the aim of increasing the level of national technological development —this is, for instance, the case of Japan (Masser, 1990);

with the objective of restructuring an entire industry (the automobile industry for instance), or a specific industry considered as strategic from a national point of view (the watchmaking industry in Switzerland or the aerospace industry in France).

With reference to the strategies, and processes, there have been two general, yet radically different, approaches to technopolis development: what may be called demand-led strategy, that follows spontaneous processes, and may be considered as a bottom-up approach (Stöhr, 1986); and the supply-led strategy, which constitutes the new version of traditional growth poles (Goldstein, 1991; Masser, 1990). Whereas the former is usually found in dynamic and industrializing regions, examples of the latter usually refer to peripheral and backward areas.

Under the demand-led approach, the creation of a technopolis responds to the needs and requirements of local entrepreneurs (or local university/research centres). The objective is not so much to generate economic growth and technological development through the impulse of external resources (capital, technology, specialized personnel), as to facilitate the endogenous innovation dynamics already at work. The process is, therefore, similar to those of spontaneous industrial and technological complexes, though, in this case, the creation of the technopolis plays a fundamental role in the consolidation of the development process. Firstly, it provides local, innovative, businesses with access to the necessary facilities, services, networks, and capital. Secondly, it stimulates the development of a creative milieu by helping to provide a critical mass of scientists, engineers and other innovative persons and spin-off of new businesses from successful ones already in the technopolis. Over time, the region is able to attract capital, technology, and creative people from outside, further enhancing the endogenous innovation process. Examples of this type of strategy are the research park of the University of Utah in the United States of America (Goldstein, 1991), and the technopolises of Nagaka, Utsonomiya and Hamamatsu in Japan (Masser, 1990).

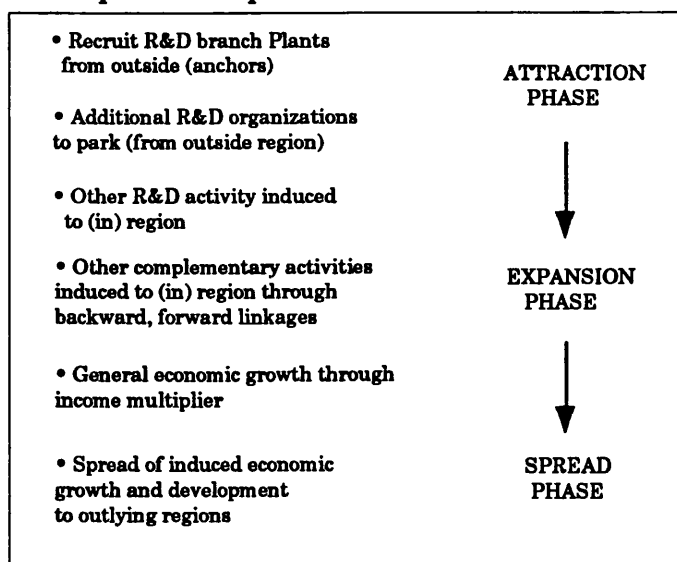
The second approach, the supply-led strategy, is based upon the theory of the growth pole. Its main objective is, therefore, regional economic development rather than industrial restructuring or national technological development. Like the growth pole, the supply-led technopolis policy understands development as a phenomenon largely determined by the external flow of resources (capital, technology, and labour). It also shares with the growth pole the emphasis on the role of agglomeration economies and the view that development, although initially concentrated in few geographical areas and sectoral clusters, is later diffused thanks to

redistributive processes operating through the market mechanism (spill-over or trickle-down effects).

Contrary to the previous approach (demand-led), the development of a technopolis under the supply-led strategy does not respond to the demands of local innovative businesses but, on the contrary, it is the technopolis, through the recruitment of research and development branch plants of multi-locational firms that is expected to mobilize the endogenous potential and the entrepreneurial talent of the area. Different also from endogenously generated technopolises, the development of a technopolis in a backward area implies the provision of rather large, up-front, public investments in the form of land, technological and transport infrastructures (high-speed railways, motorways), and financial incentives to attract branch plants into the region. This policy is usually complemented with other policies such as housing provision, environmental protection, and labour policies.

Figure 2.2, from Goldstein (1991), illustrates how growth pole strategy is supposed to work in the context of the use of a technopolis for stimulating regional economic development.

Figure 2.2 The growth pole strategy applied to technopolis development



Source: Goldstein (1991), 'Growth center vs. endogenous development strategies: the case of research parks', in Bergman, Maier, and Tödtling (eds), Regions reconsidered. Economic networks, innovation, and local development in industrialized countries (London: Mansel)

In the attraction phase, research and development branch plants are recruited to serve as anchors in the newly created technopolis, which, along with related research centres and universities, represents the actual growth pole. The concentration of R&D activity is supposed to attract other R&D facilities to the technopolis

or adjoining area, based upon the realization of localization economies. Other activity, such as manufacturing and producer services, is induced to establish in the region through the development of backward and forward linkages. All of these activities will contribute to growth of the resident and consumer services sectors through the usual income multiplier applied to the increment in local spending from enhanced aggregate payroll in the region. In the spread phase, a reasonable proportion of the economic activity stimulated by the propulsive industries in the growth centre would expand to more peripheral regions and areas (Goldstein, 1991, p.243).

Examples of this strategy are abundant being, however, the Japanese programme for technopolis development particularly interesting. This is so because, though based upon the theory of the growth pole, it shows a high degree of pragmatism and realism. Contrary to other experiences which saw in the development of technopolises and technology parks the remedy for an increasing industrial unemployment in their areas (Council of Europe, 1986), or as an easy solution to their deep-rooted backwardness, the Japanese government has shown that success in technology-oriented development is neither assured, nor easy, and that high-technology industrial complexes can not be re-created elsewhere. The objective of the Japanese programme for technopolis development was to spark development in peripheral areas and to diffuse technology out from the Tokyo area. Nonetheless, the selection criteria for the designation of technopolises were extremely high. Prefectural governments, on the other hand, were asked to formulate comprehensive programmes for technopoly development in their areas, specifying the main goals for local industrial development based on advanced technology, and to establish high technology promotion organization in order to coordinate development programmes (Masser, 1990; Stöhr, 1986; Nuttal, 1986).

Several conclusions can be drawn from the analysis of these spontaneous and non-spontaneous high technology industrial complexes. First of all, there seem to be some conditions, apart from the existence of, and interplay between, high technology firms and universities and research centres, that actually determine the success of a technopolis. These are: favourable physical, economic, and social conditions for the development of industry based on high technology; a considerable number of enterprises in the area, which are either engaged in high technology activities or have the potential for doing so; and, in some cases, proximity to a large metropolitan area. The development of the industrial complex was always based upon the strengths (local know-how, traditional expertise, and industrial specialization) of

the local economy (Masser, 1990; Goldstein, 1991; Wadley, 1986; Stöhr, 1986). Accordingly, in spite of the high degree of common interest in some sectors such as electronics, mechatronics, computers, and biotechnology, each technopolis had its own distinctive technological mix of activities.

Secondly, there is evidence (even with favourable internal conditions), of the difficulties of attracting high technology industries, research centres, and specialized personnel into development areas. As Masser (1990) has shown, referring to the Japanese experience, R&D related activities are heavily concentrated in the Tokyo area and technology transfer to peripheral regions is likely to be limited largely to activities such as simple parts production and assembly rather than basic research. Similarly, skill shortages seems also to have been a major obstacle in the success of some technopolises. The case of Nagaoka (Japan) is a good example of this. Despite the availability of high quality housing at relatively low prices, shortages of skilled labour are already a constraint on the expansion of local firms (Masser, 1990).

Thirdly, the spatial spill-over and spread effects expected from the technopolises have been, in most of the cases, limited. As Goldstein (1991, p.257) argues, referring to one of the most successful industrial complexes of the US, the Research Triangle Park in North Carolina, the park was highly successful in attracting anchors which, in turn, led to further growth and expansion of the park by attracting other R&D branch plants of outside corporations. Complementary activities that would be expected to be linked backwardly or forwardly to the R&D pole did not, however, develop to the degree that the strategy assumed.

Finally, general scepticism exists about the possibility of controlling and directing the dynamics of the technopolises. These are the new centres of technological and capital accumulation and, therefore, they are subject to fierce international competition, rapid succession of innovations, and unstable markets. If the process of development is to continue, an extraordinary effort must be made to keep the growth pole, and the firms located in it, on the top of the technological wave.

In summary, three general recommendations can be given from the analysis of technopolis experiences. Firstly, technology-led economic development strategies must be based upon the careful analysis of local conditions, both strengths and weaknesses, rather than on a prior ideological commitment to any specific model of development, which may have been successful in one part of the world, but may not be so in others. Secondly, favourable physical, economic, and social conditions, and

a considerable number of enterprises in the area, either engaged in high technology activities or with potential for doing so, seem to be prerequisites for the success of a technopolis project. Finally, the length of time that it takes for a region (even with favourable initial conditions), to restructure its economy and to concentrate R&D and other high technology activity in it, should not be underestimated. Therefore, patience and long-term commitment by regional and national leaders will be important ingredients for the success of the technopolis.

Inward investment policies

Inward investment policies have been common practice during the 1960's and early 1970's. As a result of the economic crisis of the early 1970's, they lost favour, and then it became almost a fashionable tendency to deplore them (Hansen, 1981, p.34). In the middle of the 1980's, however, inward investment policies acquired renewed vigour. The change in the international economic conjuncture, a new wave of technological development, and programmes such as the 1992 European market gave a new impulse to traditional exogenous development models.

Inward investment policies have never been defined as alternative regional development models. They have usually been justified within a more comprehensive regional development theory and strategy; i.e the growth pole. Nonetheless, what distinguishes inward investment policies from their theoretical model is that while the strategy of polarized development presupposes the existence of two general phases for achieving development in a particular area (ensuring the localization of a propulsive activity and preventing it from becoming an enclave—see, for instance, Figure 2.2), the former retain development in phase 1, destroying, in that way, the exact concept of growth pole. As one author has argued, under this policy approach, development is understood in its narrowest sense; not only is it identified with regional output, but also, production accounted in the region and industrial growth produced in the region, get confused with regional production and regional industrial expansion (Delgado, 1990). Accordingly, the economic situation of the region is not measured in terms of productive diversification and integration, sectoral specialization, or regional resource mobilization, but instead in terms of the evolution of main conventional economic indicators, particularly regional output.

Different from alternative regional development strategies (growth pole or technopolis, and endogenous approaches), the objective of inward investment

policies is not to promote the structural reconversion of regional productive structures, nor to mobilize regional endogenous potentials. It is, on the contrary, a short-term development policy that basically seeks to solve the most acute symptoms of the regional economy; i.e. unemployment and output. Accordingly, it deals mainly with the phase of the establishment of new production capacity (transport infrastructures and financial incentives to recruit branch plants), ignoring phases that are upstream, such as the activities dealing with R&D, and production phases that are downstream, such as the organization of production, the creation of synergies and the relationships with the internal sector. Objectives such as complementing the internal sector, technological upgrading of the local manufacturing base, or the creation of backward and forward linkages are not considered priorities.

Different from the model of growth pole, or from its new version (technopolis), in which the main objective was to attract propulsive, high technology firms and to generate a process of cumulative economic growth in the region, inward investment policies are non-sectoral, non-technologically discriminating. Since the objective is to increase output and employment, any type of industrial activity is welcomed even though it does not fit into the specificity of the local milieu, or into the local manufacturing and technological tradition. On the other hand, since the requirements of the internal industrial sector are basically ignored, no demand exists to develop R&D activities related to the sectoral specialization of the area, or to develop mechanisms for technology transfer. Similarly, policies for subcontracting development are considered a secondary issue or totally ignored.

Since the activities to be attracted are basically of an assembly type, inward investment policies give particular importance to those factors that more strongly determine the locational decisions of branch plants; i.e. adequately developed labour markets and good access to markets. Different from high technology firms (producers of present growth poles), the locational requirements of branch plants are more linked to market, labour, cheapness and quantity than to information, to the development of producer service activities, or to sophistication and high specification in labour and markets. Accordingly, no sophisticated technological or industrial infrastructure is required to develop R&D activities; access to Universities, technological centres, or to other large and innovative firms to develop synergies, is irrelevant.

By the same token, agglomeration economies and the need to be located in central areas (a prerequisite for high technology firms), are not only objectives and

requirements but, on the contrary, something to be avoided. Since branch plants do not develop phases that are upstream, or production phases that are downstream, they just need well connected areas (which can be medium-level urban areas), in which to develop low-sophisticated industrial activities. On the other hand, large agglomerations have important desagglomeration economies such as higher land, labour, housing, or transport costs; traffic congestion, or lower levels of quality of life. As a result of that, the emphasis given by other policies to urban agglomerations and to the development and implementation of urban projects and policies totally disappears under the branch plant strategy.

Implementation of Inward Investment Policies

Inward investment policies have been the dominant characteristic of operational regional planning in both developed and underdeveloped countries during the 1960's-70's. As Hansen points out, there has probably not been a major retarded region anywhere where some kind of growth pole strategy had not been proposed as a solution to its economic and social problems (Hansen, 1981). Dissatisfaction with the results of those policies was, nonetheless, as general as used to be their implementation (Friedmann and Weaver, 1979; Stöhr and Taylor, 1981).

In recent times, however, the implementation of inward investment policies has become a general phenomenon in European and non-European countries. The increasing economic problems that derive from present processes of economic restructuring at a global scale have led to a growing competition among regions and countries in order to attract branch plants of multilocal firms. Nonetheless, whereas the characteristics of inward investment policies have been similar in most of the cases, the development processes and the results of such policies differ widely from one region to the other.

In developed and industrializing areas, for instance, where relatively integrated regional productive structures exist, the economic growth brought by the setting up of branch plants of multinational firms usually spreads throughout the regional economy because backward and forward linkages existed between the different regional economic sectors and activities. In backward and peripheral regions, however, where disarticulated and dependent productive structures dominate, the attraction of such firms only furthered the structural heterogeneity of their productive structures and the disarticulation of regional economic circuits. Most of the abundant literature about the implementation of polarized development strat-

egies refers, particularly, to these peripheral areas, and is made up of critical appraisals. Spain and, particularly Andalucía, have been good examples of this policy orientation (González, 1981; Cuadrado Roura, 1981; Casado Raigón, 1978; Delgado, 1981; Román, 1987).

Several conclusions can be drawn from the analysis of these experiences. First of all, regional development strategies based on inward investment policies have provoked regional economic dependency and vulnerability. The most evident outcome from the establishment of a branch plant in a peripheral region has been the dualization of the local economy. Far from being a structural characteristic of backward areas, economic dualization seems to be the result of the interaction between the external and the internal sector (Delgado, 1981). It is, in fact, the existence of the external sector that impedes the development of the endogenous one, and the modernity of the modern sector that underpins the backwardness of the traditional sector.

The establishment of branch plants in peripheral areas has usually provoked the dismantling of endogenous industrial bases as the external sector absorbed labour and capital (surplus-value) and weakened local entrepreneurship. It also brought the functional specialization of the region, not only with respect to products and sectors but also with respect to specific production factors and to their functional relationships. The local economy adapts then to the productive requirements of foreign, multinational firms, the main objective of which is to use the region as an enclave using its labour and locational comparative advantages.

This situation of economic dependency and domination progressively destroys the self-regulating capacities of the regional economy. Accordingly, if in periods of aggregate economic growth this development orientation may lead to growth of some indicators such as regional product or employment (though it is not always so: Casado, 1978), reductions of aggregate economic growth rates always implied an inverted tendency towards the location or relocation of industrial activities in peripheral areas. Therefore, functionally disarticulated and weakened, the region finds itself incapable of responding to that situation.

The shift towards more inward-looking development strategies (particularly, endogenous potential development policies) became in this context useless. This is so because so-called endogenous potential does not need to be mobilized but needs to be created from zero since it has been absorbed and disintegrated by the external sector. The final result is, consequently, dependency, vulnerability and a structural

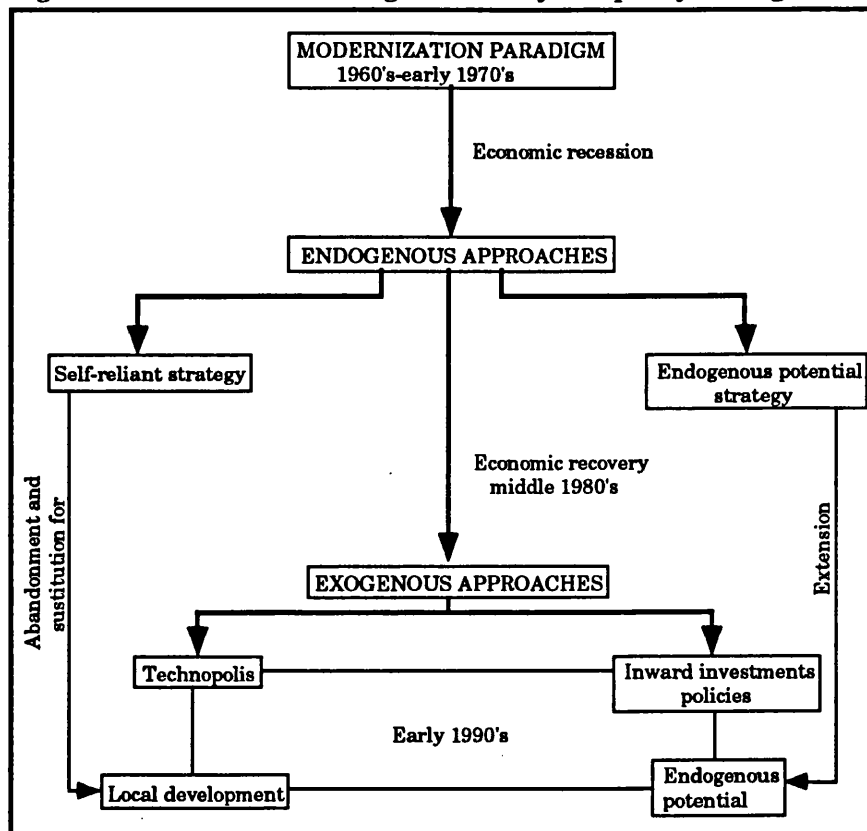
incapacity for the peripheral region to break down the vicious circle of economic underdevelopment (Dunford, 1986).

DIFFERENT DIMENSIONS OF THE CONCEPTUAL FRAMEWORK

The alternative development strategies in a temporal perspective

From a diachronic perspective, it is possible to identify an evolution of regional theory and policy during the 1980's. Figure 2.3 summarizes such evolution.

Figure 2.3 The evolution of regional theory and policy during the 1980's



The end of the period of economic growth and prosperity that was the decade of the 1960's and early 70's, brought into crisis the so-called modernization paradigm. The economic recession had actually converted the growth pole strategy into a non-viable development alternative. There was no sense in implementing a 'redistribution-with-growth' regional development strategy when there was no growth, or in trying to foster the diffusion of economic prosperity and a rapid industrialization in peripheral areas when core regions were under a generalized industrial and economic crisis. A shift from exogenous to endogenous factors was the immediate response of regional theory.

Taking-off from several development initiatives carried out in Third World countries by International Development Organizations, the school of the neo-regionalists transformed the self-reliant development strategy into a territorially based development strategy applicable to advanced and more urbanized regions of Europe and America. The new development strategy is said to be a new mode of development and a new development paradigm.

Self-reliant development was, however, soon abandoned. Its implementation was minimal in Third World countries, and even less significant in Europe. The contribution of the self-reliant approach had been, nonetheless, important. It had foreseen the importance that the so-called endogenous factors and the bottom-up approach to regional development would play in the prevailing economic conjuncture. Nonetheless, as a development strategy rooted in oppositionism and in the evaluation of past regional policies (it was, in fact, the reversal of the growth pole doctrine), it failed to recognize and integrate into its development policy important changes occurring in the political and economic spheres, which had, nonetheless, direct implications for regional theory and policy. For instance, it did not take into account the current technological revolution, nor that the regional problem was no longer one of economic dualization and peripheralization but economic restructuring. The self-reliant strategy was a development policy for backward areas when regional policy was being transformed into a structural policy for central, peripheral, and declining industrial regions alike.

The failure to develop a new regional development paradigm did not cause, however, the total abandonment of the self-reliant strategy. As Friedmann argued, new ways exist for the self-reliant strategy, which aims at a very different set of socio-cultural and political objectives. In the new alternative, he argues, 'self-reliance does not appear as a question concerning the use of policy instruments by the state but as a form of radical social practice originating within civil society'. This practice, 'represents the one best chance for the survival of the human race [and] includes objectives that stress environmental quality and preservation, social aspirations for a convivial life, self-managed economy, small economic circuits, and political self-determination (Friedmann, 1986, p.205). In summary, self-reliance had been transformed into what we have generally called local development; a policy orientation adapted to, and compatible with, current economic situation.

By that time, a very different approach to regional endogenous development was suggested and implemented by the European Community. Initially designed for areas of industrial decline, the approach of developing endogenous potential was

soon extended (particularly in the light of the third enlargement of the EC) for implementation in backward and peripheral regions alike. Different from the self-reliant approach, the endogenous potential development strategy was a strategy adapted to prevailing economic and political circumstances. It was defined as an efficient regional policy that helped economic restructuring and technological development at local, national and Community scales; it required the full openness of regional economies, and in its basis laid the 'trickle-down philosophy and the idea of economic integration as a prerequisite for regional economic development. It was, therefore, a strategy perfectly compatible with exogenous models of development. Different from the self-reliant strategy, innovation-oriented, outward-looking endogenous development has been extensively implemented throughout the Community since 1979.

As the decade evolved, the so-criticized and condemned exogenous approaches to regional development gained acceptance. The change in the international economic conjuncture, the increasing rates of aggregate economic growth, a new wave of technological development, and a far-reaching programme to complete the European market by 1992 gave renewed vigour to classic models of regional development. A new version of the growth pole appeared (technopolis), and with it the expansion of inward investment policies. On the other hand, if redistributive, top-down, regional policies had been considered till the middle of 1980's outdated, inappropriate, and even counter-productive, they acquire now, particularly in the light of the 1992 programme, an increasing importance.

Therefore, at the beginning of the 1990's, new models and old strategies make up the armoury of regional policy in Europe. Exogenous and endogenous approaches, bottom-up and top-down planning, redistributive and efficient regional policies, appear all together as alternative, and sometimes complementary, development strategies.

The compatibility between the different strategies of regional development

Despite the differences that exist between the alternative strategies of regional development presented above, they share, nonetheless, common and fundamental characteristics, such as the assumption of the same concept of development, the acceptance of the current mode of capital accumulation, and the consideration of economic growth as the driving force of social progress. Accordingly, no contradiction exists in principle between the different alternatives. Instead, there is a real possibility of implementing them concurrently, either coordinately or in a non-coordinated manner.

First of all, the self-reliant strategy as a policy directed at generating territorially integrated development should, in principle, be incompatible with an exogenous development. The initiation of a process of internal capital accumulation and the creation of a solid regional industrial basis requires the protection of local markets and local economic circuits. Eventually, this strategy of integrated local development would require disengagement from the dominant economic system. The exponents of development from below did not, however, go so far. Since functional integration and the openness of regional economies could not be ignored they suggested, together with measures for 'selective spatial closure', the creation of a parallel economy. As Curbelo puts it (1987a, p.82), 'the coexistence of articulated and disarticulated patterns of accumulation will be characteristic of the model. The disarticulated pattern will be relatively more independent of regional policies than the articulated one, which is the main objective of regional planning'. Similarly, Friedmann and Weaver (1979, p.204-205) suggested, 'alongside the cellular economy of the districts, there will be an urban-based corporate economy [...] the world economy exists, and if further integration along functional lines is to become workable, the urban-based, corporate economy will be restricted (if possible) to a complementary realm. In summary, the self-reliant strategy of development seems to be compatible with a branch plant type of development, the branch plant being the only exogenous development that can take place parallel to and marginal to the internal sector.

The evolution of the self-reliant strategy from its earlier more radical approach, which claimed regional self-sufficiency, political decentralization, regional autonomy and selective spatial closure, to the present model of community development where economic objectives are considered as important as social, personal and psychological ones, has allowed greater compatibility between this strategy and the others. As an alternative 'model of development' that relies on a 'non-commercial' set of personal beliefs (Brugger, 1985; 1986), the self-reliant strategy might well be implemented simultaneously with alternative approaches of development. It could be implemented at a local scale concentrating on backward areas or areas of high unemployment levels and rather limited potentials while, at the same time, at a regional level an endogenous or technopolis policy could be implemented. In this case, the self-reliant strategy is not only compatible but also complementary; a subsidiary strategy for marginal areas and distressed communities.

The compatibility between the technopolis policy and the endogenous potential strategy is absolute. Both of them are capital intensive and technology-led development policies; they are directed principally at increasing global efficiency and

competitiveness; and in the basis of both of them lies the trickle-down philosophy and the idea of economic growth as a diffusion process. They are in fact, mutually reinforcing strategies.

First of all, the creation of a technopolis in a region usually requires the impetus of external forces (capital and technology). The attraction of high technology firms helps to mobilize local entrepreneurship and facilitates the process of regional industrial restructuring and technological development. This is done, for instance, through the development of subcontracting programmes, technological transfer, demonstration effects, and particularly by the decentralization of high technology production and R&D activities. The attraction of high technology firms requires, on the other hand, the previous reconversion of the greater part of the regional productive structure. This is so because high technology firms will hardly displace R&D activities into peripheral and non-peripheral areas if there is not a small but highly efficient and productive endogenous industrial and service sector (Camagni and Capellin, 1985). On the other hand, the existence of this innovative internal sector seems to be necessary not only for attracting high-tech multinational firms but also for consolidating the industrial and technological complex. Only a well developed indigenous industrial sector is able to integrate and assimilate the innovative impulses given by those propulsive industries. The lack of it would lead only to the creation of regional enclaves. Therefore, in order to create a growth pole in a peripheral region and to initiate a virtuous circle of regional economic growth, the technopolis and the endogenous potential strategy should be combined.

Finally, inward investment policies, as short term development strategies should not be compatible with more structural policies that seek the reconversion of regional productive structures. The satisfaction of short-term economic objectives usually impedes the coherent implementation of medium to long term development strategies. This is particularly so in areas characterized by disarticulated productive structures, in which the attraction of branch plants only furthers sectoral disequilibrium, structural heterogeneity and economic disarticulation. Nonetheless, this structural contradiction between inward investment policies and medium/long term development strategies, does not mean that in practice they can not be implemented simultaneously as a way of industrialising the region in all/any front.

In summary, there is at present a variety of development policies that can be implemented either separately, simultaneously, or in a co-ordinated manner. Regional differences in the implementation of development policies in Europe can be, therefore, ample.

METHODOLOGY AND SOURCES USED IN THE IDENTIFICATION OF THE REGIONAL DEVELOPMENT STRATEGY OF THE JUNTA DE ANDALUCÍA

The identification and analysis of the regional planning policy of the Junta de Andalucía have consisted of: a qualitative analysis and assessment of policy documents; a quantitative analysis of actual regional public expenditure on the three policy-sectors chosen; and, personal interviews with regional policy-makers and academics and researchers, acknowledged experts on the Andalusian reality.

The analysis of policy documents was used to identify the contours of the regional development strategy followed by the Junta in its first decade. General objectives, sectoral priorities, policy guidelines and instruments, and the reasons given for justifying the implementation of such a development strategy and sectoral policies were all scrutinised as a first step in the identification of the strategy of the regional government.

The information given by these official documents¹, some of which were published while others were internal documents and, therefore, access to them required official permission, was, nonetheless, qualitative information or information related to what the regional government wanted to do, which might be different from what it was actually doing. Accordingly, an analysis of actual regional public expenditure was required.

Regional public expenditure is recorded by the different regional Departments (*Consejerías* or regional ministries). This information refers, however, to detailed (investment by project) and non-elaborated quantitative data. More aggregated information also exists at department level classified according to programmes.

¹ Official documents refer particularly to plans and periodic reports. Among the former are: Avance del Plan General Viario de Andalucía, 1984; Plan General de Carreteras de Andalucía, 1987; Plan Estratégico Ferroviario de Andalucía, 1986; Plan Estratégico Ferroviario de Andalucía, 1988; Plan General de Carreteras, 1984-91 MOPU; Plan de Transporte Ferroviario, 1987 (Ministerio de Transportes, Turismo y Comunicaciones); Plan de Desarrollo Regional, 1989-93 (Ministerio de Economía). Plan Económico de Andalucía (PEA, 1984-86); Plan Andaluz de Desarrollo Económico (PADE, 1987-90); Plan Andaluz de Desarrollo Económico (PADE, 1991-94). Periodic reports analysed are: Annual Reports of the regional agencies of industrial promotion: Institute for the Industrial Promotion of Andalucía (IPIA), and Institute for the Promotion of Andalucía (IFA); Report 'Dos años de incentivos económicos regionales en Andalucía' General Direction of Economic Cooperation; 'Diez años de gestión. 1979-89' Consejería of Public Works and Transport; Annual reports of the Consejería of Finance (1989, 1990).

Programmes, however, are too general (for instance, road development, road improvement and conditioning, railway development), or too ambiguous (i.e. promotion of local initiatives or endogenous development) to be used in the identification of the development strategy of the regional government. Apart from these, there are also Annual Regional Accounts. Regional public expenditure in this source appears classified according to organizational and functional criteria; that is 'who spends' (Departments) and 'in what' (programmes). Programmes at this level are even more general than in the previous source.

Accordingly, only department records by projects could be used to identify the development strategy of the Junta. Nonetheless, this needed to be selective since the analysis of such extensive information exceeded the objectives and possibilities of this thesis. As a result of that, three policy-sectors were chosen: roads, railway, and industry promotion.

The choice of these three policy-sectors was based on theoretical and practical reasons. Theoretical reasons because the role given by regional theory to transport infrastructure as an instrument of regional development has always been prominent (Hirschman, 1958; Biehl, 1986). The analysis of the alternative strategies of regional development during the 1980's confirms this; each of the main strategies of regional development analysed so far, confers a central role on this instrument of regional policy. Industry promotion, because industrial development is, under the prevailing economic system, the driving force of economic growth. This is manifested in the importance conceded to industrialization not only by regional theory but also by economic theory. In fact, the alternative strategies presented above are, basically, policies for regional industrial development. Development is in each case (self-reliant development, endogenous potential, strategy, and inward investment policies), identified with industrial development. Figure 2.4 synthesises the use made of these two policy instruments (transport infrastructure and industry promotion) by the alternative strategies of development.

The choice of these three policy-sectors was also justified on practical grounds; i.e. from the policy point of view. The role of transport infrastructure in public expenditure programmes at Community, national (Spain) and regional (Andalucía) level has been overwhelming. Any analysis of the strategies of development implemented in Andalucía during the 1980's would show the pre-eminence of this policy instrument. Industry promotion, on the other hand, although less significant in terms of total public resources spent on it, was considered, since the creation of the regional government, as a strategic policy for overcoming the traditional

backwardness of Andalucía. The importance of the objective of industrialization of the regional economy has increased since 1984, becoming in 1991 the first priority of the Andalusian government (Junta de Andalucía, 1984a; Junta de Andalucía, 1987; Junta de Andalucía, 1991).

Figure 2.4 Infrastructures and industry promotion in the alternative strategies of regional development

Technopolis	Endogenous Potential
<p>Infrastructure: External accessibility. Excellent transp. and commun. infrastructures. Telecomm. networks. Technopolis. Urban develop. "Word city" connected to the rest of the world</p> <p>Industrial policy: Capital intensive, high-tech foreign firms. Sectoral discrimination. R&D Technology-led policy. Technology transfer Complementarity internal-external sectors Innovation milieu. Public universities and research centres. Labour & services: sophistication, specification</p> <p>Spatial location: Highest nodality. Concentration. Agglomeration economies. Multimodal transport centre</p>	<p>Infrastructure: Telecom. and information networks BIC's. Incubators. Technology parks. sophisticated ind. land External accessibility. Good transport infrast.</p> <p>Industrial policy: Innovative SME's. Sectoral discrimination: high-tech sectors and sector of high external demand. Technology-led policy. Horizontal policies: product & process innovation. Entrepreneurship and favourable environment for innovation. Technology transfer and complementarity with the external sector (propulsive industries)</p> <p>Spatial location: Nodality. Spatial concentration Spontaneous: industrial districts. Non-spontaneous: main cities</p>
Exogenous	Endogenous
<p>Infrastructure: External accessibility. Excellent transp. infrastructures. Industrial land but not sophisticated technology parks. Telecom. and information networks are not prerequisites.</p> <p>Industrial policy: Inward investment. No discrimination. No R&D requirements. No technology transfer. No complementarity internal-external sectors Evaluation criteria: output and employment</p> <p>Spatial location: Concentration; not necessarily in largest urban centres. Nodality, access to ports, and to adequately (experienced) labour markets</p>	<p>Infrastructure: Internal accessibility. Intraregional links Not prerequisites: technology parks, industrial land, sophisticated telecom. infrast. Small scale, cost-saving infrastructure.</p> <p>Industrial policy: SME's. Sectoral and territorially biased Mobilization of indigenous (un-exploited) regional resources Inward-looking. Internal capital accumulation. Intermediate and indigenous technology. Inward investments and foreign capital penetration prevented</p> <p>Spatial location: Spatially diffuse industrialization. Rural medium urban size oriented. No agglomeration economies</p>
Inward investment policies	Self-reliant

C/L -

Finally, personal interviews with regional policy-makers and researchers were carried out as a complementary source of information². Particularly, interviews with the Chief officer of the Railway Department (Jefe de Servicio de Ferrocarriles)

² *Regional policy-makers interviewed:* Mr. Hernández, E., Chief Officer of the Department of Economy and Finance (March 1989; September 1990); Mr. Urbano, A., Chief Officer of the Studies Department (IFA) (September, 1990; March, 91); Mr. Zoido, F., General Director Territorial Policy Depart. (June, 1989); Mrs. Vega, G., Chief Officer Territorial Policy Depart. (September, 1989); Mr. Suarez, J.L., Private consultant advisor Territorial Policy Depart. (March, 1989); Mr. Benabent, M., Officer Territorial Policy Depart. (March, 1989); Mr. Funes Palacios, C., Chief Officer Railway Department (September, 1990); Mr. Belis, P., Officer IFA (March, 1989); Mr. Ferraro, C., Subsecretary Dep. Economy (June, 1991); Mrs. De Haro, I., General Director European Community Matters (March, 1989); Mrs. Badía, M., General Director of Economic Cooperation (June, 1991).

and Chief Officer of the Department of Studies of the IFA allowed the overcoming the inaccessibility of some fundamental quantitative data. On the other hand, invaluable qualitative information could be obtained from these interviews relative to the planning process in Andalucía; i.e. how decisions were taken; how the planning process, the goal setting, and the implementation of the different policies took place; and how the objectives of the regional government had evolved.

The analysis of the three policy-sectors

Road Policy

Information about regional expenditure on the road programme was available primarily at a provincial level; i.e., expenditure on road development by province and by year. This information, however, gave little insight into the characteristics and objectives of this regional policy. It was not possible to identify which axes had been developed, to which network they belonged, which territories they connected, or who were the actual beneficiaries of such expenditure. To double an existing route that links the provincial capital with the national capital, for instance, is not the same as developing a system of new local roads within the province. Perhaps total amount of public resources accounted for the province is the same in both cases, but the strategy of road development differs substantially from one case to the other; i.e. whereas in the first case road development contributes to increase the external accessibility of the province, in the latter internal accessibility is given priority.

On the other hand, if a province has the highest expenditure on road development of the regional government, it does not necessarily mean that it is the most benefited province. Public documents in Andalucía frequently give public expenditure on roads per capita by province with the objective of assessing the distribution of such expenditure according to development levels in the different areas. This ratio, however, is misleading. This is so because the project developed in the province may

Academics and researchers interviewed: Prof.. Román, C., Dep. Applied Economics. Director Institute of Regional Development. (Univ. Seville); Mr. Curbelo, J.L., Researcher of the Council of Scientific Research (Consejo Superior de Investigaciones Científicas, Madrid) (March, 1989; Oct. 90); Prof.. Cuadrado Roura, J.R., Dep. Applied Economics (Univ. Alcalá de Henares. Madrid). Research Director on Regional Studies, FIES. (Madrid) (January 89); Prof.. Delgado, M., Dep. Applied Economics (Univ. Seville) (Sep. 1989; June, 1991); Mr. Aurióles, J. Lecturer Dep. Applied Economics (Málaga) (November, 1990).

serve as a major link between two external points and not be directed to satisfy internal transport needs, which could be concentrated between the comarcal centres and the provincial capital. In conclusion, the evaluation of a transport development programme requires a micro-analysis for which the distribution of public expenditure by local government areas can give only a broad and tentative insight.

Accordingly, a micro-analysis has been followed in the identification of the road development policy of the Junta. This consisted of: firstly, the analysis of the axes that have been developed or improved. This, in its turn, implied the identification of the type of axes developed (feeder road, main road, and motorway) and of the type of traffic satisfied by them (Local or provincial, regional, and inter-regional/international); secondly, the network to which the different axes belonged; and, finally, the analysis of their wider economic and spatial effects (see Figure 2.5).

Figure 2.5 Analysis of Land Transport Infrastructures

Sectoral analysis (Internal vs. External accessibility)	Analysis of the axes		Type of axis	Feeder road/local track Main road/regional track Motorway/national track
			Traffic	Local/provincial Regional Inter-regional/international
	Analysis of the network			
	Role of the axis in the overall strategy of economic development (Geography of economic development)			
Horizontal analysis	Economic	Supply-led/Pull-strategy Demand-led/Push-strategy		
	Spatial	Concentrated Dispersal Scattered		

As a complementary analysis, the road policy of the Junta de Andalucía was evaluated according to its supply-led vs. demand-led approach. There are, from an economic point of view, two different, yet general, approaches to public expenditure: what may be called 'push-strategy' and its alternative 'pull-strategy'. Under the first approach, public investment follows demand; it does not try to modify the basic structure of the system, nor the territorial pattern of the existing economic activities. The objective of the so-called push-strategies is to increase productivity and economic global efficiency. In the second case ('pull-strategy'), public investment tries to create the necessary conditions for development in areas where this does not exist. It tries to compensate and/or modify the spontaneous (market-led)

pattern of allocation of resources. Its objectives are therefore 'territorial' instead of 'economic', meaning by territorial a pattern of allocation of public resources that does not seek primarily economic efficiency.

Finally, an analysis of the spatial pattern of allocation of regional investments on the road programme was carried out. Three different spatial patterns were considered: dispersal, concentrated, and scattered. Whereas the concentrated pattern seems to be predominant during periods of extensive economic growth and follows, therefore, efficiency criteria, the dispersal and scattering of public resources usually responds to political reasons (Hirschman, 1958).

Information about projects carried out by the regional government is provided by the Consejería of Public Works and Transports. This information is broken down into annual lists consisting of: name of the project, type of intervention carried out (conditioning, widening, new route, etc.), and actual money spent on them. Projects are also grouped by province. Since the primary objective of the thesis was to analyse the evolution of the development strategy of the Junta and to identify whether or not there had been a shift, and owing to the fact that transport projects usually last more than one year, this information was of limited usefulness. It was necessary to know not how much money was spent each year and in which projects, but instead, which projects were initiated each year and the total amount of money assigned to them, independently of how this money was spent throughout the years. Accordingly, the information given by the Consejería had to be re-elaborated. A new series of lists was generated which comprised: name of the project, year when the project was initiated, total amount of resources spent on it, and percentage of the resources spent on it in relation to total regional expenditure on the road programme in that year. Projects in these lists are also grouped by province.

Once the projects were identified according to their starting date and to their provincial location, they were mapped. The mapping of the projects was a fundamental step because by their names (for instance, JA-2-A1-100) it was impossible to know their exact location, to which axes they belonged, and their functional or spatial complementarity with other projects and across provinces. The final result was a regional map—first provincial maps had been elaborated—, where the most significant projects in quantitative terms initiated each year, minor-projects that were, nonetheless, functionally dependent (that is, those projects that constituted sections of the same axis), and projects that had some continuity (sections of the same axis) during the following years, were all mapped. In that way, the strategy of road development of the Junta de Andalucía was finally represented as it had evolved year by year.

Railway Policy:

The methodology used for the identification and analysis of the railway policy of the regional government has been the same as that of the road policy (Figure 2.4). Nonetheless, whereas the latter required a laborious job, the identification of the railway policy of the Junta has been a rather straightforward task. This has been so mainly for two reasons. Firstly, the regional railway network is considerably simple; only few lines made it up. Accordingly, public expenditure on the programme has been concentrated. Secondly, projects carried out do not refer to sections but to whole tracks; thus, projects were easily identified and mapped.

Industrial Policy:

The analysis of the industrial promotion policy of the Junta de Andalucía has been based on the activities carried out by the two industrial promotion departments created by the regional government: IPIA (Institute for the Industrial Promotion of Andalucía, 1983-86), and IFA (Institute for the Promotion of Andalucía, 1987).

Different from the other two policy sectors for which abundant quantitative data existed, the analysis of the industrial policy of the Junta had some limitations in this respect. This has been so for several reasons. Firstly, the IPIA was created as a industrial promotion agency directed at assisting local SME's. Nonetheless, it was lacking in financial autonomy, the main objective of that being to coordinate and make full use of the numerous instruments and industrial promotion incentives that existed in the region by that time. As a result of that, the resources that the IPIA managed to mobilize for the implementation of the its industrial policy belonged to external agencies and, therefore, it did not record them, nor was legally demanded to do so.

More abundant quantitative data, however, exist since 1987. In that year a new regional agency (IFA), substituted the IPIA and an annual budget was awarded to it by the regional government. Quantitative data supplied by the IFA is primarily classified according to financial instruments: grants, subsidies, loans, and loans guarantees. Regional public expenditure in industry promotion appears distributed according to these financial instruments, and according to province and sector (agriculture, industry, construction, and services). This information is obviously too limited to identify the industrial promotion policy of the regional government. Less aggregated data also exist which consist of a series of lists (by year) of firms that had received financial support. Information in those lists consists of: location of the firm

(municipality and province), economic sector to which it belongs, and type and amount of aid that it has received from the regional government. With such information, however, there is no possibility of knowing the size of the firms, their origin (regional, national or foreign), their level of technological development, or the criteria used by the IFA for giving them financial support. Accordingly, it was useless to identify the industrial development policy of the Junta.

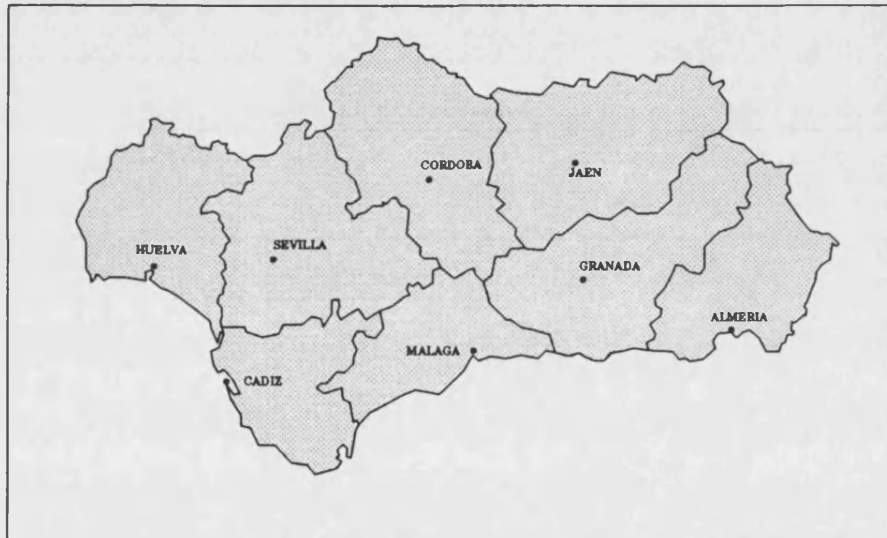
Secondly, the creation of the IFA also brought about a diversification in the armoury of regional policy instruments for industry promotion. New industrial and technological infrastructures and services, such as incubators or Business Innovation Centres (BIC's), information networks, CAD-CAM facilities, or technology parks acquired similar or even more importance than traditional financial incentives. Expenditure on these projects and services was not, however, systematically recorded by the IFA, or at least it was not available to the public. Formal written requests and several personal interviews with the Department Chief Officer did not solve this limitation.

As a result of that, the identification and assessment of the industrial promotion policy of the Junta has been based basically on a qualitative analysis of the objectives, activities and policy instruments of the two industrial promotion agencies created by the Junta during this period (1983-92). When possible, this qualitative information was complemented with quantitative data obtained from personal interviews (Chief officer of the Department of Studies and Projects of the IFA), local newspapers and specialised magazines.

3. ANDALUCÍA

Andalucía is one of the seventeen Autonomous Communities that make up the Spanish State. It is situated in the Southern part of the country and accounts for 17.3 per cent of its territory (87628 Km²). The regional population in 1986 was 17.7 per cent of the Spanish one, or 6.8 million. Administratively, the region is divided into eight provinces: Almería, Jaén, Granada, Málaga, Córdoba, Sevilla, Cádiz and Huelva, each with a provincial capital of the same name (see Map 3.1), and 766 municipalities. The province is a local entity with its own legal status, consisting of a group of municipalities and representing a territorial division designed to carry out the activities of the state. Hence it is both a local authority and part of the peripheral administration of the state. Apart from municipalities and provinces there are also *comarcas* (122) consisting of a group of municipalities though with no legal status.

Map 3.1. Provinces and provincial capitals



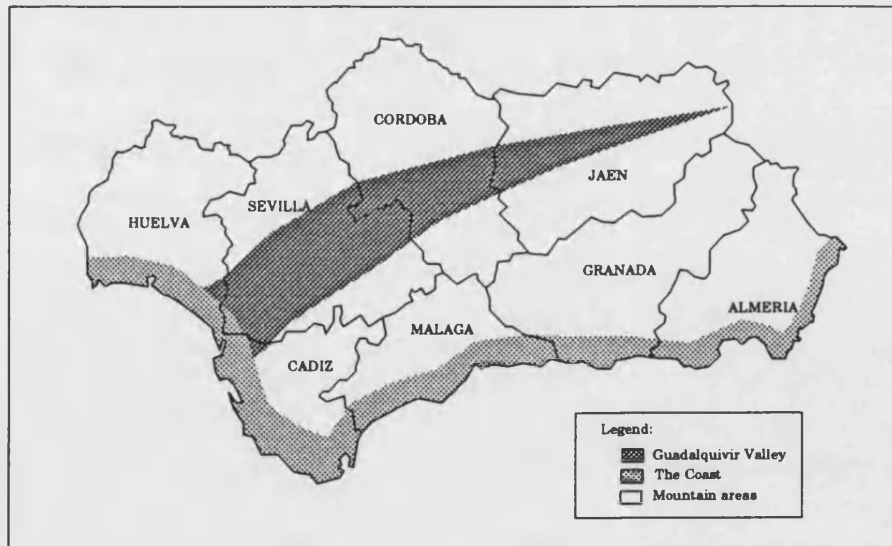
From a geographical point of view, it has three different areas (see Map 3.2). Firstly, the Guadalquivir Valley, which crosses the region from NE towards SW. This has been traditionally the most prosperous area within the region; the fertility and the richness of its land allowed the development of a dense, balanced and well structured urban system of medium-sized cities engaged in the production of and transformation of agricultural products. During recent decades, however, the valley has been losing economic and demographic significance since the agriculture sector lost its role as the driving sector of the regional economy. At present the area presents a stagnant situation.

Secondly, the coast from Huelva to Almería and from the Atlantic to the Mediterranean sea. At present, this area enjoys the highest rates of economic and

demographic growth. Since the 1950-60's new potentials, alternative sources of economic growth have appeared, which have allowed the area a continuous process of economic development up to the present. Firstly, it was the tourist sector; then, the development of several industrial growth poles —Huelva, Algeciras Bay, Cádiz— by the Spanish government during the expansionist period (1960-70); and recently the discovery of the potentiality of the coast for the exploitation of the so-called 'tropical agriculture', aquaculture or fish farming, and for the generation of renewable energy sources. All this has led to a concentration of the economic activity and of the regional population in this small fringe of the region, which has not been followed, however, by an adequate development of the necessary infrastructures (urban and transport infrastructures). As a result of that, the area suffers from many bottlenecks, which considerably limits its potential development and that of the region as a whole (Aurioles, 1989; Díaz et. al, 1991).

Finally, the mountainous areas, the northern part of the provinces of Huelva, Sevilla and Córdoba which make up the *Bética* and the mountain range from Cádiz to Granada —*Penibética*—, characterized by economic and social backwardness, isolation and depopulation. Its growth has been stagnant and historically characterized by emigration and progressive abandonment of the land. This tendency seems difficult to reverse (Junta de Andalucía, 1991).

Map 3.2 Main geographical areas of Andalucía.



These geographical areas which comprise the regional territory form three totally different, unconnected and functionally independent territorial systems. The economic, social and territorial disarticulation between them has increased with time (Díaz et. al, 1991), as has the disparity of development levels. These disparities

are also reflected at a provincial level (Table 3.1). Western provinces, particularly Sevilla, Cádiz, and Málaga enjoy higher prosperity and economic development than Eastern ones like Granada, Jaén or Almería. A look at existing transport networks at the beginning of the 1980's (see Map 4.1), perhaps the most expressive illustration of the main economic, social and political circuits, shows quite clearly the relative inaccessibility of the Eastern part of the region, the lack of connections between West and East and the better integration of the Western Andalusian provinces with the rest of the country, particularly with the North and the Centre. Western and Eastern provinces in Andalucía constitute, in fact, two different *systems*, unequally developed and poorly integrated.

Table 3.1. Provincial indicators

Prov.	Terrt. %	Pop. %	Empl. %	GDP %	Inc/cap*
Almeria	10.0	6.5	7.9	6.8	100.5
Cádiz	8.4	15.4	14.3	19.5	99.9
Córdoba	15.7	11.0	10.5	9.8	96.2
Granada	14.4	11.5	11.3	9.8	83.0
Huelva	11.5	6.4	6.2	8.2	94.5
Jaén	15.5	9.4	8.7	7.9	95.5
Málaga	8.3	17.2	18.0	16.8	107.9
Sevilla	16.0	22.6	23.1	21.2	107.9
Andal.	100.0	100.0	100.0	100.0	100.0

Source: Contabilidad Regional de España, 1987. Encuesta de Población Activa, 1989. Banco de Bilbao: Renta Nacional de España y su distribución provincial. 1987. (Inc./cap. data referred to 1985)*

Economic Underdevelopment

At the beginning of the 1980's Andalucía was one of the poorest regions of the country. It accounted for less than 13% of the national GDP, its share of the national territory and of the national population being over 17%. The regional income per capita was a mere 79% of the national average. In 1985 the rate of unemployment was the highest in Spain and Europe —30.1%—, 8.7 points above the national average. The economic structure of the region (Table 3.2) manifested its relative agricultural specialization, the weakness of the industrial sector and the dominance of the tertiary sector, which contrary to other more industrialized areas, was characterized by its marginality, high underemployment levels and low productivity, the result of a lack of employment opportunities in the other sectors (Ferraro, 1990).

Table 3.2 Regional economic structure and participation in gross national value added.

	1981			1985			1989		
SECTORS	And. %	Spain %	An/S.%	And. %	Spain %	An/S.%	And. %	Spain %	An/S.%
Agricult.	12.5	6.6	24.5	13.6	6.4	26.4	9.4	5.0	23.6
Industry	19.7	27.4	9.0	18.0	26.5	8.5	17.9	25.3	8.9
Constr.	8.1	6.6	15.5	6.8	5.6	15.1	10.0	7.9	16.0
Services	59.7	59.6	12.6	61.6	61.5	12.5	62.8	61.8	12.8
Total	100.0	100.0	12.6	100.0	100.0	12.5	100.0	100.0	12.6

Source: BBV. *Renta Nacional de España, Serie histórica*

When the new regional government was set up, Andalucía presented all the characteristics of an underdeveloped economy: backwardness, stagnation, economic and spatial disarticulation, extroversion, dependency and marginality (Román, 1987). Although it was generally acknowledged among regional researchers, academics, and policy-makers that this situation was the result of a long historical process in which internal factors such as an unequal distribution of land or the lack of regional entrepreneurship had played a central role, the most recent causes of the Andalusian underdevelopment were argued to be due to the process of unequal development in Spain during the last two decades (Delgado, 1981; Román, 1987; Junta de Andalucía, 1983a).

The *economic miracle* promoted by the dictatorship after autarchy (1959 Stabilization Plan) brought to the country the highest growth rate in Western Europe, but also immense territorial shifts of economic activities and population (Tamames and Clegg, 1984). This model of development produced massive concentrations of capital and labour in the already congested metropolitan areas of Madrid, Barcelona and Bilbao, while large areas of rural Spain became deserted and regions such as Andalucía, Extremadura and Galicia remained underdeveloped. The productive specialization of the regions determined their role in this process of intensive industrial development, urban growth and internationalization of the Spanish economy (Alcaide et.al., 1990).

The contribution of Andalucía, as well as that of other agricultural regions was twofold: it supplied labour (more than one million workers emigrated from the region during this period), capital (surplus-value from the agriculture sector, local savings, and profits seeking more profitable investments in other regions), raw materials, food and markets, which allowed for the Spanish industrial take-off. On

the other hand, it contributed to the development of the prosperous industries situated in other areas of the country by carrying out the less-profitable and most contaminating stages of the industrial process. An exogenous, dependent, externally oriented, and subsidiary industrial development, the main objective of which was to assist the industrialization of the richest areas: the Basque Country, Catalonia and Madrid (Delgado, 1981).

The development of few 'industrial enclaves' in the region was not only unable to absorb the surplus-labour generated by the agricultural modernization process, but also contributed to the deterioration of the internal industrial sector. As one author has shown (Delgado, 1991), the increasing economic interrelationships between Andalucía and the centre brought a progressive deterioration of the region's traditional manufacturing sector, already weak before this process of economic integration. From 1960 to 1975, Andalucía lost 40% of the employment in these traditional activities; particularly affected were the food-processing industries (the most significant and 'strategic' industrial sector within the region), which decreased its share in the national stake from 25.6% in 1955 to 19.8% in 1975. In 11 years, (1964-75), the number of firms in this sector in the region decreased by 50%, and employment by 28.8%.

Table 3.3 illustrates the effects of national industrial and economic development on the economic structure of Andalucía. The decline of the agricultural sector was compensated neither by the development of an indigenous industrial sector nor by an exogenous industrial development. As a result, an unproductive and over-grown service sector appeared as the only economic alternative for the Andalusian population. The economic structure of the region adapted to the accumulation requirements of the richest areas of the country (Delgado, 1991).

Table 3.3 Evolution of the Andalusian economic structure, 1960-85.

SECTORS	1960		1975		1985	
	GDP %	Emp.%	GDP %	Emp. %	GDP %	Emp. %
Agricult.	31.9	50.0	16.2	30.7	13.5	21.9
Industry	22.5	16.8	24.6	18.7	18.1	16.1
Construct.	5.7	6.4	8.1	9.8	6.8	7.9
Services	39.9	26.8	51.1	40.8	61.6	54.1
Total	100.0	100.0	100.0	100.0	100.0	100.0

Source: Banco de Bilbao. Renta Nacional de España y su distribución provincial

In 1975, the period of national economic expansion had finished. The industrial crisis came only to worsen the already weak Andalusian economy. During the period 1976-82, 71,900 industrial jobs were lost in the region at an annual rate of -4.33 per cent. Together with the rampant decline of the indigenous industrial sector, the process of transfer of manufacturing activities towards the region, which previously made up the modern and subsidiary industrial sector, significantly decreased. The analysis of spatial location of industrial activities (industrial investment) during the period 1974-80, and particularly since 1980, shows the progressive deterioration of Andalucía in comparison with other areas such as the Mediterranean Coast, the Ebro Valley and Madrid (Aurioles, 1988). At the beginning of the 80's Andalucía was an 'underdeveloped agricultural economy'; during the crisis, the region increased its agrarian specialization within the country (Delgado, 1990), as agriculture had been the only sector that manifested some kind of dynamism. The economic indicators traditionally used by conventional economics (electricity and energy consumption, hospital beds/1000 inhabitants, cars/1000 inhabitants, literacy levels, etc.) situated Andalucía in one of the lowest levels in the ranking of the Spanish regions. Underdeveloped, poor and economically disarticulated Andalucía entered the decade with a political project of historical significance: the constitution of the region as Autonomous Community.

Political Autonomy

The death of General Franco in 1975 was accompanied by the restoration of parliamentary democracy and the creation of the State of the Autonomies. This transformation —embodied in the 1978 Spanish Constitution— involved the devolution of political powers and administrative functions to newly created regional bodies, as well as to the traditional levels of local government, i.e. the provinces and municipalities. Different from other European countries such as France or Italy, the Spanish regional reform was a political reform 'from below' (Tamames and Clegg, 1984). The 1978 Constitution did not set out a predetermined map of the regions to be created, or impose on them a given set of powers and functions; instead, the new Autonomous Communities (AACC) were constituted normally through the joint decisions of a group of provinces and municipalities (via procedures set up in the Constitution). Assemblies of regional representatives (deputies, senators and provincial councillors) then drafted Statutes of Autonomy which were submitted to Parliament for final approval. These Statutes are Organic

Laws of the Spanish State —each one a miniature 'regional constitution'— specifying the Autonomous Community's (AC) territorial limits, the nature of its institutions of self-government, and the powers and functions that it will exercise. Nonetheless, the Constitution did impose certain restrictions on the powers that might be granted in the Statutes; these powers were (art. 148):

- the supervision of local government (municipal and provincial councils);
- town and country planning, urban development and housing;
- public works of 'regional interest';
- regional roads and railways (i.e. those which remained wholly within the AC's territory);
- ports and airports of 'regional interest' and those without a commercial function;
- agriculture and cattle-raising, within the general economic regulations set by central state (e.g. farm prices);
- forestry;
- implementation of national policies on environmental protection;
- water supply and hydraulic works on regional waterways (i.e. those wholly within the AC's territory);
- fresh-water fishing;
- local commercial fairs and exhibitions;
- regional economic development within the framework of national economic policy and planning;
- handicraft;
- social welfare services.

Of the functions contained in this list, only those explicitly included within the terms of the Statute of Autonomy are granted; the others remain in the hands of the central government. The Statute also states whether executive or legislative powers are involved.

The devolution process began in Spain on a two-track basis, with 'first' and 'second-class' regions (Tamames and Clegg, 1984, p. 39). First-class regions were initially those historical communities that had their own language, a strong cultural identity, and had historically claimed autonomy; i.e. Catalonia, the Basque Country and Galicia. These regions were granted Statutes with broader powers, and were listed in the Constitution under art.151. The rest of the regions —listed under art.148— had to pass a transitory period until they reached the level of autonomy of the historic communities. Andalucía, although it was not a historical community, was included among them for political reasons (Morata, forthcoming; Zaldívar &

Castells, 1992). The Constitution in fact, allowed this to take place but under very restricted conditions (including a special referendum). Andalucía had such a referendum but it did not pass it. It was the intervention of the Socialist Party (PSOE) in national parliament and the subsequent modification of the law that finally allowed Andalucía to be included among the historical communities, and therefore to enjoy the highest levels of economic and political autonomy.

Devolution also presupposes the existence of an institutional and administrative organization. Again, the Constitution left the nature of the AC's institutions and internal organisation to be determined by the Statutes and regional legislation. All the AACC have adopted the same basic model: a legislative assembly elected directly by the regional population, a President elected by the assembly, and an executive council or regional government supported by a majority within the assembly. The central state can not ordinarily exercise direct controls over the actions of regional bodies; conflicts over respective spheres of power and the constitutionality of either national or regional legislation are resolved by the Constitutional Court, acting as final arbiter.

Regions enjoy financial autonomy according to the principles of coordination with state finance and interregional solidarity. The regional financing system —still in a transitory period since the approval in 1980 of the Regional Finance Law, or *Ley Orgánica de Financiación de las Comunidades Autónomas: LOFCA*— is broadly based on shared central revenues, regional tax revenues, and contributions from a shared cooperation fund —Interterritorial Compensation Fund—, the objective of which is to redistribute resources among regions for the construction of a more balanced territorial model of economic development.

Decentralization and regional autonomy were regarded by almost all the Spanish political forces active since 1975, as a necessary and integral part of the transition to democracy; a way of eradicating repressive authoritarian tendencies ingrained within the political system (Tamames and Clegg, 1984, p.31). These reforms responded on the one hand, to the profound, historical aspirations of the linguistic communities within the Spanish people (particularly the Basques and Catalans), which found political expression in movements for autonomy and even separatism; on the other hand, devolution was seen as a means of promoting social equality and a more balanced model of economic development.

In Andalucía, the Statute of Autonomy passed in 1981. The economic functions transferred (see powers listed above: art.148) allowed the Junta to intervene in

almost all the sectors of the regional economy. The central government retained, however, its power to carry out national economic planning, to formulate general policies on prices, public finances and banking and the basic legislation concerning the most important economic sectors. It also continued to be responsible for 'national' public works, roads, railways, airports, and seaports (as defined in national legislation), as well as its own extensive industrial holdings (most of them administered through the Instituto Nacional de Industria, INI).

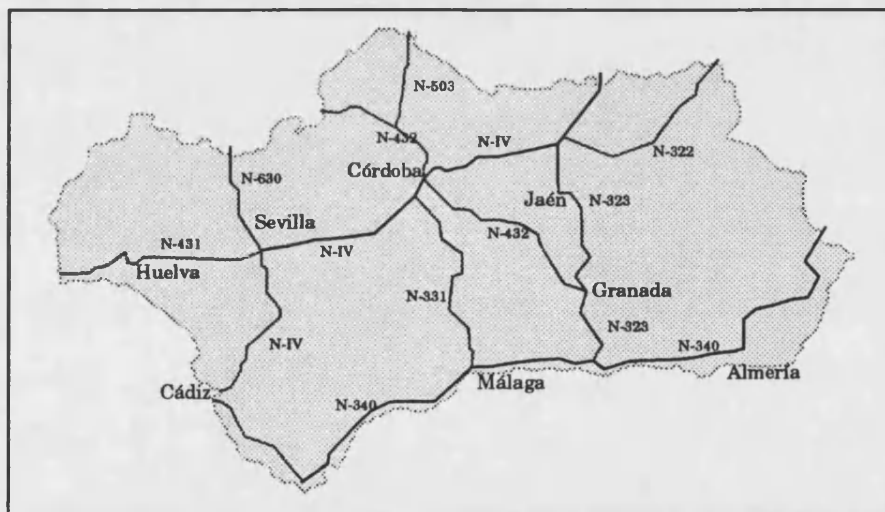
The first regional election brought the socialist party into power. The lack of any legitimating nationalist ideology in Andalucía gave the new regional government the need to justify itself and the own autonomy, for which it struggled so much, on practical grounds; i.e. with evident economic results. It had to convince the Andalusians almost as much as central government that it was prepared for 'repairing the comparative economic and political wrongs that had engendered the demands for autonomy' (Barzelay, 1987, p.110). If central government had allowed and even facilitated the disruption of the regional economy, the new regional government would promote an inward-looking and integrated model of regional development. If central government planning had been an antidemocratic and a top-down activity subordinated to the dictates of profit criteria, the regional development plan elaborated by the Junta would be a collective project in which the interest of the Andalusians would be fully represented. Political autonomy would bring therefore in Andalucía, economic development, political democracy, and greater social equity.

4. ROAD DEVELOPMENT POLICY

THE ANDALUSIAN ROAD NETWORK AT THE BEGINNING OF THE 80'S

At the beginning of the 80's, the Andalusian road network was made up of a complex system of different road categories relatively well adapted to the mountainous character of the region (see Map 4.1). The main axis was the national road N-IV, which penetrates the region through the Despeñaperros Pass and follows the Guadalquivir Valley crossing Bailén, Córdoba and Seville to Cádiz on the Atlantic Coast. This main axis constitutes the main exit of the region towards the Meseta. It channels the Andalusian traffic towards the north of the country, collecting not only all the traffic from the valley but also from the whole region as several transverse routes end in it. More than 30% of Andalusian interchanges (road passengers and goods) with the rest of the country are carried by this main corridor. The second most important axis is the national N-340 which follows the Coast from Cádiz to Murcia, through Algeciras, Málaga, Almería and Pto.Lumbreras.

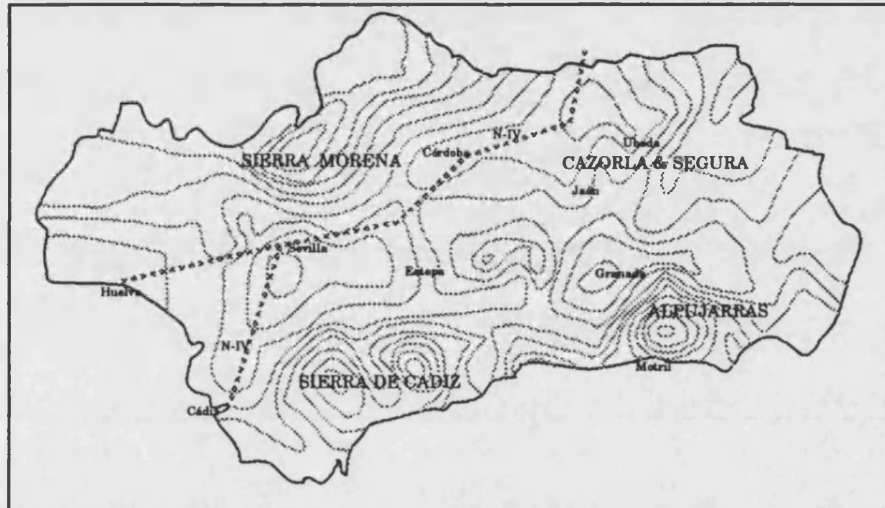
Map 4.1 Andalusian Road Network. 1980



Among the transverse corridors stand out the national N-331, which links Málaga and Córdoba and the national N-323, which links Motril and Bailén; both of them lead into the N-IV, thus linking the Andalusian Coast with the north and centre of the country. Apart from those, there are other transverse routes which cross the Sierra Morena. These include, the N-432, which links Granada with Badajoz (traffic on this road is quite light except for the section between Córdoba and Espiel where the route splits to Almadén on the one hand, and to Badajoz to the other); the national N-630, which connects Seville to Mérida; and finally the N-322 which connects the Sierra Morena of Jaén with Albacete through the Alcaraz Pass.

In accessibility terms (see Map 4.2), only the areas connected by the main corridor, the N-IV, and its prolongation to Huelva and Cádiz, are well communicated. The mountainous zones (Cádiz, the Alpujarras, Cazorla and Segura, and the Eastern part of the region), East of Ubeda and Motril, the inner triangle made up by Granada-Jaén-Estepa, and Sierra Morena from Despeñaperros to Portugal, are isolated areas, and also the most backward ones within the region.

Map 4.2 Accessibility levels



Source: Consejería de Política Territorial y Energía (1984)

In 1984, Regulation 951/1984 transferred to the Junta of Andalucía 9687 Kms. of roads, that is, 80% of the existing regional road network managed by the State until that moment. Since 1984, the regional network has been divided into: roads of General Interest of the State: 2659 Kms. (13%); Autonomous network: 9687 Kms. (40%); and the local network: 10.787 Kms. (47%), belonging to the provinces and municipalities (see Map 4.3). Table 4.1 shows road distribution by province according to their status.

The transferred network was the result of excluding from the regional network, those routes that belonged to the national trunk network. The main axes, those previously analysed, were all integrated into the network of national interest. As a result of that, the network of the Junta was made up of an unstructured, incoherent and non-articulated system of roads, highly heterogeneous in its engineering characteristics and functionally dependent on the existing centrally oriented regional network.

The problem, according to the regional government, was not the lack or scarcity of linkages between the main regional urban centres (the road network existing in the region was rather dense and well adapted to the regional geography), but the lack

of any kind of internal structure and hierarchical organization of such a network. There were no clear itineraries but instead a sum of different routes with different characteristics. In fact, the road network was not *centred on the region*; changing this became the main objective of the Junta de Andalucía (Junta de Andalucía, 1984a; Consejería de Política Territorial y Energía, 1984).

Map 4.3 Distribution of powers over the regional road network

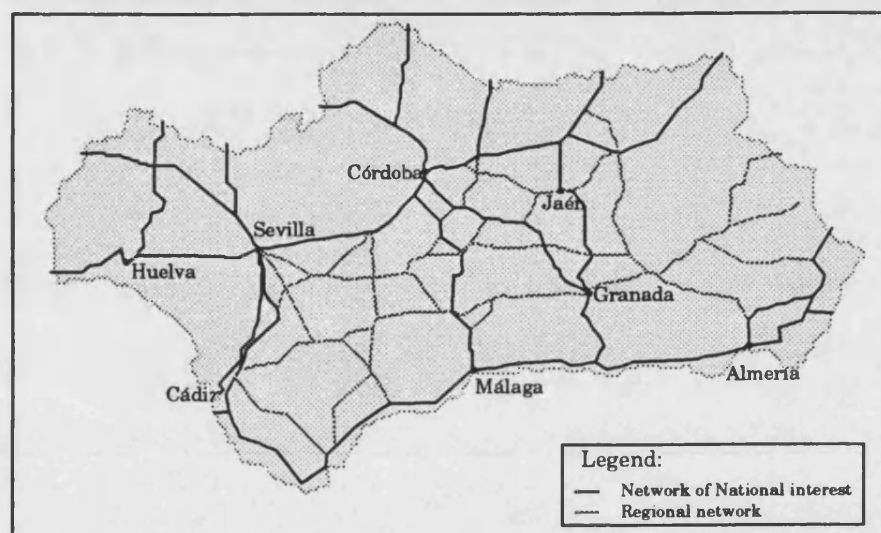


Table 4.1 Road distribution by province according to their status (Km.)

	MOPU				JUNTA				PROV.	
PROV.	NAT.	COM.	LOC.	TOT.	NAT.	COM	LOC.	TOT.	PROV.	TOTAL
Almería	257.2	—	31.7	288.9	137.6	302.3	311.2	751.1	1364.8	2404.8
Cádiz	270.7	—	11.2	281.9	117.5	482.5	471.0	1071.0	670.8	2023.7
Córdoba	407.1	64.6	8.4	480.1	57.1	615.0	828.1	1500.2	2443.8	4424.1
Granada	259.0	—	—	259.0	321.2	533.4	565.0	1419.6	1181.8	2860.4
Huelva	368.1	17.1	6.0	391.2	54.7	205.6	460.2	720.5	896.8	2008.5
Jaén	372.3	—	—	372.3	179.4	550.6	578.1	1308.1	1732.0	3412.4
Málaga	233.0	—	—	233.0	139.6	531.4	485.1	1156.1	812.1	2201.2
Seville	340.6	—	12.2	352.8	246.6	685.4	828.0	1760.0	1685.4	3798.2
Total	2508.0	81.7	69.5	2659.2	1254.0	3906.0	4527.0	9686.6	10787.5	23133.3

Source: *Consejería of Public Works and Transport (MOPU: Ministry of Public Works and Urban Planning; PROV.: Provinces; Nat= national; Com= comarcal or provincial; Loc= local).*

ROAD DEVELOPMENT POLICY BETWEEN 1984 AND 1986

The importance given to the spatial aspects of the strategy of development in the first regional economic plan (Junta de Andalucía, 1984a), was significant. In particular, great importance was given to the development of a regional road network. Economic, political, and social reasons strongly recommended that option.

According to regional policy-makers, the new territorial organization of the state (State of the Autonomies) would change the structure of the economic, political and social regional relations and, consequently, the functionality of the regional transport system (Consejería de Política Territorial y Energía, 1984). From an economic point of view, the expansion of the regional production system and the possibility of fully exploiting the indigenous potential (the economic objectives of the newly created regional government), did require a well articulated spatial structure and a well-endowed regional transport system. It was considered that the lack of such a transport system was strongly limiting the economic development of Andalucía. From a political point of view, the development of a road network for the region was believed to be a fundamental element for giving geopolitical cohesion to the recently created autonomous community. Social objectives could also be fulfilled. It was understood that the growing gap between rich and poor areas in the region was rooted in an inequitable access to productive activities and social services, and that by increasing the accessibility of the rural population to the main regional urban centres (*comarcal* centres, provincial capitals and regional capital), greater social equity could be ensured (Junta de Andalucía, 1984b; Consejería de Política Territorial y Energía, 1984).

The planning and development of the regional road network was entrusted to a newly created Department, the Consejería of Territorial Policy and Energy. The department was expected: firstly, to tackle the unbalanced territorial structure of the regional economy; and secondly, to redress the unequal distribution of the regional income and wealth, both indirectly and in the long run. It was created as a horizontal agency with a long-term planning perspective; its objective being to coordinate the different sectoral policies of the Junta. The importance given to this department can be noted by the share of the department's budget on total regional budgets (see Table 4.2).

Table 4.2 shows the annual regional budgets from 1984 to 1990 divided into eleven categories of regional public expenditure. Chapters from I to V refer to current regional expenditure, whereas Chapters VI-IX refer to regional capital expenditure. Chapter VI is capital investments. As can be seen from Table 4.2 the department's share of total regional capital investments along the 1984-90 period is significant.

The aim of the road policy of the Junta of Andalucía during this period, as set by the 1984 road plan was the development of a 'highly structured regional network with a strong internal coherence, using the existing infrastructure to the maximum, in

order to help preferentially internal mobility as a means for fostering territorial equilibrium' (Consejería de Política Territorial y Energía, 1984, p. 2). According to that, the first task was the definition of a Basic Functional Network, made up by several main horizontal and vertical internal axes, complemented by a dense network of local (*intercomarcal*) routes. The criteria used for the definition of the Basic Functional Network were: maximum territorial homogeneity in terms of accessibility between the different areas of the region; maximum use of the existing network and development of new links only in the case of strict necessity; and consideration of the different routes according to the function they had to play, without taking into account their status (regional or national routes).

Table 4.2 Participation of the Department of Territorial Planning on Regional Budgets (%)

Chp	1984	1985	1986	1987	1988	1989	1990
Chp I	1.2	2.8	3.0	2.9	3.1	1.4	1.3
Chp II	1.5	7.8	6.2	6.4	6.3	1.5	1.6
Chp.III	—	—	—	3.4	—	0.2	0.1
Chp.IV	—	—	—	0.4	—	—	—
Chp.V	—	—	—	—	—	—	—
Chp. VI	45.6	52.2	50.8	51.2	53.4	43.9	44.5
Chp. VII	4.5	4.1	7.7	11.6	8.3	17.5	20.3
Chp.VIII	51.4	69.8	81.2	27.7	12.5	4.4	6.7
Chp. IX	1.3	9.1	19.0	39.1	34.2	7.3	5.5
TOTAL	9.5	16.8	15.2	14.1	9.5	8.9	9.4

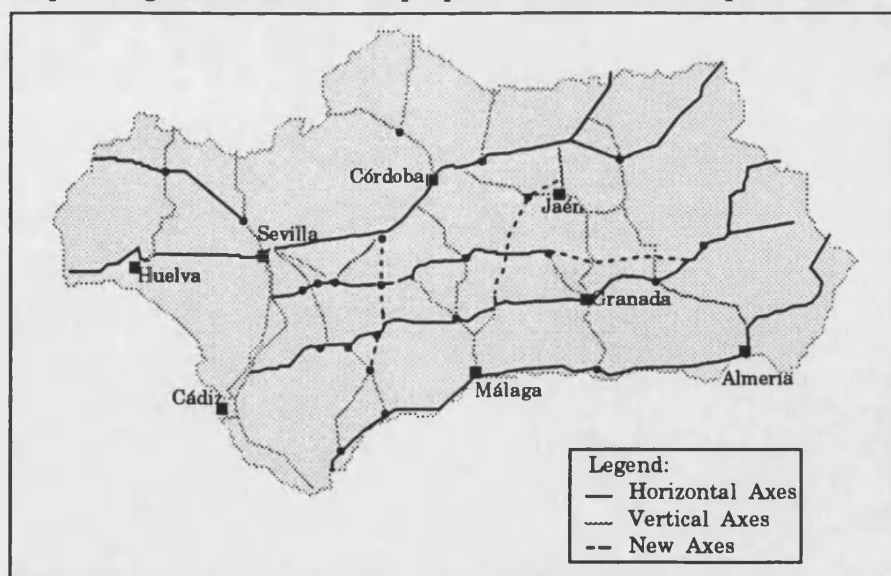
Source: Consejería of Public Works and Transport

The focus of the regional road plan was a territorial one; that is, the priorities were defined following accessibility criteria but not traffic demand or the level of utilization of the network. According to the Plan (Consejería de Política Territorial y Energía, 1984, p.18), 'against the classic methodology, which analyzes the network route by route, and evaluates it according to the level of traffic demand and use of the network [...] a method that considers the network as a whole, and therefore analyzes its global functionality, is preferred'. The plan argued that it takes into account the social implications of the road network and therefore, it considers 'the territorial implications of it more important [...] than the satisfaction of traffic needs measured in terms of demand compared to actual supply'. According to the plan, 'although there is not a formal territorial model approved by the regional government by this time, there is a clear implicit idea, which has been expressed by different political institutions and head regional politicians; this idea is to combat the traditional bias towards the promotion of the most developed socioeconomic

areas and to help a territorial model where economic opportunities are identical for all the areas' (Consejería de Política Territorial y Energía, 1984, p.19).

Map 4.4 shows the regional network proposed in 1984. National routes and improved regional roads to the category of the former, made up jointly the proposed regional road network. Only four sections of new routes were projected in the plan: Ecija-Ronda, Jaén-Loja and the eastern part of the Horizontal Central North Axis. According to the plan, these new routes were justified only because they would substantially increase the accessibility levels of the Sierra Morena and Ronda, the inner central area of the region, and the eastern part of Andalucía through the horizontal central north corridor to Baza; that is, some of the poorest areas of the region. Although the basic functional network would play an important role for the satisfaction of many intercomarcal traffic needs, it was considered as necessary to develop an intercomarcal network, which complemented the basic one. This was defined according to the following criteria: firstly, all the comarcal capitals should lay over the basic functional network, or at a distance not longer than 15 Km.; secondly, the network should help the economic and social relations between the comarcal capitals; according to that, basic and intercomarcal networks had to be coordinated and complementary; and finally, the intercomarcal network must join the comarcal capital with the rest of its surrounding territory.

Map 4.4 Regional road network proposed in the first road plan, 1984

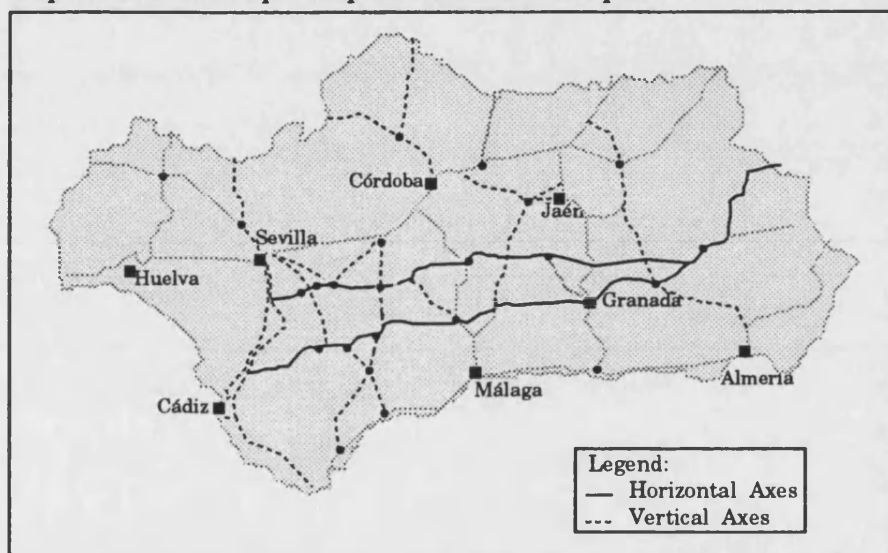


Source: Consejería de Política Territorial y Energía (1984)

In order to develop a road network centred on the region, the 1984 plan set up priorities of road development without distinguishing road status; that is, it established which axes should be developed independently of whether they belong

to the central government (MOPU —Ministry of Public Works and Urban Planning) or to the Junta. Map 4.5 shows the priorities set up in the Avance. In order to fulfil the objectives set up by the regional government, it was recommended (yet no national plan of road development had been approved) that the Ministry of Public Works and Urban Planning allocate priority to the improvement of the so-called vertical axes (Consejería de Política Territorial y Energía, 1984). The Junta on the other hand, was to concentrate on the development of two intermediate horizontal axes between the N-IV and the N-340 corridors, which belong to central government.

Map 4.5 Road development priorities. 1984 road plan



Source: Consejería de Política Territorial y Energía (1984)

Road Development Programme: 1984-86

Regional government expenditure on the road programme and its provincial distribution is shown in Table 4.3. The variation of the total figures from 1984 (12091.1 mill. pts.) to 1985 (2560.1 mill.pts) is explained by the fact that road projects usually last two or three years. The initiation of the programme in 1984 with a substantial amount of money led to the development of new routes, but left 1985 with less resources for starting up new projects. In 1986 projects initiated in 1984 were mostly completed and a new series of projects were initiated.

Table 4.3 Regional government expenditure on the road programme, 1984-86 (Mill.pts. 1986)

PROV.	1984	%	1985	%	1986	%
Almería	1862	15.4	497	19.4	1315	9.6
Cádiz	1286	10.6	278	10.9	2097	15.3
Córdoba	1497	12.4	632	24.7	570	4.2
Granada	944	7.8	407	15.9	2180	15.9
Huelva	735	6.1	127	4.9	913	6.6
Jaén	722	5.9	25	1.0	1733	12.6
Málaga	1578	13.1	0	0.0	711	5.2
Sevilla	3468	28.7	594	23.2	4223	30.7
TOTAL	12091	100.0	2560	100.0	13741	100.0

Source: Consejería de Obras Públicas y Transportes

As explained in the methodology (Chapter 2) this information (regional government expenditure on the road programme by province), does not allow a proper evaluation of the road programme. A project-oriented analysis was required for the identification of the strategy of the regional government. Table 4.4 shows the most significant road projects developed by the Junta de Andalucía during the 1984-86 period. Regional expenditures on those projects presented in Table 4.4 accounted for 62.9% of total regional expenditures on the programme in 1984; 81.3% in 1985; and 75.9% in 1986. The rest of the money: 37.1% in 1984, 18.7% in 1985, and 24.1% in 1986 was spent following a scattered pattern of expenditure; that is, on small-scale projects consisting in improvements of mainly local roads, dispersed throughout the regional territory. Map 4.6 shows the development of the road programme by year. Map 4.7 summarizes the development of the programme during the 1984-86 period.

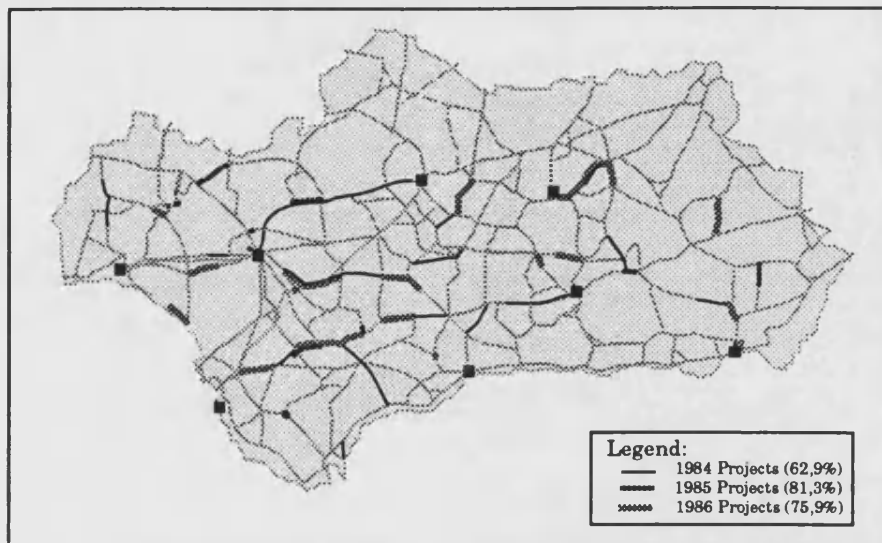
Table 4.4 Road Development by the Junta de Andalucía: 1984-86

PROJECT	Province	1984 (%)
Arahal-Osuna (V-C)	Sevilla	16,7
C-431 Sevilla-Córdoba (W)	Sevilla	7,5
N-324 Huelva-Abla-Gergal	Almería	8,08
N-342 Algodonales (V)	Cádiz	4,6
Pto. Higuerón-La Línea	Cádiz	1,65
Pte. Genil-Lucena	Córdoba	2,24
C-339 Ronda	Málaga	5,12
N-321 Salinas-Las Pedrizas	Málaga	2,17
N-342 Campillos-Antequera	Málaga	1,8
N-431 Lim. prov. Sevilla-Sanlúcar	Huelva	2,05
Alosno-Tharsis	Huelva	1,3
Albuñol- La Rabita	Granada	1,5
N-342	Granada	3,83
N-321 Pte. del Obispo-Baeza	Jaén	2,82
Jodar (V)	Jaén	1,55
TOTAL		62,91

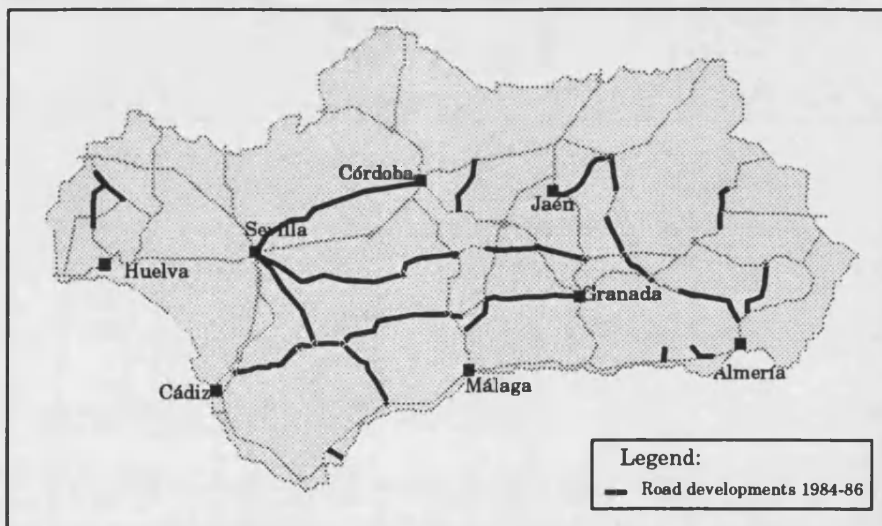
PROJECT	Province	1985 (%)
Cabra-Lucena	Córdoba	21,75
Vte. Gilena-Pedrerá	Sevilla	8,12
Camas-Salteras	Sevilla	7,17
Vte. S. Juan Aznalfarache	Sevilla	4,71
Tahal-Macael	Almería	10,5
Dalías-El Ejido	Almería	5,53
N-342 Guadix-Purullena-N-342	Granada	9,54
N-342 Villamartín (V-C)	Cádiz	7,49
Olvera-Pruna	Cádiz	3,1
Zufre-Sta. Olalla	Huelva	3,36
TOTAL		81,27

PROJECT	Province	1986 (%)
Venta del Junco-Arahal (D)	Seville	18,54
Utrera (V)	Seville	3,75
C-336 Benalúa de Villas	Granada	8,1
C-3329 Cullar-Baza-Huescar	Granada	2,29
Access Alhambra	Granada	1,67
N-342 Algodonales-Olvera	Cádiz	10,94
Pto. Serrano	Cádiz	1,44
Castro del Río-Bujalance	Córdoba	3,27
Alcalá la Real-Mures	Jaén	3,69
Ubeda-Jodar	Jaén	3,63
Baeza-Jaén	Jaén	2,87
Al-110 Sotomayor	Almería	3,37
Gergal (V)	Almería	5,66
Pilas-Almonte	Huelva	2,29
N-342	Málaga	2,62
Pte. Alora	Málaga	1,82
TOTAL		75,95

Map 4.6 Road Development by year. Junta de Andalucía: 1984-86



Map 4.7 Road Development during the 1984-86 period. Junta de Andalucía



Evaluation

A three-step analysis is required for the evaluation of the road programme: analysis of the axes; analysis of the network to which they belong; and finally, analysis of the wider effects of those axes upon the geography of economic development.

As far as the first element is concerned, road development during the 1984-86 period has allocated priority to the *development of intra-regional axes*. The two east-west internal axes of the region, that is the horizontal central north (from Utrera to

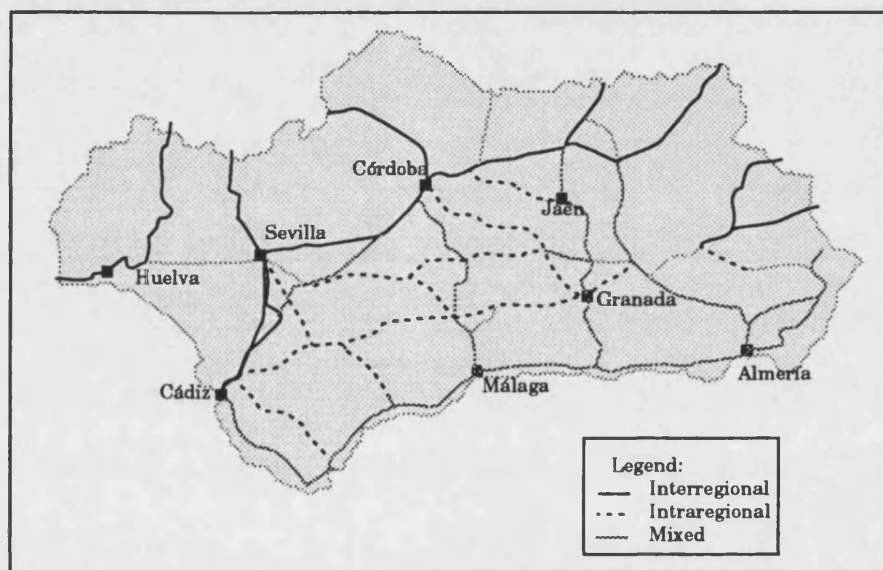
Alcalá la Real) and the horizontal central south axis (from Villamartín to Vélez Rubio), were the main projects of the regional road programme during these years. Particularly important was the improvement of the horizontal central north axis, which connects the Campiña of Córdoba and accounted for 16.7% of total regional expenditure on the programme in 1984, and 21.7% in 1985. Other important developments were the alternative axis to the N-IV between Seville and Córdoba through Lora and Palma del Río, the connection between Almería and Granada through the N-324, and the link between Seville and the Mediterranean Coast (Málaga) through the mountainous area of Ronda. Numerous projects were also carried out for the development of the intercomarcal and basic functional networks in the northern part of the province of Huelva, in Almería (Olula del Río-Macael, Berja-El Ejido) and within the province of Jaén (Jaén-Ubeda, Ubeda-Jodar). The year 1986 brought important changes. Nearly 20% of public expenditure on roads went to the development of a double carriage on the sections Vta.del Junco-Arahal and Osuna-Estepa. Although these sections belong to the horizontal central north axis, the works initiated that year did not have the objective of further developing such axis, but, instead, of creating a new regional route, which was not considered in the road plan: the regional motorway, A'92. The rest of the 1986 annual budget went to developing those routes given priority in 1984.

Two main analyses allow us to define these axes as intra-regional routes: the type of traffic they satisfy, and the territories they link. As far as the first element is concerned, satisfaction of traffic demand, Map 4.8. shows traffic demand in 1983 over the regional road network by type of traffic: inter-regional, intra-regional, and mixed. A comparison between Map 4.8 and Map 4.7 (road development during the 1984-86 period), shows that priority has been given to those axes that satisfy primarily intra-regional demand against those the main objective of which is to link Andalucía with the exterior. The majority of the roads developed during the 1984-86 period satisfy regional and inter-provincial traffic demand.

The routes developed between 1984 and 1986 reflect the political will of the Andalusian government in increasing the internal accessibility of the region. Firstly, the horizontal central north axis allows the structuring of one of the less accessible areas within the region, that is, the triangle constituted by Granada, Jaén and Estepa (see Map 4.2). This axis was considered strategic in the 1984 road plan as it links Seville with the eastern provinces of Granada and Jaén, while allowing the prosperous and densely populated area of the Campiña of Córdoba better to be linked and connected with the east and west. The horizontal central

south axis, on the other hand, constitutes the alternative route for east-west regional relations against the Coastal corridor (N-340) linking Cádiz with Murcia. The development of this axis allows not only the internal connection of the region, but also, and principally, an increase in the accessibility levels of the northern Sierra of the province of Cádiz (Consejería de Política Territorial y Energía, 1984). This is again, one of the less well endowed areas within Andalucía as far as transport infrastructure is concerned; it is quite isolated and, according to policy-makers, this matter has subsequently affected the economic development of the area. By linking this area to the rest of the regional territory, new economic and social opportunities can open up.

Map 4.8 Road traffic demand by territorial categories



Source : Consejería de Política Territorial y Energía (1984)

The development of the link between Seville and the Costa del Sol through Ronda constitutes a similar objective. This link would provide an alternative axis to the Seville-Málaga route through Antequera, and would allow the development of the inner area of the Sierra de Ronda, a backward and isolated area (Consejería de Política Territorial y Energía, 1984). Finally, Almería has been classified sometimes as the 'least Andalusian province' of the region; situated in the eastern part of Andalucía and considerably isolated from the rest of the regional territory, the province has always been better connected with other areas outside the region than with the rest of the regional capitals (Seville, Málaga, Córdoba). The improvement of the link between Almería and Granada during these years may be seen as the political will of the regional government of fostering the economic, political and social integration of Andalucía.

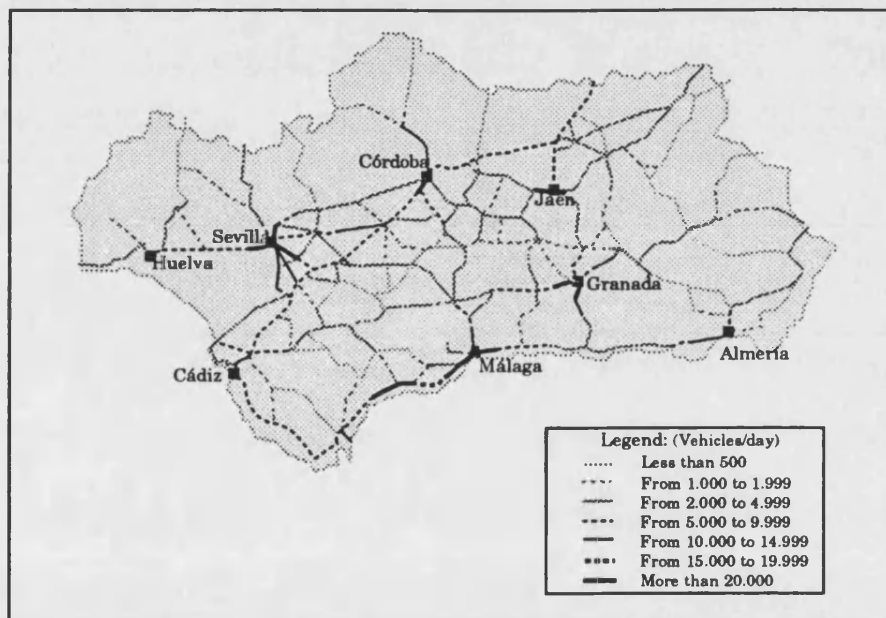
In summary, road development during the 1984-86 period directly and expressly promoted the opening up of isolated and backward areas within the region (Campiña de Córdoba, mountains of Cádiz), the integration of eastern and western parts of Andalucía, and bringing Almería nearer the rest of Andalucía.

A way of identifying whether a land transport corridor promotes internal rather than external accessibility, apart from the analysis of the type of traffic it satisfies and of the territories it links, is to recognize to which network it belongs; i.e. regional, national, or continental. The routes developed by the Junta de Andalucía during 1984-86 period belong to the network set up in the 1984 road plan. The type of intervention carried out by the regional government has consisted basically of upgrading the priority regional routes (the two horizontal corridors), to the category of national routes. By doing so, the Junta integrates national axes into the regional network, rather than developing the latter as subsidiary and complementary in respect to the national trunk network. A *centralist* alternative of developing the regional network would have been to further develop the existing radial network by increasing the number of branches in a hierarchical way: national trunk network, regional network (subsidiary and complementary to the former), and finally, local network. The intervention of the Junta de Andalucía during these years has, on the contrary, diminished such a structure; it has done so, firstly, by upgrading the regional main axes; and secondly, by giving priority to east-west corridors against north-south ones.

The road programme of the regional government has not only sectoral objectives (satisfying traffic demand) and territorial ones (linking territories), but also wider economic objectives. As we have seen, the role given to the development of the regional road network in the strategy of development of the Andalusian government is significant. By linking internally the region and opening up isolated but potentially prosperous areas (mountains of Cádiz or Córdoba) the road programme seems to be coherent with the objective set up in the regional economic plan (Junta de Andalucía, 1984a) of basing the development of Andalucía on the exploitation of the indigenous resources. Instead of improving the external connections of Andalucía—an appropriate road policy if the strategy of development seeks primarily to increase the export potential of the region, or its attractiveness for foreign capital—, the road programme of the Junta de Andalucía during these first years of regional government allocated priority to the expansion of the regional economic circuits. Internal capital accumulation prevailed over large-scale functional integration.

From an economic point of view, road development by the Junta after 1984 followed a supply-led strategy. A look at Map 4.9 on average traffic demand over the main regional itineraries elaborated by the Ministry of Public Works and Urban Planning (1983) and its comparison with Map 4.7, where projects developed by the Junta of Andalucía are mapped, shows that the so-called territorial objectives have received priority over the alternative objective of satisfying traffic demand. Road development and improvement during 1984-86 did not follow traffic demand, but instead it follows the political objective of building up a road network centred on the region. There is no correlation between levels of traffic demand and regional government intervention over the road network.

Map 4.9 Average traffic demand over the regional road network. 1983



Source: Ministerio de Obras Públicas y Urbanismo (1983)

From a spatial point of view, regional government intervention over the road network may be classified as 'soft', small-scale, and disperse-scattered. Soft and small-scale in the sense that it uses the existing routes making only necessary improvements, or trying to 'get the best' of previous routes. For example, only the alternative axis to the N-IV between Seville and Córdoba has been widened. There are no spectacular projects, or radical developments, but instead the progressive upgrading of the existing network. There is also a disperse pattern of allocation since public resources have been scattered throughout the regional territory. A look at Map 4.6 and at Table 4.4 shows this. Particularly interesting is to contrast how much money spent by the regional government has been yearly reflected in the map. This shows in some way, the degree of concentration of regional expenditure.

Whereas in 1984 only 62.9% of total annual expenditure on the road programme was mapped (1985 was a special year), percentages rose up to 87.4%, 85%, 89.7%, and 98.8% in 1987, 1988, 1989, and 1990 respectively. Whereas in the 1984-86 period no one project accounts for more than 20%, in the following period, 1987-90, one single project accounts for more than 50% in three of the four years.

In summary, the road policy of the Andalusian government during these years was coherent with the economic and territorial objectives set up in the Statute of Autonomy and the Andalusian economic plan (Junta de Andalucía, 1984a); that is, the promotion of an endogenous model of economic development, and the social and political integration of Andalucía.

ROAD DEVELOPMENT POLICY SINCE 1987

The second half of the decade brought important quantitative and qualitative changes in the road policy of the Junta de Andalucía and of the central government. First of all, in 1984 a new road development plan from central government arose (Ministerio de Obras Públicas y Transportes, 1984). The objective of this plan was to double by 1992 the mileage of national dual carriageways, from 2300 Km. to 5600 Km. Trunk roads were also going to double, from 8400 Km. to 15000 Km. The programme cost reached about 800,000 mill.pts (pts. 1983). The country's integration into the European Community in 1986, however, led to a sharp increase of central government's resources for the development of infrastructure programmes, and also to a shift in transport priorities. Instead of the modernizing of the existing trunk network, a plan for the development of a new national motorway network was going to receive priority. In 1988, Regulation 3/88 (Decreto-Ley 3/88) laid down the new objectives of the central government, and increased by 70% the initial budget of the 1984 road plan. The objectives laid down in the Decreto-Ley 3/88 were:

- general modernization of the productive system of the country in order to increase competitiveness in an increasing supra-national and integrated market;
- elimination of the main physical and infrastructural bottlenecks for development;
- integration of the Spanish territory in the European market, through a substantial improvement of the main land transport axes;
- development of a well-endowed inter-city road network.

By the year 2000, the country should have 3600 Km. of toll motorways and 4500 Km. of motorways. The main elements of this new high-capacity national road network

are the axes Madrid-Burgos, Madrid-Zaragoza, Madrid-Seville-Huelva, Madrid-País Valenciano; the Mediterranean motorway up to Almería on the one hand, and Seville through Granada on the other; and the motorway of Asturias, Galicia, and Navarra. The projected motorway network will allow a linkage between Algeciras (Andalucía) and France through the Mediterranean corridor, and through Seville-Madrid; and a linkage of Portugal with France through Salamanca-Madrid, Madrid-Burgos and Madrid-Barcelona. Map 4.10 shows the investment plans and priorities of the central government. In 1990, the 1.5 billion pesetas considered in the Decreto-Ley 3/88 for the development of the road programme of the Spanish government had increased to more than 3 billion pesetas.

Map 4.10 Projected national motorway network.



Source: Ministerio de Obras Públicas y Transportes (1988)

The year 1987 brought important changes to Andalucía. First of all, in that year a new Department was created, called the Consejería of Public Works and Transport (COPUT). The former Consejería of Territorial Policy disappeared, and with it, the objective of coordinating over the regional territory, the different sectoral policies of the regional government. The Consejería of Territorial Policy became a Research Centre (Centro de Estudios Territoriales y Urbanos) integrated into the regional administration but with no legal or decisional capacity. The new Consejería strives

for a more efficient and practical policy intervention, emphasizing management against planning.

This restructuring reflects, nonetheless, a more significant change than just a simple administrative reorganization. It signifies the progressive abandonment by the regional government of the territorial concern as it was previously understood (internal regional integration), and the increasing importance of transport infrastructures in the strategy of development of the Junta. Regional public expenditure on the road programme increased from 13,741 mill.pts. in 1986 to 22,312 mill.pts in 1987, 20,278 mill.pts in 1988, 33,098 mill.pts in 1989 and to 22,615 mill.pts in 1990 (see Table 4.5).

Table 4.5 Regional government expenditures on the road programme, 1987-90 (Mill.pts. 1988)

PROV.	1987	%	1988	%	1898	%	1990	%
Almería	597	2.7	1321	6.5	2011	6.1	1250	6.1
Cádiz	889	3.9	973	4.8	2700	8.2	536	2.6
Córdoba	2197	9.8	1381	6.8	1263	3.8	1134	5.5
Granada	7394	33.1	4735	23.3	13460	40.7	10190	49.4
Huelva	608	2.7	1170	5.8	2067	6.3	1500	7.3
Jaén	1804	8.1	164	0.8	650	1.9	3881	18.8
Málaga	2465	11.1	5871	28.9	4105	12.4	1423	6.9
Seville	6359	28.5	4665	23.0	6843	20.7	700	3.4
Total	22312	100.0	20278	100.0	33098	100.0	20615	100.0

Source: Consejería de Obras Públicas y Transportes

The importance of the road programme increased not only in absolute terms but also relatively. Table 4.6 shows the distribution of the annual budget by programme. As can be seen, there has been an internal re-distribution of public expenditure among the different infrastructure programmes carried out by this Consejería: Urban Planning and Housing decreased relative their participation from 55.46% in 1986 to 35.98% in 1988, while the road programme increased from 24.33% in 1986 to 31.3% in 1987 and 34% in 1988. The evolution of these two programmes seems to be quite complementary: a decrease in one of them is always compensated by an increase in another. The category Transport (referred to since 1987 to the Railway programme) increased from 0.89% in 1986 to 6.33% in 1988; Hydraulic Works also increased substantially; the rest of the programmes, that is Physical Planning (Ordenación del Territorio) and the category 'Others' decreased since 1986. There has therefore been an internal re-distribution of expenditures, which has included

increases in those infrastructure programmes that may be grouped as economic overhead capital against those programmes aimed at developing social overhead capital (Hirschman, 1958).

Table 4.6 Distribution of COPUT resources by programme (Mill.pts).

Year	Hous.	%	Roads	%	Hydr.	%	Trans.	%	Others	%	Total
1984	17567	61.2	5450	19.0	5058	17.6	125	0.4	497	1.7	28697
1985	26072	50.9	14184	27.7	9332	18.2	461	0.9	1217	2.4	51266
1986	30111	55.5	13208	24.3	8070	14.9	486	0.9	5416	4.5	54291
1987	32202	46.9	21509	31.3	10089	14.7	2500	3.7	2416	3.5	68716
1988	28830	35.9	27346	34.1	16300	20.4	5070	6.3	2572	3.2	80118

Source: Consejería de Obras Públicas y Transportes

The shift in the road policy of the regional government has been not only quantitative but also qualitative.

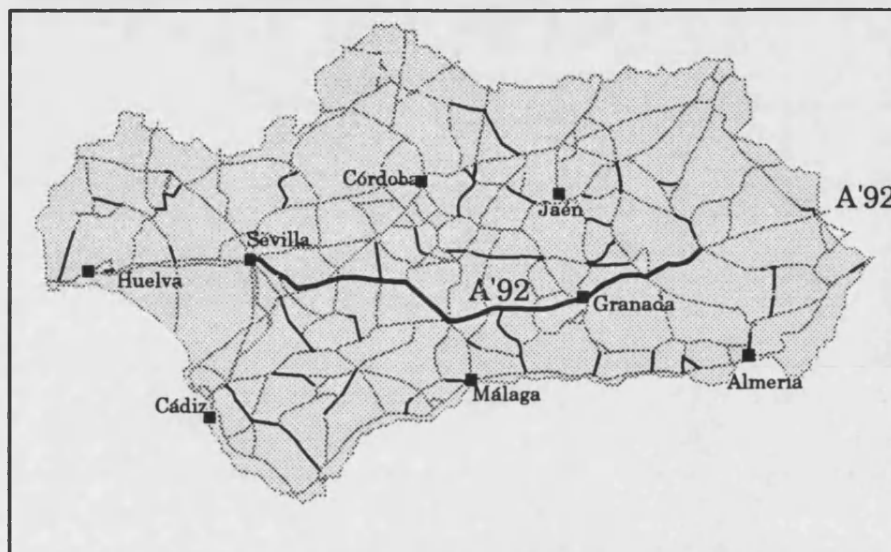
The Implementation of the Road Programme since 1987

The road programme of the Junta since 1987 has concentrated on the development of a single project, the A'92. As may be seen in Table 4.7, in total annual budgets for the road programme, the A'92 accounts for 56.27% in 1987, 57.64% in 1988, 37.91% in 1989 and 54.39% in 1990. The rest of the money went to numerous new projects dispersed throughout the regional territory (see Map 4.11); many of them belong to the intercomarcal network, particularly during 1989 and 1990. In that sense, regional road policy since 1987 contrasts with that of previous years. During 1984-86, priority was allocated to the development of the basic functional network. A polarized policy seems to be dominant since 1987, which includes the development of a major project, the A'92, together with the dispersal of public funds throughout the regional territory. A comparison between Map 4.6 and Map 4.11 is rather illustrative in that respect.

The A'92 is a singular project. Total regional expenditure on it surpasses 48,000 mill.pts; it also enjoys EC financial assistance (50%). It is the most expensive civil infrastructure carried out by any of the regional governments in Spain, and it is included (see Map 4.10) in the motorway programme of the MOPU, and in the map of National Plan of Community Interest on Motorways of the Spanish government (Ministerio de Economía y Hacienda, 1989, p.49). It is, in fact, one section of the Mediterranean motorway.

According to public documents and to regional policy-makers, 'the transverse Andalusian corridor is the necessary condition for the take-off of our Autonomous Community' (Ríos Pérez, 1987. p.90); it will provide the 'political vertebration of Andalucía', its 'integration into the European Community', the 'expansion of the regional economy, the intra-regional territorial equilibrium and regional development'; and it will also allow 'the fostering of economic growth while simultaneously helping the distribution of such economic growth' (Ríos Pérez, 1987 p.90).

Map 4.11 Road development by the Junta de Andalucía. 1987-90



Evaluation

Infrastructure requirements and traffic demand which satisfy the A'92

The Andalusian West-East axis has been built as a motorway. Generally speaking, the aim of a motorway is to allow long-distance trips between main urban centres in the shortest possible time period. They are the widest, quickest and most secure type of routes. The saving of travel-time, the speeds they allow, and their comfort help long-trip connections, being, on the other hand, a handicap for traffic relations between near points, which are easily done by other less sophisticated types of routes. Motorways link territories on a large scale (national or international). They do not fit well into the surrounding local territories. They have been compared with the railway in the sense that when you leave the departure point, you do so without stopping until you reach the destination point. Service areas are like railway

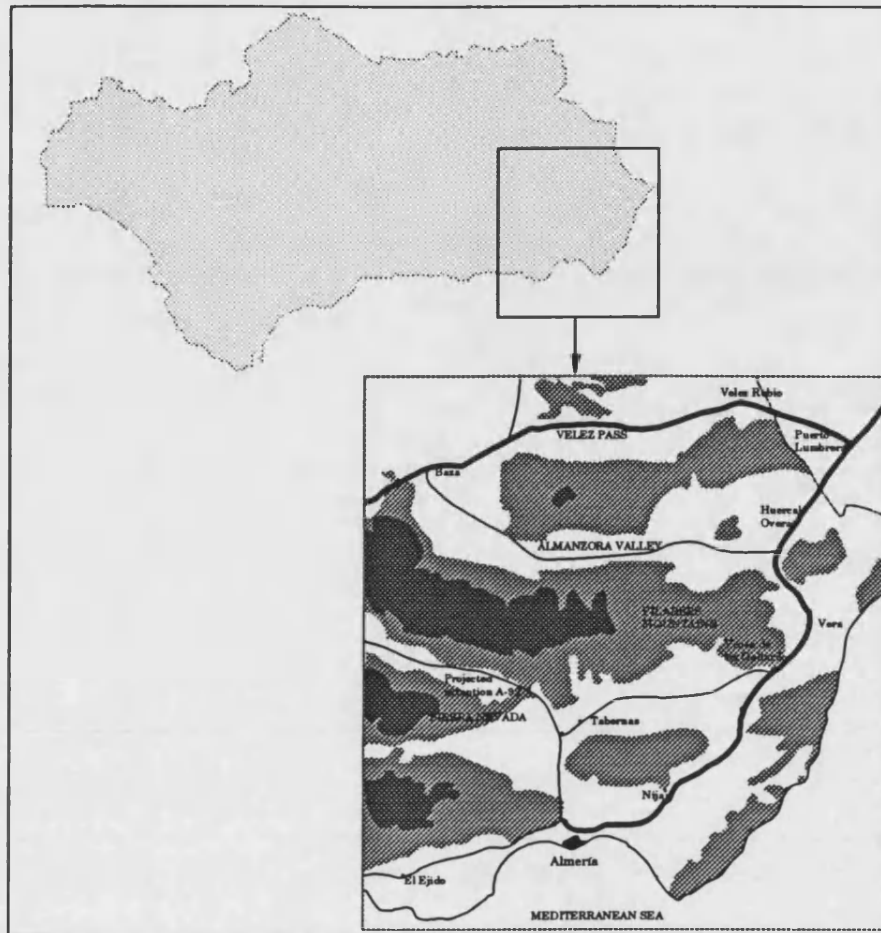
stations; they are built only to serve the users of the motorway; there is no contact with the villages you are passing through. The motorways require special protection in order to guarantee traffic security, and access to them is limited.

The A'92 fits this description. By developing the A'92 it has achieved a 'rapid and uninterrupted access from Seville to Central Europe, Italy, the southeast part of France and Olympic Barcelona along the Mediterranean Spanish Coast'; 'this function makes full sense within a regional development policy that has its focus on the full integration into Europe' (Consejería de Obras Públicas y Transportes, 1990. p.21). That is, the goal of the transverse regional corridor is to link Andalucía with its reference economic centre, the European Community.

The purpose of the A'92 is to satisfy (or to create) national and international traffic demand. It does not satisfy traffic needs of the area it crosses through. The proof is in the route chosen for it. Initially, it was projected that the A'92 would pass in Almería through the Valley of Almanzora against the alternative comarca of Vélez because: i) demographic density and the number of urban nuclei were higher than in the comarca of Vélez (57.000 inhabitants and seventeen Municipalities against 13.000 inhabitants and three Municipalities in Vélez); ii) traffic demand was considerably higher in Almanzora (mainly local traffic); iii) local economic dynamism and economic potential was also higher in Almanzora (Macaël); and finally iv) there was a clear under-endowment of transport infrastructures in the area (Almanzora), as the only railway that existed there had recently been closed down. All these circumstances situated the Almanzora alternative as the best one (see Map 4.12).

The regional government, however, finally opted for the Vélez alternative. The reasons given are quite significant: i) the objective of the A'92 between Pto. Lumbreras and Baza through Almería is not to serve local traffic demand but to allow the link by highway between Seville-Baza and the Mediterranean axis; in that sense, it is argued, the connection through the Almanzora Valley is not convenient because it is more expensive as a result of its high economic and demographic density; ii) if Almería requires a high-speed road, it is argued, the best option is to link the capital and even Adra with Pto. Lumbreras and the Mediterranean corridor and, therefore, allow the agriculture of the coast of Almería (tropical and perishable agriculture) easily to export its products in Europe (Consejería de Obras Públicas y Transportes, 1990b, p. 22).

Map 4.12 The route of the A'92 through Almería



Source: Consejería de Obras Públicas y Transportes (1990b)

As the document suggested, the option was to build the A'92 through the comarca of Vélez. The Junta, after carrying out the construction of this section, has transferred it to the MOPU (as it clearly belongs to the network of national interest). In compensation the Ministry has built a highway that links Almería-Adra with Pto.Lumbreras (integrated into the National Plan of Community Interest of Almería, 1990. See chapter 6: Industrial Promotion Policy). In this way, it is assumed, the infrastructure requirements of the province of Almería are satisfied, although what has been done is the connection of the capital and the exporting sector (perishable agriculture of Dalías and Adra) with Europe. As it was historically, Almería is again, under the administration of an autonomous regional government the main concern of which was the economic, social, and political integration of Andalucía, better connected with the exterior than with the rest of the regional provinces. The interior of the province (Macael, and Almanzora) has again been abandoned, despite the protests of local entrepreneurs.

Territories connected by the A'92

It is generally argued by regional politicians and policy-makers that the A'92 is consistent with the political option of integrating Andalucía internally and with an endogenous model of development, and that it is equitable from a territorial point of view because it links the traditionally isolated and marginal eastern part of the region (Ríos Pérez, 1987; Consejería de Obras Públicas y Transportes, 1990b). The objective of the A'92, however, is not primarily to link the region internally, but to link Seville, and in a second case, Málaga, Cádiz and Huelva with the exterior.

To integrate the region internally, as Andalusian politicians and policy-makers argue, means to connect territories which are within the region. The objective of the A'92 was not to connect the eastern part of the region with the western, but it did indirectly connect Seville with Granada, although clearly leaving aside the surrounding territories of the A'92. The A'92 *crosses* the region from West to East, but it does not integrate the territories that it crosses. To integrate the intermediate territories or to satisfy the infrastructure requirements of the central area of Andalucía would have implied the development of a dense and diversified road network as was projected in the 1984 plan. As noted, the 1984 Plan proposed the construction of two horizontal central corridors, an intermediate category between the highway and the comarcal road (basic functional axes) which were perfectly permeable and connected to the intercomarcal basic network, allowing the simultaneous satisfaction of local, comarcal and regional traffic needs. The two horizontal central axes initiated at the beginning of the autonomous period (the horizontal central north and the horizontal central south axes) have been totally spoilt owing to the construction of the A'92, which has replaced them. The A'92 simplifies and transforms the role of those horizontal corridors; it leaves the surrounding territory out and does not help the satisfaction of local traffic needs.

The changes that the A'92 provokes over the regional network is not reversible and conditions its future development, layout and design. It is well known that the 'construction of a network of highways centred on a region brings the radical transformation of its transport system; it brings important changes in the organization of the regional territory. The development of a network of this type tends to strengthen relations between the main industrial and service centres and increases their economic and social control over the rural areas and comarcal capitals' (Consejería de Obras Públicas y Transportes, 1990b, p.30). On the other hand, the

solutions found for Almería seem contradictory to the objectives designed and implemented by the Junta during the 1984-86 period. Neither the connection of the capital with the rest of the Andalusian provinces, nor the satisfaction of local needs within the province (local routes in Macael or Tahal) have been considered since 1987. On the contrary, the link between Almería and the Mediterranean motorway directly questions the stated objective of integrating the region internally.

The network to which the A'92 belongs

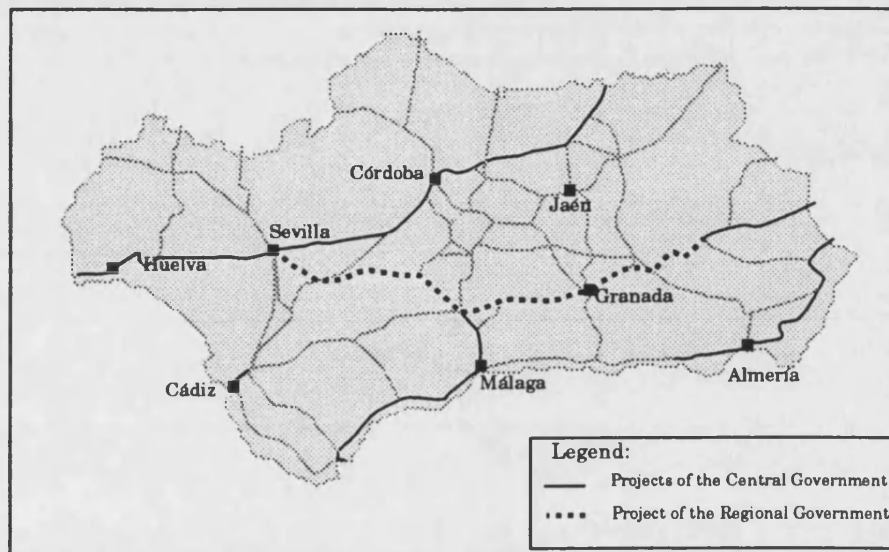
As we analysed previously, road development during 1984-86 by the Junta was coherent with the objective set up in the 1984 road plan, of developing a regional road network centred on the region. The routes developed belonged to that network, that was laid down from below, and adapted to the new political organization of the state (State of the Autonomies). The A'92, however, belongs to a national, as well as a European territorial framework. Despite being a regional project, it is included as we have seen, within the network of national motorways. It is also the only regional project that is included in that network. The regional government itself has recognized that 'the itinerary made up by the N-334 between Seville and Antequera, and the N-342 between Antequera and Murcia through Granada (that is, the A'92), has an unclear status' (Consejería de Obras Públicas y Transportes, 1990b. p.16). This is so because, 'although it lies entirely within Andalusian territory, it fulfils all the conditions for being included within the network of national interest. Firstly, it is a fundamental itinerary for the external connections between Andalucía and Murcia (two different regions); and secondly, it links three of the biggest national urban centres: Seville, Málaga and Granada' (Consejería de Obras Públicas y Transportes, 1990b. p.16). According to national legislation, that would require that it be included within the Network of State General Interest (RIGE: Red de Interés General del Estado).

The A'92 shares the engineering characteristics and the functionality of the rest of the national routes. It would have never been built without Madrid's Plan for the development of a national motorway network. Coordination between the national road plan and the road plan of the Andalusian government has been of uppermost importance. Map 4.13 shows the relationship between the intervention of the central government in Andalucía and that of the Junta.

The A'92 constitutes the 'regional contribution' to the Mediterranean motorway. It is complemented by the Andalusian motorway from Madrid to Seville, by the link between the A'92 and Málaga-Algeciras, by the V Centenario motorway from Seville

to Huelva, and by the penetration of the Mediterranean motorway to Almería. The objective of the road policy of the central government in Andalucía has been to link the main regional 'growth poles' to the national road network (Ministerio de Economía y Hacienda, 1989). The objective of the A'92 is the same, to link Seville with the Mediterranean Coast; the difference is that it lies almost entirely inside the region and that it may be considered as a transverse corridor, an aspect which seems to give it the claimed regional character. The quality of the axis, its design, its role, and the traffic it satisfies is similar to the rest of the national motorways.

Map 4.13 Road development in Andalucía: MOPU-Junta



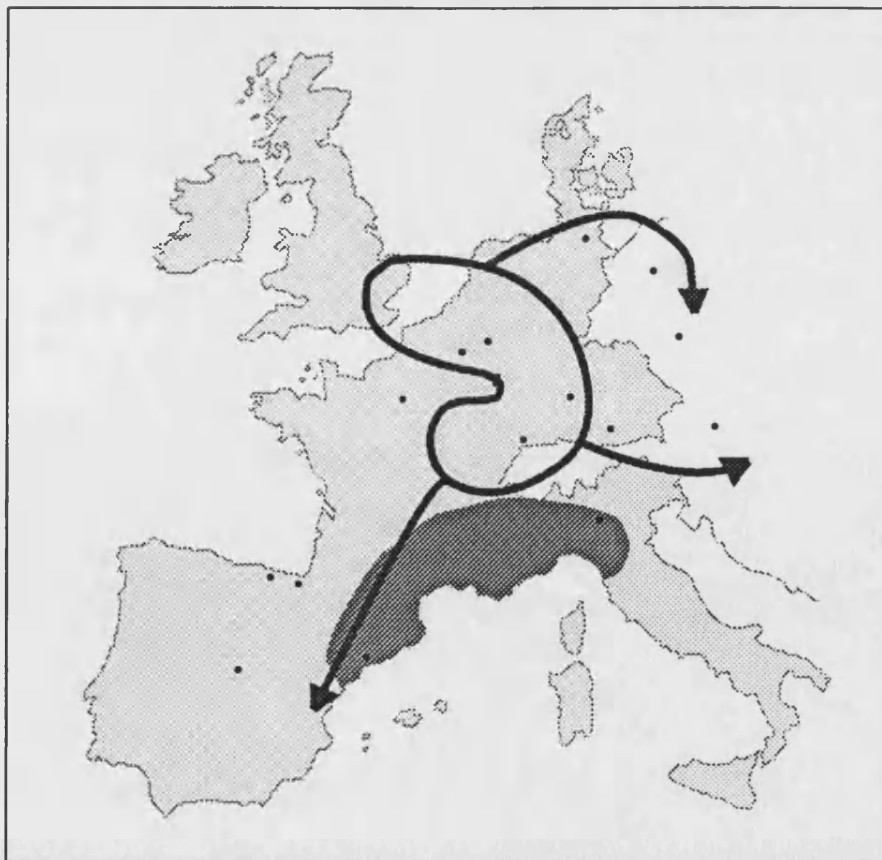
The A'92 contextualized: an exogenous model of economic development

By connecting Andalucía with the Mediterranean coast, and integrating it into Europe the Junta de Andalucía not only attempts to satisfy/create traffic demand, but also to fulfil wider social, economic, and political objectives. Geopolitical considerations such as European integration, are probably, since 1987, as important as the internal integration of Andalucía was during the first years of the regional government. Economic factors, for example, the creation of a single market and the necessity of first having the physical basis for making this market a reality, are also important. It is, however, on regional development grounds that the A'92 has been based. As we have seen, road development during the 1984-86 period primarily promoted the development of the internal economic circuits; external accessibility was clearly a secondary objective since development was understood as a local phenomenon, the result of the mobilization of indigenous resources. The

objective of the A'92, according to regional politicians and policy-makers, is to allow the economic take-off of Andalucía. Increasing the external accessibility of the region, and fostering integration into Europe is supposed to bring economic development to the region.

Following several studies carried out by the E.C., the Junta of Andalucía argues that if the creation of the Single Market will probably bring about a higher spatial concentration of economic prosperity leading to the consolidation of an economic centre in Central Europe, there may be at the same time other growth poles, secondary markets in the periphery that can profit of the general climate of economic growth. These poles of development may play an important role as elements for the spreading out of the beneficial effects of this unique market. These areas or corridors, which connect Central Europe with the periphery, such as the Spanish Mediterranean coast, are called 'warm fringes' or 'growth areas', and through them the compensatory impulses of the polarized tendencies previously pointed out, may flow (see Map 4.14).

Map 4.14 Diffusion areas of the European growth



Source: Comisión de las Comunidades Europeas (1992)

The strategy of exogenous development to which the A'92 contributes consists basically of increasing the external accessibility of the region and increasing its attractiveness. These two aspects appear intimately linked and the role given to transport infrastructure development within this strategy of economic development is a central one. The European Community since the creation of the ERDF (1975), has strongly emphasized the role of transport infrastructure on regional development. The economic development of peripheral regions, it is argued, requires the integration of these regions into large-scale interaction systems. Only by connecting them with core regions, could economic development take place (Keeble et. al., 1982; Biehl, 1986.; Biehl, 1988; Blum, 1982; Robert; 1982).

The strategy of economic development of the Andalusian government since 1987 matches this concept of development. The contribution of the A'92 is that it will allow the spill-over effects of the economic dynamism that is supposed to flow from Central Europe, through the warm fringe of the Mediterranean Coast to Seville, where a major project for attracting foreign investments has been developed: Cartuja'93 (see chapter 6: Industrial Promotion Policy). Cartuja'93 and A'92 are therefore two complementary instruments for the economic take-off of Andalucía. The new model of economic development will consequently be industrial and externally-oriented. It will take place first in Seville, but future development of A'92 branches will allow, it is argued, the spreading of the economic benefits of this secondary market through Seville, to the rest of the provincial capitals. It is considered that by developing A'92 branches to Málaga, Huelva, Cádiz, and Almería, this will not only connect Seville to Europe but also the different regional growth poles with the rest of the Spanish and European metropolises. The economic opportunities created by this connection, would profit not only Seville but also the rest of urban centres linked to it. Nonetheless, if economic development had to take place initially in Seville, the quick and easy access from there to the rest of the regional capitals could allow the spin-off of economic growth concentrated initially in the regional capital (Castells, 1989b).

From an economic point of view, the A'92 follows a pull-strategy; that is, it does not try to remove existing traffic bottlenecks or to respond to traffic demand, but instead it tries to spark development. An efficient road policy from the Junta would have required the development of the Andalusian Mediterranean corridor from Cádiz to Almería and Murcia (Auriolles, 1989). This policy would have been efficient because it is in this area that economic activity and regional population tend to concentrate since recent decades (see Chapter 3). The A'92 follows, however, territorial objec-

tives. It is a political project, a compromise of the regional government born as early as the Autonomy. In that respect, road development since 1987 is coherent with previous policies. The political will of integrating Andalucía into Europe has prevailed over the satisfaction of regional traffic demand. Nonetheless, as some authors have pointed out (Aurióles, 1989; Márquez, 1991), the A'92 is not territorially balanced from an internal regional point of view as it primarily increases the external accessibility of Seville, one, if not the best, connected area within the region. Therefore, the A'92 is neither efficient nor territorially balanced: it ignores where the highest exogenous economic potential of the region is located; i.e. the Mediterranean coast, while it abandons the objective of increasing the accessibility of the most isolated areas within Andalucía (the logical choice under a pull strategy).

The spatial pattern of allocation of resources followed by the Junta for the development of the road programme since 1987 also contrasts with that of the earlier years. On the one hand, it follows a very concentrated pattern of spatial allocation of resources since approximately 50% of total annual expenditure on the road programme has been spent on one project, the A'92. On the other hand, the remaining 50% has gone to the development of very small projects dispersed throughout the regional territory. It seems that the Junta, following such a pattern of expenditure, tries to compensate for this territorially unbalanced distribution of regional resources.

Nonetheless, this policy does not seem to be very coherent. There is not much sense from a technical point of view in pouring money into a secondary or intercomarcal network that was adapted to a functional basic network that does not exist any more. The development of a motorway network centred on the region has radically changed the road network defined in the 1984 road plan and developed between 1984 and 1986. The advance that the regional government made for the development of an intermediate or regional road network (the development of the two horizontal axes) has been diminished as the A'92 has been imposed over it, taking different sections of the main axes and transforming them into a unique corridor which belongs, from a technical point of view, to the national motorway network. Therefore, if the basic functional network has been transformed, and the intercomarcal network was territorially and functionally complementary to the former, it is difficult to imagine the existence of a rational plan for the development of the intercomarcal network. It does not seem possible rationally to develop such network without having first defined the new basic functional network.

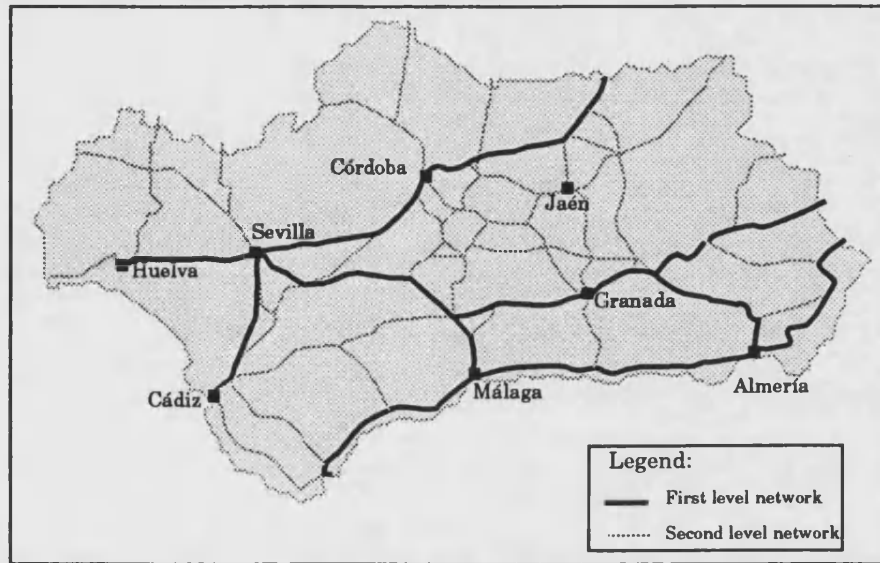
ROAD POLICY IN PERSPECTIVE

In 1992, after ten years of regional government, the Andalusian road network presents a clear radial structure. It is made up of two radial motorways —the Andalusian motorway which connects Madrid with Seville, and its prolongations to Huelva (V Centenario motorway) and Cádiz; and the 1992 motorway which links Seville with the Spanish Mediterranean coast, and its prolongation to Málaga. A section of the Mediterranean motorway gives Almería an exit to Europe. Through these high-capacity, high-speed routes, an unstructured regional network exists. The priorities of the Junta de Andalucía for the development of the regional road network in the coming years have been laid down in the new regional economic plan: (Junta de Andalucía, 1991). According to it, the following measures are going to be taken:

- development of the main structuring axes (motorway programme): 'together with the network of General Interest of the State, the regional government is going to develop axes linking the main Andalusian cities. Priority interventions are: to finish the A'92 and its connection with the Mediterranean motorway; a new motorway between Guadix and Almería [prolongation of the A'92]; and the completion of the Granada-Málaga axis by developing the Salinas-Las Pedrizas section' (Junta de Andalucía, 1991, p. 26);
- development of the basic functional and intercomarcal networks: these constitute the 'main network of the Autonomous Community, which allows the internal articulation of the region'. Priority will be given to the link between Huelva and Cádiz towards the north of the National Park of Doñana. 'As far as the intercomarcal network is concerned, the programme set up for the 1987-90 period will be completed. Linkages between the coast and the interior will also receive priority' (Junta de Andalucía, 1991, p. 26).

Map 4.15 is representative of the future regional road network. It seems that the Junta de Andalucía is going to reproduce the so-criticized radial character of the national and European transport networks. Like them, the Andalusian road network links the core with peripheries but ignores periphery-periphery relations such as Cádiz-Antequera, Granada-Córdoba, Córdoba-Jaén, or Jaén-Almería.

Map 4.15 The future Andalusian road network



As has been suggested previously, the development of a motorway network centred on the region brings radical transformations to its transport system, and important changes in the organization of the regional territory (a comparison between Map 4.15 and Map 4.4 is very expressive in this respect). Obviously, the new regional basic functional network (that called in the 1991 regional economic plan (Junta de Andalucía, 1991) 'main network of the Autonomous Community', has to be adapted to the new structure created by the motorway network. As has been previously suggested, there is not much sense in pouring money into a functional network that has neither been connected nor integrated into the first level road network constituted by the regional motorways. This means that, from a technical point of view, a new road plan should be elaborated in order to integrate those developments that have taken place, yet which were not considered in the first road plan (Junta de Andalucía, 1984b). The future regional road network would be as follows:

- first level network: motorway network which belongs to the network of national interest although it will be developed in coordination with the Junta de Andalucía. This network has a clear radial structure, and it is not centred on the region. Regional motorways are but sections, branches of the national network;
- second level network: made up of regional axes, which complement and develop the previous network. This regional network diversifies and increases the permeability of the former; its main role is to connect the different regional territories to the main network;
- finally, the intercomarcal network would be functionally and territorially dependent on the second level regional network.

This is not only the most rational road network from a technical point of view (keeping in mind the developments carried out since 1987), and that which has been assumed by the regional government (Junta de Andalucía, 1991), but also the network that is demanded by local entrepreneurs and Chambers of Commerce. Local entrepreneurs and mayors of the main municipalities of the Campiña of Córdoba, Almería, and mountains of Cádiz are all asking for connections to the motorways that have been just developed. The development of their industries and localities depends, according to them, on the improvement of their roads and on the connection between those and the new motorway network (EL PAIS, March 13 1991; EL PAIS, March 23 1991; Diario 16, Oct. 25 1990).

In summary, the evolution of the road policy of the Junta reflects a shift in the strategy of development from an approach that emphasizes the role of endogenous factors in development, and the importance of social, economic, and political regional integration, to a model of development the main concern of which is the integration of the region into larger-scale economic and political systems. Development is understood as an exogenous phenomenon rather than the result of the exploitation of the human, natural, and institutional regional resources.

5. RAILWAY POLICY

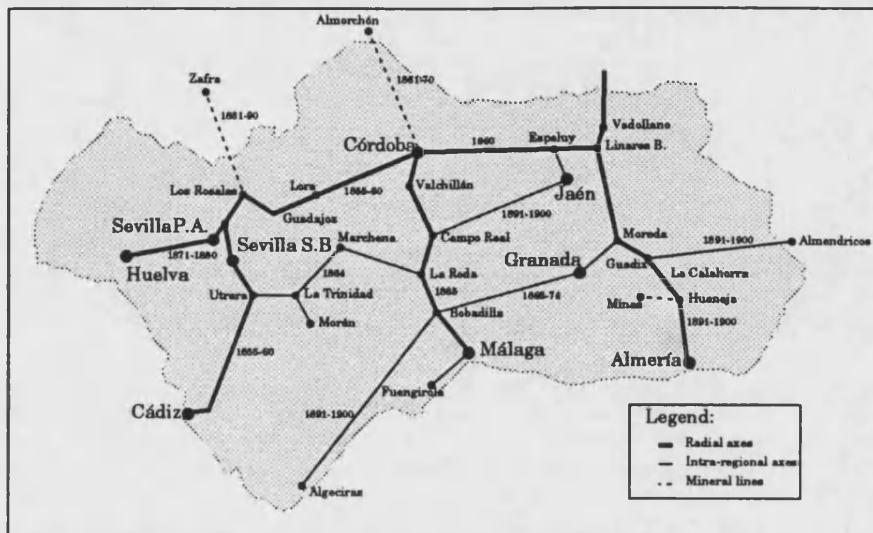
THE ANDALUSIAN RAILWAY AT THE BEGINNING OF THE 80'S

The Andalusian railway of 1980 had two main problems: the technical obsolescence and the lack of a coherent structure (Ocaña and Gómez, 1989). It had the lowest levels of electrification and double track of the national network. Only the main axes, Cádiz/Huelva-Manzanares, which links Andalucía to Madrid, and the Málaga-Córdoba line, were totally electrified; the double track had a symbolic presence of 6 Km between Lora del Río and Seville (see Map 5.1).

The network was characterized by an incoherent structure, which reflected its historic evolution. The different lines created, which belonged to different private companies, were built according to very particular and specific interests; as a result of that, they were totally unconnected and uncoordinated, both between themselves, and with their socioeconomic environment. There had never been a global idea or plan about what was expected from this regional railway (Bernal, 1990). The objective of the rival railway companies was to use the lines for extracting regional raw materials (mining and agricultural products) in an exploitation system that has been described (González de Castro, 1990) as 'looting'. The railway was developed as a means for commodity transportation connecting production centres (agriculture: Campiña of Seville, mining: Sierra of Cordoba, or industrial: textile or Steel industry in Málaga) with distribution nodes. The traditional separation between the Eastern and Western parts of the region come from these early years of the construction of the regional railway (Vega, 1990). Social objectives, on the other hand, were only considered when they coincided with economic interests (Ocaña and Gómez, 1989).

Like the regional road network, the Andalusian railway in 1980 was made up of three main radial corridors: first, the Cádiz/Huelva-Manzanares axis through the Despeñaperros Pass, which constitutes the single link between Andalucía and the Meseta. This is the most important axis and channels all the traffic between Andalucía and Madrid, Andalucía and Catalonia, Andalucía and Levante, and Andalucía-Castilla la Mancha and the North; second and third, are the corridors Málaga-Córdoba and Almería-Linares, which connect the Mediterranean Coast with the main axis Manzanares-Cádiz. The first of these, the Málaga-Córdoba axis, despite being totally electrified, takes more than one hour to cross the Guadalorce Valley and the El Chorro Pass, only 60 Km. long. The link between Almería and the Cádiz-Manzanares axis is not electrified, the gradients are steep and the equipment is old; hence, all this explains for the very modest speeds reached along the line.

Map 5.1 The Andalusian railway network at the beginning of the 1980's.



Source: Consejería de Turismo, Comercio y Transportes

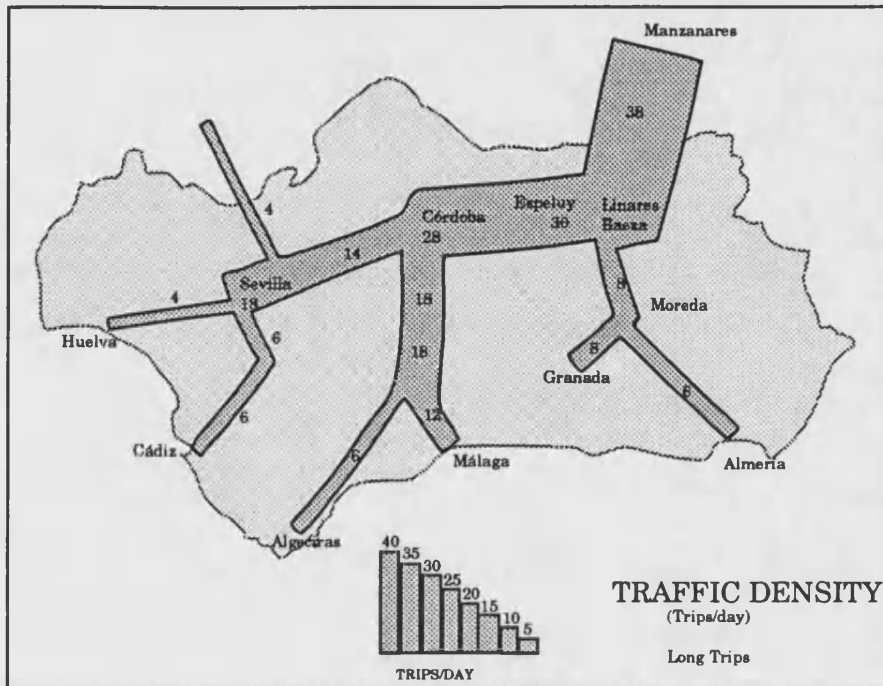
Apart from these main corridors, there are others less important ones, the transverse or intra-regional corridors and the mineral lines (Ocaña and Gómez, 1989). There are two transverse corridors, the Cádiz-Murcia axis, which follows the *Surco Intrabético*, and the Utrera-Jaén corridor through the *Subbético* of Córdoba. The origin of the Cádiz-Murcia axis is very complex; first the Granada-Bobadilla section was built, linking the eastern capital to the Málaga-Córdoba axis; afterwards, the section between Baza and Lorca and the Algeciras-Bobadilla line was built. During this century, the axis was completed with the linkages Baza-Guadix and Guadix-Granada. Although the origin and characteristics of this axis are very heterogeneous, especially because it is not really a single axis but a number of west-east links, which connect two of the three north-south corridors, it fulfils two important functions within the regional network: it connects internally the *Surco Intrabético* and this with the radial axes; and it connects the region with the Levante, the only line between Andalucía and the Mediterranean Coast (Ocaña and Gómez, 1989). The engineering characteristics of this line are very poor especially because of the topography, which imposes steep gradients and reduced speeds (between 40 and 60 Km./hour). The other intra-regional axis is the Utrera-Jaén corridor made up by the sections Utrera- La Roda and Campo Real-Jaén. Its construction was the result of the demographic pressure of the agro-cities of the countryside of Córdoba, and the lack of alternative transport infrastructures. The engineering characteristics of this axis are similar to the previous one. Apart from these, there is also a local axis, Ayamonte-Huelva-Zafra, which crosses the western part of Sierra Morena and plays a secondary role.

As far as the mineral lines are concerned, their role was to allow the export of minerals from the main mining centres of the region to the rest of the country. The first line is the Rosales-Zafra link, which crosses the Sierra Morena of Seville; it also connects the area of El Pedroso, a previously prosperous area. The second line is the Córdoba-Almorchón line, which crosses the Valley of Guadiato, and finally there is the Minas del Marquesado-Hueneja axis, only of 15 Km. long, to bring the mineral from Alquife to the Coast through the Almería-Linares corridor.

In summary, the regional railway is made up of a main axis, which links the region with Madrid; this is complemented by two other radial links, which connect the Mediterranean Coast (Málaga and Almería), with this major axis. These three radial corridors constitute, from a technical point of view, the best structured and well-endowed lines of the regional network. The rest, the secondary network, is made up of intra-regional links and several isolated lines (mineral lines) which do not constitute, properly speaking, a regional network; technically, they are very deficient and the quality of the service they provide does not allow them to compete with other means of transport.

Railway traffic in Andalucía shows a clear correlation with the quantity and quality of the regional network and of the regional railway service (Consejería de Turismo, Comercio y Transportes, 1986). It is possible to differentiate between three different types of traffic: extraregional, regional (inter-city) and metropolitan or urban traffic (Map 5.2, Map 5.3 and Map 5.4). As can be seen in Map 5.2, practically all the railway traffic generated between Andalucía and the rest of the country is channelled by the main axis, Cádiz-Manzanares. It carries all the traffic between Andalucía and Madrid (61% of total traffic in the Cádiz-Manzanares axis), Andalucía and Cataluña (17%), Andalucía-Levante (6.5%), and Andalucía-Castilla la Mancha and the North of the country. Traffic increases along the Cádiz-Huelva-Manzanares axis as it absorbs the traffic generated in the north-south branches: Málaga-Córdoba, and Almería-Linares. Traffic is especially intense between Seville and Madrid (450,000 passengers/year by railway), Málaga-Madrid (420,000 passengers/year), Granada-Madrid (245,000 passengers/year), Seville-Cataluña (220,000 passengers/year), Córdoba-Madrid (210,000 passengers/year), Almería-Madrid (165,000 passengers/year), Málaga-Cataluña (124,000 passengers/year), Córdoba-Cataluña and Jaén-Madrid (105,000 passengers/year).

Map 5.2 Railway traffic between Andalucía and the rest of the country.



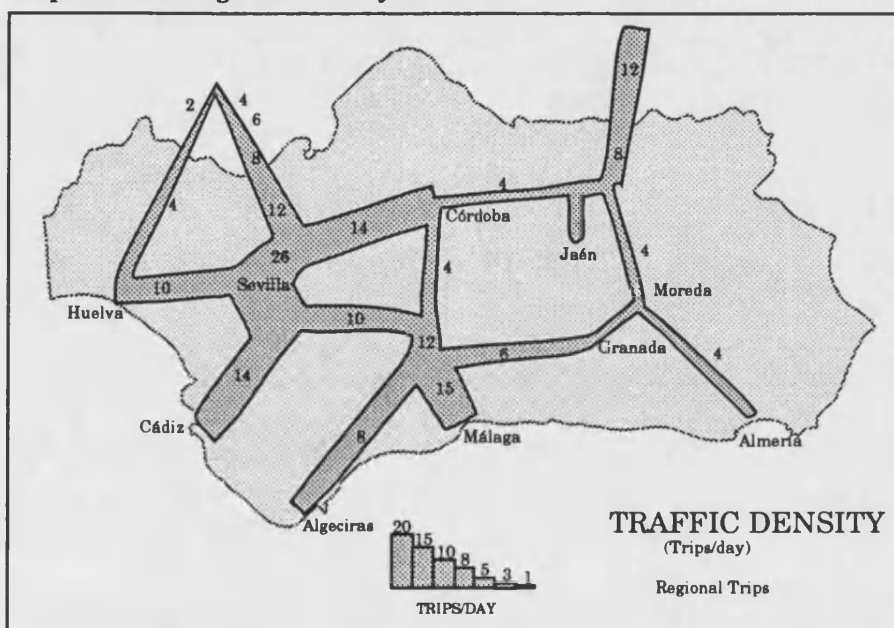
Source: *Consejería de Turismo, Comercio y Transportes (1983)*

Intra-regional traffic (Map 5.3) radiates from Seville. Traffic is the highest between Seville and Córdoba (950,000 passengers/year), Seville and Cádiz (860,000 passengers/year), and Córdoba and Cádiz (530,000 passengers/year), all of them along the main corridor, the Cádiz-Linares axis. Other important links are Málaga-Seville (350,000 passengers/year), Málaga-Cádiz (250,000 passengers/year), Málaga-Granada (190,000 passengers/year), Granada-Sevilla (97,000 passengers/year) and Granada-Cádiz (72,000 passengers/year). Traffic generated by eastern provinces, Almería, Granada, and Jaén, is less significant. Almería is the province that attracts and generates less number of trips by railway within the region; the only important links are Almería-Granada and Almería-Jaén, since the interrelations between Almería and the western provinces are practically non-existent. The main reason for this, is the limited supply of services and the bad configuration of the existing network, which implies an indirect route to reach the province (Consejería de Turismo, Comercio y Transportes, 1986).

Urban railway traffic is especially important in the main regional capitals. It is practically non-existent in Almería, Jaén and Huelva. Málaga, at the other extreme, has an important traffic over the railway, which is unsatisfied (Consejería de Turismo, Comercio y Transportes, 1986). There is no service between the areas of Vélez-Málaga and Nerja and between Marbella and Estepona; the section between Málaga and Fuengirola reaches more than 15,000 passengers/day. The

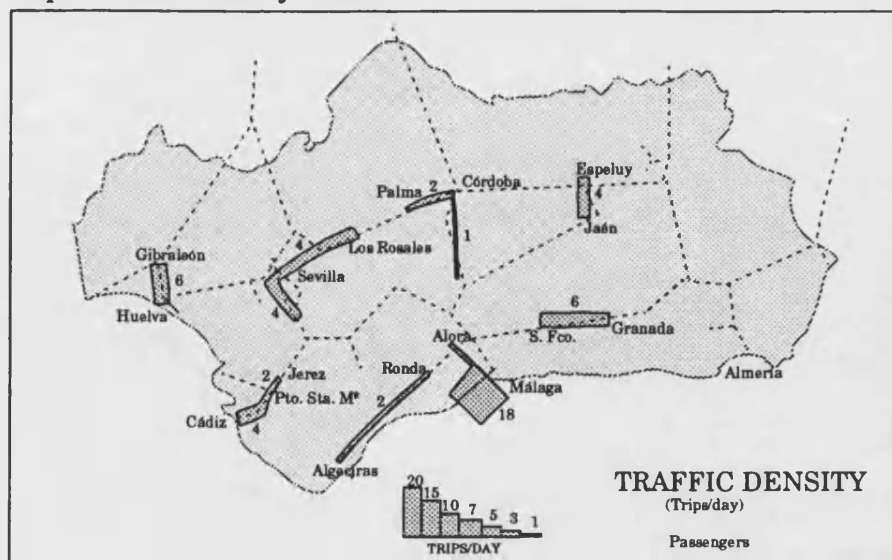
link between Granada and San Francisco is also important; it serves a population of about 100,000 inhabitants. The metropolitan area of Seville is the most complex one within the region. Most of the trips are made by car, but the railway is important for the Sevilla-Lorca and Sevilla-Los Rosales-Villanueva del Río sections in the North, and the Dos Hermanas and Utrera sections in the South (Map 5.4).

Map 5.3 Intra-regional railway traffic



Source: *Consejería de Turismo, Comercio y Transportes* (1983)

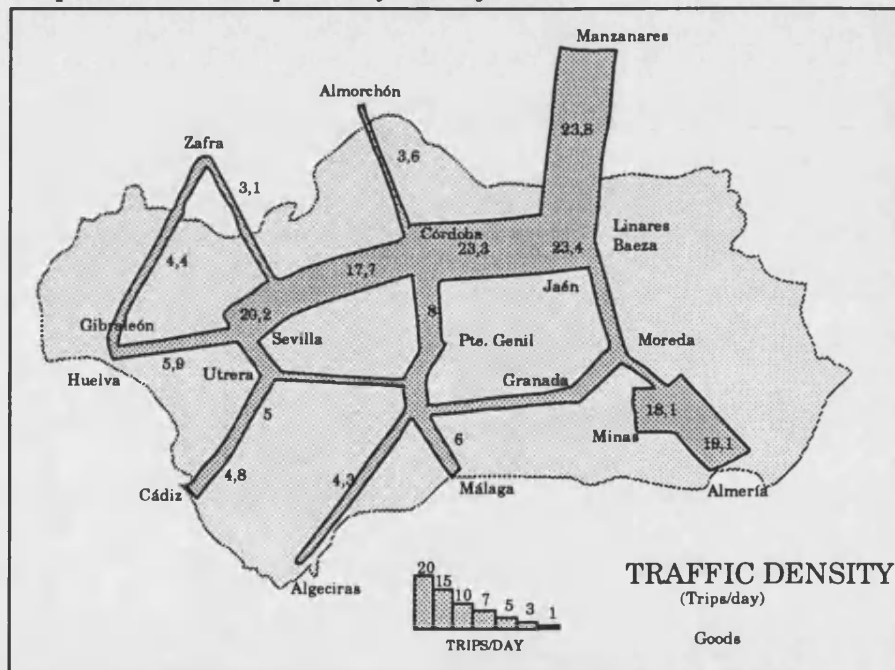
Map 5.4 Urban railway traffic



Source: *Consejería de Turismo, Comercio y Transportes* (1983)

As far as traffic of goods is concerned, Map 5.5 shows the main axes. The most important areas are the so-called mineral lines and the industrial areas and main ports: Huelva, Cádiz, Algeciras, Sevilla and Almería. Between these, 3,800,000 metric tons (Tm) of minerals are brought from the mines of Marquesado in Granada to the Port of Almería; 800,000 Tm./year of coal in the province of Córdoba; 800.000 Tm./year of chemical products, wood and minerals arrive in Huelva from its own province, Badajoz and Cantabria; 1,900,000 Tm./year have as departure or destination point Huelva, connecting it with Huelva itself, Extremadura, Cantabria and Cataluña; and 1,300,000 Tm./year have as origin or destination point Seville. The participation of the railway among other means of transport in the transportation of goods is around 15% for inter-regional traffic and between 4 and 9% for intra-regional one.

Map 5.5 Goods transported by railway



Source: Consejería de Turismo, Comercio y Transportes (1983)

RAILWAY DEVELOPMENT DURING THE PERIOD 1984-86

The role given initially to the railway within the development strategy of the Junta was a rather limited one. Several reasons justified this. First of all, as different from the road network, the jurisdiction of the Junta over the regional railway is considerably limited. Three different institutions enjoy *exclusive* power over it: the

State, the public holding RENFE and the Autonomous Community. The State, according to the principle of general interest, has exclusive jurisdiction over the national railway, made up of those lines that pass through the territory of more than one autonomous community. RENFE, created (Regulation 23 July 1964) as an independent Institution from the State, enjoys its own legal personality and has exclusive power over the development, management, exploitation and administration of the national railway. Nevertheless, and in spite of its total autonomy (supervised by the State), it depends functionally and financially on the Ministry of Public Works & Transport and on the Ministry of Finance. The Andalusian government, by the Article of Autonomy (Art. 13.10) has exclusive power over the railway, the lines of which lie entirely within the regional territory. Regulation 698, February 13, 1979, (Art.15) transferred 'from the Administration of the State to the Junta of Andalucía powers for the setting up, organization and exploitation of the railway which lies entirely within the territory of the Autonomous Community' except if it is of national interest or it is integrated into the network of RENFE.

In 1980, the total regional network belonged to RENFE. Therefore, the real jurisdiction of the regional government over the railway in the region was very limited, referring almost exclusively to: the planning of the railway in the region, that is, the elaboration of a regional plan in order to co-ordinate State and regional intervention in its territory, and to the future regional railway, that is, the railway lines that could be developed by itself. Owing to the limited budgets that the Junta had at the beginning of the autonomy, this second jurisdiction was considered by the regional government, as a relative empty one.

Secondly, for its intrinsic technical characteristics the railway can not be considered as an adequate instrument of spatial planning, since it can hardly consolidate and strengthen the intermediate and basic urban system, which was the main objective of the territorial policy of the regional government and that of the road programme. It has to serve distances longer than 300 Km. (except for the metropolitan areas, in the Andalusian case, Seville, Málaga and Cádiz) in order to be competitive. Finally, the share of railway traffic on total traffic demand (particularly for passengers), is considerably limited in comparison with road transport; therefore, it is less suited for use as a political instrument (internal integration of the region), or as an economic one (promotion of development).

Accordingly, the railway programme was commissioned to a different Department from the Consejería of Territorial Planning, which had responsibility for transport

infrastructure development. The management and administration of the regional transport system between 1984 and 1986 was the task of the Consejería of Tourism, Commerce and Transport. This department had two main functions: to manage and administrate the system, particularly road transport; and to develop transport infrastructures, that is, bus stations, railway and transport infrastructure by air and cable.

During this period the Department, through its General Direction of Transport, was engaged in two other programmes besides its support for railways. The most important was the road transport (passengers and goods) improvement programme, which included a series of investments in the infrastructure of bus stops, bus stations and new buses. The third programme was the design and development of regional air transport and transport by cable. The air policy, was a very political regional initiative; it was argued that, because of poor land based links an alternative means of regional transport should be developed in order to satisfy regional traffic demand. Along the period 84-86 the Consejería carried out several studies to assess the socioeconomic implications of the development of an alternative regional air system.

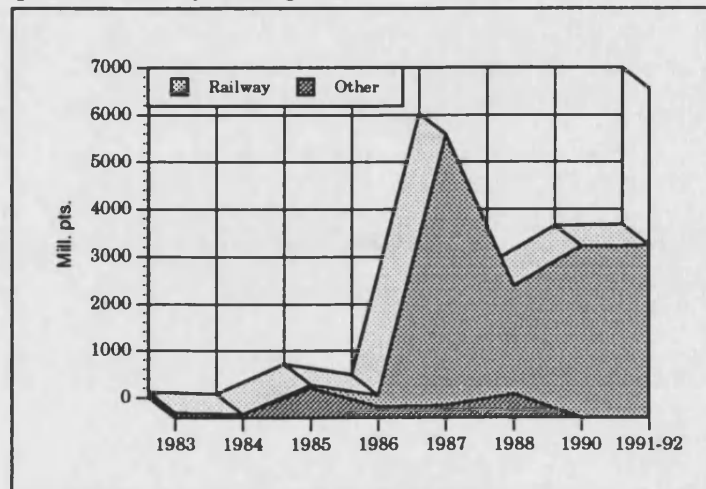
Financially, the resources of the General Direction of Transport were very limited. Table 5.1 and Figure 5.1 show total transport expenditure by year and by programme. As can be seen, the regional railway had in fact a very secondary role in the transport policy of the Andalusian government; it accounted for less than 10% of total regional transport expenditure on this programme in 1985, and a similar to that of cable transport in 1986. The railway was, therefore, considered neither a strategic instrument for planning, nor a priority regional public transport service.

Table 5.1 Expenditures of the General Direction of Transport by programme (Mill. pts).

PROG.	1983	1984	1985	1986	1987	1988	1989	1990	91-92	Total
Road transp.	116	80	650	27	279	520	—			1672
Railway	—	—	63	250	5749	2302	—	3655	3680	15699
Cable & Air	—	—	2	216	—	—	—			218
Total	116	79	715	493	6028	2822	—	3655	3680	17473

Source: *Consejería de Obras Públicas y Transportes*

Figure 5.1 Expenditure of the General Direction of Transport on railway (Mill. pts).



Source: *Consejería de Obras Públicas y Transportes*

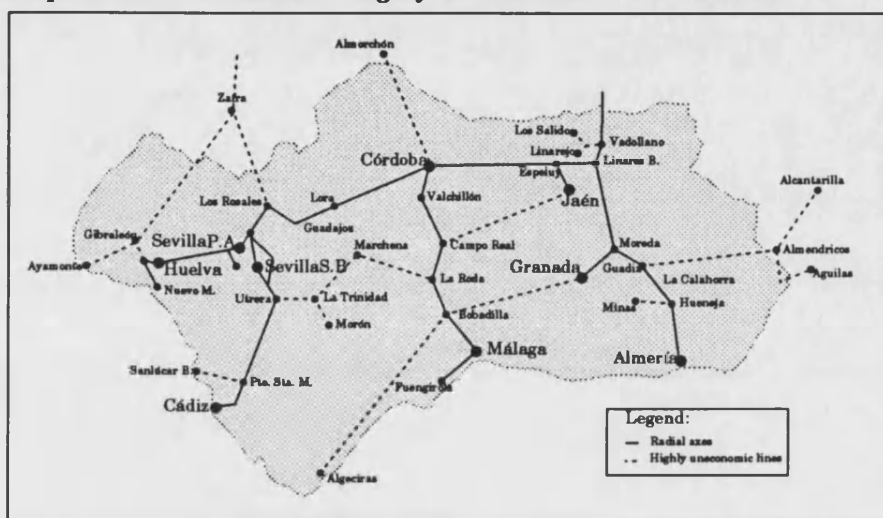
Though marginal in economic terms, the railway soon became a programme of foremost political importance for the Junta de Andalucía. As pointed out before, the jurisdiction over the regional railway is a shared one (with RENFE and the State), being the autonomy of the regional government limited. In 1984, the Spanish government initiated a process of reconversion and restructuring of the industrial sector. This programme directed to public enterprises and holdings had the general objective of reducing economic losses and increasing the competitiveness of the industrial public sector. As a public holding, RENFE was also affected by restructuring plans. In 1984, a Programme-Contract was signed between the State and RENFE. The objectives of the Programme were: 1) deficit reduction, which meant reduction of the financial contribution of the state to the holding; 2) clarification of the final objective of the state contribution: investments, compensations as a result of the compulsory character of this service, or subsidies for the exploitation of the system; and 3) increase service revenue.

In order to increase the competitiveness of the public holding, different types of measures were suggested:

- increase productivity and reduce costs, mainly through labour policies: employment reduction, salary contention, and flexibility on labour conditions;
- management improvement, through administrative reform and technological advancement & computerization of the system;
- improved service quality and supply. It is considered unnecessary to increase service supply but to fit it to the specific transport needs of the users;
- finally, the closing down of the 'highly uneconomical railway lines'.

The study carried out by RENFE for the Programme-Contract with the State classifies 3,055 Kms. of tracks as highly uneconomical lines. The criterion for the definition of a line as uneconomical was the average level of self-financing: less than 23.1 per cent of self-financing was considered as uneconomical. From the 3,055 Kms. of tracks classified as uneconomical lines, 967 Km. lay within the Andalusian territory, that is 31.65 per cent of the total uneconomical lines. Map 5.6 shows the regional railway and the lines classified as uneconomical lines.

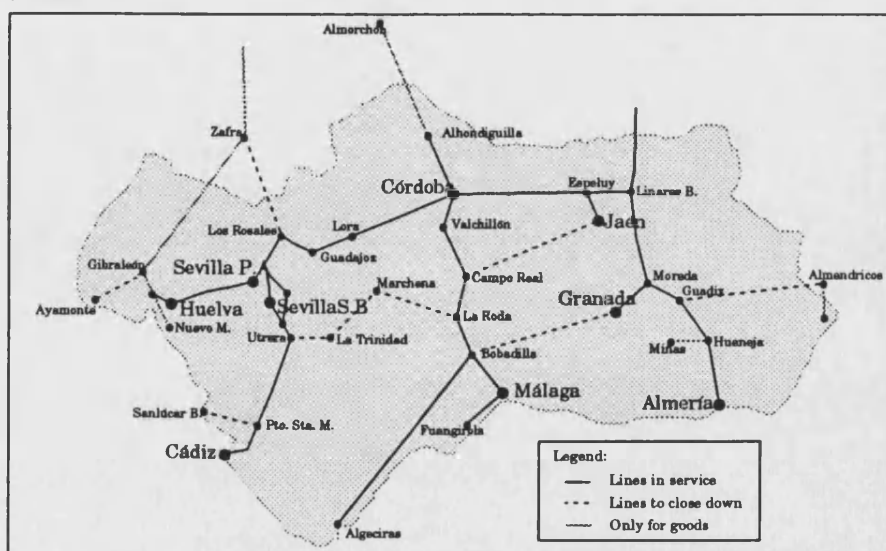
Map 5.6 Lines classified as 'highly uneconomical lines'. RENFE



Source: *Consejería de Turismo, Comercio y Transportes* (1984)

The Agreement established two different types of measures for those uneconomical lines: maintenance through a previously defined system of compensation; and total or partial withdrawal. Map 5.7 shows the measures which were planned to be taken by RENFE in the region (from January 1, 1985).

Map 5.7 Measures to be taken by RENFE after the Agreement State-RENFE (1985)



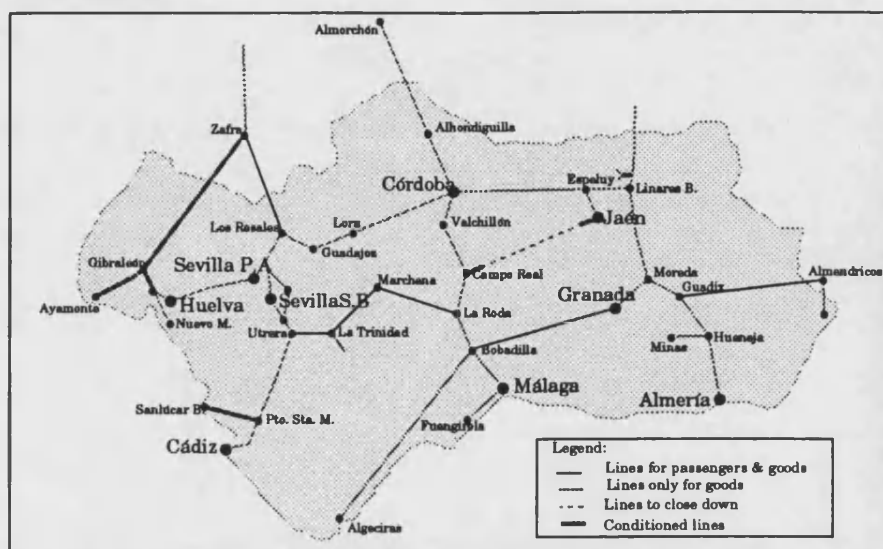
Source: *Consejería de Turismo, Comercio y Transportes*

The reaction of the Junta was immediate. Firstly, it elaborated a study in order to evaluate the economic and social implications of the closure of the regional lines; and, secondly, it mobilized affected territorial (Municipalities, Diputaciones) and social collectives (trade unions, entrepreneurial associations, regional MP's, etc.), against the decisions taken by RENFE and in defence of the regional interest. The study elaborated by the regional government strongly criticizes the methodology used by RENFE in the definition of the uneconomical lines. It also accuses the public holding of having made the decision unilaterally instead of first taking into account the interest of the affected sectors.

According to the study (Consejería de Turismo, Comercio y Transportes, 1984, p.100-103), practically the total secondary network in Andalucía (967 Kms.) is going to close. If this happens, 'the Andalusian network will have a radial character, and that will contradict the objective of the regional government —laid down in the Statute of Autonomy—, of promoting human, cultural and economic relations within Andalucía'. The new configuration of the network, it is argued, will not allow the connection between Seville and Málaga, or between Seville and Granada. Furthermore, 'the historical event of the Universal Exhibition of 1992 in Seville, and its foreseeable spread-effects on the rest of the region is an important argument for the improvement of the Andalusian internal and external communications. Furthermore, even if the EXPO'92 did not develop, it is necessary to repair the historical injustice [which Andalucía has suffered] as a result of our bad communications'.

The study concludes that the present situation of deficit of these lines is the consequence of bad management and the implementation of a negligent policy; services were inadequate, it is argued, and traffic demand in the affected areas was transferred to other alternative means of transport. Accordingly, 'we should not allow, that bad management and the abandoning of services [...] was the cause of the closing of a large number of lines that have clear prospects of economic success, as a result of the radical changes (mobilization of the regional endogenous resources) that the existence of the autonomous government implies (Consejería de Turismo, Comercio y Transportes, 1984, p.102). The study proposes the transitional maintenance of those lines because it is not possible to evaluate the real prospects for them before having first considerably improved the quality of the service and having reduced operational costs to a minimum. If after a reasonable period of time, it is argued, the lines are still deficient, then they should be definitely closed. Map 5.8 shows the proposal of the regional government for the classified uneconomical lines.

Map 5.8 Proposal of the Regional Government for the classified unecological lines



Source: *Consejería de Turismo, Comercio y Transportes (1984)*

The conflict was finally solved through the Agreement Junta of Andalucía-RENFE, December 26, 1984, with the participation of the affected provinces. The agreement laid down the subsidy of several lines with the financial compensation of RENFE. The State would contribute the first year (1985) 74 per cent of the amount to be paid by RENFE; 28 per cent in 1986, 8 per cent in 1987 and 0 per cent in 1988. As of that moment, the State would leave the future of the lines to the two parties to the agreement. The lines and the amounts to be paid by RENFE are shown in Table 5.2.

Table 5.2 Agreement Junta de Andalucía-RENFE (1984)

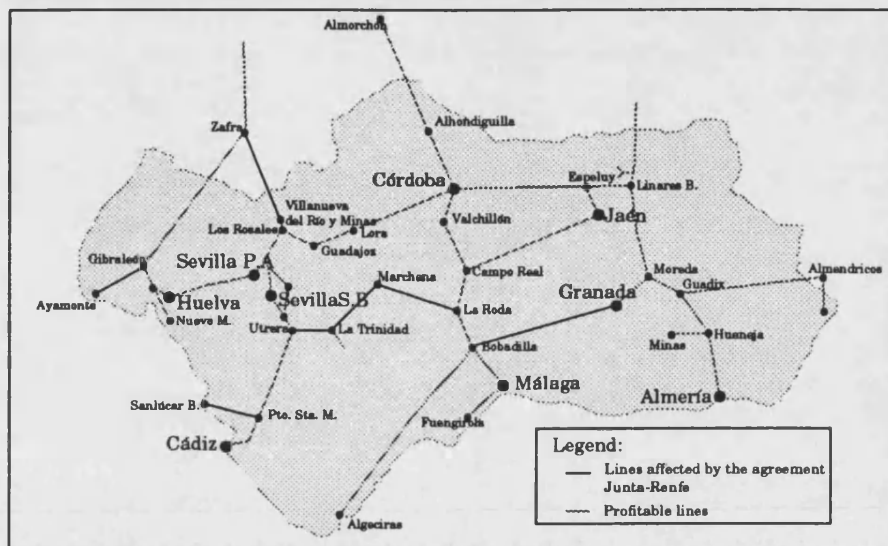
LINE	Mill.pts (1985)
Utrera-La Roda	317
Granada-Bobadilla	400
Gibraleón-Ayamonte	82
Pto.Sta.María- Sanlúcar B.	60
Villanueva del Río y Minas-Guadal.	111
Total	970

Source: *Consejería de Comercio, Turismo y Transportes*

The regional government included in the 1985 budget, 300 mill. pts., defining it as investment in order to be financed through the Interterritorial Compensation Fund. The extraordinary character of this expenditure, however, was emphasized by the regional government, pointing out that the limited budgetary resources for

the next year (1986), and especially for future years, will demand limiting in the future, economic support to only three priority lines: Utrera-La Roda, Granada-Bobadilla and Gibraleón-Ayamonte. A new agreement Junta-RENFE on January 29, 1985 also included Villanueva del Río y Minas-Guadalcanal as priority lines.

Map 5.9 Agreement Junta-RENFE for the uneconomical lines



Source: *Consejería de Turismo, Comercio y Transportes (1984)*

The need for co-ordination: the Andalusian Railway Strategic Plan (PEFA, 1986)

The decisions taken by RENFE and the State had created political instability and confrontation between the central and regional government. In the end, a transitional solution was found, but this made evident the need for: firstly, defining the priorities of the Andalusian government as far as the regional railway was concerned; and secondly, clarifying and defending those priorities in order for them to be taken into account by RENFE and the central government. It was considered that although the authority of the Andalusian government over the existing regional railway was relatively limited, its priorities should be integrated in the sectoral plans of the public holding and the State. Because of that, the Andalusian government decided to elaborate a regional railway plan. This was to constitute the framework for future regional *and* national interventions in the regional network.

The Andalusian Railway Strategic Plan (PEFA) claimed that 'the planning of the regional railway, was not the exclusive initiative of the Central Administration or RENFE, independent of the political programme of the regional government'

(Consejería de Turismo, Comercio y Transportes, 1986, p.4). It recognizes that the Junta has limited real power over the system, as it necessarily conflicts with the State or the public holding, but it argues that confrontation is not the solution as the regional government has exclusive jurisdiction over its territory. This means that RENFE's control can be considerably limited if the Junta applies its exclusive power over urban planning, dangerous and harmful activities, compulsory expropriation, and the final approval of any of plans elaborated by RENFE. Furthermore, the plan argues that this capacity of control by the regional government is totally autonomous, and the state can not limit or interfere in it.

The plan criticizes the measures taken unilaterally by RENFE (highly uneconomical lines) and believes that agreed planning could have solved the conflict. The alternative, having in mind the real limitations of the regional government over the railway (lack of resources, lack of any strategic plan at the national level, and lack of jurisdiction), is according to the plan, reciprocal respect and equilibrium between the different parts. It is neither possible nor adequate, it is argued, to plan imperatively (top-down) nor to follow a genuine bottom-up approach since the setting up of general principles under this approach is, in reality, useless' (Consejería de Turismo, Comercio y Transportes, 1986, p. 67). The only solution is, therefore, to lay down a plan whereby the different interests are incorporated and integrated. The role of the PEFA was therefore, to specify clearly the regional interest of the Andalusian government over the railway.

The strategy of the PEFA, 1986:

The PEFA outlines three different stages in the strategy devised: a strategy for the short-run, for the medium-term and for the long-run. Firstly, the strategy for the short-run consists of rationalization of the management and exploitation of the regional railway. This strategy essentially affected the highly uneconomical lines and referred to measures affecting cost-savings, improvement in the organization of the system, and more efficient exploitation of the existing equipment and infrastructure. According to the plan, highly uneconomical lines should be considered a priority within the whole strategy because they constitute minimum actions to take with the beneficial result of continuing their function as regional links. Improvement of inter-provincial lines and railway nodes will be also a priority during the first stage.

Secondly, a strategy for the medium-term consisting of development and improvement of the existing railway network. The main objective of this strategy was to

satisfy inter-provincial travel demand. This was the first priority of the plan. The PEFA suggests two types of measures: firstly, the development of an inter-city service, and secondly, the construction of an alternative East-West axis. According to the PEFA, the development of a regional intercity-service satisfies social-territorial objectives as well as economic ones. As suggested before, the railway can hardly consolidate the basic urban network, which is the general objective of the territorial policy of the regional government. Nonetheless, it can contribute by increasing the territorial articulation of Andalucía by means of connecting the subregional centres, that is, the eight provincial capitals plus Algeciras and Jerez. On the other hand, it also satisfies economic objectives because the proposed network is in fact serving the most dynamic areas, that is, Huelva, Seville, Alcalá-Dos Hermanas, Cádiz, Jerez, Marbella, Fuengirola, Málaga, Córdoba, Jaén, Granada, Almería and Algeciras. The development of this regional inter-city service, requires, nonetheless, two different types of measures: improvement of services, in qualitative as well as in quantitative terms; and the development of the existing intra-regional or secondary network. The development of this secondary network, would affect the following axes:

- Sevilla-Utrera: development of double tracks;
- Utrera, Almargen, Bobadilla and Moreda: junction improvements;
- Morón-Almargen: new track;
- Utrera-Morón, Almargen-Bobadilla, Alora-Málaga, Jimena de la Fra.-Algeciras, S. Francisco-Granada: rectification of the tracks;
- Utrera-Morón: improvement of the track;
- general engineering improvements along the whole corridor: Utrera-Almargen, Algeciras-Granada and Granada-Almería.

As far as the development of a new alternative East-West axis is concerned, the PEFA suggests the substitution of the traditional link through La Roda, from Seville to Bobadilla, and from there to Granada, Málaga and Algeciras for the alternative connection through Morón and Almargen. This alternative axis would help to fulfil three different and important objectives: it would improve internal relations and accessibility in more sections of the regional network than the other alternative; it would improve access from western Andalucía to the Straits of Gibraltar, one of the most dynamic areas of the region; and it would give an alternative to the Madrid-Cádiz line for the external relations of the region.

Finally, measures to be taken in the long-run consisting of the development of new lines. According to the plan, this is a very costly strategy and must be implemented

only when the new lines are totally necessary as a result of a highly unsatisfied demand or when there is no other technical solution to solve the identified deficits. Among the measures to be taken in the future is to provide access to Andalucía through the Straits of Gibraltar and the Mediterranean axis. According to the plan, the existing radial network has reinforced the connection of Andalucía with the rest of the country through the Meseta, limiting the importance of the Mediterranean axis and the traditional Ruta de la Plata (through Extremadura). In that sense, the Andalusian Economic Plan (PEA, 1984-86) had already argued that 'the current layout of the regional road network [...] and that of the railway, orientated towards the link between the region and the Meseta, but inadequately communicated with Extremadura, Levante and Portugal, is one of the main causes that explains the structural situation (of underdevelopment) of the Andalusian economy' (Junta de Andalucía, 1984a, p. 17).

Accordingly, the PEFA suggest the development of the Mediterranean corridor along the Andalusian tourist coast. After having analysed the demographic and economic potential of the area (one of the greatest in Andalucía), traffic demand over the local railway (the greatest in relation to the rest of the regional tracks), seasonal demand (high demand during the summer time because of tourism), dual character of the line (local as well as inter-regional axis), prospects for future demand, and the actual congestion of the line, the plan concluded that the railway system in the area demands immediate intervention. It pointed out, however, that the policy defined for this axis differs from that laid down for the rest of the network, because in this case, the main objective is not to attract traffic demand to the railway from other means of transport, but to convert it into the main corridor for travel along the Costa del Sol. This policy also differs from the rest in the sense that the Mediterranean axis is considered to be a national priority rather than a regional one. The Expo'92, points out the PEFA, is the opportunity to solve the existing bottleneck in this area. Table 5.3 and Map 5.10 show the proposal of the PEFA.

In 1986, the PEFA was approved. It was considered by the regional government as the base document for the signing of a global agreement between the Junta of Andalucía and RENFE. As we have seen, it set up regional priorities for short, medium and long-term actions in order to be considered and integrated in the sectoral plans of the Public Holding (RENFE). Since that moment, it was considered, any decision taken by RENFE or the State over the regional railway should take into account these priorities laid down by the Andalusian government.

Table 5.3 The proposal of the PEFA, 1986

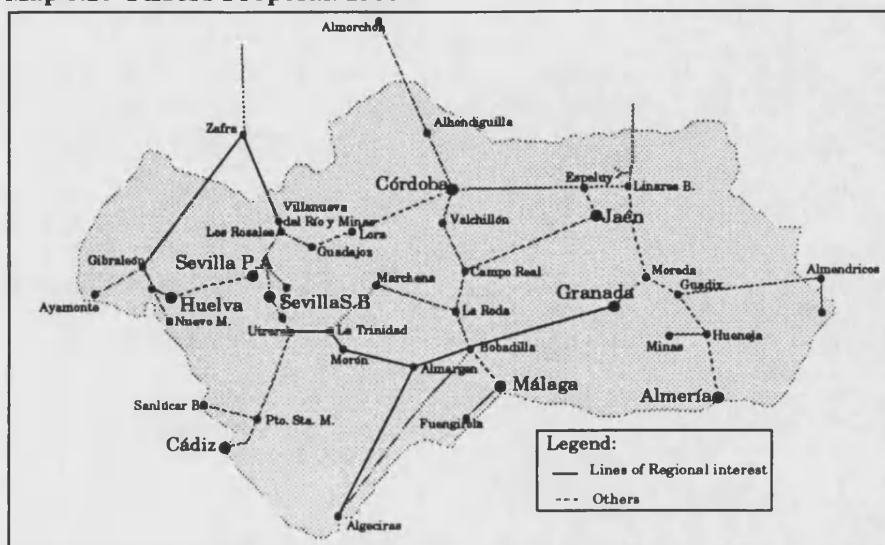
PROJECT							Investment	
	1	2	3	4	5	6	Total	%
Sevilla-córdoba	4486						4486	11,82
La Salud-Utrera	1969,5						1969,5	5,18
Utrera triangle		276,5					276,5	0,72
Utrera-La Trinidad			249	238,5	141		628,5	1,65
La Trinidad-Morón			192,5	181	96,5		470	1,23
Morón-Almargen		5880					5880	15,49
Almargen triangle		25,5					25,5	0,06
Almargen-Bobadilla			1058	4	255	315	1632	4,3
Bobadilla triangle		355					355	0,93
Málaga-Córdoba		1051	509		3040		4600	12,2
Algeciras-Almargen			1288	63	1218	1460	4028,5	10,61
Granada-Bobadilla			1169	206	1037		2411,5	6,35
Almería-Linares					1990	1630	3620	9,53
Granada-Moreda					480	570	1050	2,76
Moreda triangle					10	20	30	0,08
Los Rosales-Mérida				1276	1578		2853,5	7,51
Sevilla-Huelva					875		875	2,3
Jaén-Espeluy					257,5		257,5	0,67
Espeluy triangle		224,5					224,5	0,59
Huelva-Zafra				2275			2274,5	5,99
TOTAL	6455,5	7813	4465	4243	10977	3995	37948	100

Source: Strategic Plan for the Andalusian Railway (1986).

Legend: 1= Doubling; 2= New routes; 3= Rectification; 4= Conditioning;; 5= Signalization; 6= Electrification

Regional public intervention until the elaboration of the PEFA had been, nonetheless, insignificant. In spite of the conflict with RENFE and the subsequent agreement with the public holding for the subsidy of the regional uneconomical lines, only one of those lines received financial support by the Junta de Andalucía, the Utrera-La Roda line. As Table 5.1 showed, in 1984 there was no investment in the railway. In 1985, 63 mill. pts. were spent in that line; and 250 mill. pts. in 1986. Clearly, the development of the regional railway has not been a priority of the Junta during this period. Political confrontation and popular mobilization were significant, but the actual result for the regional railway very limited. Nonetheless, the PEFA was to prove a turning point in that policy.

Map 5.10 PEFA's Proposal. 1986



Source: *Consejería de Turismo, Comercio y Transportes (1986)*

RAILWAY DEVELOPMENT SINCE 1987

The Railway Policy of RENFE and the State since 1987:

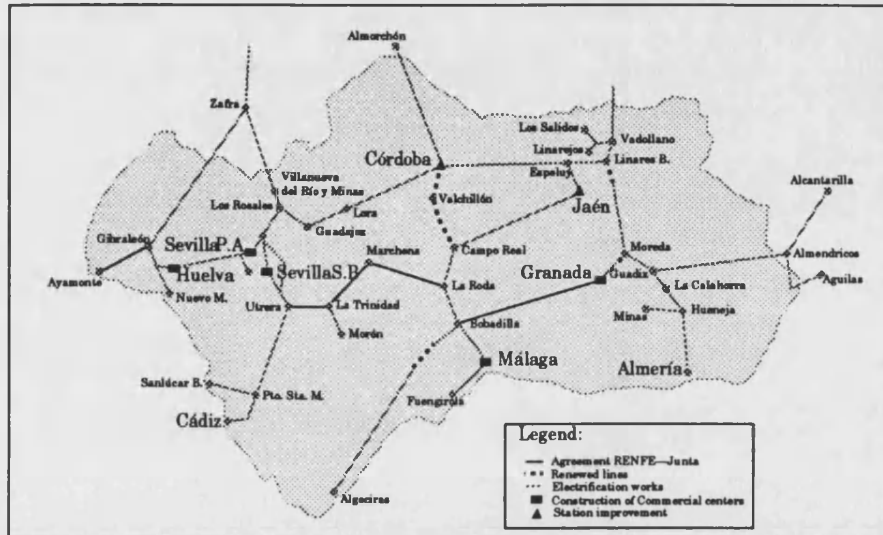
As has been pointed out, RENFE's policy during the early 1980's was guided by the main objective of rationalizing the national railway and making it economically more efficient. Public intervention during the period 1980-1987, was very modest and directed mainly towards improving the railway service rather than development (in quantitative as well as in qualitative terms) of the network. RENFE intervention during this period in Andalucía was characterized by (Ocaña and Gómez, 1989):

- a minimum increase in the Kms. of electrified lines: from 35.7% of the total regional railway to 36.5% in 1986;
- no developments on double-tracks;
- renovation of small track sections;
- limited improvements in several stations and commercial areas of Córdoba, Málaga (Los Prados) and Algeciras-S. Roque stations.

In coherence with an economic conjuncture characterized by recession, the intervention of RENFE in Andalucía (and in Spain as a whole) during this period had a

local and diffuse character, mainly reduced to a minor renovation of the tracks and general improvements in security systems. Map 5.11 shows railway development by RENFE in Andalucía until 1987.

Map 5.11 Railway development in Andalucía by RENFE: 1983-87



Source: Ocaña and Gómez (1989)

The year 1987, however, marked a turning point in this policy. After 35 years of public neglect of the railway (period during which the national network had fallen from 12.948 Km. in 1950 to 12.710 Km. in 1985, although the length of the tracks had increased up to 25% as a result of the construction of double tracks, and the railway had progressively deteriorated its participation among other means of transport (see Table 5.4)—, the Ministry of Transports decided to elaborate a national Railway Transport Plan (PTF) for the period 1987-2000 (Ministerio de Transportes, Turismo y Comunicaciones, 1987).

Table 5.4 Railway participation in national land transport (%)

	1970	1975	1980	1985	1986	1987
Goods	14,3	11,6	10,2	9,0	8,5	8,7
Pass.	14,9	12,0	7,0	8,7	7,5	7,0

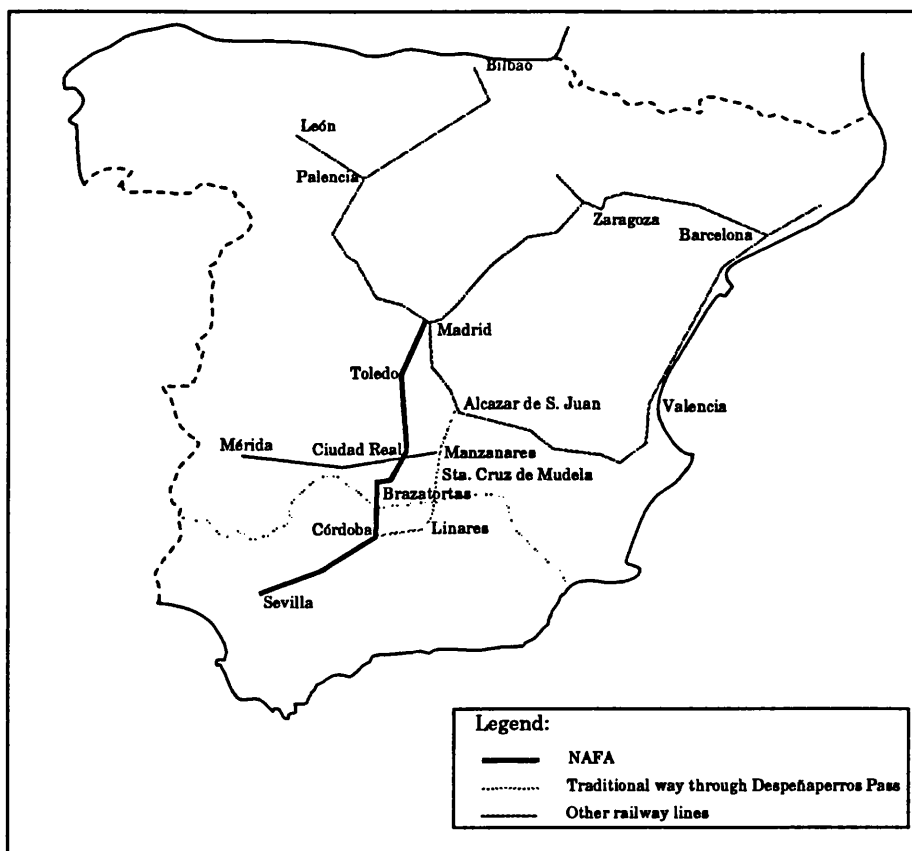
Source: Ministerio de Transportes, Turismo y Comunicaciones

The general objective of the PTF was to modernize the national railway and to increase its participation in national land transport. For that, a budget of 2.1 billion pts. was compromised. The proposal of the PTF was to increase up to 200 Km/hour the speed of twelve of the existing main lines, and to allow a maximum of 160 Km/hour in some sections of the other lines. The plan also considered the improvement of the quality and service of this means of transport and the renovation of the urban

networks of the most important national capitals. It shared, generally speaking, the same policy guidelines as the national road plan, PGC, 1984-91.

One of the priorities of the PTF was the development of a new access to Andalucía through Brazatortas (NAFA, or Nuevo Acceso Ferroviario a Andalucía). The traditional way from Madrid to Seville was through the Despeñaperros Pass, crossing the Sierra Morena by Alcázar de S. Juan, Sta. Cruz de Mudela and Linares-Baeza (see Map 5.12). This line is one of the most congested of the Spanish railway network because it channels all the traffic towards Andalucía, Levante, and Badajoz-Lisbon. The objective was to build a new track between Madrid and Córdoba through Brazatortas, as double track allowing a maximum speed of 250 Km/hour, and to double the section between Córdoba and Seville allowing a speed in it of about 200 Km/hour. The projected reform would considerably reduce travel-times in all the affected relations: Huelva, Cádiz, Seville, Algeciras, Málaga, and Córdoba; Badajoz and Lisbon; and indirectly, Jaén, Granada, and Almería through Despeñaperros.

Map 5.12 Nuevo Acceso Ferroviario a Andalucía. NAFA



In October of 1987, the Spanish government decided to adopt high-speed technology for the Madrid-Seville line. The PTF, had not considered the introduction of such

technology for the national railway but only a maximum speed between 200 and 250 Km/hour in some of the main lines. Only one year later (October 1988), and without fulfilling most of legal requirements (studies, projects, and time-periods for public discussion), the Spanish government decided to change the width of the tracks to a standard gauge, similar to that of the European countries. Initially, the standard gauge would be developed in only one line, the French frontier-Madrid-Seville line. The enormous budget required for its development, however, forced the Spanish government to decide on the development of only one section: the Madrid-Seville line. These two decisions have been, according to experts, the most controversial decisions taken by the Spanish government since Democracy.

There were, nonetheless, important reasons for the taking of such measures by RENFE and the Spanish government. First of all, according to the Spanish government, the introduction of the high-speed in the national railway and the change to the standard gauge, are fundamental instruments for strengthening the integration of Spain into Europe. The coherence between the objectives of the national railway policy and those proposed by the EEC for the railway, it is argued, is total. There is a clear synergy between the Spanish government and the EEC in the common objective of developing a high-speed railway network (Ministerio de Economía y Hacienda, 1989, p. 54).

Certainly, in December 1990, the Commission of the E.C. approved—after one year of claim for an European common railway policy as a necessary instrument for the proper functioning of the single market in 1993—, a plan for the development of a European High-Speed Network that allows the connection of the main urban centres of the Community. This European network (laid down in a general plan set up by national governments, European railway companies and the main constructors and manufacturers in the sector. Andalucía Económica, 1990c) will be made up of 9000 Km. of new lines (among which is the Barcelona-Madrid-Sevilla corridor) and other 15000 Km. of existing but conditioned lines. It will allow one, for instance, to go from Madrid to London in 9.15 hours., from Madrid to París in 6.45 hours or from Madrid to Brussels in 8.05 hours. Map 5.13 shows the projected high-speed railway European network.

The development of these high-speed corridors must go hand in hand with the construction of local networks, since the productivity of transport networks, it is supposed, can be adversely affected by poor connections with other infrastructures. Airports or TGV stations, for instance, are often served by urban transport systems that are old or unreliable, reducing the economic impact of the high speed network

(Comisión de las Comunidades Europeas, 1992, p. 17). An efficient planning of these networks has to integrate, consequently, the urban and European territorial scales.

The development of this European railway network is considered central to the integration of the European territory (Comisión de las Comunidades Europeas, 1992). Accordingly, in January 1991, the Community created an Infrastructure Fund for the development of such high-speed European network (highways and railway). It had been strongly criticized that, despite the economic importance for Europe of such transport networks, until now they had been financed by national and regional governments and mainly under the category of Regional Policy. This, however, posed important problems. As Millan (1990, p.4) points out, 'Community assistance for regional development is necessarily concentrated on the regions with the most severe structural problems of underdevelopment and restructuring'. Nonetheless, Europe requires the development of European-wide transport networks, and for that not only is the creation of a new Infrastructure Fund necessary, but Community regional policy should contribute to it as well¹.

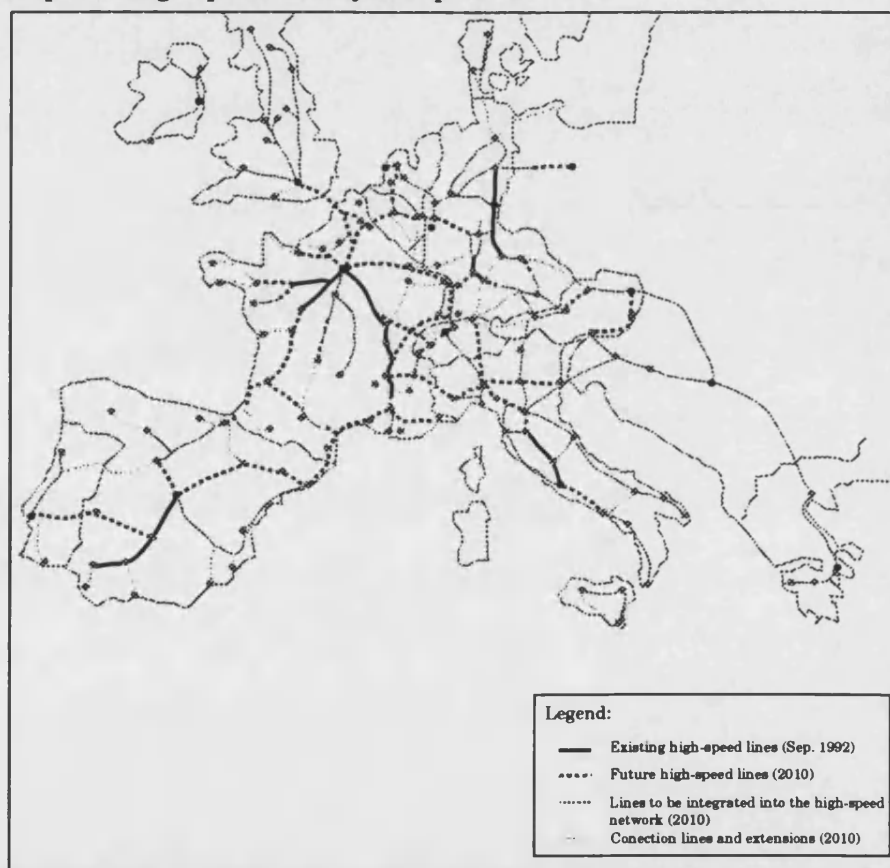
In the light of the future development of such a European-wide railway network, it was obvious that the Spanish government did not want, again, to be excluded from Europe. Autarchy was over, and the socialist government in Madrid wanted, more than anything, to convert Spain into a *real* European country. Accordingly, it assumed the Community's objectives as its own. As the Regional Development Plan of the Ministry of Economy pointed out (Ministerio de Economía y Hacienda, 1989, p. 54), the national railway policy contributes efficiently to the unification of the Internal Market; it improves the accessibility of the peripheral regions decreasing the impact of the last enlargement of the Common Market; it helps interchanges with non-member countries; it contributes to the convergence of the different railway policies of member states; and it is coherent with the policy of the Community of developing long corridors like Irún-Madrid-Algeciras or Portbou-Barcelona-Madrid-Lisboa.

By emphasizing the existence of such a synergy, the Spanish government does not only want to show that railway policy in Spain is coherent with that at European

¹ At large, as this author argues, 'within the 1992 large market, peripheral regions also have a direct interest in the completion of schemes within more central regions which will link all regions into European-wide transport networks. Community regional policy should not simply be concerned with the role of providing financial assistance to a limited number of regions. It has also to address issues reflecting the use and development of Community territory as a whole' (Millan, 1990, p.4).

level, but also, to recall the Community about its shared interest in the development of a railway of such characteristics (high-speed and standard gauge) in Spain. As the Spanish government argues (Ministerio de Economía y Hacienda, 1989, p. 54), most of the proposals for railway development in Spain should be classified as interventions of Community Interest and therefore, financed as such. The choice of the Madrid-Seville line —a difficult option to understand if the objective was actually to connect the Spanish railway with the European network—, acquires in this context a logical meaning: the line Madrid-Seville is an equilibrium option and, therefore, it should be financed within the plan of convergence and of catching up with Europe.

Map 5.13 High-speed railway European network



Source: Comisión de las Comunidades Europeas (1992)

The connection of the national railway into the future high-speed European railway network is not, however, the only reason that explains the decisions taken by RENFE and the Spanish government since the country's integration into the EC. The EC is also interested in giving a new role to the railway in the context of the 1993 Single Market, and also, in promoting the integration and development of the main European companies of the sector.

According to some studies carried out by the European Commission (Comisión de las Comunidades Europeas, 1992) traffic growth during recent years has led to a serious problem of congestion in high density areas such as the Benelux and in some heavily used North-South routes such as the Rhone Valley, some Alpine Valleys and the London-Dover corridor. Bottlenecks will inevitably spread in land transport infrastructure unless annual growth in road traffic falls below 1.3%. On the other hand, the continuing traffic growth is expected to outstrip the extension and improvement of the transport system, and cause aggravating congestion, especially in the central regions and the main population centres. As far as air transport is concerned, annual growth rates are likely to remain above 6% for several years; traffic and congestion have also increased at the principal international airports (for instance, reported peak period flight delays tripled between 1986 and 1987 and then nearly tripled again between 1987 and 1988). This means that the European Community will face in a near future a serious problem of traffic congestion; hence, impeding the taking of the full benefits of the large market since the free movement of people, goods and capital within the Community will be prevented as a result of the existence of an scarce and inefficient European transport system.

The need to cope efficiently with this increasing traffic demand has assigned the European railway a central role, especially since environmental problems and problems of land use in the most congested areas have become so important. The railway appears to be the best transport solution, especially as a result of the development of high-speed networks and multi-modal transport techniques which will allow the railway to be very competitive. This pressing situation, although it does not affect directly and primarily Spain, seems to have been an important factor in the decision of the Spanish government. As RENFE argued (Funes, 1989; Fernández Durán, 1990), there is an exogenous factor which favours the decision of adopting the high-speed technology and changing the width of the tracks; that is, road transport infrastructure development has already reached a saturation point *in other countries*, and there is a real bottleneck in European air traffic and in European airports.

Finally, the business prospects that arise from the development of such a network and the services linked to it, is another reason that may explain the railway policy of the Spanish government and the support given to it by the European Commission². It is known that the prospects of the single market have led to a progressive

²The propaganda and support given by the European Commissioner on Transport, Mr. Van Miert, to the post-1986 Spanish railway policy is significant in that respect. According to him, 'the development of

homogenization of all the European means of transport, and that the most important European companies in the sector (mainly French and German) have a direct interest in such homogenization and in the possibility of exploiting the economies of scale arising from European integration; that is, of introducing their materials and productions into all the European countries. This, on the other hand, requires the homogenization of the national networks (like the Spanish, which has a different gauge). The possibility of exploiting the internal market and the economies arising from their functional integration also give an opportunity to these European companies to compete with their Japanese competitors; a leading motive, on the other hand, for the creation of the Single Market .

Personal interviews with regional policy-makers have shown that, apparently, the Spanish government has received important pressures from the EC and from some well represented European companies in the sector (EL PAIS, June 9 1991), for the signing of the so-called 'Contrato del Siglo'. Certainly, one of the most important outcomes of the Spanish railway policy since 1987 has been a millionaire contract with the European companies Alsthom and Siemens; Alsthom for 50,000 mill. pts has to provide 24 new trains (high-speed); it has also become the owner of the public enterprises existing in the sector particularly MTM (Maquinista Terrestre y Maritima) and ATEINSA, which were previously floated by the Spanish government for 20,000 mill. pts. Siemens, in its turn, will provide 75 engines for 35,000 mill. pts. As a compensation for that, the European Community has pressed Alsthom, Siemens, and the British General Electric Company to accelerate their integration in order to foster the competitiveness of the European railway technology.

The railway policy of the Spanish government and RENFE since 1987 has been probably one of the most controversial policies of the Spanish government since democracy. According to experts (EL PAIS, Nov. 1 1988; EL PAIS, Nov 24 1988) the implications for the national railway of this policy are so important and so disappointing that it is difficult to understand from a national, and also from a rational point of view. For Spain this policy means the end of the existing railway and the death of national technology.

the Spanish railway network according to the standard gauge and with the high-speed technology is urgent and vital for the integration in Europe of certain industrial areas, and it is adequate from an economic point of view'. The change on the width of the tracks however, he adds, should receive priority over the introduction of the new high-speed technology (EL PAIS, 27 April 1991).

First of all, let us examine the introduction of the high-speed technology. High-speed technology is not a mere acceleration of the traditional technology, but the actual transformation of the traditional railway into a new means of transport. It requires substantial changes in the design and characteristics of the tracks; important changes in the electrification and signalling systems, in the characteristics of the engines, carriages, and in the rest of mobile components (wagons). The adoption of high-speed technology can not be considered, therefore, as a mere improvement in the existing railway, but as the development of a new transport system. Notwithstanding, whereas the introduction of high-speed technology is a logical step in the development of the French railway, or in the German one, in the Spanish context it is a clear break-option. As one author has argued (Funes, 1989), when the Spanish government decided to introduce high-speed technology the national railway was characterized by its general obsolescence, the low quality of the service it provided and the use of conventional technology. This was the logical consequence of the neglect suffered during recent decades. The difference between the Spanish railway and those of other more developed European countries like the French or the German, is not, therefore, a mere difference of capacity or quality of the railway system or service; they are, in fact, two different means of transport.

Modernization for the Spanish government means utilization, instead of development of new technology. It was twenty years ago when the French government first decided to develop the high-speed technology and, ten years ago when the first high-speed European train began functioning in the Paris-Lyon axis (TGV South-East). At the present, there are in France more than 3450 Km. of tracks adapted for high-speed travel. The construction of 500 Kms. of new line in France, for example, implies the improvement of most of the relations with the affected area because the high-speed trains can run perfectly through the conventional network which has been continuously adapted and improved. In Spain, however, the introduction of a new line adapted for the new technology means separating it from the rest of the network, which will not benefit by such an improvement and can even suffer unpopularity when compared with the new line.

Furthermore, since the new technology can not be developed in Spain in such a short period of time (before 1992), it is necessary to import it, and this also has important implications for Spanish technology. Well known are the efforts and successful results that Spanish technology (the Talgo), has obtained in the last years in principally two main aspects: firstly, the technology for changing the axes of the trains in order to allow them to circulate across lines of different width; and secondly, the effort to increase average speeds: Talgo has developed a maximum

speed of 288 Km/hour (last demonstration in the FRG). The Talgo technology is, in fact, a high-level technology, particularly if compared with the quality of the national railway network. The import of high-speed technology from France and Germany, however, diminishes the efforts of the Spanish company and compromises its future. According to that, it is ironic in this context to hear the successive Ministers of Transport to claim that 'Spain has entered the Club of the High-Speed', since 500 Km. of new line adapted for the new technology have been build, while not only the technology, but also all the infrastructure and mobile equipment have been imported. So Spain has done in 5 years what the Japanese, the French or the Germans did in 15 or 20 years!.

The decision to change the width of the tracks to the 'European' gauge has not been less controversial (EL PAIS, Nov. 1 1988; EL PAIS, Nov. 24 1988). Firstly, railway traffic affected by the change, that is, international traffic, accounts only for 3% of all the railway traffic in Spain. This problem is, on the other hand, quite satisfactorily solved with the Talgo technology; secondly, the railway is competitive for trips no longer than 6 hours. This means that the link Seville-París, Seville-London, or Seville-Roma will not be able to compete with the plane. Furthermore, the change of the track will affect at the moment the link between Madrid and Seville through Brazatortas, which means that the new line will not reach in the near future — particularly in present economic conjuncture, and after the 1992 Convergence Plan of the Spanish government—, the French frontier and that it will not have a connection with the European high-speed railway network. That is, the construction of the house has started by the roof and the supposed objective of the reform — to ease international traffic— will not be fulfilled.

The decisions taken by RENFE and the State since 1987 have implied the actual abandonment of the PTF, 1987-2000 (Instituto de Estudios Económicos, 1990). The Spanish railway policy has been, since 1987, largely reduced to the development of that spectacular project, the high-speed railway line between Madrid and Seville through Brazatortas. This project has had, on the other hand, an enormous impact in the railway policy of the Junta de Andalucía.

The Railway Policy of the Junta de Andalucía since 1987

After the decisions made by RENFE and the Spanish government during and after 1987, the first task of the Junta de Andalucía was to elaborate a new railway plan (Consejería de Obras Públicas y Transportes, 1988). The objective of the PEFA, 1988, was to integrate that *national project for Andalucía* (high-speed and standard gauge), which was neither integrated in the national railway plan (PTF, 1987-2000), nor in the 1986 regional railway plan (PEFA). Table 5.5 shows the priorities and projected expenditures laid down in the new regional railway plan, PEFA, 1988.

Table 5.5. The proposal of the PEFA, 1988

PROJECT	New line	Doubl.	Renov.	Electrif.	Signall.	Bypass	RAF	Others	Total	%
Brazatorta-Córdoba	75000								75000	51,53
RAF Sevilla							18000		18000	12,36
RAF Córdoba							5000		5000	3,43
RAF Jaén							900		900	0,61
La Salud-Utrera*		2400		300	660	200			3560	2,44
Jerez Fra.-Cádiz		4870		610	1340	250			7070	4,85
Triangle Utrera*	650			60	50			150	910	0,62
Utrera-La Roda*			1700	1300	1050	100			4150	2,85
Triangle La Roda*	965			90	70				1125	0,77
Bobadilla-Granada*			1755		1230	135			3120	2,14
Málaga-Córdoba	2355	2400		515	3620	255			9145	6,28
Algeciras-Bobadilla				2220	1780	165			4165	2,86
Almería-Linares				2040	2420	180			4640	3,18
Granada-Moreda				715	570	15			1300	0,89
Rosales-Fuentes Arco*			1430	115	1210	30			2785	1,91
Sevilla-Huelva					1100	135			1235	0,84
Jaén-Espeluy					320	40			360	0,24
Pto.Sta.M.-Sanlúcar B.*			1000	465		165			1630	1,12
Huelva-Fregenal Sierra			1015			10		400	1425	0,97
TOTAL	78970	9670	6900	8430	15420	1680	23900	550	145520	100

Source: *Consejería de Obras Públicas y Transportes, (1988)*

* Lines of regional interest

As can be seen, the plan integrates central as well as regional government projected investments in Andalucía. It has, however, an ambiguous attitude towards the new line Madrid-Seville. According to the plan (Consejería de Obras Públicas y Transportes, 1988, p. 26), 'the integration of this millionaire project (53,000 mill. pts of 1984 according to RENFE in 1986; 75,000 mill. pts according to the PEFA, 1988; and 260,000 mill. pts. in 1990: Andalucía Económica 1990c; and 450,000 mill. pts in 1992 by the Ministry of Public Works and Transport) implies the acceptance and consolidation of the territorial model defined by the present radial network'. Although it recognizes that the new axis might have positive advantages from a

national (strategic link to the Strait of Gibraltar) as well as from a regional perspective (increased accessibility between the region and the rest of the country), it addresses itself to the question of the coherence of such an action in the light of the present situation of the majority of the regional lines. Accordingly, the plan considers that 'it [the project] should not signify any obstacle in the execution of other railway investments which Andalucía strongly needs; for that reason, it will not be counted as an investment in the regional railway' (Consejería de Obras Públicas y Transportes, 1988, p. 26).

The Junta has assumed the decisions taken by RENFE and the Spanish government since 1987. Nonetheless, it prefers to ignore the unilateral and the contradictory character of such investments with respect to regional railway priorities, and redefine its priorities over the regional railway as if nothing had happened. The PEFA, 1988, considers, as the former railway plan (PEFA, 1986) did, the west-east regional axis as the priority for the regional government. Nonetheless, the most innovative proposal of the PEFA, 1986 (the design of the new transverse corridor through Morón and Almargen) is rejected. Although it is recognized (Consejería de Obras Públicas y Transportes, 1988) that the alternative Morón-Almargén is the best one, it is argued that this would demand studies, projects and works that would require too long a time-period, and that could deteriorate traffic relations between Seville and Málaga and Granada.

Hence, despite being the main objective of the railway policy of the Junta, and despite the significant and contradictory intervention of RENFE and the State in Andalucía which would require a radical answer from the regional government in order to compensate for the increased radial structure of the regional railway, it adopts the quickest and cheapest alternative for fulfilling the so-claimed regional interest: west-east connection. Apart from that, the rest of the regional railway network (most of the lines classified as highly uneconomical lines) is totally abandoned, and the development of an inter-city railway service within Andalucía—one of the priorities of the 1986 plan—, set aside.

Meanwhile, the Department of Territorial Planning was abolished and a new Department, Consejería of Public Works and Transport, took its place. Railway management and development was, during the 1984-86, the task of the Department of Tourism, Commerce, and Transport, different from that of Territorial Planning. As we have seen, during that time, the importance given to the railway (in social, economic and territorial terms), was limited. Railway development was certainly not a priority of the Junta de Andalucía. In 1987, railway policy is transferred to the

General Direction of Transport within the Department of Public Works and Transport. Regional public expenditure over the railway increased from 250 mill. pts in 1986 to 5,749 mill. pts. in 1987. Total regional expenditure for the period 1987-92 on the railway amounts to more than 15,000 mill. pts (Table 5.6).

Table 5.6 Railway development. Junta de Andalucía: 1984-92 (Mill. pts)

PROJECT	1984	1985	1986	1987	1988	1989	1990	1991-92	Total
Local Netw.									
Jaén	—	—	—	249	—	—	—	—	249
Córdoba	—	—	—	—	—	—	1633	3180	4813
Seville	—	—	—	5500	383	—	1410	500	7793
West-East link									
Arahal (Variant)	—	—	—	—	1452	—	216	—	1668
Rest	—	63	250	—	377	—	396	—	1086
Others	—	—	—	—	90	—	—	—	90
TOTAL	—	63	250	5749	2302	—	3655	3680	15699

Source: *Consejería de Obras Públicas y Transportes*

A first look at those figures might suggest that RENFE's *conflicting* intervention in the region and the subsequent elaboration of the PEFA, 1988, had led the regional government to intervene more effectively over the regional railway in order to compensate for its increasing radial character. Ultimately, though short, medium, and long-term measures proposed by the PEFA, 1986 had been abandoned, the development of the intraregional axis was still the declared objective of the regional government. A more careful analysis reveals, nonetheless, how the external circumstances overwhelmed the regional government and how the new plan PEFA, 1988 became outdated almost even before publication.

As can be seen from Table 5.6, of the 15,000 mill. pts. spent by the regional government on the railway during the period 1987-92, more than 80% went to develop the arterial railway networks (RAF) of Seville, Córdoba and Jaén. The RAF of Seville accounts for more than 7,700 mill. pts. Investments on the west-east corridor, however, only accounts for 10% of total regional expenditure.

Developments of the RAF of Seville and Córdoba have been the result of the construction of the axis Madrid-Seville; local networks had to be adapted to high-speed technology and to the standard gauge. In the case of Seville, the construction of the line Madrid-Seville, but also the celebration of the Expo'92, has led to a total reconstruction of the local network and to the construction of a new central station, Santa Justa. Initially, the total cost was expected to be around 18,000 mill. pts, but final costs have reached almost 28,000 mill. pts. of which the Municipality of Seville

has to pay 15%, the Ministry of Public Works 29%, the Public Society Expo'92 a 31%, and the final 25%, the Junta of Andalucía.

Although the new access to Andalucía is a central government project, it has implicated the Autonomous Community because it is considered a development project for the region (Ministerio de Economía y Hacienda, 1989). Therefore, it should also be a priority objective for the Junta. The regional government, however, did not think the same only one year before (Consejería de Obras Públicas y Transportes, 1988). The situation had, nonetheless, changed. The regional government is not only not evaluating RENFE's investment coherence with the regional priorities laid down in the regional railway plan, or requiring the subordination of such investments to the Junta's priorities, but contrarily it is even contributing (80% of total regional expenditure on the railway), to a project that is contradictory with the priorities laid down since 1984.

The railway policy of the Junta since 1987 has, therefore, fostered external accessibility against the objective of internal integration of Andalucía, which was the *leit motiv* of the Junta's policy during the first years of regional government. The axis developed does not belong to the regional network, nor even to the national one taking into account the lack of functional complementarity of the Madrid-Seville axis with the rest of the national railway network. Interestingly, the Junta de Andalucía has not emphasized the economic importance of this axis for the development of Andalucía. Contrary to the road development programme, for which regional propaganda has been significant, the regional contribution to the Madrid-Seville line has been silenced by the Junta. Though the A'92 could wrongly be defended as an intraregional axis contributing to the internal integration of the regional territory, this is not, however, the case with the new access to Andalucía through Brazatortas. It is obvious that the development of this axis has nothing to do with the objective of exploiting the indigenous resources of Andalucía. If the Madrid-Seville line is going to have any effect on regional development it will probably come as a result of the integration of the region into larger economic and spatial systems (country-Europe); it is therefore framed into an outward-looking strategy of development.

From a regional point of view, an evaluation of the new Madrid-Seville line shows that it does not follow either of the two approaches considered in our methodology; that is the push-approach or the pull-one. It does not follow a push strategy because it does not pretend to increase the accessibility levels of isolated or poor areas within the region, but instead, the regional capital which is in fact the best connected and

most accessible area as far as the railway is concerned. To follow a push strategy from a regional point of view would have demanded the increase of internal accessibility and the development of the west-east regional corridor; this, however, has not been the priority. The Madrid-Seville line does not follow a pull-strategy either. As pointed out previously, traffic demand is especially intense in the Costa del Sol. This is one of the most congested areas within Andalucía. It is recognized that the economic potential of the area is being hampered as a result of a real scarcity of transport infrastructures. As several studies (Aurióles, 1989; Ocaña and Gómez, 1989) and the Junta's own regional railway plan (Consejería de Turismo, Comercio y Transportes, 1986) and regional development plan (Junta de Andalucía, 1991) suggest, the Mediterranean coastal corridor has an undoubted regional economic and social interest. The Mediterranean Coast is one of the most dynamic areas in Andalucía, from a demographic as well as from an economic point of view. It seems, however, that policy-makers, national as well as regional, do not want to see the economic potential of investing in this area. As the PEFA, 1986 pointed out, the role that the railway might play is a central one, especially because it is a very populated area, totally urbanized and as the municipalities are between the coast and the mountains, there is a real shortage of space to allow urban growth. It is also a service area, where contacts and movement are especially high, the existing transport infrastructures are overcrowded and continuing traffic growth easily outstrips the building (or extension) of new roads. Therefore, if there exists a logical place to develop a new line in Andalucía, it is the coastal corridor (Consejería de Turismo, Comercio y Transportes, 1986).

The Madrid-Seville line has, however, a different perspective from a national point of view. The new line does not follow a pull strategy from a national point of view; this is especially so, since the government decided to change to the standard gauge, thus impeding the removal of the bottleneck of Despeñaperros (Funes, 1989). The development of the New Railway Access to Andalucía (NAFA) as it was planned in the Spanish PTF, (Ministerio de Transportes, Turismo y Comunicaciones, 1987) — traditional technology and non-standard tracks—, considerably improved the links between Extremadura, Andalucía, and Levante with the North of the country. The change of the gauges in the line Madrid-Seville and the introduction of high-speed, means that travel to Extremadura, Lisbon, Levante, and eastern Andalucía will have still to cross the Pass of Despeñaperros as the new trains are not adapted to the characteristics of the rest of the national network. Goods will also have to be transported via Despeñaperros. Therefore, it will be difficult to remove the bottleneck of this pass, which was one of the arguments given in the PTF for the

improvement of the Madrid-Seville line. According to the Minister of Transport, Mr. Borrell, the AVE (High-speed, or Alta Velocidad) belongs to the national plan of convergence —code for catching up with the rest of Europe—, and therefore, it can not be evaluated according to cost-benefit analysis (Diario 16, April 16, 1992). It is not demand that has principally created the necessity of the high-speed Madrid-Seville line.

The strategy is, nonetheless, a push one because Andalucía is one of the poorest and less well-endowed regions in Spain as far as transport infrastructure is concerned. The development of this axis is an equilibrium option as far as inter-regional development is concerned. By developing this Southern corridor (Madrid-Seville), the Spanish government is trying to impulse the economic growth of the region by increasing its accessibility to central Europe. This, apparently, will allow the diffuse of economic growth towards Andalucía and the increase of its attractiveness. From an inter-regional point of view Andalucía is favoured against other richer areas of Spain. This may explain, why the Junta de Andalucía has been *forced* to contribute to this project which contradicts the objective of regional internal integration set up in the Statute of Autonomy and in the different sectoral and non-sectoral regional plans. As the advisor of the president of RENFE pointed out, 'the New Railway Access to Andalucía is an infrastructure of national dimension [...] its biggest and more immediate benefits will concentrate on the increasing external accessibility of Andalucía, particularly for the Western part of the region [...] yet, it will probably reinforce the actual centralized spatial model, either from a national or a regional point of view' (Perez, 1990, p.4).

Certainly, from a spatial point of view, the pattern of allocation of resources of the Junta since 1987 may be defined as concentrated, large-scale, and capital intensive; more than 80% of total regional expenditure on the railway contributes to the development of a single, spectacular project. This pattern is contradictory to that followed by the Junta during the 1984-86 period. The territorial implications of both, national and regional railway policies in Andalucía are already evident. Seville, the regional capital, has become the regional growth pole. As one author has argued (Vidal, 1990), the main beneficiary of the new access, as far as it is totally unconnected with the rest of the regional railway network, is evidently Seville. Seville is going to become the access point to Andalucía from the rest of the country. Far from creating a homogeneous inter-territorial accessibility, the new axis will consolidate very differentiated accessibility nodes, it being the case that Seville became an isolated island within the Andalusian territory to the detriment of many

areas with high economic potential and communication deficits such as the Bay of Cádiz and Málaga.

The implications of the railway policy of RENFE, the Spanish government, and that of the Junta de Andalucía since 1987 are, therefore, significant, and can be summarized as follows:

- consolidation of the traditional radial structure of the regional network and reduction of the external relations between Andalucía and other regions (Extremadura, the North, Levante) to a singular route through the Meseta;
- the billionaire budget that the new link has required constitutes a real handicap for the future development of the rest of the network. The decision of changing the width of the tracks, increased the initial budget from 53,000 mill. pts (RENFE, 1986), to more than 450,000 mill. pts (Ministry of Transport, 1992), only for the development of the new line. Also to be taken into account is the doubling of the line between Córdoba and Seville (more than 4000 mill. pts), which had been done before the decision of changing the width of the tracks, and hence it became useless, without having been used yet; two other links with standard-gauges had to be developed. New electrification works and the conditioning of the local networks in Córdoba and Seville imply the augmentation of the initial budgets. All this to improve only one line of the regional (and national) network, when the existing network is in deplorable condition and will have to remain like that for many years;
- the actions taken constitute a clear disequilibrium: the Córdoba-Seville link, will enjoy a quadruple line, electrified tracks and high-quality service, while the rest of the regional railway network is made up of single tracks, more than 60% without electrification, with bad design and having a deplorable service;
- the policy of central government does not only not improve the secondary regional network (the priority of the regional government) but it harms it considerably. As a result of the introduction of new technology in the Madrid-Seville line, the rest of the regional network will appear as a totally obsolete network, or as one author has called (Funes, 1989) as the 'botijo network'. The links with Huelva, Algeciras, Cádiz and Málaga, on the other hand, will not only be deprived of the high-speed but it will be necessary to change in Seville or Córdoba, or to follow the traditional way through Despeñaperros;
- furthermore, RENFE has proposed introducing the standard gauge in the lines Seville-Huelva and Seville-Cádiz. When the new axes are built, Andalucía will be internally broken and divided into two 'railway zones': the occidental and high-quality one, and the oriental and obsolete one; and the region will suffer

internally the same rupture that exists now between Spain and France; a rupture which the Spanish government was so worried about, and wanted to solve as soon as possible;

- even if each of the provincial capitals in Andalucía could be linked to the national high-speed railway network, it will not be possible for the Junta to avoid the strong radial character of such a network centred on Spain and on Europe. The spatial integration of Andalucía has been, therefore, substituted by the objective of integrating Andalucía into larger scale systems.

In conclusion, it is clear from this, that the agreed planning has not worked in this area, and that national interest has prevailed over regional interest, even when the objective of the central government in this case is not precisely a national one but the development and promotion of the region itself. All this really questions, nonetheless, the role of the Junta of Andalucía in the regional railway and the so claimed co-ordination and collaboration between the different administrative levels, regional and national.

RAILWAY POLICY IN PERSPECTIVE

The new regional development plan of the Junta points out: 'powers over the regional railway are not transferable to the Andalusian administration. Consequently, the manoeuvring capacity of the Autonomous Community in this field is reduced to a limited participation in those projects that are of special regional interest (Junta de Andalucía, 1991, p. 32). Projects of regional interest for the 1991-94 period are:

- the subsidy of the west-east regional corridor, particularly the Utrera-La Roda and Granada-Bobadilla;
- and a programme for the development of local railway networks (RAF) in the largest urban areas within Andalucía.

On the other hand, the priorities suggested by the Spanish government (Ministerio de Obras Públicas y Transportes, 1993) for future railway development in the region are the links Sevilla-Cádiz, Sevilla-Huelva, and Córdoba-Málaga, and the restructuring of local railway networks. Since budgetary prospects are limited, the extension of the high-speed technology and standard gauge will be reduced, for the moment, to the Madrid-French frontier line (via Catalonia or the Basque Country).

Meanwhile, the three andalusian axes will be modernized and speed increased up to 160 Km/hour in order to spread the benefits (in time reduction) of the Madrid-Córdoba-Seville line.

From a political point of view the evolution of the railway policy of the Junta de Andalucía during the 1980's gives interesting lessons. According to the 1978 Constitution and to the Statute of Autonomy, the power of the Junta over the regional railway referred to the planning of the railway in the region in order to coordinate State and regional intervention in Andalucía, and the possibility of developing a regional railway network over which the Junta had exclusive jurisdiction. The decision of RENFE of closing down those lines classified as highly uneconomical lines made the Junta react and elaborate a regional railway plan (PEFA, 1986) the objective of which was to let RENFE know the regional priorities.

The decisions taken by RENFE and the Spanish government did not take into account the priorities laid down in the regional railway plan, PEFA, 1986. A spectacular project, the most expensive civil project in the history of Spain (EL PAIS, Nov. 25 1990), was being developed between Madrid and Seville. The next step was the elaboration of a new railway plan PEFA, 1988 which integrated the decisions taken by RENFE and the State. The position of the Junta was ambiguous towards this large-scale central government project, but its commitment towards the defence of the regional interest (west-east regional link), seemed unequivocal. Expenditures, however, followed a different pattern and priority was given, as of 1987 to complement central government expenditure on the Madrid-Seville axis. No implementation of the PEFA, 1988, has been achieved, giving the limited power that the Junta has over the regional railway. Now the regional government limits itself to participate in those projects that are of special regional interest; among them, the reconstruction of the local railway networks to complement RENFE's priorities over the Andalusian network. No significant improvement of the regional railway lines will be done, but the subsidy of the symbolic, yet deplorable, west-east axis.

6. INDUSTRIAL PROMOTION POLICY

At the beginning of the 1980's, Andalucía was one of the least industrialized regions in Spain. Though its share of total Spanish population and territory was around 17%, it accounted for less than 8.6% of total industrial production in the country, and less than 8.4 % of total national employment in the sector. In 1981, regional GDP accounted for 12.9% of the total Spanish GDP. The 'industrial problem' of the Andalusian economy at the beginning of the decade could be synthesized in two aspects: the weakness of the internally generated industrial sector; and the dual character of the regional industry.

When the regional government was first created, numerous researchers and academics in Andalucía agreed on their interpretation of the underdevelopment of the region as the result of the unequal process of development that occurred in Spain during the 60's and early 70's (Delgado, 1981; Román, 1987). Andalucía was seen as the economic periphery of a country which had its centre in Catalonia and the Basque Country. The underdevelopment of Andalucía was the other side of the coin, the opposite of the development of those richest areas.

All the features (economic, social, and cultural) that usually characterize underdeveloped countries, were clearly identifiable in the region: export based economy (mainly of raw materials), sectorally specialized in the less productive sectors; financial, technological and economic dependency from the centre; supplier of capital, natural resources and labour, while net importer of manufactured goods. The economic structure of Andalucía was shaped, as in the case of most underdeveloped countries, to the benefit of the rich regions. Its lack of industrialization was the result of that unequal division of labour within the country. As Román (1987, p.75) points out, 'the present situation of the Andalusian economy, characterized by economic and social underdevelopment; low levels of production, income and investment; unemployment and outward-migration; progressive deterioration of the quality of life [...] extroversion, dependency and marginality, is at large, a consequence of the adoption by the Spanish government, of the conventional model of industrial growth implemented since the promulgation of Regulation 10/59, ill-called the Stabilization Plan'. As a result of that, regional participation in national industrial value-added and employment progressively decreased since 1955. Table 6.1 shows the evolution of Andalucía's participation in national industry.

Table 6.1. The participation of Andalucía in national industry: 1955-85

			Productivity	
YEAR	% Employ.	% Ind.GDP	Andalucía	Spain
1955	12.6	10.7	311.8	334.2
1964	10.7	9.7	512.1	548.8
1975	9.8	9.6	1132.2	1141.9
1983	8.8	8.7	1644.4	1673.9

Source: *Renta Nacional de España. Banco de Bilbao*

In 1984, when the first regional development plan was laid down, the industrialization of the region was seen as a condition *sine qua non*, Andalucía would never escape from its backwardness (Junta de Andalucía, 1984a). As a raw-material exporting region, which needed to import most of manufactured goods, it was thought that if an endogenous secondary sector were developed in the region, Andalucía could solve many of the causes of its underdevelopment; i.e., the economic dependency, the structural unemployment and the lack of integration of its productive structure. The value-added created in the region and appropriated by other areas, would remain in Andalucía creating wealth and employment. As the Andalusian economic plan stated, 'the way out from the underdevelopment in Andalucía is the industrialization of the region' (Junta de Andalucía, 1984a, p.17).

The problem of the Andalusian industry, nonetheless, was not only its weakness and small participation in national and regional GDP and employment, but also the strong dualism of its internal structure. As pointed out in Chapter 3, the industrialization of the country during the 1960's and early 1970's brought to Andalucía an extroverted and subsidiary industrial development, which manifested itself in the creation of few industrial enclaves (Delgado, 1981). These enclaves constituted the modern industrial sector and were capital-intensive, specialized on few sub-sectors (mainly petrochemical —Huelva and Algeciras—, and naval —Cádiz) and technologically developed. The results for Andalucía of this national regional (industrial) policy were very disappointing (Casado Raigón, 1978; Fourneau, 1978). It created far less employment in Andalucía than in the rest of Spain, it was not able to absorb the surplus labour generated by the parallel process of agricultural modernization, it did not create enough economic relationships (forward-backward) with the local industry; it depended on external inputs and served external markets. Usually, these industrial enclaves, carried out the first stages of the productive process in the region, and reserved the final ones, which bring the greatest part of the value-added, to the most developed areas. Furthermore, this type of industry was very

much spatially concentrated; it was located mainly on the triangle Seville-Huelva-Cádiz, and the bay of Algeciras.

The rest of the industrial sector (95% of total industrial firms in the region), was made up of local SME's specialized in very few and traditional sub-sectors (mainly food-processing industries, textiles, wood and furniture, and leather), backward from a technological point of view, and dependent on internal demand. These firms were dispersed throughout the regional territory (Junta de Andalucía, 1983c). This sector of traditional and non-competitive regional SME's suffered the increasing competition brought by the economic expansion of the 1960's, and the parallel process of national industrialization and national market integration. As one author has pointed out (Delgado, 1990), the increasing economic relationships between Andalucía and the 'centre' brought to the region the progressive deterioration of its traditional manufacturing sector, already weak before this process of economic integration. From 1960 to 1975, Andalucía lost 40% of the employment in these traditional activities. Particularly affected was the food-processing industry, the sector that presented the highest *comparative advantages* for the region, which decreased from 25.6% of its share in the total number of national firms in this sector in 1955, to 19.8% in 1975. From 1964 to 1975 the number of firms in this sector in Andalucía had decreased by 50%, and employment by 28.8%. Table 6.2 shows the distribution of the regional industrial output by sub-sectors and its evolution during recent decades.

Table 6.2 The structure of the Andalusian industry (% Industrial GDP)

Sector	1955	1964	1975	1981
Mining and oil	11.6	9.8	4.5	8.1
Water, gas and power	6.2	6.4	7.7	9.3
Food, drinks and tobacco	37.2	31.9	20.2	26.2
Textiles	3.9	3.3	2.8	2.5
Leather, shoes and clothing	6.3	9.9	6.4	5.6
Wood and cork industry	7.5	6.4	4.4	3.3
Paper and print industry	2.1	2.3	3.8	5.4
Chemical industries	5.4	6.6	17.9	11.6
Ceramic, glass and cement ind.	3.6	4.5	7.5	5.8
Metallic industries	16.0	18.8	24.6	22.2
Total industry	100%	100%	100%	100%

Source: *Renta Nacional de España. Banco de Bilbao. Serie homogénea y año 1981.*

The economic crisis initiated in 1975 worsened the weak industrial structure of Andalucía. During the period 1976-82, Andalucía lost 71,900 industrial jobs at an annual rate of 4.33%. The decreasing importance of traditional industrial activities came parallel to the slowing in the process of transfer of manufacturing activities towards the region. The analyses of spatial location of industrial investments in Spain during the period 1974-1980, and particularly during the first half of the 1980's, present Andalucía as a declining region in industrial terms (Auriolles, 1988; Delgado, 1990).

INDUSTRIAL PROMOTION POLICY: 1983-1987

In 1983, the new regional government created a new department called the Institute for the Industrial Promotion of Andalucía (IPIA). The IPIA was constituted as an autonomous (economically and administratively) institution dependent on the Department of Economy, Planning, Industry & Energy (Regulation 1/1983, 3 March). Its objective was to implement the policy of the Junta in relation to the promotion of those industries considered as priority for the economic and social development of Andalucía.

According to Regulation 1/83, 'the need to increase the participation of industry in the Andalusian economy is of such importance, that it will determine at large, the role that our region will play in the future, in the national economy'. Furthermore, 'the objective of Andalucía to supply goods sufficiently manufactured, to reach a more balanced external trade, to decrease unemployment and outward-migration, will depend on the level of *industrialization* that it manages to acquire *through the mobilization of the existing natural resources and the integration of its unstructured economy*' (emphasis added). In addition, the economic underdevelopment of Andalucía requires, it is argued, strong support from the regional government, which must start with the implementation of a definite promotion policy. According to the regional government, the characteristics of the underdevelopment of the Andalusian economy, justifies a level of public intervention in Andalucía higher than that corresponding at national level. A redistributive social-democratic framework for Andalucía, it is argued, would be useful only in a context of high economic growth and the existence of important compensatory measures from the central government. The current situation, however, justifies a strategy based on the mobilization of the regional resources and a stronger public participation in the economic promotion policies; that is, a type of intervention socialist in character (Junta de Andalucía, 1983c. p.53).

The Institute was initially conceived as a coordinating agency to assist local SME's. It was lacking in financial autonomy because the role given to it was to co-ordinate and make full use of the existing instruments of industrial promotion in the region (most of them belonging to the industrial and regional policies of the central government in Andalucía), in order to develop an autonomous industrial policy from and for Andalucía. Apart from the fact that the current economic situation did not allow the Junta to develop expanded budgets, it was also considered necessary to give a regional character to those particular and uncoordinated instruments. They had to be mobilized for the benefit of Andalucía; they had to be integrated in, and subordinated to, the economic and social objectives laid down by the newly created regional government.

The Institute was endowed with an acknowledged research team; in particular its head, Mr. Alburquerque, was considered to be a socially compromised researcher. His idea about what development is, and should be, differed radically from traditional modernization-industrialization paradigms. His view, on the other hand, was coherent with present economic circumstances and with the dominant political thought in the recently set up Autonomy. According to that, the IPIA defined and implemented from the beginning a completely new and *radical* industrial policy. The role of the IPIA's director, Mr. de las Morenas, and particularly of Mr. Alburquerque, was nonetheless central for the formulation of such an *alternative* industrial policy.

By law, the IPIA was defined simply as a coordinating agency, the main task of which was to coordinate existing industrial schemes in the region and to direct those public resources towards the exploitation of the indigenous resources. Under such a clause the IPIA could have acted as a bureaucratic institution limiting itself to coordinate central and regional Ministries (MINER, Consejería of Economy, etc.) public and private financial institutions, local authorities, etc. with its clients, mainly local SME's, and to channel the existing financial resources (financial aid schemes) to the benefit of the internal sector. The objective of the IPIA director and head manager, however, was to go further. Despite lacking in financial autonomy, their objective was, apparently, really to plan the economic development of the region, to define a strategy of endogenous development based on a totally different model of industrial development; a strategy for the long-run, which allowed the region progressively to improve its industrial development and the sectoral articulation-integration of its economic structure. The industrial promotion policy of the IPIA was thought to be something more than a mere policy of economic support for

individual firms. It was considered as a strategy for regional economic development in the broadest and most radical sense.

The IPIA totally rejected the identification between economic development and industrial development as was understood by traditional exogenous strategies of development. Industrial development in Andalucía, it was argued, has been capital-intensive, externally-driven and oriented, urban biased, and alienated from endogenous resources and potentials. The strategy to be implemented, on the contrary, must be territorial and local resource-based, and must take into consideration the process of economic development as the integration of the different economic sectors: agriculture, industry, and services.

By considering industrialization as a process of full mobilization of the indigenous resources, the economic development of the region was comprehensively addressed, from the extraction of raw materials to the final elaboration of the product. Manufacturing was not seen as an independent and mainly exogenous activity within the regional economic structure but, instead, one stage more in the whole process of production and regional resource mobilization. The development of Andalucía, it is argued, should be based on the full exploitation of its endogenous resources, and 'industrialism' should be avoided as it is the result of a narrow concept of economic development. In accordance with that, the IPIA would act as a horizontal agency integrating and intervening in the whole range of activities from the elaboration of marble to the commercialization of the pine-nut in Huelva, and the exploitation of the natural park of Grazalema. Hence, the Institute's strategy was the result of a 'new concept of development' (IPIA, 1986a).

'Strategic Planning': the Strategy of Industrial Endogenous Development of the IPIA

The strategy of endogenous development was implemented through the so-called Action Plan. An action plan was defined as a coordinated group of measures that take into account, global and pragmatically, all the aspects that affect the industrial activity to be developed. It integrated the whole cycle of a productive process (from the first manipulation of the raw material to its marketing and trading), or the full range of activities (integrating different sectors: agriculture, industry, and services) in a specific territory (comarca, or community of municipalities) (IPIA, 1986b).

As against traditional strategies of development, which artificially laid down plans to be implemented in the target areas without knowing the specific local conditions and circumstances, the Institute opted for a bottom-up approach. The process was firstly, to identify local potentials and then, to set up strategic plans for the full exploitation of such potentials. As the sectors and areas appropriated for the development of an Action Plan were so numerous in the region (that is, regional potentials were so abundant), it was necessary to select and to develop only some of them (IPIA, 1986b). As distinct from traditional industrial policies, the strategy of the IPIA was local/territorial and sector-based, and that required, because of managerial and financial limitations, concentration on developing only a few sectoral and territorial plans. Though limited in economic and spatial terms, these plans were considered, however, as the basis of the future regional industry and the foundations of a territorially and sectorally integrated regional economic development; i.e. the first objective of the regional economic plan, PEA, 1984-86 (IPIA, 1986b).

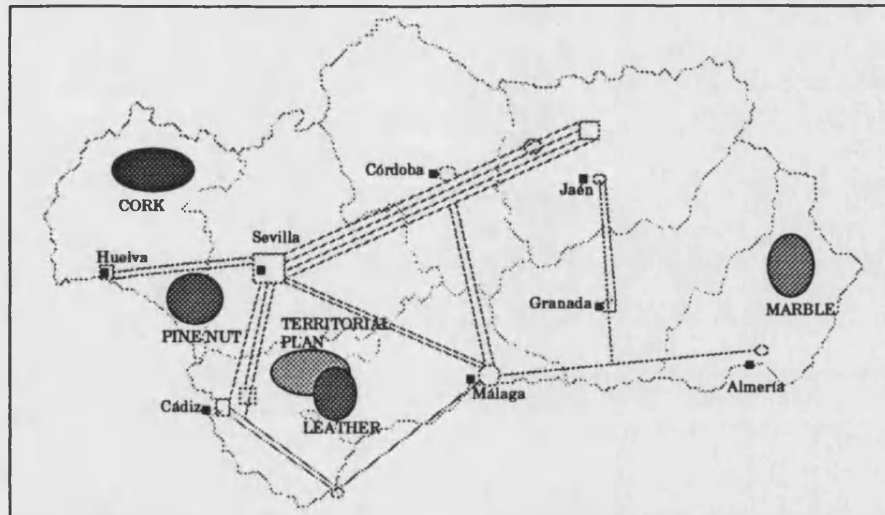
The election of the Action Plans was made according to several criteria. Firstly, the initiative had to start from the interest groups, mainly local authorities and local entrepreneurs. The role of the IPIA was to mobilize local entrepreneurship but not to create it or to attract it from outside. Accordingly, the Institute demanded planning responsibility from local groups such as local authorities, trade unions, and local entrepreneurs, before initiating any Plan. It was considered that if the plans were demanded from the affected areas and local groups, the chances of success would be considerably higher.

Secondly, the chosen sectors and areas had to be suitable for the application of an endogenous industrial strategy; that is, they had to help the diversification of the sectoral structure of the regional economy by increasing the manufacturing of regional raw materials or semi-manufactured goods, improving the competitiveness of the traditional-artisan sectors, or exploiting local non-fully exploited resources, and/or to contribute to the developing of particular areas or territories. These sectors and areas had to show, however, some economic potential and prospects of success. Since the economic development of the region had to be based on the exploitation and development of those endogenous potentials, priority would be allocated to those traditional sectors and territories that showed the highest prospects of economic success; those sectors in which the region had some kind of comparative advantage, specialization, technical expertise, or tradition.

Accordingly, the following action plans were initiated during 1984 (see Map 6.1):

- marble in Macael (Almería): the marble industry was considered a clear potential for the regional economy. The quality of the regional raw material and the possibility of access to external markets were considerably high. The exploitation of this endogenous resource seemed to be a clear development option. On the other hand, the marble industry was the only important activity in the province at that time. The general economic potential of the area was very limited and its natural resources scarce;
- leather in Ubrique (Cádiz): the main objective of this action plan was to improve the quality of the 'Ubrique's products' and to open new markets for them. Local production was already famous not only in Andalucía but also in Spain. Ubrique had developed a long tradition of leather works but distribution and commercialization channels were hardly developed. The objective of the action plan of the IPIA was to create the trade mark of origin and to develop new commercialization channels;
- cork in the mountains of Huelva: given the importance of cork production in the region (18% of total world production), the objective of this action plan was to increase the manufacturing of this raw material in the region: from 34% that was actually manufactured in Andalucía to 63%. New production methods were designed in order to increase productivity and competitiveness of the local production;
- ceramic and brick in Bailén (Jaén): the crisis of the construction sector had strongly affected this activity. The objective of the plan was firstly, to rationalize production, and secondly, to help the sector to solve its financial problems;
- the pine-nut in Huelva: the largest area of pine-nut production in Spain is found in Andalucía: 49% of the total national surface. Within Andalucía, the largest part of this production is made in Huelva. The exploitation of this regional resource had high economic prospects since there already existed national and international markets to be filled. The objective of the IPIA was to retain in Andalucía a greater part of the value generated by this economic activity through the extension and integration of the production process, from the collection to the packing of the product;
- territorial plan of the mountains of Grazalema (Cádiz): the objective of the plan was to develop one of the poorest areas in the region. The area was classified as Natural Park (R. 13/85 Junta de Andalucía, 12 Feb. 1985) and the objective of the IPIA was to help the exploitation of the natural resources and potentialities of the park.

Map 6.1 The Action Plans of the IPIA, 1984-86



Source: IPIA (1986)

In aggregate terms, the importance of these sectors in the regional economy was minimal. Nonetheless, there were important justifications for the IPIA for addressing the industrial/economic strategy of development of Andalucía in such a way. It was believed that the underdevelopment of Andalucía (and that of most backward areas) was very much the result of a model of development that had been imposed on the region for the benefit of other areas. Andalucía had been used as producer of primary products, those that were in highest external demand such as tourism and agriculture, and as a place for the establishment of industrial enclaves that were totally unconnected to the regional economy. This model of development had implied the waste of endogenous resources and the progressive weakening of the regional industry.

To reverse this model of development, which had brought to Andalucía only economic and social backwardness, primarily required the exploitation of those resources that had been unilaterally abandoned because they were not in the interest for the richest areas and for capital in general. Andalucía had to readdress such a path of development, but that could not be done overnight, particularly when regional interaction systems and economic circuits had been displaced by large-scale ones, out of the control of the Andalusians. The problem was not the lack of indigenous resources, but rather the misuse made of them: over-utilization of some potentials (tourism, for instance), and decay of others. As the regional development plan (Junta de Andalucía, 1984a) suggested, there was a huge gap between the Andalusian resources and potentials and the actual exploitation of them. The development of Andalucía could and should be based on the full exploitation of its indigenous resources, and towards that objective the action plans of the IPIA were

directed. Setting up a new path of development required a long-term perspective, and starting by some of the numerous possible fronts. At the beginning of the industrialization process, production would have to be concentrated on a relatively few economic activities such as leather, wood and furniture, marble, etc.; subsequently the product-mix would become more and more diversified, until the majority of the economic activities carried out in the region were integrated. During this process of internal, regional, capital accumulation, the regional territory and the regional government have become the agglutinative axes. The strategy might appear initially to be marginal, but with time it would be definitely dominant.

Despite these arguments, the sectoral priorities of the IPIA seem to be very odd, though significant from a theoretical point of view. As has been shown (Table 6.2), the role of the food-processing industry within the regional industry was, and still is, dominant in terms of value-added and employment (18.5% in 1980). The regional food-processing industry is important not only in quantitative terms but also *strategic* in terms of public policy; particularly, under a genuine endogenous industrial policy as the IPIA was suggesting. As the Document *Empresas* (Junta de Andalucía, 1983c) elaborated by the Junta points out, the food-processing industry is the regional industrial sector that presents the highest comparative advantages. Andalucía is primarily an agricultural region, and the development of the food-processing industry is, therefore, the best instrument for developing backward and forward linkages within the regional productive structure. Furthermore:

it is the industrial sector with the highest potential for employment generation; it is the sector that allows a greater integration of the regional industrial structure, and therefore allows a higher retention of value-added; it directly helps the mobilization of regional productive resources; it is suitable for the development of co-operatives, and collective associations for commercialization, innovation, and production; it is a low-energy consuming sector; it allows a balanced territorial development because it is the industry that presents a more even spatial distribution within the region; it has export potential; demand prospects are rather stable; and finally, the development of the food-processing industry is coherent and complementary with the other main objective of the regional government: the agrarian reform (p.45-46).

Despite the coherence of these arguments with the strategy of the IPIA, and the fact that the development of the food-processing industry is a claimed political objective of the Junta (Junta de Andalucía, 1984a), the institute did not consider this sector

as a priority within the endogenous strategy. This, however, is significant from a theoretical point of view, and a deeper analysis of the institute's sectoral priorities allows a more critical assessment of the so-claimed radical character of the self-reliant strategy, and particularly that of IPIA (Barzelay and O'Kean, 1989).

The hypothetical objective of the IPIA, and that of the self-reliant strategy, is to control the industrialization process, or the accumulation process, which is the same, from the bottom; i.e., that the region had autonomy and control over the process of capital formation and reproduction. To initiate this process through the food-processing industry (the clearest industrial option for an endogenous strategy of development) would have required substantial political changes; that was so precisely because it was an industry in which Andalucía had clear comparative advantages, and, therefore, it was already (or in the process of being) under the control of external capital.

A clear radical endogenous industrial policy would have required the repossession of this strategic regional industrial sector. The IPIA, however, preferred to set up its industrial strategy over other much less strategic regional sectors. In fact, despite the *dependentista* political discourse of the self-reliant strategy of the IPIA, the reversal of the exogenous model of development was said to require the exploitation of those resources that had been unilaterally abandoned. Instead of proposing a radical change in the national and international division of labour (as its analysis of the causes of the Andalusian underdevelopment seemed to suggest), the IPIA promoted the development of marginal economic sectors. Obviously, autonomy was guaranteed in this strategy, since those traditional sectors were, in fact, out of the interest of national and foreign capital. In that sense, the criterion of being demanded from local authorities and entrepreneurs for the actual definition and implementation of an action plan, appears to be rather significant. In the end, the radical development strategy of the IPIA seems to have been reduced to the implementation of a reactive policy demanded from below and allowed from above. In summary, a strategy the more evident economic result of which is the rationalization of necessity.

As significant as the sectoral priorities of the IPIA, were the institute's concept of planning and the implementation strategy of the action plans. If the former was a reactive policy in economic terms, the latter was a persuasive strategy in search of political legitimation. Against top-down planning, the IPIA argued for a planning strategy from-below. Firstly, the initiative had to start from the interest groups. Once the local authorities or other groups had contacted the institute in order to

carry out an action plan in their municipality or sector, the institute intervened in all the phases of the plan, from the identification of the potentialities and bottlenecks of the sector or territory, to the definition of a proper strategy, the capture of privileged financing, or the creation of a commercial society in order to market the products. The role of the the IPIA, 'over the specific place' (IPIA, 1986b), was to integrate itself in the collective action, coordinating, advising and supplying the necessary factors (information, technical assistance, etc.) during the whole process.

As Barzelay and O'Kean suggest (1989), the IPIA, nonetheless, rejected the idea that the supplier of the service knew, in fact, the circumstances that affect its clients better than themselves. According to that, it tried to mobilize the informal knowledge of its clients, encouraging them to identify their problems and to find the solutions for them. Its role consisted of coordinating and helping the interaction between all the affected parts. It was thought that if people participate in the planning process, compromises could more easily be reached and agreements between the different parts more easily made.

The IPIA acted as the intermediary between all the affected parts. Furthermore, it presented itself as the defender of the interests of local entrepreneurs against other public and private institutions. This peculiar role revealed, in fact, the actual alliance between the regional government and local interest groups; it was the manifestation of the regional social pact born as early as the creation of the new regional government. The role of the IPIA was recognized by all the parts and that allowed the institute to be considered as the natural bridge between the public sector and the industrial clients. The idea that the IPIA was defending the interests of its clients in front of other agencies and institutions made them more confident and collectively active. It was a different way of public behaviour and the clients seemed to trust in it (Barzelay and O'Kean, 1989).

This attitude, however, cost the IPIA the hostility of the regional entrepreneurial association (CEA, Confederación de Empresarios de Andalucía) as it considered itself as the unique representative of regional entrepreneurs in front of the regional and national administrations; the IPIA was 'invading' its function, breaking down the classic conflict between the public and the private sector. On the other hand, the *interventionist* policy of the IPIA was radically conflicting the idea that the CEA had about what should be the role of the public sector in economic matters. The 'group-oriented' approach that the IPIA was implementing seemed rather suspicious to the Andalusian entrepreneurial association. Public support was directed not to individual firms (the most viable or competitive) but to *a group of SME's acting in the*

same sector and territory. The economic strategy of the IPIA was difficult for the regional entrepreneurial association to understand. Instead of promoting the most competitive sectors, firms, and territories, the Junta explicitly biased its industrial promotion policy towards marginal areas, firms, and economic activities.

The IPIA, however, radically differed from such a view. According to the institute, the implementation of a 'competitive model' characteristic of traditional policies of industrial promotion, consisting of the competition between firms in order to obtain public support and financing, would be devastating for the regional industry. The Andalusian industrial sector, it is argued, is based almost exclusively on small firms. This internally generated sector is characterized by its high fragmentation and its inability to compete with the more productive industrial sector and with the largest firms. To apply a 'competitive model' in this context, therefore, would imply a strong competence between these small firms within the same sector or territory, and that would have weakened their position and bargaining capacity against large suppliers and buyers, to which the support of the institute was not addressed.

Furthermore, supporting those firms individually would have little impact on the development of the industrial sector in the region as a whole. Since the objective was not primarily the industrialization of the region, through the creation of new firms or the improvement of the existing ones, but the exploitation of endogenous potentials, the policy was best directed towards territories and sectors rather than being directed to specific firms or projects. On the other hand, the group-oriented approach allowed the integration of all the steps of an industrial process, from the first manipulation of the raw materials to the design of the final product, its marketing, and commercialization. By doing so, firms did not compete among themselves but collaborated in order to succeed in a collective project that would benefit all of them; thus, an egalitarian strategy made up of co-operative societies and popular associations.

Mobilizing resources to carry out Action Plans

As has been pointed out, the IPIA was created as an agency engaged in the promotion of the industrial development of Andalucía. As a strategic planning agency it defined a model of 'industrial' development for the region, but its financial resources were very limited. By that time, a multiplicity of public agencies and industrial promotion incentives existed in the region in a very uncoordinated way:

IMPI (Institute for the small and medium enterprise, Ministry of Industry and Energy—MINER), CDTI (Center for the technological and Industrial development, MINER), GAEIA (Large Area for the Industrial Development of Andalusia, MINER), BCL and BCI (Public financial Institutions), Regional banks, Saving banks (Cajas de Ahorros), and Local Authorities.

The role of the IPIA was to make full use of and to co-ordinate the whole range of resources available in the region. This was an enormously difficult task. In that context, the IPIA could have acted as a bureaucratic agency limiting its functions to inform the regional entrepreneurs about different incentives available in the region at that moment, and to help them submit their subsidy application forms. The IPIA, however, tried to integrate and co-ordinate all these resources for the implementation of its industrial strategy.

Once the plan was laid down, it managed to engage many of the Institutions with powers over the sector or over the territory for the development of the plan. For example, technical (geologic and mining) and economic studies were done freely by Ministries; transport infrastructures were developed in the areas of the Action Plans by the provinces, local authorities or the regional government; general agreements between the Department of Economy and regional financial institutions were laid down in order to help the SME's affected by the plan (subsidies and credits with lower interest rates); and incentives for the promotion of industrial innovation (CDTI) were integrated in the Action Plans through the creation of the Technological Innovation Societies.

The sources that the Institute managed to mobilize were considerable. It was, therefore, a strategy of mobilizing the endogenous potentialities. The IPIA managed to mobilize not only local entrepreneurship and local natural resources, but also local, regional and national capital and to direct them in the 'right' way. The strategy of endogenous industrialization was financed, therefore, by coordinating the instruments of industrial promotion existing in the region. These resources, however, were not specific to the Institute; they had existed before and they had their own objectives and logic.

As a result of that, the IPIA had to carry out two different functions. Firstly, it acted as a regional institution intermediary between the local interests and the rest of agencies and institutions (Ministries, financial institutions, etc.). Accordingly, it provided information to regional entrepreneurs and carried out the proceedings for the most important promotion instruments like GAEIA. Secondly, it carried out its

own strategy of industrial development. These two functions were not yet integrated. It also seemed quite difficult to do so because they were based on different grounds (collective action-competitive model). The task was even more difficult since it had to be done from the bottom to the top as the IPIA was trying to do.

The IPIA as an Intermediary Institution:

As an intermediary institution the IPIA carried out several tasks. Firstly, it acted as the 'unique window' of the Junta of Andalucía; that is, it provided information about existing public aids, public offers, legislation, etc. It also offered advisory services to local SME's. The Institute was also the intermediary between the regional SME's and other Institutions. It wrote references and functioned as a direct link between the affected parts. Apart from that, the IPIA carried out micro-economic studies for those enterprises according to 'the interest and social repercussions of the corresponding SME and according to its situation and relation to a strategic sector or zone' (IPIA, 1986c, p.5).

Secondly, it provided technological advisory services. In 1983 the Ministry of Industry and Energy (CDTI: Center for Technological and Industrial Development) signed an agreement with the Junta de Andalucía with the objective of coordinating the functions of the CDTI in the region. The IPIA was the institution commissioned to carry out this task. For the development of these functions, the Institute organized courses about technology and innovation directed to local entrepreneurs, it elaborated an inventory of the technological resources existing in the region, and it evaluated and carried out the proceedings of innovative projects.

The most significant and innovative activity that the IPIA developed in this area, however, was the creation of Technological Innovation Societies. By definition, a society of technological innovation was 'a corporate society the social objective of which was the development of processes, technologies, auxiliary equipment and elements of production of general interest for a sector'. The societies of technological innovation were linked to the respective Action Plans. Their social capital was usually distributed as follows: one third was subscribed by local entrepreneurs linked to the sector, another third by the Institute of the SME (IMPI, Ministry of Industry and Energy), and the rest by the local banks and Saving Banks. During the 1984-86 period societies of technological innovation were promoted for each of the existing Action Plans.

Thirdly, the IPIA participated in the Committee of evaluation of GAEIA. The role of the IPIA in this committee since 1984 was to qualify the regional initiatives in a

first instance, and to administrate the economic resources given to Andalucía by the central government in order to correct the inter-regional economic disequilibrium. The strategy of the Institute in the committee of GAEIA was directed to obtaining and securing financing for the implementation of its endogenous industrial strategy. During the period 1984-86 all the industrial projects integrated in any of the Action Plans had special treatment (individually or by group) by the Ministries of Industry and Public Works (MINER and MOPU). As the representative of the SME's in the region, the IPIA submitted the application forms of those firms, carried out the proceedings and even elaborated the necessary documents in order to obtain financing for them.

Finally, the institute evaluated, administrated and monitored the financial agreements between the Junta and regional financial institutions. One of the most important public instruments for the promotion of the regional SME's are the agreements between the Junta and regional financial institutions. Andalucía has been a capital exporting region (Junta de Andalucía, 1984a). Regional savings have traditionally been taken to other regions where the productivity of capital investment was higher. That has caused a progressive removal of regional capital. The new regional government with the aim of combating this dependent role of Andalucía with respect to other richer areas, while promoting regional entrepreneurship, laid down in its financial strategy the following main objectives: firstly, to keep the largest quantity of financial resources in the Autonomous Community, hence preventing the continuous financial fluxes by creating innovative projects of interest to local banking institutions; and secondly, to divert the compulsory coefficient of regional investment (the proportion of benefits that local banking institutions obtain in the region), towards projects of regional interest.

In order to carry out these objectives the Junta signs, since 1983, annual agreements (through different regional Departments, particularly the department of Economy, Planning, Industry and Energy) with regional financial institutions. The objective of these agreements is to give local SME's privileged financing (subsidized loans). Internal regulation dated April 15, 1985 (Consejería of Economy, Planning, Industry and Energy) commissioned the IPIA to carry out the agreements between the Consejería and the financial institutions. It was acknowledged that the Institute had been developing that role (although not legally established) since 1983. Table 6.3 shows the distribution of such subsidized loans by sector during the 1983-86 period.

Table 6.3 Agreement Junta-Regional Financial Institutions: 1983-86 (Mill. pts)

	Agriculture	Industry	Services	Total Subs.	Total capital
1983	206	281	532	1019	9395
1984	280	583	1066	1929	16865
1985	462	1163	1483	3108	28755
1986	—	—	—	—	47875

Source: IPIA. Memoria 1983-86.

As can be seen from Table 6.3, total resources mobilized for local SME's increased by 79.5% from 1983 to 1984, 70.5% from 1984 to 1985, and 66.5% from 1985 to 1986. Total resources increased from 9,395 mill.pts in 1983 to 47,875 mil. pts in 1986. This scheme of financial support to regional SME's functioned, however, as a mere financial instrument belonging to any banking institution, as it did not fulfil economic objectives established by the IPIA. For instance, in 1983, only 27% (135 firms) of the firms that benefited from such subsidized loans coincided with those selected by the IPIA; if millions of pts. are considered, the percentage decreases to 14%. On the other hand, in most of the years, from 1983 to 1986, more than 55% of total subsidized loans went to the service sector, and that was contradictory to the objective laid down by the Junta of increasing the weight of the industrial sector in the regional economy (IPIA, 1986c). In summary, regional small and medium firms benefitted, since 1983, from the increasing resources of the regional government. This financial scheme, however, did not contribute to the endogenous industrial policy of the IPIA, nor to the general objectives of the regional government.

The strategy of endogenous development:

The most important function of the IPIA was the encouragement of a strategy of endogenous industrialization. As was pointed out, the IPIA had no financial autonomy in supporting the development initiatives it promoted. It was presupposed, despite the obvious difficulties, that it would use the existing financial instruments in the region. The IPIA used its political power and its acknowledged intermediary role among the different institutions, and among those and its clients to benefit its strategy of endogenous development. The task of coordinating all the existing financial instruments to implement the strategy, however, was a more difficult one. Despite these circumstances, the IPIA managed to mobilize a considerable amount of financial resources.

During the period 1983-86, the following Action Plans were developed: Action Plan for the Marble of Macael, the cork industry affecting the Western part of the region, the brick sector in Bailén, furniture in Granada, jewellery in Córdoba, the fish

industry on the coast of Cádiz, leather in Ubrique (Cádiz), pine-nut in Huelva, and the territorial Plan for the mountains of Grazalema. As has been shown in Map 6.1, the location of the Action Plans reflects the diffuse model of industrial development chosen by the IPIA. All of them are located outside the main industrial corridors and poles of the region, and therefore in inaccessible and less rich areas: Almanzora Valley (Almería), the Mountains of Cádiz and Huelva (Ubrique, and cork and pine-nut industries), or the province of Granada.

In 1986, when the IPIA was abolished and replaced by a newly created agency (IFA), the degree of development of those plans was very unequal, with marble in Macael being the most advanced and successful one. The evaluation of these plans and the assessment of the total financial resources mobilized by the IPIA during this period has been an impossible task mainly for two reasons: firstly, owing to the fact that it was lacking in financial autonomy (which, otherwise, would have required the official accountability of its funds) the IPIA did not record systematically the money it managed to mobilize from the different sources (banks, Ministries, provinces, local authorities, and regional financial institutions). Secondly, information about IPIA's activity was formally requested to its successor IFA, but it was denied as 'it disappeared when the IFA moved out to its new office' (interview with Officer of the Department of Studies of the IFA). The information available is therefore very limited and it was obtained by informal personal interviews.

It is known that all the projects submitted within an Action Plan of the Institute had special treatment (individual negotiations or by groups) from the Ministries of Industry and Public Works in Madrid. The cork sector, for instance, had a privileged subsidy (20%) from the GAEIA (more than 2,000 mill.pts of investment); exactly the same happened to the ceramic sector in Bailén and the Marble of Almería (maximum rates of award). The Action Plan of Macael mobilized more than 3,000 mill pts. Finally, transport infrastructures, economic and geological studies, and other services and facilities were developed for the Action Plans by the different agencies and institutions.

The strategy of industrial development laid down and implemented by the IPIA was unequivocal. More or less significant in quantitative terms, it was the only strategy of industrial development that the Junta had during that period. The IPIA enjoyed total political support from the regional government, and it was recognized as its main representative by national institutions as well as by regional entrepreneurs. That explains why the IPIA was placed at the crossroads in 1986, when important changes occurred not only in Andalucía but also in Spain.

The IPIA at the crossroads:

Until 1986 the industrial policy of the Junta de Andalucía had been characterized by the limited resources spent on the industrial programme and by the total support of the Junta to the strategy defined and implemented by the IPIA. It was clear that all the strength of the institute depended on the political support given to it from the regional political power; this political support was the element which conferred on the institute its intermediary role between the regional administration and its 'clients'.

The year 1986 brought, however, many changes. Politically, the nationalist discourse and that of underdevelopment, which had previously predominated, was gradually replaced by another less aggressive discourse of modernization and social vertebration. As Barcelay and O'Kean (1989, p.65) point out, this message subtly undermined the idea that only by making laborious efforts with a long term perspective, carefully adapted to the specific local circumstances could the structural underdevelopment of the region be overcome. From an economic point of view the somehow pauperistic economic policy of the Junta and the limited regional budgets led to a period of economic expansion and increasing public resources.

Given the new circumstances, the director of the institute asked the regional government for an answer. There was the possibility of supporting the strategy of the IPIA, thus giving the institute economic as well as political support to carry out its strategy; or to leave the endogenous strategy to chance, and therefore giving it up. Choosing the first option (a coherent strategy of endogenous development as the IPIA was proposing) would have implied, in the long run, substantial administrative, economic and political changes. The endogenous strategy of the IPIA was too challenging. It required a clear definition of a model of economic development for the regional government to implement, the implementation of a non-efficient strategy of development with a long-term perspective, the co-ordination of the different sectoral agencies and regional Ministries (Consejerías), and the option for a interventionist public sector instead of a mere subsidiary role for it.

Several circumstances were apparently affecting the decision. First of all, there was a problem of power between the horizontal agency, IPIA, and the rest of regional departments (principally, Agriculture and fishery, Tourism, Commerce and Transport, and Economy). At the beginning of the autonomous period, when the Institute started to function, the regional administration was not yet developed. Depart-

ments were weak instruments of regional policy; they had few powers and few resources with which to play a major role in the economic policy of the regional government. The IPIA, however, was an ad hoc institution with a major role to play: to solve the structural problem of the lack of industrialization of Andalucía, considered a key factor in the underdevelopment of the region.

During this first period of regional government, numerous powers were transferred to the Junta. Departments such as Agriculture, Tourism, and Industry, started to play a more important role as they increased their budgets. Then, the problem of who was to control the Action Plans, and subsequently the strategy of economic development of the regional government emerged. The different departments wanted to play their corresponding role in the planning commissions of the Plans and to control them. It had to be decided, at that moment, which would be the role of the IPIA in the future. It had to be decided whether it should become the arm of regional economic policy acting as a horizontal agency engaged in the promotion of the economic activity in general; or whether its global strategy should be sectoralized and assigned to the different sectoral agencies.

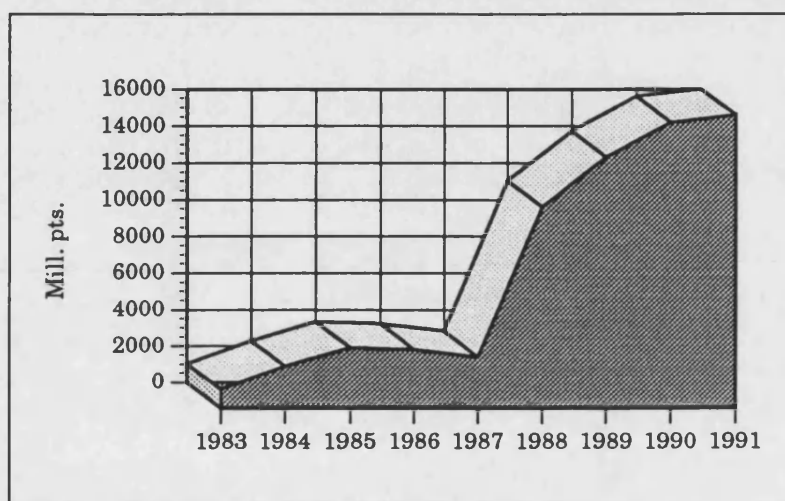
The second other important problem was the fact that the IPIA had been created with the intention of coordinating the existing financial instruments in the region, yet it was in fact acting independently of the other main instrument the regional government had created, SOPREA (Society for the Economic Promotion and Reconvertng of Andalucía. Regulation 3 March 1983). SOPREA was a financial institution that participated in the social capital of enterprises considered as strategic for the industrial development of the region. Its role was mainly to help the economic reconvertng and restructuring of crisis sectors and firms. It seemed therefore necessary to integrate these two complementary agencies in order to give coherence to the regional industrial strategy.

The IPIA seemed to have lost political support from the Junta. The regional government did not accept the trade-off put forth by the Institute; i.e. either to give resources to it, or to abandon the endogenous industrial strategy. The Junta decided to create a new agency, to give it the resources that the IPIA had lacked, and, furthermore, to commit the new Institute to a policy of endogenous industrial development.

INDUSTRIAL PROMOTION POLICY SINCE 1987

The year 1987 marked a turning point in the evolution of the industrial policy of the Junta de Andalucía. As was the case with the two other policy sectors previously analyzed, roads and railway, the most significant and apparent change that occurred since 1986 was the sharp increase in the total amount of regional resources spent on the industry programme. Figure 6.1 shows the evolution of regional government expenditures in the industry programme.

Figure 6.1 Total regional expenditure on the industry programme



*Sources: IPIA, SOPREA, IFA, Conserjería de Economía
(Expenditures from 1983 to 1987 refer to SOPREA).*

The change that occurred after 1987 was not only quantitative, but also qualitative. It affected the pattern of public expenditure, the strategy of industrial development, and the administrative framework in which the industrial policy of the Junta was framed.

In 1986 the IPIA was abolished. Apparently the institute had gone too far and as a result of its challenging concept of development, it put the regional government in a difficult position pressing it to decide finally whether it wanted to implement a coherent strategy of endogenous development or to abandon it definitively. The decision of the regional government was to create a new institution, called the IFA (Institute for the Promotion of Andalucía), with a new director and a new head for the Planning Department. The IFA was created as an autonomous institution, economically and administratively. Its objective was, according to the regional government, the same as that of the former IPIA (Regulation April 13, 1987): the promotion of the endogenous industrial development of Andalucía. It would also

become the executive arm of the Junta for the implementation of its economic policy. Apparently, nothing had changed. The endogenous strategy of development implemented by the IPIA was not expressly rejected, but instead given to the IFA by way of financial autonomy for implementation.

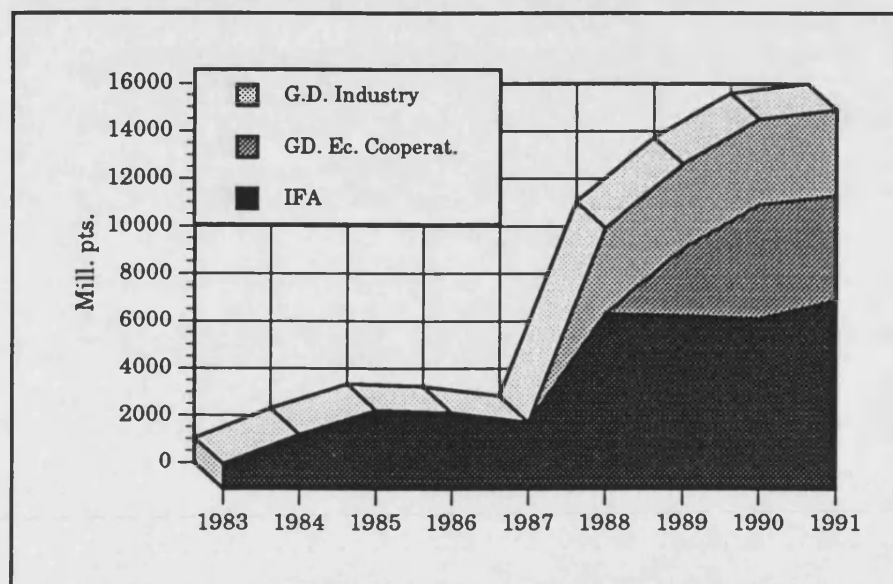
In 1988, a new regional department, the General Direction of Economic Cooperation and a revitalized General Direction of Industry, became engaged in the implementation of the industrial promotion policy of the Junta. This was the result of two external factors: the *extraordinary* industrial dynamism in Andalucía as a result of the investments brought into the region by foreign firms, and the revitalization of national regional policy with a new regional incentive legislation.

Parallel to the sharp increase in total regional resources on industrial policy since that date, the Junta implicitly established a *division of labour* between the different departments. The IFA was to play the role of being the institutional representative of the Junta abroad, in front of regional entrepreneurs and entrepreneurial associations, regional banking institutions, and national and European administrations. It would be the main department engaged in the organization, implementation, monitoring, and evaluation of the industrial policy of the Junta de Andalucía, which was since that moment under the direct control of the Consejería of Economy and Financing. The second department, the General Direction of Economic Cooperation, had two main tasks to fulfill, firstly, to complement national regional policy, particularly the implementation of the Regional Incentive Legislation (Law 50/1985, 23 Dec. 1985) of the central government in Andalucía (ZOPREA); and to attract, through new financial aid schemes, foreign firms to the two main regional innovation 'milieu', Cartuja'93 and to the Andalusian Technology park in Málaga. Finally, the General Direction of Industry was to concentrate on the consolidation of the so-called embryonic industrial complexes, which consists basically of the development of subcontracting programmes and programmes of technology transfer between branch plants established in the region and the local industrial sector.

The political and economic importance given to these new departments was seen by the IFA as a clear menace and therefore, it pressed the Junta in order to obtain control over some of the instruments given to the other departments. In 1990, the IFA was integrated into the Consejería of Economy, becoming a dependent department within that Consejería. The policy of the IFA was since then subject to the general economic and industrial objectives laid down by the regional Ministry (IFA, 1990a).

Figure 6.2 shows total regional resources spent during the 1987-91 period on the industrial promotion policy, classified according to departments: IFA, G.D. of Economic Cooperation, and G.D. of Industry.

Figure 6.2 Total regional resources on industrial promotion



The Institute for the Promotion of Andalucía (IFA) and its role in the new industrial policy of the Junta de Andalucía:

The IFA plays a strategic and multiple role within the new industrial policy of the Junta de Andalucía. According to its President, Mr. Romero, its strategy is a mixture of the endogenous and exogenous development (IFA, 1990a). The industrial policy of the IFA is, however, a four-faceted strategy: local/rural development, endogenous development, technology-led exogenous policy, and consolidation of the embryonic industrial complexes. Generally speaking, it synthesizes the multiple industrial policy of the Junta de Andalucía. Figure 6.3 shows the four-faceted industrial strategy of the IFA, and Table 6.4 the Institute's budget classified according to financial instruments.

Figure 6.3 The four-faceted industrial policy of the I.F.A.

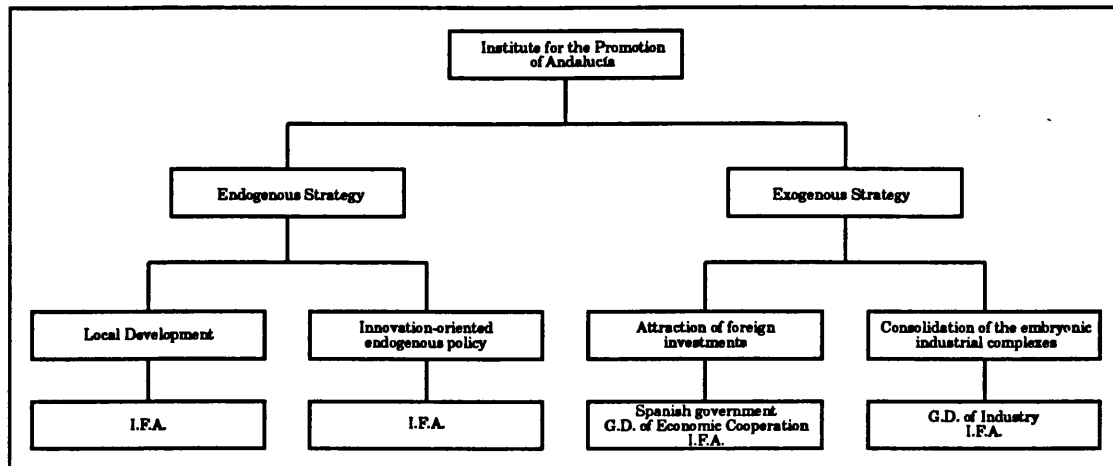


Table 6.4 IFA budget (Mill. pts.)

YEAR	Loan Guarant	Direct loans	Loan subsidy	Cap. particip	Cap.grants	TOTAL
1987	491	857	—	1483	0	2830
1988	2288	2752	1530	856	0	7425
1989	1126	2050	2033	1802	0	7337
1990	1045	5158	669	1384	81	7211

Source: IFA

Local development: the deviation of the Action plan concept

The policy of endogenous industrial development of the IPIA was carried out through the so-called Action Plans. Action Plans were sector-based policy instruments, and integrated the whole cycle of specific productive processes. They had to be demanded from below (local authorities and entrepreneurs), and had to show perspectives of economic success. They were both territorial and sectorally based.

The abolition of the IPIA did not imply the immediate abandonment of the action plans. The most successful ones (marble of Macael, brick in Bailén, the sectoral plan of the cork, and that of Grazalema), were still in operation in 1990. The rest of the plans, however, were abandoned but new ones came to replace them. Table 6.5 shows old and new plans and total IFA's resources spent on them. Three main features define the evolution of the action plans since the creation of the IFA: the limited resources spent on them; the progressive abandonment of the plans initiated during the period of the IPIA; and the actual deviation of the action plan concept.

As can be seen from Table 6.5, the importance of the action plans within the industrial policy of the IFA is limited; around 16% of the Institute's total resources are spent on these programmes. Different from its former IPIA, which used external resources to finance its endogenous policy, the IFA confers a very secondary role on Local Development programmes, as they are now called. Table 6.5 also shows the decreasing relevance of the old plans. Despite the successful results of some of the plans initiated by the IPIA (the marble industry for instance, increased its sales 20 times from 1983 to 1990, Diario 16, April 27, 1991), their importance diminishes throughout the period. Nonetheless, neither the reduced economic support to the action plans in comparative terms, nor the abandonment of traditional ones have been the main changes occurred in their implementation since 1987. The Action Plans of the IFA are, in fact, different instruments from those created and implemented by the IPIA.

Table 6.5 The Action Plans of the IFA (Mill.pts)

PLANS					
OLD	1988	1989	1990	1991	TOTAL
Marble (Macael)	—	121	0	0	121
Ceramic (Bailén)	—	—	0	0	0
Cork (Huelva)	—	—	45	0	45
Furniture (Sanlúcar)	—	—	3	0	3
Grazalema	—	—	0	0	0
NEW					
NPCI Almería	—	0	396	555	951
Food-processing ind. (Alm.)	—	—	205	0	205
Cazorla, Segura, Las Villas	—	—	63	115	178
Alpujarras	0	0	37	115	152
Sierra of Huelva	—	—	73	115	188
Sierra of Seville	0	0	195	115	310
OTHERS	—	—	0	375	375
TOTAL	0	1269	1044	1390	3703
% Total IFA budget	0	17.3	14.5	17.4	16.4

Source: IFA.

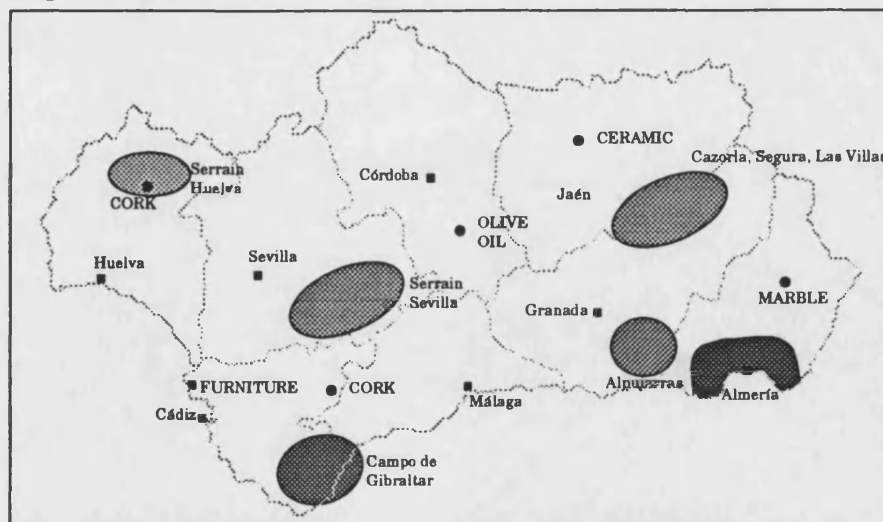
There are basically two different groups within the action plans of the IFA: those that are initiated and carried out exclusively by the IFA; and those initiated by other institutions in which the IFA has some participation (see Map 6.2). Action plans that are the initiative of the institute are the following:

- Plan Auxiliary food-processing industry in Almería (Poniente almeriense). This plan was initiated in 1988, its main objective was to develop an auxiliary

industry for the perishable agriculture of the Campo de Dalías. The development of this industry was considered a priority since the sector is totally controlled by foreign firms via inputs as well as outputs: more than 80% of seeds and fertilizers are imported, and the marketing and commercialization is carried out by Dutch firms. Almería sells the raw material, with the regional contribution to such production being natural resources and labour. The objective of developing the auxiliary food-processing industry was to retain a larger part of the value-added generated by it in the region;

- Plan of Cazorla, Segura, Las Villas: this plan was also initiated in 1988. It is situated in a mountainous area that is considered as an environmental resort. The goal of the plan is to develop new economic activities: rural tourism, wood, olive oil and sheep;
- Plan Alpujarras: initiated in 1990, it shares characteristics similar to the previous one. It is a poor, isolated and mountainous area. Activities to be promoted are rural tourism, food-processing industry and handicrafts;
- Plan of Huelva mountains: the area, specialized in the mining sector, was negatively affected by the crisis that occurred in this sector during the last decade, which left the zone in a critical economic and social situation. This lead the IFA to elaborate a plan for diversifying the economic structure of the area. The new activities to be promoted are pork products, marble, cork, wood, chestnuts, rural tourism and mushroom production.

Map 6.2 Action Plans of the IFA



Source: IFA

Action plans in which the IFA participates as a collaborative institution are the following:

- National Plan of Community Interest: Almería-Levante. This programme was initiated in 1990; it is a Spanish government initiative and was approved by the European Commission in 1989 (EEC 26/10/89) to be developed during the 1990-92 period. The plan is basically a plan for infrastructure development (74% of total public expenditure on the programme), and coincides in spatial terms with the Auxiliary food-processing industry plan of Almería previously initiated by the IFA. The main role of the IFA in this plan is to promote the development of new economic activities that have been amplified (food-processing) to integrate other activities such as tourism, service sector, and processing of construction materials. The total cost of the programme rises to 47996.5 mill.pts, of which 37.2% belongs to the central government, 9.9% to the Junta 3.3% to municipalities, and 49.5% to the Community via ERDF;
- Plan of Seville mountains: this plan has been the initiative of the province of Seville and the municipalities of the area. It was integrated into the plans of the IFA in 1990 with the objective of asking the EC for financial support. The task of the IFA has not been the elaboration of the plan as such, but its integration into the aid schemes of the institute. The objective of this plan is principally to develop the food-processing industry related to local agriculture production;
- finally, a new plan was laid down in 1990, Action Plan of the Area of Gibraltar (Campo de Gibraltar). This is a central government initiative, though most of the different administrations with powers in the area participate: Junta de Andalucía, province of Cádiz, Municipalities, and European Community. According to the IFA, the development of this area 'has been conditioned by the domination of a few industrial enclaves —petrochemical and oil refining— and the overwhelming role of exogenous factors' (IFA, 1990a. p.47). The strategy of development is, nonetheless, basically reduced to the development of infrastructures, particularly transport infrastructures.

It has been argued that the action plans of the IFA are, in fact, different instruments from those created and implemented by the IPIA. There are several reasons that support such a view:

1. The action plans which are the main initiative, or the exclusive initiative, of the IFA respond more closely to what has been classified in the literature as local development, than to the self-reliant approach of the IPIA plans. Firstly, the concept of local integral development (IPIA) in which the main objective was to integrate the different phases of a specific productive process (that which presented the best comparative advantages in the area, and sometimes in the region),

extending from the extraction of raw materials to final production and commercialization, has been replaced by a kind of integral development that entails economic diversification but where the different and new activities are totally unconnected among them; e.g., pork products, tourism, handicrafts, agriculture, and construction materials. Comprehensiveness has been replaced by diversification, and sector-based policies by policies directed to the stimulation of local entrepreneurship.

Secondly, the action plans of the IPIA were sectorally and territorially based; i.e., the strategy for the development of the different localities was always linked to a specific sector, which was the activity with the highest potential for the area. The new strategy, however, is considerably vague in the formulation of sectoral priorities specific for each plan. All the areas (Huelva, Cazorla-Segura-Las Villas, las Alpujarras, etc.) seem to have the same economic potentials, particularly rural tourism. The action plans of the IFA are, therefore, territorial plans. Their main objective is not to develop a particular sector or to exploit regional indigenous resources but to solve the economic and social problems of specific territories.

Thirdly, the plans are situated in mountainous and deprived areas. There is a total lack of entrepreneurial dynamism and this contrasts with the Action Plans of the IPIA which were the result of collective actions and the mobilization of local entrepreneurs. As the IFA points out (IFA, 1990a, p.46), 'they are situated in marginal areas, outside of the main regional economic circuits'. On the other hand, 'those [territories] are a type of area where the strategy of local/rural development is the only viable strategy of development' (IFA, 1990a, p.81). For the same reason, they are top-down plans, elaborated, implemented and monitored by the IFA without local participation; that is, they can not be considered the result of collective actions as the IPIA plans were.

Finally, the *group-oriented* approach of the IPIA towards the financial support of local firms has been substituted by a project-oriented scheme administered in a discretionary manner. In 1990, for instance, the plans of Grazalema, Cork, Food-processing industry in Almería, Cazorla-Segura-Las Villas, Sierra of Huelva and Seville were all reduced to the financial assistance of less than three firms. On the other hand, foreign initiatives are welcome when they show interest as tends to be the case in the tourist sector and the food-processing industry.

The objectives of these plans can, therefore, be summarized as: i) to avoid the decline of marginal areas; ii) to combat their increasing unemployment and prevent

outward-migration; and iii) diversify the economic activities of those areas in order to keep their local populations. They are marginal actions, in which the regional government, and even the IFA, do not believe that they constitute the seed for the future economic development of Andalucía. The objective is, therefore, not to use them as the base for the economic restructuring and take-off of Andalucía but to palliate the particular problems of marginalization of these areas. According to that, the modernization discourse which exists in other areas and departments of industrial promotion of the regional government, has been replaced by a traditionalist discourse. Autochthonous traditions, local identity and specificity are here vindicated. In summary, the Action Plans of the IFA have become a kind of reactive and subsidiary intervention instead of being an active, *radical* and positive one as it used to be.

2. The plans in which the IFA participates as a partner among other institutions respond more closely to the so-called Operative Programmes of the Community. Operative programmes are planning instruments to be integrated into the Community Support Frameworks in order to receive financial assistance from the EC. They are defined as a coordinated group of measures over a specific territory. They are multi-year programmes and the most significant feature is that they are the result of the coordinated intervention of different administrations: European Community, national and regional governments, and municipalities. The role of the IFA in these programmes is marginal in economic and planning terms. For instance, the NPCI, Almería-Levante and the plan of the Area of Gibraltar are, both of them central government initiatives. On the other hand, IFA participation in the total resources to be spent in those programmes is also minimum. It is reduced to manage a small part of the total programme cost directed to promoting local entrepreneurship. By the same token, the largest parts of the programmes are implemented by other departments, both, departments of the central government and departments of the Junta (Ministry of Public Works and Transport, Consejería de Public Works and Transport, Department of Agriculture, and Department of Environment).

These programmes are integral and territorial plans. Their objective is not to develop a particular industry or economic sector, but to concentrate a large amount of public resources in a limited period of time and over a reduced territory with the objective of *injecting a definite development impulse in the area*. They are integral programmes because they integrate from the development of transport and energy infrastructures, to environmental protection, recycling, water supply, professional training, reconvertng of agricultural structures, afforestation, hydraulic works,

and economic promotion. Transport infrastructure development has, nonetheless, an overwhelming role within these plans. (NPCI, Almería, and in the Plan of Gibraltar. IFA, 1990a).

As in the other plans of the IFA, there is a tendency towards the promotion of a multiplicity of economic activities as alternative development sources for the areas. On the other hand, the exogenous character of the development strategy implemented is, in some cases, evident. In the case of Almería, for instance, the main objective has been to open up the area and to link it to the Mediterranean highway as a way of increasing its export potential (controlled by foreign firms) and its attractiveness, and the diffusion of the economic growth that seems to be affecting the Spanish Mediterranean coast (Ministerio de Economía y Hacienda, 1989). In the case of the Campo de Gibraltar, the main objective is to develop the infrastructures of the area of Algeciras, which has a geo-strategic role from a European point of view.

Of the new plans implemented by the IFA since 1987, those in which the institute does not have exclusive powers, and those in which the exogenous elements are more important (IFA, 1990a), have received the greatest financial support. Particularly the NPCI, Almería (the less endogenous one) accrued 38% of the total expenditure of the IFA on local development during 1990, and 34% in 1991.

Towards a new concept of endogenous development

The second half of the 1980's has brought to Andalucía a proliferation of technological infrastructures, public programmes for technological diffusion, technology transfer institutes, and financial schemes for technological innovation, together with a shift in the concept of endogenous development. The argument, defended by the Andalusian government, is twofold. Firstly, the rapid globalization experienced by the current economic system during recent decades, it is argued, has implied a progressive integration of international markets and the opening-up of national, regional and local economies within a system of fierce international competition. Local markets are simply inflections within a chain of interdependencies the logic and dynamism of which do not depend ultimately on the local or regional economic structure, but on the way those local economies are integrated into the general chain of interdependencies. Self-reliant systems are basically economies of subsistence, increasingly marginal from any development potential. Under these new condi-

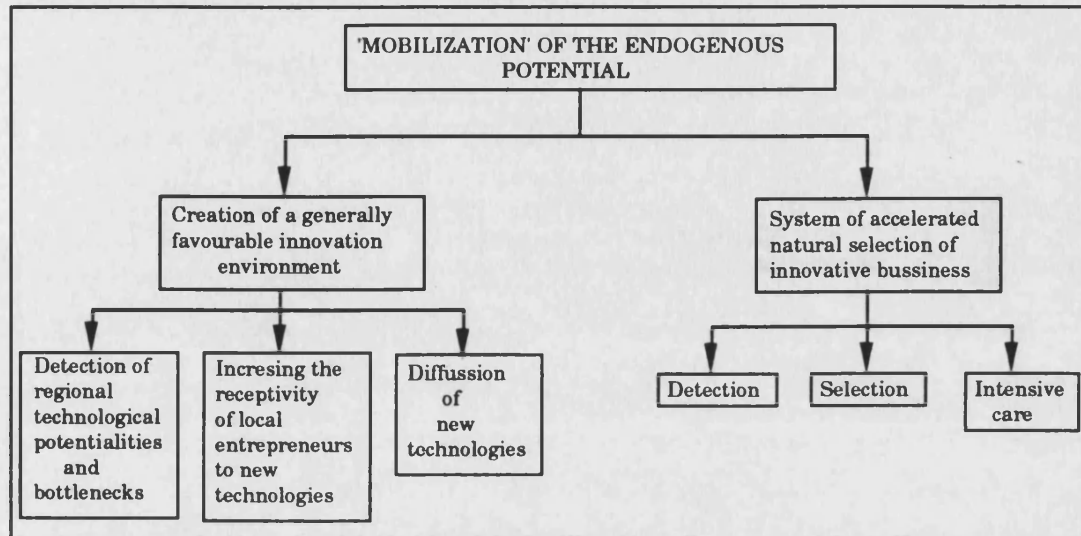
tions, endogenous development can be understood only as the maximization of the specific factors of a region in a context of inter-regional competition based on the relative efficiency levels of the local economies and on their ability to adapt to new external conditions (Junta de Andalucía, 1991; IFA, 1990a; Castells, 1989b).

On the other hand, the competitiveness of individual and collective productive units in this new economic context, depends, to a large extent, on their technological capacity. It is evident, it is argued, that the differential of economic dynamism between nations and regions at present corresponds to their respective position in the technological-industrial scale; those regions and countries where high-technology sectors have become the motor of the economy, are those that benefit from the highest rates of economic growth (Castells, 1989b). Consequently an endogenous industrial policy must assume these new conditions, and this means that it should firstly, help the regional economy to articulate to the global network in order to prevent its exclusion from the main circuits of economic growth; and secondly, foster the innovation and technological development of the regional industry as a necessary condition for increasing its global efficiency, productivity, and competitiveness (Junta de Andalucía, 1991).

The Spanish integration into the European Community furthered the understanding of Spanish and Andalusian policy-makers of the new pressing conditions and the need to adapt the regional and national economy to the fierce competition that the creation of the single market in 1993 entails. The innovation-oriented endogenous industrial policy implemented by the IFA since 1987 has relied heavily on the European Community for its implementation. The influence of the EC in the development of this policy has been as much non-financial as financial. Not only is the orientation towards innovation, or the bias towards SME's, European-inspired, but many of the instruments created by the IFA since 1987 have been designed, promoted, and co-financed by the EC.

Generally speaking, the endogenous industrial policy of the IFA in Andalucía has been implemented following two general types of measures; measures directed towards the creation of a generally favourable innovation environment in the region; and measures for the detection, selection, and intensive care of a small number of innovative businesses (see Figure 6.4)

Figure 6.4 The endogenous industrial policy of the IFA



Creation of a generally favorable innovation environment

The creation of an adequate milieu for regional innovation comprises basically three types of measures: measures for the identification of the technological level of Andalucía in order to lay down policy guidelines based on the analysis of regional technological potentialities and bottlenecks; measures for the diffusion of existing new technologies; and measures, for the increasing receptivity and awareness of the Andalusian entrepreneurs of the new technologies, i.e. management education in a broad sense.

In order to define its innovation-oriented industrial policy, the first objective of the IFA has been the elaboration of several research projects in order to detect technological needs, bottlenecks and lacunae within the Andalusian internal sector. According to that, four different projects have been initiated post-1988. Firstly, the IFA, in collaboration with the state corporation EXPO'92, commissioned in 1988 Prof. M. Castells and Prof. P. Hall, to elaborate a research project with the objective of evaluating the technological development, requirements and necessities of the Andalusian economy, and to give policy guidelines for a future development strategy for Andalucía. The project called PINTA (Research Project on New Technologies in Andalucía; Castells and Hall, 1992) laid down a strategy of development based on the new technologies and established what will constitute its basic instruments, Cartuja'93, an innovation centre in Seville for international cooperation and technology transfer, and the Andalusian Technology Park in Málaga. Both of them will constitute 'the diffusion centres for the process of technological modernization in Andalucía' (IFA, 1990a, p.45). A second project,

commissioned by the institute and co-financed by the EC through the STAR programme, was elaborated by Telefónica Sistemas, S.A, a private company, with the objective of evaluating technological needs in Andalucía.

In collaboration with the CDTI (Center for Technological and Industrial Development. Ministry of Industry and Energy) the Institute initiated the elaboration of a Catalogue of Technological resources in Andalucía in 1990. The IPIA, in collaboration with the CDTI, had already produced a technological resources inventory of Andalucía. Nonetheless, this inventory was sector-based and, as the IFA argues, a different catalogue oriented towards firms was necessary. This approach of the IFA, as it will be discussed later, is rather significant and reveals a totally different concept of what is technological innovation and how should it be addressed. Finally, another project has been developed within the European programme ELITE. The objective of this study was to evaluate the use of new information technologies by the Andalusian enterprises and to identify the main lacunae in order to help public bodies to define priorities in their promotion strategies.

As far as diffusion of new technology and management education are concerned, they basically consist of improving the access of SME to information and to new managerial and technical skills. According to the IFA (IFA, 1990a), this has become one of the priority lines of intervention of European industrial promotion agencies. In Andalucía, the IFA offers a variety of services for the dissemination of technical and industrial information and for improving management knowledge and skills; i.e. technical information bulletins, technical and managerial advisory services, quality management, courses and seminars, training programmes for local entrepreneurs, the creation of centres for developing data processing systems and for improving the skills of computer users, and industrial design centres. By doing so, it is expected that either former entrepreneurs increase their productivity via process or product innovation, or new-comers commence innovative and modern business.

The new services and facilities provided by the IFA are directed to all types of entrepreneurs (included potential entrepreneurs), independently of the economic sector. Since the objective is to mobilize local entrepreneurship and to increase regional technological development and productivity in order to compete in external markets, horizontal measures addressed potentially to all sectors and firms are basically more effective. This is so because productivity disparities is believed to be greater among areas and firms in the same sector than among sectors within the same areas or within the region. Nonetheless, the existence of a well grown producer

service sector seems to be a prerequisite for the development of a technologically advanced internal industrial sector (IFA, 1990b. p.57). According to the IFA, the development of this sector is strategic for improving the competitiveness of firms. It helps the adoption and the diffusion of technological innovations, and the increase in the productivity levels of regional firms. Accordingly, in order to increase the demand and, indirectly, the supply of producer services, the IFA has elaborated a catalogue of producer service firms in Andalucía (IFA, 1990b). This may be, it is argued, an instrument as important as the existence of a well endowed transport network.

System of accelerated natural selection

Parallel to the creation of a generally favourable innovation environment the IFA implemented a system of accelerated natural selection. Following the European Business Innovation Centre concept, a system of accelerated natural selection consists basically of the detection, selection and intensive care of a small number of innovative business start-ups. The instruments used for the implementation of this policy range from the creation of innovation centres, SME incubators and CAD-CAM facilities, to financial aid schemes and Programmes for Innovation and Technology Transfer:

1. Business and Innovation Centres (BIC): the objective of the BIC is to to operate a system of accelerated natural selection of the small number of innovative business start-ups that are likely to have a significant long-term impact on the local economy (Malan, 1988. p.87). It is an initiative of the European Community the main objective of which is to detect, select and train potential entrepreneurs; to facilitate research, development and technology transfer; to provide the various professional services required to draw up a business plan and actually to launch a company; to help raise financing, including venture capital, which may come from a fund managed by the BIC itself; and to provide incubator facilities, which aid the receiving of continued assistance after it is launched, if necessary, through the direct involvement of BIC staff in the company's management. The aim of the EC is to create a European Business and Innovation Centre Network (December 1984) in order to add transnational dimension to these initiatives. The main justification for promoting transnational co-operation between BIC's lays in providing their client companies with the support structure needed to exploit the European Market (Malan, 1988. p 84). It is believed that without such infrastructures, SME's, particularly those located in peripheral areas, will not be able to compete against

large firms nor to benefit to the same extent from the expected economic dynamism that the 1993 unique market entails.

The Spanish integration into the EC gave Andalusian firms the possibility of benefitting from such infrastructures and networks. In 1989, the IFA created in Andalucía two BIC's, one in the Technological Park of Málaga and the other in Seville. Both of them received financial support from the EC and were integrated into the European BIC network. In March 1992, twelve firms had already been selected to establish themselves in the BIC of Seville. Management assistance, marketing facilities, financing, technological advice, and the supply of technological services available from the IFA have been given to these firms. Their sectoral specialization has not been revealed, except that they range from medical equipment to CAD-CAM services. No traditional activities, however, are developed by any of them.

2. CAD-CAM facilities: the IFA has created, in Seville, a centre for facilitating SME access to Computer Assisted Design and Computer Assisted Manufacturing. Apart from the organization of several seminars and training programmes that were addressed to local entrepreneurs and students in general, direct assistance has been given to a reduced number of firms, among which the most important are: the public holding CASA (for the development of the subcontracting programme that this firm signed with the multinational Mc Donnell-Douglas), Fujitsu España (components and applications) and FOYCAR. Particularly in the case of CASA, the assistance of the IFA has been direct as the Institute intervened directly in the choice and development of CAD-CAM solutions for the firms subcontracted by CASA.

3. Andalusian Institute of Advanced New Information Technologies (Society IA-2): This is a mixed society created by the IFA in 1989 with participation of the multinational SIEMENS-NIXDORF and DOPP Consultants. The main objective of this institute is to train local entrepreneurs in the use of new information technology resources.

4. Financial aid Schemes: there are two main financial aid sources for SME's. One general, addressed to the whole segment of SME's; and the other reduced to innovative firms. The first source, in operation since 1983, is result of the agreement between the Junta and regional financial institutions. The objective of this line of privileged public financing is to support Andalusian SME's; there is no sectoral or territorial discrimination. During the years 1983-86, the IPIA tried to bias this

privileged public financing towards the objectives defined in its endogenous industrial strategy, but it was difficult to do so and the Junta-regional financial institutions agreement became, more or less, a mere financial scheme similar to that of any banking institution (IPIA, 1986c). During the 1987-90 period, the characteristics of this scheme were similar. No sectoral priorities were defined, nor was specific criterion of project-evaluation regarding technological innovation or employment creation, set up. Table 6.6 shows total regional financial support to local SME's under this scheme. As can be seen, the amount of privileged loans decreased 32.4% from 1986 to 1987, 5.8% from 1987 to 1988, and accounted for 43787.9 mill.pts in 1990, 4087.1 mill. pts. less than in 1986.

Table 6.6 Agreement Junta- Regional Financial Institutions: 1987-90 (Mill. pts.)

	Agric.	Industry	Services	Total Suba.	Total capital
1987	—	—	—	—	34222
1988	671	668	615	1954	32346
1989	436	553	623	1612	30446
1990	—	—	—	2068	43788

Source: IFA.

Parallel to the decrease in public financial support to local SME's through this scheme, the IFA initiated a new programme in 1989, called *Technological Innovation Programme*, the objective of which is to give financial support (preferential loans) to those SME projects that deal with some kind of technological innovation. This scheme of financial aid comes to complement that which already existed from the Ministry of Industry (CDTI: Center for Technological and Industrial Development).

As has been shown, during the 1983-86 period, the IPIA used this instrument to develop the sector-based technological development societies (one for each action plan). The IFA, however, addresses innovation from an atomistic and less comprehensive point of view. In 1989 the IFA supported those projects considered as innovative with 340 mill.pts. In 1990 total IFA support accounted for 305.9 mill.pts. Nine firms benefitted from this scheme in 1989, and ten did in 1990. There is no sectoral discrimination besides being innovative, and firms can be foreigners as well as regional. In 1990 from the ten projects supported, five belonged or were linked to different multinationals.

The evolution of these financial aid schemes is interesting and significant in several aspects. Firstly, it shows that the endogenous industrial policy of the IFA and the

Junta is not directed to the whole segment of regional SME's as is usually argued (IFA, 1988, 1989a, 1990a) but to that segment considered as innovative; though the claimed objective is to exploit the indigenous potential, this aid scheme does not pretend to exploit regional comparative advantages (as it is not sector-discriminating), nor human or entrepreneurial regional potentials, as foreign capital can be also awarded. The crucial aspect seems to be innovation on the one hand, and small or medium enterprise on the other.

The evolution of these financial aid schemes is also interesting in the sense that it shows a proliferation of instruments but, at the same time, a lack of coordination and complementarity between them. It also evidences the lack of integration of this innovation-oriented policy with the actual internal industrial sector of Andalucía. If the objective is to upgrade the technological level of Andalusian industries, then there is not much sense in creating a different aid scheme for innovative SME's and in leaving aside the traditional ones. It seems that instead of modernizing and reconverting the indigenous industrial sector, the objective is escaping-out towards new sectors and new firms. The IFA, different from the IPIA, which tried to coordinate all the financial instruments that existed in the region in an uncoordinated way, and to divert those resources (including those belonging to the aid scheme Junta-Financial institutions) for the promotion of its own industrial policy, implements, however, the existing instruments, perhaps in a bureaucratic form, and creates new instruments that are more coherent and tailored to its innovation-oriented industrial policy.

5. Finally, programmes that intend to *add a transnational dimension to local initiatives and to help technology transfer*; these are all European programmes, called "Community Programmes". Community Programmes aim to provide a better link between the objectives of the Community for structural development or conversion of regions and the objectives of other Community policies. Community Programmes are being implemented in Andalucía by the IFA ever since 1989:

-SPRINT (Strategic Programme for Innovation and technology transfer in Europe).

The objectives of this programme are: i) support for liaison between advisory bodies, particularly SME's; ii) the organization of transnational activities and dissemination throughout the Community of information on innovation and technology transfer; iii) the transfer to industry of the results from R&D carried out or financed by the public sector; iv) initiatives to develop opportunities for co-operation between firms; v) stimulation of supply of, and demand for, transferable technologies using data bases, technology marts and technology fairs; vi)

- promotion of innovation in the rejuvenation of mature industries; vii) training of those consultants specialized in technology transfer, innovation management and financing of innovation and related fields that provide services mainly to SME's; and viii) support of local authorities in the creation of a favourable environment for innovation. The main results of the application of this programme in Andalucía have been the promotion of Andalusian enterprises in order to help subcontracting from the aeronautic industry of the southeast of France. Other contacts have been made between local and Portuguese firms in sectors such as seeds or new information technology. On the other hand, the IFA presented in 1990 a project called 'Adaptation of CAD-CAM techniques and technologies from the industry metals transformation sector'. The objective of this programme is to foster and develop technology transfer from the metal-mechanical sector to traditional activities such as leather, furniture, and wood;
- ESPRIT (European Strategic Programme for Research and Development in Information Technology). This was launched in 1982 as the European response to the Japanese fifth-generation computer programme and the US defence programmes in computing and semi-conductors. The involvement of the 'club-of-twelve' leading European IT firms (GEC, Plessey, ICL, Siemens, Nixdorf, AEG, Thomson, Bull, CGE, Olivetti and STET) at all stages in the planning process was clearly important to the eventual industrial orientation of the programme (Howells and Charles, 1988). Its major support is concentrated in advanced microelectronics, software production, advanced information processing, office systems and computer-integrated manufacturing. The Community funds up to 50% of the cost of the individual projects, with the rest generally paid by industrial partners. The task of the IFA has been to diffuse this programme throughout Andalucía and to promote a collaborative project between Andalusian and Portuguese enterprises, the University of Seville, the University of Evora (Portugal) and the Institute of Brenen (Univ. of FRG);
 - The STAR programme. This programme is based on the idea that advanced telecommunications services, which the Community is trying to establish on the lines of a commonly defined strategy in Europe, offer a unique chance better to link less-favoured peripheral regions of the Community to central markets. In order to ensure that regional and local economies draw the maximum advantage from this factor, a series of promotion measures has been provided by STAR. By mobilizing local and regional initiatives, these measures should create the critical mass of demand that is necessary to justify the infrastructure cost, the lack of which is often a hindrance to undertaking the investment (Wäldchen, 1988). The IFA has developed in Andalucía through the STAR programme, the

following projects: a digital ring for telecommunications in the Technology Park in Málaga; the creation of a Homologation Institute providing testing and standards facilities for telecommunications, information technology and electronics components in the Technology Park as well; a network for tourism information and advanced booking; a service of advanced telecommunications in the Comarca of Macael (Almería); and finally it has financed the research project carried out by Telefonica Sistemas, S.A about telecommunications requirement in Andalucía (see research projects carried out by the IFA);

- STRIDE. The objective of this programme is to foster research, technology and innovation in European Objective 1 regions. In Andalucía the IFA has obtained financial aid from the EC for the development of two projects in Cartuja'93: the development of the Andalusian Centre of Applied Technological Services or CASTA (Centro Andaluz de Servicios Tecnológicos Aplicados), and the International Centre for Technology Transfer or CITT (Centro Internacional de Transferencia de Tecnología).

A quantitative evaluation of the endogenous industrial policy of the IFA would require knowledge of: firstly, how much money went into this policy in comparison with the others; i.e. local development, attraction of foreign investments, and the consolidation of the embryonic industrial complexes; and secondly, it would require knowledge of which firms are benefitting mainly from it; i.e. new firms or old ones, new or traditional sectors, innovative or labour-intensive firms. This evaluation has been carried out only in an indirect way.

As was explained in Chapter 2 (Methodology) it is difficult to know exactly how much of the IFA budget goes to the different programmes or activities of the Institute, as information is available only in an aggregated form, and is classified according to financial instruments: subsidies, loans, loan guarantees, capital participation, and capital grants. There also exists more detailed information consisting of a series of lists about firms that have received any kind of financial support from the IFA. This information, however, does not allow us to know the size of the firm, its technological level, or whether it belongs to a traditional regional sector or not (sectoral classification on the lists is very general). Except for the new scheme created by the IFA (Technology Innovation Programme), the criteria for giving financial support have not been expressly stated. Therefore, from this information it is not possible to know whether the endogenous strategy of the IFA favours traditional sectors, nor which type of firms are primarily benefitting from it. Nonetheless, there are other ways of evaluating the endogenous industrial policy of the IFA.

First of all, the innovation-oriented endogenous industrial policy of the IFA is a horizontal policy; i.e., there is no sectoral priority, except that of technological innovation and development of the so-called *new sectors*:, particularly, information technology and producer service sector. Yet, the concept of technological innovation has not been defined, neither directly by official documents, nor indirectly, through a clear orientation in the evaluation criteria of project award. *Innovation* has been addressed in a piecemeal way. The process of technological innovation, however, is a complex one; it implies the link between scientific knowledge, invention, innovation, adoption, etc. None of these elements have been taken into account by the IFA in a comprehensive manner. There has actually been a proliferation of technological infrastructures, programmes for technology innovation, and technology transfer, promotion of the integration into European networks, and others, but neither is any comprehensive plan in sectoral nor in technological terms.

Innovation has been addressed not only in a piecemeal way, but has also been biased towards only some parts of the process, the less sophisticated ones. As was pointed out by the OECD (OECD, 1987), innovation is a vast concept, which ranges from an extension of knowledge beyond that which already exists, to any change which simply requires good technological know-how and a keen appreciation of client needs, or to that which consists in trials, measurements, or a good method of value analysis. Innovation has been also defined as any change with respect to the previous allocation of resources leading towards an increase in regional productivity. The IFA has emphasized the importance of product and process innovation, and that of innovation in management and organization. As has been shown, great importance has been given by the institute to the increasing of the receptivity of Andalusian entrepreneurs towards the use of new technologies, and to the creation of the so-called favourable environment for innovation. There has not, however, been any comprehensive plan for the technological upgrading of any of the traditional Andalusian industrial sectors. Innovation is a vague concept not clearly targetted.

The innovation-oriented industrial policy of the IFA could be implemented anywhere; there are no references to the specificities of the Andalusian industrial sector. The IPIA promoted technological development by creating societies of technological development that were specific for each plan and for each sector. This was a bottom-up, sector-based approach to technological development, adapting and creating the appropriate technology for the specific necessities of the indigenous resources. The IFA, however, created a new aid scheme that has no relation to the

industrial structure of Andalucía. Innovation is *something added*, an horizontal objective independent of the industrial characteristics and specialization of Andalucía.

The innovation-oriented policy of the IFA is an industrial policy for a few number of SME's, the most innovative firms. In coherence with the BIC's concept, the strategy of the IFA is one of detecting, selecting, and giving intensive care to a reduced number of firms. As has been shown, all the innovation-led programmes and infrastructures developed and implemented by the IFA have directly favoured a very small number of firms. These firms have received the whole range of technological, managerial, and other services that the institute has, yet the rest of the regional firms are only benefitting in a very indirect way (through the creation of a favourable environment for innovation and general education). In that respect, the strategy of the IFA is a market-oriented one; a policy of accelerated natural selection.

The sectors and firms that will benefit most from the IFA endogenous strategy are obviously not traditional sectors and firms, which have no innovation potential, as the research project PINTA has shown; neither the Macael or the Ubrique firms will benefit from the infrastructures created in the BIC's of Seville and Málaga. The location of these firm incubators in the most industrialized areas of the region and near to the two major industrial promotion projects (Technological Park of Malaga and Cartuja '93 in Seville) is rather significant in that respect, and reflects the underlying development philosophy and ideas of this innovation-oriented endogenous industrial policy. Rather than promoting the structural reconverting of traditional structures and industries, the innovation-led policy of the IFA clearly favours the creation of new firms and the development of new sectors; both of them subsidiary and dependent on the firms installed in the regional technopolises, which are, after all, according to the regional government, the only ones that can bring about the technological modernization of the regional industry.

The innovation-oriented industrial policy of the IFA is, finally, an imported policy. It is European-inspired and European-financed, but this does not mean that the strategy is appropriate for all types of regions within Europe. It has consisted of the development of technological infrastructures and programmes, but there has been a total lack of understanding of what innovation is, and how it should be addressed. The proliferation of infrastructures and programmes will probably bring the creation of new innovative SME's, but clearly it is not going to help the technological

reconverting and upgrading of the Andalusian industry. On the other hand, the small number of innovative firms will hardly solve the structural unemployment and the lack of industrialization of the region.

Promoting Andalucía abroad and attracting foreign investments:

As has been shown, the IPIA explicitly excluded from its strategy of industrial development the attraction of foreign firms since it was considered, in coherence with its self-reliant approach to economic development, that this creates the disruption of regional economic circuits, external dependence and lack of internal control over the development process. Though the IFA was initially created with the objective of promoting the indigenous industrial sector, the role of exogenous factors has progressively increased since 1988. At present, the attraction of foreign investments is one of the priorities of the industrial policy of the Junta de Andalucía.

Different from the other two industrial policies (local and endogenous development), where the IFA had the main responsibility for their implementation, the attraction of foreign investment is a shared policy and the role of the institute in it is central, but secondary in monetary terms. The role of the IFA in the framework of the *exogenous strategy* (Junta de Andalucía, 1991; IFA, 1990a) is basically twofold: it represents the region and the Junta de Andalucía abroad with the objective of attracting foreign investments; and it contributes to the development of the necessary infrastructures for the attraction of such investments. Financial incentives, however, have been taken away from the institute's control.

Institutional representation: Promoting Andalucía abroad

As the IFA points out, 'under current economic circumstances and, particularly, in the light of the future European single market, regional marketing is a fundamental instrument for increasing the competitiveness of Andalucía (IFA, 1990a. p.51). Accordingly, three delegations of the institute have been opened, one in Madrid, another in Brussels and the third one in Tokyo (Japan). The objective is to attract foreign investment. The activities of the IFA in those offices has been intense since 1989; conferences, meetings, and audiovisual programmes have been organized in order to inform foreign investors about the business opportunities in the region. The 1992 Universal Exhibition held in Seville during the April-October period was also used as a platform for the contacting of foreign firms. The IFA launched two

extensive programmes in which head managers of the most important multinationals were invited to come to Seville to visit the EXPO'92 and to be informed about the future Cartuja'93, and the extraordinary financial incentives they may accrue from setting up in it.

Apart from that, the IFA has also published several documents and informative pamphlets in different languages in order to inform about financial, fiscal and infrastructure (industrial and communications infrastructures) facilities in the region. The development of high-speed transport infrastructures and the actual integration of Andalucía in the Internal European Market have been strongly emphasized in this policy of regional promotion. Andalucía, it is argued, has the advantage of being one of the poorest regions in Europe and so foreign initiatives can enjoy the highest levels of financial assistance to private undertakings allowed by the Community, while at the same time, it belongs to the European Community and, therefore, it is integrated in the European Market in economic as well as spatial and political terms. The Institute has also elaborated a catalogue of available industrial land in the region. The main objective of this catalogue is 'the attraction of investments towards the autonomous community of Andalucía' (IFA & Junta de Andalucía, 1990).

Industrial infrastructure development:

Two main industrial infrastructure projects have been carried out in Andalucía since 1989: the Andalusian Technology Park in Málaga and Cartuja'93 in Seville.

1. *Andalusian Technology Park*: the construction of the park was initiated in 1989 with the share-holders being the Junta of Andalucía (IFA), the public corporation EPSA (Public Corporation for Land Development in Andalucía) and the municipality of Málaga. It covers 170 hectares, the largest technology park in Spain, and is situated in one of the most dynamic areas of Andalucía. It also enjoys a number of strategic locational advantages: proximity to Malaga international airport; good connections to Seville, Madrid and the Mediterranean Spanish coast by highways, easy accessibility to Malaga city, and a port of national significance.

The objective of constructing this technology park was to consolidate the industrial impulse that Málaga had received as a result of the relatively recent establishment in the area of three branch plants of the multinationals Fujitsu, Siemens and Alcatel. The idea of developing an infrastructure of such characteristics was to further expand this 'embryonic industrial complex', and to increase its technological

level (IFA, 1990a). The activities carried out in the area by those firms, it is recognized, are mainly of an assembly-type with very little emphasis on R&D. Accordingly, by creating this science park, and taking advantage of the previous location of Fujitsu, Alcatel and Siemens new high-technology firms could be attracted and further research developed.

The technology park of Malaga has been designed as an archetype, the general idea being to cluster in one site of high environmental quality, training and research activities on the one hand, and technologically advanced industries on the other with the aim of achieving 'cross-fertilization'. The park has been endowed with a Homologation Institute providing testing and standards facilities for telecommunications, information technology and electronic components; with a Business Innovation Centre with associated incubator units; and University Institutes and government sponsored research institutes (Centro Andaluz de Documentación en normalización y fabricación, Instituto Andaluz de Automática Avanzada y Robótica, and Instituto Andaluz de Procesado de Imágenes). Firms who want to invest in the park must fulfil at least two conditions. They must be high-technology industries and investment must be over 300 mill.pts.

The initial objective of Mr. Romera, director of the Andalusian Technology Park, was to attract multinational firms, particularly Japanese and American, specialized in information technologies, electronics and telecommunications. The problems found in the recruitment of this type of firms has led to a redefinition in the objectives of the park. At present, small and medium enterprises from Europe, and particularly from the rest of the country, are also welcomed, and the technological specifications have been amplified in order to allow other high technology firms specialized in different sectors to install in the park. On the other hand, the initial land developed for R&D laboratories has been reduced by 50% and the left-over space set aside for technological production.

The development of this infrastructure has cost around 6000 mill. pts. with IFA contributing over 2,400 mill.pts. (1192,5 mill.pts. for the development of the site, 400 mill.pts in the Homologation Institute, and 870 mill.pts. in the construction of the BIC), which is more than the total IFA budget for the development of the Action Plans in any of the years from 1987 to 1991. Underneath this initiative lies a genuine growth pole strategy, as it is implicitly assumed that the concentration of these high technology firms in the park will help to mobilize the scarce endogenous potential, and that the economic activity and innovation dynamics generated by

those propulsive industries will subsequently spread-out to the rest of the region (IFA, 1990a).

2. Cartuja '93: Cartuja '93 emerged as 'an imaginative alternative for re-utilization of the infrastructures and facilities constructed for the Expo '92 on the site of the Isla de la Cartuja' (Castells & Hall, 1989). The Universal Exposition held in Seville in 1992 brought extensive infrastructure development not only to the site of the *Isla de la Cartuja* but also to the capital, Seville, and the region. In order to re-utilize them, the Junta of Andalucía, through the IFA, and the Expo '92 State Corporation commissioned Prof. Castells and Prof. Hall to lay down an imaginative alternative for the Isla de la Cartuja. The result was, Cartuja '93, a technopolis project focussing on international cooperation, technology transfer and the co-ordination of joint research and development programmes between companies and governments of different countries, emphasizing particularly the North-South Axis (Castells & Hall, 1989; Castells, 1988).

The initial objective of Cartuja '93 was to attract, on the one hand, International Organizations for technological transfer, and, on the other, high technology multinational firms that were interested in expanding their activities in Third World countries, particularly, Latin America. Andalucía offered to these multinational firms the possibility of investigating new markets¹ and an easy access to Latin America. As Castells and Hall argue (Castells & Hall, 1989), the economic structure of the region is very similar to that of most underdeveloped countries, particularly those of Latin America. Firms will have in this context, the possibility of testing new lines of products and processes for Third World markets without having to go there. Ultimately, though an underdeveloped region, Andalucía belongs to Europe and it is economically and physically integrated into the European Market. Also, it has the political, economic and social conditions of any of the European countries. On the other hand, the location of International Organizations for technological transfer in the site of Isla de la Cartuja will help multinational firms sell their 'discoveries' in Third World markets since Spain, and particularly Andalucía, constitutes an excellent bridge between Europe and Latin America. The sectoral priorities laid down for Cartuja '93 were, accordingly, biotechnology and software production in Spanish.

¹ Apparently, one of the main problems experienced by high-tech sectors is the excessive concentration on a relatively small number of products, those of higher demand in OECD countries (Castells, 1989b).

The development strategy underneath the Cartuja'93 project was a relatively coherent one. The comparative advantages of Andalucía, it is argued, refer almost exclusively to the agriculture and tourist sector. Nonetheless, these traditional sectors are non-competitive and technologically obsolete and, therefore, can not help Andalucía to compete in the European internal market. Because technological change and development is a long-term process and Andalucía seems to have structural obstacles for removing its technological backwardness, the process will be facilitated and driven by those high technology firms attracted to Cartuja'93. These firms, it is argued, 'will be prepared, in their own interests, to transfer technology and seek new technologies in the areas that Andalucía requires' (Castells & Hall, 1989, pg.41).

Cartuja'93 has been endowed with several public centres for research and development, training and international technological cooperation. Firms that want to invest in Cartuja'93, have the possibility of benefiting from all the aid available at EEC, national and regional levels. Andalucía is classified as a zone of absolute priority for financial aid from the Structural Funds of the EEC, whether in the form of investment grants or the concession of loans under special conditions. In that respect, must be emphasized the extraordinary generous fiscal benefits laid down (July, 1992) by the central government for firms that decide to install themselves in Cartuja'93. These measures are:

- Business taxes: 15% tax reduction for real estate investments, and 10% tax reduction referring to construction, rehabilitation, and other capital investments. Tax reduction of 30% for intangible R&D activities, and 45% for tangible goods;
- 95% tax reduction on patrimonial transmissions and other legal acts;
- local taxes: 95% tax reduction on economic activities taxes, and 95% again on real estate taxes and construction works.

Benefits will decrease by 50% on December 31, 1995 with the objective of speeding up the installation of the multinational firms in Cartuja'93. The measures taken by the central government have been criticized by opposition political forces, which see the benefits of Cartuja'93 as contradictory to current monetary tightness and public deficit control. Even within Andalucía, criticisms have arisen from representatives of the technology park of Málaga, who claim a fair treatment in respect to Cartuja'93. Another type of aid for which Cartuja'93 constitutes a priority is constituted by risk capital ventures in which the Junta participates through the IFA.

The most important contribution of the IFA to Cartuja'93 has been the development in the site (in collaboration with private companies, or by itself) of centres and services related to technology transfer, technology education, and technology information. In particular the Institute has created in Cartuja'93 the centre CASTA, Andalusian Centre for Applied Technological services. The objective of this Institute is to link regional demand for technologies and the R&D activities developed in the research centres situated in Cartuja'93. The IFA has also created a mixed company with World Trade Center, called World Trade Center Sevilla, S.A. (200 mill.pts), in order to use the infrastructure of WTC for the international promotion of Cartuja'93. In addition, the institute has created a mixed society, Sociedad Universal de Servicios la Cartuja, S.A with the firm EXHIBIT in order to supply the necessary services for the maintenance of the site.

In 1992, after more than one year of intense public activity in regional marketing, no one high technology firm had yet decided to set up in Cartuja'93. The initial project, particularly that referring to the sectoral specialization of the high-tech firms to be attracted into Cartuja'93, had already been abandoned. In March 1992, the Cartuja'93 state corporation (composed of the State, 51%; the Junta de Andalucía, 44%; and the Municipality of Seville, 5%) decided to divide the land of the *Isla de la Cartuja* into three parts and to transform the former technopolis into a Scientific park, a Technocultural part, and a service area.

3. Apart from its contribution to the development of the Andalusian technology park and Cartuja'93, the IFA has developed industrial land and the associated infrastructures in Cádiz (Pto. de Sta. María) for the establishment of Cádiz Electrónica, S.A. a branch plant of the multinational Ford. Information about the total cost of this development is not available.

Despite the recognition of IFA (Regulation 13 April 1987) as the executive arm of the Junta de Andalucía in its economic promotion policy, the implementation of this technology-led exogenous strategy, particularly that which refers to direct economic support (capital grants), has been ascribed to the General Direction of Economic Cooperation. The exclusive role of this department is to give economic support to the so-called *strategic projects*. The budget of the G.D of Economic Cooperation up to 1800 mill.pts in 1989, increased to 4790 mill.pts. in the following year; and was around 4500 mill.pts. in 1991. Table 6.7 shows the annual budget of this General Direction and the distribution of such expenditure among the different programmes.

Table 6.7 Annual budget of the G.D. of Economic Cooperation (Mill. pts.)

AID LINE	1989	1990	1991
Technology Park	0	2000	2000
Reg. Incentive Leg.	1000	1990	1500
Others	800	800	900
TOTAL	1800	4790	4400

Source: G. D. of Economic Cooperation.

Two main lines of aid have been established by this regional department:

- aids for firms that want to install themselves in the Andalusian Technology Park (Málaga). This is a project-related investment grant scheme. The Junta awards at a maximum rate of 30% of eligible private expenditure to firms that specialize in high-technology and invest over 300 mill.pts;
- Regional Complementary Scheme to the new Regional Incentive Legislation (Law 50/1985 of 23 December 1985) laid down by the Spanish government in 1985. The new Regional Incentive Legislation (Law 50/1985, 23 Dec. 1985) came to replace the various and uncoordinated instruments of industrial promotion that the country had up to 1985,—Areas of Urgent Industrialization or ZUR, and particularly the Large Areas of Industrial Expansion or GAEI—, by a single instrument adapted to the European legislation. Regulation 652/1988 defined Andalucía as priority area for economic promotion or ZOPREA (Zona de Promoción Económica de Andalucía), classified as a Zone I with maximum allowed level of award (50% of eligible expenditure).

According to the Junta de Andalucía the objective of its Regional Complementary Scheme is to increase the rate of public assistance to those projects that, being included in the RIL are 'significant for the economic development of Andalucía' (Consejería de Economía y Hacienda, 1990). In fact collaboration between the Spanish Ministry and the Consejería of Economy on this matter is very close. The most important projects (for instance, General Motors, Ford, Hughes Microelectronics Europa España), have been approved and assisted coordinately. The IFA carries out the same tasks that the Junta used to do while the GAEIA was in operation, i.e. project evaluation, qualification and monitoring. This is an interesting 'division of labour' among different public administrations, which reveals the role, the political significance and the development priorities of them: the central government tries to reduce inter-regional disequilibrium by promoting the location and expansion of economic initiatives in the region (classified as Zone I); the

Consejería develops a clear strategy of exogenous development in co-ordination with the central government, and the IFA represents the so-called mixed strategy between the endogenous and exogenous approach.

Table 6.8 shows the projects that have received financial support by the G.D. of Economic Cooperation since 1989. As shown in that table, most of the firms are branch plans. They use very few, if any, regional inputs; they have external markets; and they are capital intensive according to the amount of their investments. Only two of them, Hughes Microelectronics Europa España and Rio Tinto Fruit, S.A., received more than 1800 mill.pts. of financial aid from the regional government.

Consolidation of the 'Embryonic Industrial Complexes'

The project commissioned by the IFA and the State Corporation Expo'92 from Castells & Hall in order to define a development strategy for Andalucía based on new technologies, identified three embryonic industrial complexes in the region. These were: electronic and new information technologies industrial complex; electronic components for the automobile industry; and an aeronautics complex.

The pole of electronics, telecommunications and new technologies is situated, as we have seen, in Malaga. In order to consolidate this, the Junta developed the Andalusian technology park. The second complex, the automobile industry, has one branch in the Bay of Cádiz and other in Linares (Jaén). In the first case, the complex is specialized in electronic components for the automobile industry; it was the result of the installation in this area of two branches of the multinational General Motors and, recently (1990), that of Ford Europe; both of them are assembly-plants with no R&D activities developed in the region. The second automobile complex, in Linares, is the result of the installation in the area of a branch plant of the multinational Rober-Santana Motor; it is also an assembly-type plant. Finally, the third complex, the aeronautic pole in Seville and Cádiz, has been the result of the expanding activity of the public holding CASA (Aeronautic Constructions, S.A.). The expansion of this firm is linked to a subcontracting programme with the multinational Mc Donnell-Douglas, which commissioned the Spanish CASA to construct the rear wing of the MD-11. According to the regional government, there are also good prospects for this firm and for the aero-space complex in Andalucía as a result of the

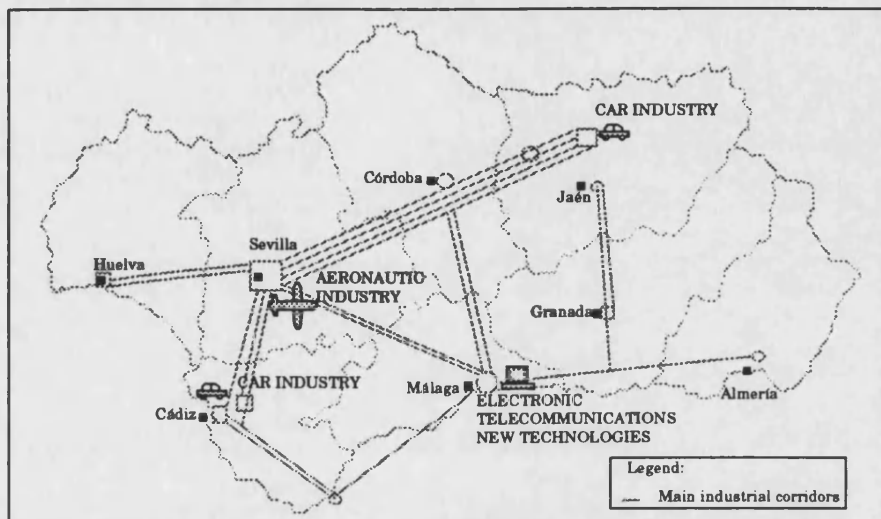
Table 6.8 Firms Subsidized by the Junta via Regional Incentive Legislation (RIL)

YEAR	FIRM	Invest. (Mill. pts.)	Ministry Sub.		Junta Sub.		SECTOR	CAPITAL	Regional Inputs	MARKETS
			(Mill.pts.)	(%)	(Mill.pts.)	(%)				
1989	Hughes Microelectronics Europa España	7770	2875	37	1010	13	Electronic components	USA (Filial of General Motors)	10%	European Market
1990	High Technology Composites	917	321	35	33	6	New Materials (plastics)	National & multinational	< 10%	European Market
1990	New Departure Hyat Europa, S.A.	3170	793	25	200	0,6	Automobile components	USA (Filial of General Motors)	0%	European Market
1990	Rio Tinto Fruit, S.A.	8222	2056	25	822	1	Agriculture	Duch	5%	European Market
1990	Cía Cerámica y Porcelana Noble, S.A.	1347	242	18	162	12	Construction	National	-	European Market
1990	Wisal, Mecánica de Precisión	401	100	25	32	0,8	Mechanical	National	-	European Market
1990	Internacional de Paneles, S.A.	4717	660	14	283	0,6	Construction	National	-	European Market
1990	Arrocerías Herba, S.A.	1347	135	1	135	1	Agroindustry	National	-	European Market
1990	Río Ródano (Huelva)	3669	440	12	294	0,8	Extraction & elaboration minerals	French (Filial of Rhone Poulenc)	-	European Market
1990	Río Ródano (Granada)	842	84	1	42	0,5	Extraction & elaboration minerals	French (Filial of Rhone Poulenc)	-	European Market
1991	Loracero's, S.A.	761	205	27	46	0,6	Steal	National	0%	European Market
	Total	33163	7911		3059					

Source: G. D. Economic Cooperation

Spanish participation in the European Aeronautic programme —construction of the European Airbus and European aircraft (see Map 6.3).

Map 6.3 'Embryonic industrial complexes'



As a result of this spontaneous industrial growth in the region and, having in mind the high value-added generated by those sectors and the level of world demand for their products (IFA, 1990a), the promotion of such sectors and the consolidation of their respective industrial complexes have become a priority of the Junta. The objective of the Junta as far as concerns the consolidation of these embryonic industrial complexes is twofold: primarily, to attract more foreign investments, particularly investment related to the sectoral specialization of the different complexes, which could consolidate these industrial poles; and secondly, to develop a small, but highly innovative and dynamic regional sector, which could complement the former. By doing so, the regional government tries to avoid the creation of industrial enclaves in the region and, also, to set the bases for the creation of some industrial comparative advantages in Andalucía. It is believed that with the external impulse of those firms, Andalucía could develop an internal, highly specialized industrial sector that could constitute the first step for the industrialization of the region.

The most comprehensive programme implemented by the Junta with the purpose of creating an internal subsidiary sector, and of developing subcontracting and technology transfer projects has been the Contract-Programme between the public holding CASA and the regional government. The objective of this agreement is to allow the company to carry out the subcontracting programme signed with McDonnell-Douglas for the development of the rear wing of the MD-11 aircraft. CASA

has created a network of SME's in Seville and Cádiz (HTC, TASA, etc..) with the objective of carrying out this project.

Regional public support for this project has been significant, both in financial and non-financial terms. In financial terms, CASA has received from the regional government a capital grant of 15.600 mill.pts. The programme, however, entails many other measures. The Junta, through the IFA, has carried out a far-reaching programme to restructure and float the existing regional firms in the aeronautic sector. Accordingly, the holding ISA (Industria Sevillana de Automoción) has been restructured and transformed into INVERISA. The share-holders of the new holding are: IFA (10%), Banco Hispano Americano, Fiat and Ercros. INVERISA has been divided into two branches, HTM, which took the traditional activities and employees of ISA; and HTC (High Technology Composites), which develops the subcontracting programmes signed with CASA (MD-11), and which also obtained a new contract with the Swedish firm SAAB for the construction of the wings of the SAAB-2000 aircraft. Once the regional aeronautic sector had been restructured, and traditional activities set aside from new ones, support from the regional government to the floated activities and firms has been definite. HTC, for instance, has received 354 mill.pts from the Regional Incentives Legislation (9.3% given by the Junta), and 250 mill.pts from the IFA as capital participation.

In this fourth industrial policy there has also been a division of labour between different regional departments. The General Direction of Industry is the department directly engaged in the financial aspects of the contract-programme, and the IFA monitors and evaluates the programme, deals with the internal sector, with SME's engaged in the programme, and with the so-called non-financial transfers. Accordingly, it facilitated venture capital, preferential loans, and capital guarantees, to reconverted as well as to new firms in the aeronautic sector; it promoted the creation of new firms adapted to the requirements of the subcontracting programme; it offered them, direct technical and managerial assistance, CAD-CAM facilities, preference in all the services and technological facilities available in the institute; and finally, it facilitated the development of linkages between the Andalusian firms and other European firms specialized in the aerospace sector.

According to the regional government, the consolidation of this industrial complex is priority. It is the clearest industrial alternative for Andalucía (Junta de Andalucía, 1991; IFA, 1990a). Regional public expenditure on the programme (a comparison with table 6.4 —IFA's budget—, shows the importance given to this programme), but also, the comprehensiveness with which it has been applied seems

to confirm that. The regional government has definitely opted for specializing Andalucía in this sector.

A second main programme of this type developed by the Junta has been the agreement between the Junta de Andalucía and the firm Rover-Santana, which has a branch plant in Linares (Jaén). The Junta has given Rover-Santana a capital grant of 2,400 mill.pts. for the period 1988-92. As a compensation, Rover-Santana compromised itself to invest up to 12,000 mill.pts during the 1987-91 period; to spend 1.5% of its total sales on R&D activities; and to increase subcontracting with local firms. This programme has been carried out by the General Direction of Industry. The participation of the IFA in it has been, nonetheless, less significant than in the previous case: aeronautic sector. At the moment, the most evident result of the Rover-Santana—Junta de Andalucía agreement has been the expansion of the activities of the multinational in the region.

The role of the IFA within this industrial policy (consolidation of the embryonic industrial complexes) could be compared in some ways to that of the IPIA. For instance, it has been a relatively comprehensive industrial policy from a sectoral and technological point of view. Its policy has been sector-based (aeronautic sector), and technologically controlled and monitored. IFA's participation and involvement has been significant; it gave intensive care (restructuring and reconvertng of all firms, creation of new subcontracting-innovative firms, technological assistance, financial support, integration into European networks of SME's specialized in the same sector, development of mechanisms for technology transfer, and direct involvement on firm's management) to a group of firms not following the competitive approach but the collaborative one; entrepreneurial dynamism and economic potential did exist before, and it was not created artificially from public institutions; they were not marginal actions in the sense that the IFA and the Junta believe that the development and industrialization of Andalucía could come from the development of these sectors; they were considered, in fact, as the first step for the consolidation of the regional industry around these industrial activities.

There is, however, a fundamental difference between the action plans of the IPIA and this *endogenous* industrial policy of the IFA. Whereas in the first case, the development of the regional industry was based on what already existed, in the second, such development is externally generated and externally controlled. For example, the sectoral specialization of the Action Plans of the IPIA was related to the existence of important and unexploited regional potentials. The sectoral specialization of the industrial complexes, however, has been exogenously defined.

It has been the establishment in the region of those branch plants or the contracts signed with multinationals, that has determined the sectoral priorities of the industrial policy of the Junta and IFA. Whereas, in the first case, the comparative advantages of Andalucía in those sectors (Action Plans) were based on the availability of raw materials, technical expertise, and traditional know-how, in the case of the industrial complexes the only comparative advantages are cheap labour and geographical situation. This second factor seems to have been particularly important since the creation of the complexes comes since the Spanish integration into the EC. On the other hand, while, within the industrial policy of the IPIA, innovation was understood as an endogenously generated process the main objective of which was the exploitation of indigenous resources, in the case of the industrial complexes, innovation is an externally guided process. It is the branch plant, and particularly the main firm, which controls in qualitative and quantitative terms the innovation process of subcontracting firms and the technology transfer mechanisms.

If the IPIA policy could be interpreted as marginal in the sense that it affects only a minority of regional entrepreneurs and sectors (the IPIA would say that is marginal in the short-run), the industrial complexes policy is not marginal (in the short-run and according to aggregate indicators such as industrial output and employment), but instead, a case of extremely fragile industrial development. The case of CASA seems to be significant in that respect. After having received the highest financial and non-financial support from the Junta in order to develop the aeronautic subcontracting sector, CASA decided in 1992 to transfer a large part of its activities to the Basque Country. The effects of this decision are already enormous in Andalucía. HTC is now suffering from an important crisis. It seems that clearest industrial alternative for Andalucía, as the Junta suggested, has suddenly disappeared.

7. THE REASONS FOR THE SHIFT AND ITS IMPLICATIONS ON ANDALUCIA

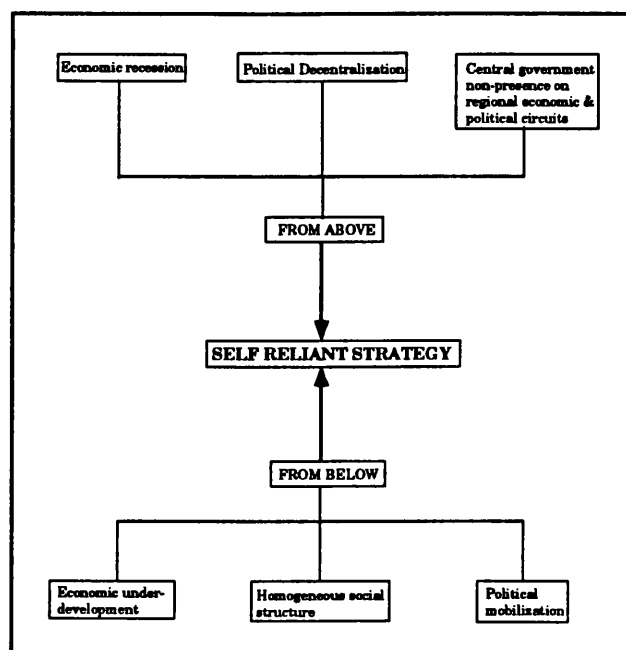
The analysis of the three policy sectors —road, railway, and industry promotion— has shown how the creation of the regional government brought the implementation of a genuine self-reliant development strategy. Nonetheless, this strategy was abandoned in the middle of the 1980's and replaced by one based on functional integration into larger-scale systems. The purpose of this chapter is threefold: to explain the reasons for the shift; to interpret the logic of the development strategies pursued in Andalucía during the first decade of regional government; and to highlight some of the economic and political implications that the shift in the development strategy of the Junta might have for Andalucía.

REGIONAL DEVELOPMENT POLICY OF THE JUNTA DE ANDALUCIA IN CONTEXT

The forces that underlie social practice in general, and public policy in particular, are usually complex. Economic, political, cultural and even psychological factors are frequently found acting together and, often, mutually reinforcing each other. To determine the relative importance of each factor in a particular process is a complicated task, particularly since cause-effect relationships in social sciences are difficult to demonstrate, and more difficult to measure. The purpose of this thesis is not, therefore, to give absolute and define answers to the reasons for the shift in the development strategy of the Andalusian regional government but to highlight possible factors that may have affected such a shift.

At the beginning of the 1980's, when Andalucía won its autonomy and the first regional development plan was laid down, the endogenous approach to regional development was not an option but was the only possible development strategy for Andalucía, and, also, for most peripheral regions (Zacchia, 1986). The development strategy implemented by the Junta, however, was not only a strategy of endogenous development but a self-reliant development strategy, which implied, together with a shift in the pattern of allocation of public resources —from exogenous to endogenous factors, from a concentrated pattern to a dispersal one—, a different approach to decision-making and planning, a qualitative change in the regional social relations, and the option for a territorially integrated development. Several circumstances favoured the implementation of such a development strategy. Figure 7.1 synthesizes them.

Figure 7.1 Circumstances that favoured the implementation of the self-reliant strategy in Andalucía



Firstly, *from above*, the international and national economic conjunctures were characterized by recession. This was manifested in extremely low national aggregate growth rates (below 1,8%), increasing unemployment rates (22% at the beginning of the 1980's), industrial decline and restructuring, and decreasing profit rates and private investments. The mobility of production factors had also decreased, and affected Andalucía in the form of a net inflow of immigrants — Andalusians who had abandoned the region during the last two decades—, and with a decrease in internal and external industrial investments in the region. Central government economic policy was much reduced to foster industrial restructuring and the structural adjustment of the national economy, deeply affected by the post-1973 economic recession. No extensive public expenditures in Andalucía were expected as the crisis had imposed tight monetary policies and restricted public budgets, and the presence of crisis-sectors in the region —those which required a policy for industrial restructuring—, was negligible in comparison with areas such as the Basque Country, Sagunto, or Asturias.

As far as regional planning is concerned, national regional policy was at a halt. Current economic and political circumstances left little scope for it. The pursuit of a more equitable model of inter-regional development —the main objective of traditional top-down strategies—, had become a secondary objective not only for economic reasons, but also as a result of the creation of the Autonomous Communities and the subsequent transfer of powers over regional planning. Under such

circumstances the development of the region, as the first Andalusian regional plan states (Junta de Andalucía, 1984a, p.6), has to be the exclusive task of the new regional government, which has to base development on the exploitation of the indigenous resources, since central government support can not be expected.

Politically the highly centralist Spanish state was being transformed into a quasi-federal state. The role of politics was overwhelming and Spain seemed to be more sensitive to political changes and influences than to the dictates of the economy. It was one of those periods in which, following Stöhr and Taylor's words, 'metaphysics dominate rationalistic thought', and reduced economic growth and small-scale societal interaction prevail over rapid economic growth and technological change (1981, p.477).

From below, the economic and political situation of Andalucía was one of economic underdevelopment and political mobilization. Economically, Andalucía was an underdeveloped and peripheral region, and self-reliance was —different from the European-inspired endogenous strategy—, a development strategy tailored to the needs and requirements of peripheral regions. It suggested a territorially integrated development, and the main problem of Andalucía was economic and spatial disarticulation. It demanded the subjugation of functionally organized units by territorially organized ones when economic dependency and extraversion appeared as the most evident characteristics of the regional economy.

Socially, Andalucía presented a rather homogeneous structure. Different from other more developed regions in Spain, where capitalist social relations and structures were more developed, Andalucía did not have an important capitalist middle-class or bourgeoisie. Important economic and social differences existed between the owners of the land —*latifundistas*— and the rest of the regional population; nonetheless, the former integrated only few traditional regional families the rest of the regional population being made up of urban middle class employees and agricultural workers. This rather homogeneous social structure and the lack of an important regional capitalist class allowed the regional government to implement a development policy that defended, apparently, the *general interest* of the regional population; i.e. a self-reliant development strategy. It would actually have been impossible to favour rural and marginal areas, or to promote local minor capital instead of competitive regional firms if there had been an important regional capitalist class in Andalucía. This capitalist regional class would probably have pressed the regional government to defend its particular interest and to identify it with the 'regional interest'. This identification is particularly common during

periods of economic recession, when the penetration of foreign capital is not enough to dynamize the regional economy, and, therefore, the promotion of regional capital becomes the only alternative for preventing the collapse of the regional economy (Curbelo, 1987).

Politically, the creation of the regional government had brought about great expectations among the Andalusian population. The claim for autonomy in Andalucía was based upon consciousness of underdevelopment and the belief that secular economic and welfare scarcities could be solved if the region had a regional government with wide economic and political powers. Political autonomy and economic development were interpreted in Andalucía as necessary and structurally interlinking elements. In that context, the self-reliant theory appeared suggesting decentralization as a condition *sine qua non* for economic development and for a more equitable distribution of the regional wealth. The devolution of powers to lower tiers of government was seen by the proponents of the self-reliant strategy, as the first and unavoidable condition for everything else.

The appropriateness of the self-reliant approach in the prevailing situation of Andalucía at the beginning of the 1980's was, therefore, absolute. Economic and political, external and internal circumstances favoured the choice and the implementation of the self-reliant strategy. It was a strategy *allowed from above and demanded from below*. Nonetheless, as suggested in Chapter 2, despite its emphasis on the economic aspects of the development strategy and its direct allusion to dependency theory and analysis, the only firm proposal of the self-reliant theory is decentralization and legitimation of the new regional governments, the greatest beneficiaries of the proposed redistribution of powers. The case of Andalucía clearly demonstrates that. The political discourse of the Junta, its planning activity, the importance given to the different development programmes, and the objectives and policy-guidelines of those programmes, all reveal the political utilization of the self-reliant strategy by the newly created regional government.

As far as regional planning is concerned, the process of planning was for the new regional government as important as the strategy of development itself (Barzelay, 1987). The Junta emphasized planning as a democratic process; a process of social negotiation between regional interest groups rather than a technocratic and rational top-down public activity. Bottom-up planning was considered a guarantee not only for the defense of the general interest of the Andalusian population, but also for political legitimation and representation of the new regional government. The elaboration of the regional development plan acquired, in this context, foremost

importance (Junta de Andalucía, 1984a). As Barzelay points out (1987), the best instrument that the Junta had for consolidating the newly created regional government and for demonstrating the Andalusian population and the central government that the claim for autonomy was fully justified, was a democratically elaborated and grass-root regional development plan. The elaboration of the regional plan was in fact more important than the result of it.

In fact popular mobilization and participation in the development process were so significant that usual corporatist political practice was, in the case of Andalucía, inverted. Instead of being the consequence of the existence of important and consolidated associations and regional interest groups that pressed for a regional coalition, concerted and corporatist political action was the cause of them. By integrating the initially weak trade unions and entrepreneurial associations into the planning process, the regional government consolidated their institutional capacity, and compromised them with the autonomy and with the newly created regional government (Barzelay, 1987). It was assumed that the lack of important regional power blocks that could identify their economic and political interests with those of the regional government, might actually compromise the political stability and legitimation of the regional government.

The development strategy to be implemented by the regional government was, therefore, to be laid down by the Andalusians themselves. Accordingly, a planning commission and fifteen committees, where trade unions, researchers, professional bodies and associations, and entrepreneurs, were all represented, were commissioned to lay down the development strategy of the new regional government. Despite the radical political discourses of regional politicians (President Escuredo used to give enthusiastic speeches in rural and agricultural areas about the agrarian reform, the extroverted and dependent role of Andalucía in the country, etc.), the result of that planning commission was, nonetheless, a rather *neutral* one: the underdevelopment of Andalucía was rooted basically in the huge gap existing between its enormous natural riches and potentials, and the value of the regional product (output). Despite the enormous endogenous potential of Andalucía, it was argued (Junta de Andalucía, 1984a), the region suffered from poorness, unemployment, and emigration. The development of the region would have to come, consequently, from the full exploitation of the indigenous natural, human and institutional resources.

By interpreting the underdevelopment of the region as the result of the unilateral abandonment of endogenous resources the regional government avoided tackling

other more structural causes of the Andalusian underdevelopment, such as the dependent role of the region in the national and international division of labour or that of the unequal distribution of the regional wealth, and to address development towards the mobilization of under-exploited regional resources. There was clearly a huge gap between the *dependentista* political discourse of the Junta and its actual strategy for removing Andalucía from its backwardness.

The preeminence of the political dimension in the development strategy of the Junta de Andalucía during those first years of regional government appears also in the distribution of the regional budget, and in the importance given to the different development programmes. As shown in Chapters 4, 5, and 6, the role of the road programme in the strategy of the regional government was preeminent. Despite considering the industrialization of the region as the only way of removing Andalucía from its backwardness, and despite claiming that the underdevelopment of the region required a strong public intervention, socialist in character (Junta de Andalucía, 1983c), road development was given priority over other economic development programmes. The railway, agrarian reform, and the promotion of endogenous industry were clearly secondary objectives in comparison with the importance given to the development of a regional road network *centered on the region*.

The preeminence given to this policy instrument was not only the result of a short-term policy that sought immediate political acknowledgement from the Andalusian population—as Hirschman pointed out (1958) the visibility of this public expenditure is the reason that explains the preference of policy-makers for the development of transport infrastructures—but also, the political will of the new regional government for consolidating the region as a political unity.

It is well known that the level of development and design of a transport network reflects the level of economic development of a state or region as much as its political power and structure. Weak states always show weak and unstructured transport networks, whereas consolidated political powers are always associated with well developed and structured networks. Accordingly, the consolidation of new states (for instance the Roman Empire), has always been followed by the development and improvement of their transport networks; the creation of new frontiers (the division of Germany after Second World War) by their restructuring, and the colonization of new areas by the extension of the main corridors, which linked the core with the new periphery.

The constitution of Andalucía as an autonomous community brought, similarly, the political will of restructuring the existing radial road network and of developing a new one centered on the region. The reversal of the radial character of the regional road network, the removal of the traditional rupture between the western and eastern parts of the region, the opening up of isolated and backward areas within the region, and the bringing closer of less Andalusian provinces, such as Almería (the only province where the referendum for the Autonomy was not approved), to the rest of Andalusian capitals were the aims of the road development programme of the Junta during the 1984-86 period. The political content of the network was also evident in the territorial bias of the programme. The Junta rejected the satisfaction of traffic demand as the main criterion for the development and improvement of regional roads. The regional road network was conceived as a territorial instrument that should give political unity to Andalucía.

Political legitimation was also a significant feature of the railway policy of the Junta de Andalucía during the 1984-86 period. For technical and economic reasons — difficulties of using it as an instrument of spatial planning, and limited share in total traffic demand—, the railway had a very limited role within the development strategy of the Junta during the first years of regional government. It was not considered an appropriate instrument for physical planning, nor a public service to be promoted. The Junta's attitude towards the development of the regional railway, however, soon experienced an important shift. The decisions taken by RENFE of closing down the highly uneconomical lines (practically, all the secondary railway network in Andalucía), made the Junta react immediately. It mobilized local interest groups, political parties, trade unions, and chambers of commerce in order to defend the 'regional interest' against RENFE and the central government. The outcome was a regional railway plan (Consejería de Turismo, Comercio y Transportes,, 1986) the main purpose of which was to warn RENFE and the State in case they wanted to intervene again in the region without taking into account regional priorities and policy guidelines, and to define regional priorities for the railway in order to be taken into account by the public holding and the central government. Apart from the plan, the Junta's contribution to the development of the regional railway was reduced to an exiguous subsidy of the uneconomical regional lines. Political confrontation with the central government and popular mobilization was strong, but the actual result for the regional railway, very limited.

Industry promotion during those years was characterized by the relative scarcity of public resources for the development of the programme and by the definite

support by the regional government of the strategy of endogenous development. The action plans of the IPIA synthesized a totally different and, apparently, radical strategy of regional economic development. Nonetheless, instead of asking for the reform of the national and international economic system and the restructuring of the dualistic economic and social regional structures, as would correspond to their pseudo-structuralist analysis of the Andalusian underdevelopment, or less radically, supporting the development and restructuring of competitive regional firms and sectors, the Junta and the IPIA suggested the exploitation of marginal natural regional resources as the way of removing Andalucía from its backwardness.

This strategy was, nonetheless, coherent with the concept of development that considered regional economic underdevelopment as the result of the misuse made of indigenous resources: over-utilization of some of them, —those that were in highest external demand, such as tourism or agriculture—, and unilateral abandonment of those that were not in the interest of the richest areas and of extra-regional capital. The exogenous and dependent model of development that had prevailed until the creation of the IPIA, would be reversed by implementing a comprehensive and long-term policy, which, though initially affecting marginal economic activities, would eventually integrate the whole regional economic structure.

In aggregate economic terms, the impact of the strategy of the IPIA was minimal. Politically, however, its result was evident: it obtained political support and acknowledgement from local minor entrepreneurs, while, by provoking the opposition of the Andalusian entrepreneurial association (CEA), which could not understand the populist and inefficient policy of industrial promotion of the Junta, it procured the recognition of its leftist social bases which were clearly 'socialist in character'.

As concluded in Chapter 2, in the end, the radical self-reliant development strategy is reduced to decentralization and legitimation of the newly created regional governments, and to a mere shift in evaluation criteria of development projects and in the pattern of allocation of public resources. The rest, that is, the proposal for a territorially integrated development that, starting by the production of wage goods and services, would integrate then the whole range of regional economic activities —a "*recouler pour mieux sauter*" strategy as Stöhr and Taylor (1981) suggested— is simply ignored. This is so because to initiate such a process of internal capital accumulation in a region such as Andalucía, which is fully integrated in the national and international division of labour, would have required the regional government

to repossess, for instance, the food-processing industry (the most evident regional endogenous potential), and that was already in the hands of multinational capital. That strategy would have required the inclusion of a programme of political revolution, and that proposal was neither in the self-reliant theory, nor in the hands of a regional government of a capitalist country.

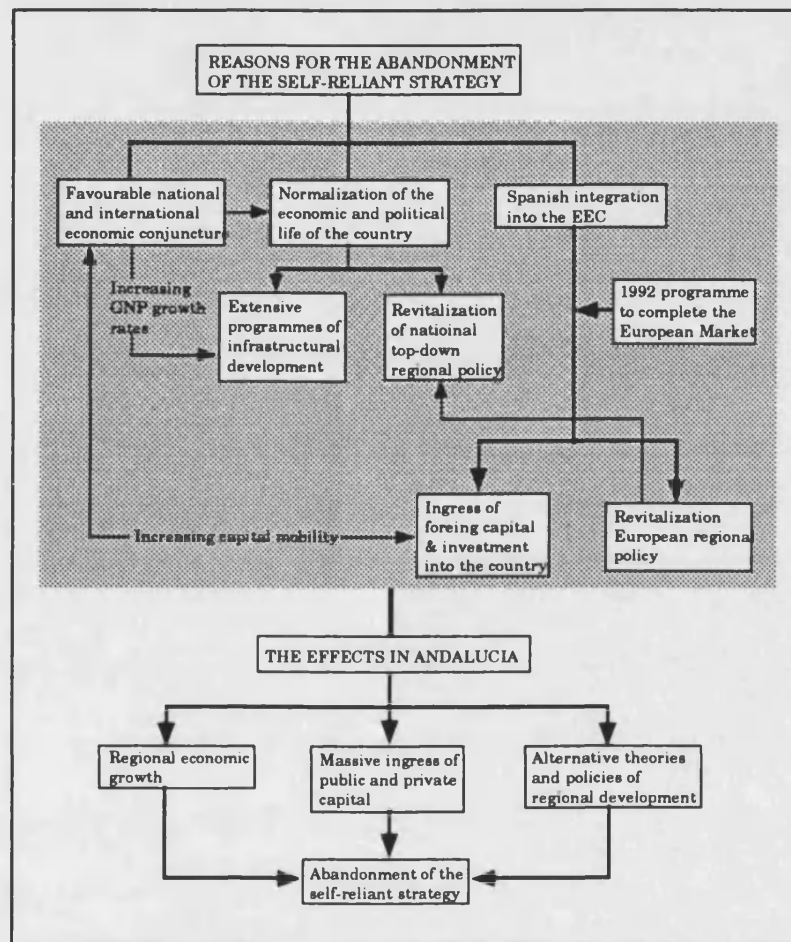
Therefore, the suggestion of a self-reliant development strategy that, starting by the satisfaction of regional basic needs will afterwards lead the regional economy to compete in a better position in the international arena, might be a persuasive proposal for areas that are excluded from the main international and even national economic circuits, and where the majority of their population live engaged in mainly non-capitalist economic activities. Nonetheless, in more urbanized regions (Friedmann, 1985) or in European peripheral regions, the strategy defined as such is simply naive. That explains why the generalization of the self-reliant development strategy (initially defined by International Development Organizations for its implementation in marginal, rural, and isolated areas of Asia and Africa), to a "territorially-based development" (European and American versions), has brought about the reduction of the *radical* endogenous strategy to a marginal policy of economic promotion. As a result of that, this development strategy will never allow the region to improve its position in the international division of labour. It may be politically useful, and economically necessary under periods of economic recession, but it will not allow the region to overcome economic underdevelopment and dependency.

In summary, the self-reliant strategy of development implemented by the Junta during the first years of autonomy was a strategy *allowed from above and demanded from below*. Perfectly adapted to prevailing macro-economic conditions, *radical* without compromising any of the basic foundations of the system, adjusted to the leftist ideology of the Andalusian population, and particularly suitable for allowing the implementation of a corporatist political practice, the self-reliant strategy was a regional development strategy tailored to the prevailing economic and political circumstances of Andalucía at the beginning of the 1980's and to the requirements of a newly created regional government which sought political legitimization.

What was it that happened, however, in the middle of the 1980's ? In the middle of the 1980's the general macro-economic and political conditions that had allowed the Junta to implement the self-reliant strategy of development changed radically. Several mutually reinforcing factors, such as favorable economic conjuncture, the Spanish entry into the EC, the massive ingress of foreign capital, and the revitali-

zation of top-down regional policy, pressed for a change in the development strategy of the regional government. Figure 7.2 synthesizes the interplay of these factors and the effects in Andalucía.

Figure 7.2 Factors that pressed for the substitution of the self-reliant strategy



After more than ten years of considerably low growth rates, the national GDP in 1985 began to increase progressively reaching a maximum annual growth rate of 5.5% in 1987. The national economy was experiencing an intensive growth process, which had a clear pull-effect over the economy of the rest of the regions (Alcaide et al., 1990), but particularly, over the Andalusian economy (Rodríguez and Curbelo, 1990). Table 7.1 shows the change in the economic conjuncture in Spain and in Andalucía.

Table 7.1 Evolution of gross domestic product growth rates (at factor prices)

	1982	1983	1984	1985	1986	1987	1988	1989
Andalucía	1.5	2.3	2.5	3.4	3.6	6.2	7.0	5.2
Spain	1.2	2.0	2.0	2.3	3.3	5.5	5.2	5.0

Source: Consejería de Economía y Hacienda. Junta de Andalucía. 1990

The shift in the international economic conjuncture and the simultaneous integration of Spain into the European Community favoured capital mobility and the penetration into the country of foreign capital. Inward investments in Spain have been, according to experts, the most important exogenous factor that explains the recovery of the national economy since 1986 (Alcaide et. al.1990; Rodríguez and Curbelo, 1990; Auriolles, 1989; 1990; Junta de Andalucía, 1989). Table 7.2 shows direct foreign investments in Spain and in Andalucía since that date.

Table 7.2 Direct Foreign Investments in Spain and in Andalucía, 1986-90 (Mill. pts.)

	1986	1987	1988	1989	1990
Andalucía	18,438.2	36,095.4	64,294.7	160,000.0	100,166.4
Spain	393,131.5	727,279.4	849,500	1,247,000	1,829,640
And./Sp. %	4.7	5.0	7.6	12.8	5.5

Source: Junta de Andalucía, 1990.

Andalucía has been, after Madrid and Catalonia, the region that received the greatest share of direct foreign investments in Spain. For a traditional agricultural, peripheral and backward region such as Andalucía, the interest shown by foreign capital in investing in it seems rather surprising and manifests the new position of Andalucía in the national and international division of labour.

Two main factors have contributed to improve the competitive position of Andalucía in the national and international economic arena: the integration of the country into the EEC and the development by the central government of extensive development programmes in the region. After more than ten years of practical central government non-existence in development matters, the favorable economic conjuncture, the massive entry of foreign capital and the non-neglectful financial contribution of the ERDF since 1986, allowed expansive national budgets and the development of several infrastructure programmes that have no parallel in the last 20-30 years of Spanish history.

If this new situation was to affect all the autonomous communities, the impact on Andalucía was to be immense. This was so mainly for political reasons. Andalucía is an underdeveloped economy, a region that "if it were to come adrift from Spain and float off into the Mediterranean, it would become one of the West's poorest nations" (Financial Times, 1991.p. I). That is, its possibilities of benefiting more than other Spanish regions from the national economic growth were clearly limited. As the Financial Times pointed out, however, in its survey on Andalucía (December 12, 1991), the region is not only the physical and spiritual home of many of Spain's young Socialist leaders, including Prime Minister Mr. González, but it is the region that delivered Spain to Mr. González in 1982, the region that saved him in 1986 in the referendum on whether to remain in NATO, and that which, whenever strong and separatist-minded regions such as Catalonia or the Basque Country press Madrid for more powers, calms the waters and holds the Spanish body politic together (p.I). It is, furthermore, the region that gives more than 30% of the votes to the Socialist Party, in power in the national government since 1982. Hence, from a political point of view, and for the Socialists, Andalucía is not simply one region among others; it is their development target.

Accordingly, all the development programmes implemented by the central government since 1986 have favoured Andalucía. Andalucía has received more than 27% of the ERDF managed by the Spanish government; it has been the region most benefited from the highway development programme of the national government; railway development has been reduced almost exclusively to the Madrid-Seville line, and Cartuja'93—the unique Technopolis project in Spain—has been awarded to Andalucía. As the Minister of Transport, Mr. Borrell, pointed out, 'these years [1987-92] have been the years of the South' (Diario 16, March 24, 1992).

By doing so the central government is trying to improve the competitive position of Andalucía against other Spanish regions and to compensate for the 'comparative wrongs' suffered historically by Andalucía. If the economic situation during the first half of the decade did not allow the socialist party in the national government to intervene in the region, the new favorable economic conjuncture, plus the classification of the region as region Objective 1, justified such an extensive intervention and the massive pouring of money into it. Table 7.3 shows central government civil investment in Andalucía since 1987 in comparison with the rest of the Spanish regions.

Table 7.3 Central government civil investment in the different Autonomous Communities, 1987-90 (Thousands millions pts.)

REGIONS	1987	1988	1989	1990	Total	Pop. (Mill.)
Andalucía	412	84	112	182	420	6.8
Aragón	12	14	25	27	80	1.2
Asturias	8	10	12	26	56	1.1
Baleares	4	3	3	3	12	0.7
Canarias	6	6	7	9	28	1.6
Cantabria	6	9	9	14	38	0.5
Castilla-Mancha	23	37	51	55	166	1.6
Castilla y León	22	30	52	60	164	2.6
Cataluña	13	19	27	48	106	5.9
Extremadura	13	14	11	20	57	1.1
Galicia	10	11	13	23	57	2.7
Madrid	40	45	58	78	221	4.8
Murcia	13	11	16	19	59	1.0
Navarra	3	4	4	3	14	0.5
País Vasco	6	5	5	8	24	2.1
Rioja, la	2	3	4	4	13	0.2
Valencia	27	34	41	52	154	3.7
No regionalized	60	55	65	80	259	
Total	308	394	513	710	1924	

Source: Zaldívar, C. y Castells, M. (1992). *España fin de siglo* (Alianza Editorial, Madrid).

The effects in the region were immediate: extraordinary rates of economic growth (0.6 percentage points above the national rate during the 1985-89 period) and an increased interest of multinational firms in setting up in the region. The repercussions of this new economic situation and of the direct intervention of the central government in Andalucía for the self-reliant development strategy implemented by the Junta during the first years of regional government were significant. This was so because these new circumstances did not only invalidate the political discourse of having to make the development of Andalucía rely on the exclusive mobilization of its natural, human and institutional resources, but also a development strategy that required the existence of extraordinary conditions —such as economic recession, selective spatial closure, relative non-presence of the central government—, for its implementation.

Under a period of economic recession, such as that which prevailed before 1986, and for a newly created regional government of a peripheral region, it was relatively easy to defend 'selective spatial closure', to reject foreign investments in the region because they cause the disruption of regional economic circuits, or to implement a

non-efficient pattern of public expenditure favouring local capital against multinationals or increasing the internal accessibility instead of developing high-speed transport corridors, which connect the region with the exterior. Self-reliance was not, in that context, an option but a necessity.

The economic growth experienced by the region since 1986, however, furthered capital mobility and inward investments into the region, and that contradicted the 'selective spatial closure' requirements of the Junta self-reliant strategy. There then became obvious the impossibility, first for a regional government, and second within the current economic system of preventing the penetration of foreign capital and the subsequent take-over of the most prosperous regional sectors and business. In less than five years the most prosperous businesses that existed in the region, most of them in the food-processing industry, were taken over by multinationals: Guinness, Ferruzzi, etc. (Andalucía Económica, 1991b; Delgado, 1990), and the regional government could do nothing, although it was really concerned about the situation. On the other hand, the maintenance of the self-reliant strategy in the new economic context would have required the Junta to reject the offer of multinationals (Fujitsu, General motors, Ford, Rio Tinto fruit,) to set up in Andalucía and to let them go, for instance, to Catalonia. This possibility was actually unthinkable when such foreign investments create in the region far more employment than the whole segment of local SME's.

The economic growth that Andalucía was experiencing was also incompatible with the dispersed and non-efficient pattern of regional public expenditure. This is so because under the prevailing system of capital accumulation, economic growth implies increasing competition and the transfer of resources from the less productive to the most productive sectors, from the less efficient to the most efficient firms, from the less dynamic to the most prosperous areas, and from old to newest technology (Camagni and Capellin, 1985). To follow a non-efficient pattern of public expenditure in this context means to impede such a process of economic growth, and this is actually unthinkable unless a revolutionary process had previously been set in motion.

As Hirschman (1958) pointed out, in countries where dynamic economic growth has not yet taken hold, the dispersal allocation of public resources is the dominating pattern. This pattern responds to political criteria (group-focussed image of change) and it is economically inefficient; he adds, however, once development begins, urgent demands for several types of capital-intensive public investment appear and must be given the highest priority whether or not they correspond to the govern-

ment's sense of distributive justice. Hence, under periods of extensive economic growth, both the national and regional state will tend to promote the functional integration interest of the overall productive system, even against the territorial integration prospects of their own nations and regions. For example, the state will support the internationalization process of capital and the creation of national and regional champions, despite the expected negative consequences upon the number of jobs or the survival of minor national and regional capital (Kafkalas, 1987. p.311).

In the case of Andalucía this meant the development of high-speed transport corridors in order to increase the attractiveness of the region instead of developing intra-regional roads that satisfy the infrastructural needs of local entrepreneurs from the *campiña* of Córdoba or Macael, or the promotion of the most competitive regional firms instead of favouring local minor capital and the exploitation of idle indigenous resources. Therefore, economic growth in Andalucía forced the substitution of the dispersed and scattered pattern of public resource allocation characteristic of the self-reliant development strategy by a concentrated pattern, both in economic terms —sectors, firms, internal vs. external capital— and in spatial terms.

As Hansen (1981, p.35) pointed out, the proposal for bottom-up strategies derives from the assumption that world capitalism has entered a period of permanent crisis. The proponents of regional self-reliance consider that the recent downturn will result in permanent stagnation rather than eventual adaptation leading to a period of recovery. This view, however, presents two major difficulties. Firstly, it ignores the fact of international business cycles and the possibility of a period of recovery, an assumption that seems rather unrealistic; secondly, it seems to require the explicit inclusion of a theory and programme of political revolution. Since the latter has never been suggested by the proponents of the self-reliant strategy, the bottom-up approach is in fact a naive and unrealistic approach to regional development.

Similar to the assumption of permanent world crisis, a prerequisite for the implementation of a self-reliant strategy, the proponents of the self-reliant approach tend to ignore the national macro-economic and political dimensions, and to treat the central government as a residual. Under a period of relative central government non-presence, such as that which prevailed in Andalucía during the first years of regional government, it is agreeable and easy for a newly created regional government to treat the region as if it were a country and to convince its social bases regarding the possibility of an autonomous regional development exclusively directed by the regional government. In Andalucía, for instance, the

Junta ideally tried to impose a bottom-up planning believing that the odd situation that prevailed at the beginning of the autonomy would last for ever. It wanted to believe that *territorial* objectives would prevail over *economic* ones, or that national priorities would be subordinated to regional ones. Accordingly, the Junta set up sectoral plans and policy guidelines that, though in general, not explicitly contradicting national policies, did not take them into account. Neither national priorities nor foreseeable national public investments in the region were taken into account. Furthermore, some of the sectoral plans elaborated by the Junta (the first road plan, for instance), did not only state the objectives and measures that had to be taken by the regional government, but also, the type of intervention that the central government might carry out in order to be coherent with the 'regional interest' laid down in the regional plans.

The idealism of the regional government, characteristic in most of the proponents of the self-reliant strategy, became obvious when the central government started to lay down infrastructural plans and set up national priorities. The impossibility of a genuine bottom-up planning then became apparent. It was absurd from a technical point of view to pretend that 'national' objectives and priorities should be subordinated to 'territorial' ones. This idea contradicts in fact, the objective of planning in itself, which is not to impose hierarchically the objectives of the different tiers of government but to coordinate them, and integrate and rationalize the interventions of the different public administrations. The idea of developing, for instance, a national transport network from below was nonsense since a coherent and rational transport network requires first, the integration of national, regional and local interests during the planning process, and then the development of the network in a hierarchical way; i.e. from the highest level to the lowest one. Although the regions have exclusive power over the regional transport networks, the State under mandate of the Constitution, must guarantee and facilitate free mobility within the country and the functional integration of the national territory. Given the political significance of transport networks, and under the present political organization of the Spanish state, the idea of each autonomous community developing its own transport network, and treating its region as if it were a country and thus ignoring that the Spanish state exists, is unthinkable.

Furthermore, in a political system like the Spanish one, and under the present territorial organization of the state, planning means that national objectives should always prevail over regional ones. To ignore national objectives and priorities, or try to impose territorial criteria over national criteria not only makes no sense from a

technical point of view, but also is contradictory to the idea of nation itself. This evidence, made clearer when the presence of the Spanish government became more obvious, explains why the period of conflict between regions and central government in Spain led to one of collaboration and coordination after 1988 (Minister of Public Administrations. 11 April 1991. Radio Nacional). As the Andalusian Minister of Economy, Mr. Montaner, pointed out in 1989 (Montaner, 1989), 'planning must be understood as a participative process in the sense of including other public administrations; it must be an instrument for coordinating the actions of the public administrations, for instance development planning or the implementation of infrastructural programmes'.

Top-down planning, like the existence of business cycles, can not simply be ignored. Furthermore, these are not conjunctural circumstances but structural characteristics of current economic and political system; i.e. capitalism and the nation state. The economic recovery, the massive entry of foreign capital, and the 'normalization' of the country's economic and political life that brought the central government to its 'natural' position forced the abandonment of the self-reliant development strategy implemented by the Junta during the first years of regional government. It was not central government intervention in the region superseding economic measures of large scale integration over socio-political development strategies set up from below, as the proponents of the self-reliant development strategy usually argue and the Andalusian Party confirms, that brought about the abandonment of the self-reliant development strategy. It is certain that the central government gave 'pragmatism' to the development strategy of the Andalusian government, and fostered the replacement of the somehow pauperistic and parochialist strategy of the Junta by a development strategy more coherent with prevailing economic and political circumstances. Notwithstanding, the self-reliant strategy was condemned from the outset. The Junta had assumed that the extraordinary economic and political conditions that prevailed during the first years of regional government would last for ever, thus ignoring the very essence of the economic and political system over which it tried to act.

Nonetheless, those factors were not the only elements that pressed for the substitution of the self-reliant strategy of the Andalusian government. The change in economic conditions came associated to, and was related to, another fundamental factor that would have a clear repercussion on regional policy; i.e. the country's integration into the EC.

The Spanish entry into the EC coincided with a period defined by some authors as *Eurooptimism* (Curbelo & Albuquerque, 1992), and with the setting up of a far-reaching programme to complete the internal market of the European Community by 1992. The purpose of European integration is to stimulate economic growth in the Community and to increase the competitiveness of Europe against its main competitors; i.e. USA and Japan. The intellectual impetus for completing the internal market comes from the long-established principle that countries that eliminate barriers to trade between them in order to form a customs union are able to attain a higher level of welfare. These gains are due to several mutually reinforcing effects: shifts in the pattern of resource allocation, entailing a more efficient distribution of resources; higher mobility of production factors, particularly capital; stimulation of competition; greater specialization in production; increased scale economies in production and distribution; higher productivity and faster growth of output; and improvement of the level of competitiveness of Europe against its main competitors (Begg, 1989).

Apart from its direct economic, political and social repercussions over member countries, the 1992 programme has had significant impact over regional policy at Community, national, and regional levels. The impact has been quantitative and qualitative, direct and indirect. At Community level the most direct repercussion has been the reform of European regional policy and the doubling in real terms of the Structural Funds from 1987 to 1993. The aim of this reform is to increase the efficiency of regional policy through three different measures: concentration of the funds in the less-developed regions (Objective 1 regions), coordination in geographical and functional terms of the structural funds, and the application of the subsidiary principle. By doing so it is expected that problem regions will be able to reconvert and restructure their productive structures and, hence, to benefit more from the economic growth that the single market entails.

Indirect and qualitative impacts are, however, as significant as the latter. Far from bringing about a mere functional and administrative reform, the single market project has forced the redefinition of regional policy according to its theoretical underpinnings and underlying tenets. This process of theoretical redefinition is particularly important for countries, such as Spain, which have recently entered into the Community (precisely in a time when Community regional policy receives an important push), and in which the prevailing economic and political conditions before integration favored the implementation of regional development approaches contradictory to functional integration and economic expansion (self-reliance).

The underlying idea in the Community is that the creation of the internal market will boost economic growth in Europe as a whole. Though it is widely assumed that the creation of such an European market may lead to a widening of regional disparities owing to the heightened competition that will be ushered in by 1992, it is also seen as providing an opportunity for less-favoured regions to gear-up to an improved economic performance. Furthermore, the internal market, it is sometimes argued, may be particularly beneficial for peripheral regions and for SME's (Rambow, 1989; Capellin, 1990).

In the basis of such an assumption lies a concept of development long-defended by classic economic theory. Firstly, the problem of peripheral regions in Europe is assumed to be a problem of relative backwardness. Economic development and underdevelopment are considered as merely quantitative and relative processes, in the sense that the former represents more development than the latter. They are interpreted as different stages of economic growth: the modern and the retarded one. By doing so the Commission assumes that there is a linear path of development despite the evidence of increasing disparities in regional development levels within the EC (Commission of the European Communities, 1981; 1984; 1987). Secondly, because the problem is one of relative backwardness and economic dualization, the solution to it would consist of fostering the modernization of backward economies, and that implies the move from traditional to modern activities, from old to new and innovative firms, from obsolete to the newest technologies. The cause of the problem is not, as the structuralist school suggested, the unequal relationships in economic and political terms between core and periphery, but instead the isolation of backward areas from central economies. It is isolation that brings regional underdevelopment and impedes the positive downwards and outwards process of economic and technological diffusion. Hence, peripheral regions can escape from their underdevelopment only by increasing their functional integration into Europe.

The benefits for peripheral regions of the single market in Europe may come, in theory, from two different sources. Firstly, they may benefit from the attraction of foreign, European and non-European, capital into the region. Because the completion of the internal market is expected to boost economic growth in the Community it is seen as an opportunity for the creation of new firms and for the displacement of existing ones into peripheral areas. Particularly, non-European firms will probably try to displace part of their productive activities into the EC as a means of avoiding exacerbated protectionist measures. The opportunities for peripheral regions to benefit from such inward investments are, apparently, ample.

According to the Commission (Comisión de las Comunidades Europeas, 1992), peripheral regions show evident comparative advantages for the attraction of such investments. Firstly, though the main area of economic growth in the Community—the triangle Paris-London-Amsterdam and the Ruhr area—, will continue to concentrate population and economic activity, there seems to be evidence of the existence of potent decentralizing forces within the Community. A new area of economic growth, from the prosperous regions of southern Germany and north Italy towards the most dynamic areas of south France and the Spanish mediterranean coast (Barcelona and Valencia), appears to consolidate, bringing new opportunities for backward areas to benefit from the trickle-down effects. Secondly, peripheral areas show evident locational advantages against traditional European growth poles. These are, for instance, younger demographic structures and abundant labour markets, better quality of life, lack of urban congestion and environmental deterioration, and lower labour and land costs (approximately 30% lower than in the central-north triangle of the Community). The exploitation of both, the decentralizing forces from the centre and the locational advantages of the periphery, require, nonetheless, the development of a rapid and well-endowed transport system that connects core with periphery. This seems to be the most important prerequisite for stimulating economic growth in the European periphery through an exogenous way.

There is, nonetheless, a different source of economic growth for European peripheral regions. The process of economic integration, it is assumed, not only implies increasing competitiveness but also growing collaboration between firms and between regions located in different countries, and a possibility for peripheral regions to increase their relative efficiency and competitiveness. The interplay of market forces will press regions to specialize in those activities in which they have some kind of comparative advantage and to modernize and restructure traditional sectors, firms, and technologies. This process of sectoral specialization and modernization, diversification and economic expansion requires, nonetheless, technological diffusion and easier access to relevant information. The motor of development lies in the diffusion of innovation, and this requires flooding backward regions with successive waves of innovations in order to displace outdated products, techniques, organizations, ideas, etc. Hence, economic integration is a prerequisite for regional development; the only source able to bring about the necessary restructuring of retarded regional economies.

Nonetheless, it is well known that there are important barriers to innovation adoption, such as the friction of distance between generator and receiver and a range of cultural, linguistic and political barriers. These obstacles are considered, in fact, as the main limiting factors that impede economic modernization and development in peripheral areas. Accordingly, regional policy should primarily address the problem of unfavorable environments for innovation. Increasing the receptivity of local entrepreneurs towards new technologies and facilitating easier access to markets and information for them became, consequently, the main policy guidelines of this wrong-called endogenous development strategy.

In summary, either through an exogenous way or via an 'endogenous' development, economic integration and the completion of the European single market is the only possibility for peripheral regions to escape from their backwardness.

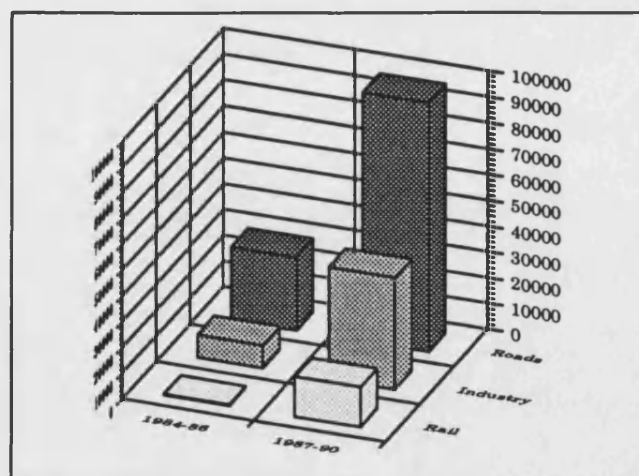
The immediate response of the Andalusian government to the new economic and political circumstances was a radical shift in its development policy and a redefinition of its concept of development. Instead of emphasizing the role of indigenous resources in regional development, the Junta then understood development as an externally generated phenomenon. The underlying idea is that development is a centrifugal diffusion process that diffuses, partly through the market mechanism and partly through the aid of regional development policy, from the areas of economic growth to the remaining locations. That process is supposed to occur at European, national and regional level alike. Hence, instead of relying in the exploitation of under-exploited or abandoned regional resources for increasing the development of the region, the Junta relies mainly on the impulse of external factors as a way of fostering the competitiveness of Andalucía in the European market.

If the development strategy of the Junta of Andalucía during the first years of regional government required 'selective spatial closure' as a precondition for the development of the indigenous industry and for the integration of regional economic circuits, functional integration is seen now as a prerequisite for economic development; if the strategy of the Andalusian government sought a balanced territorial development within the region and suggested a pattern of allocation of public resources contrary to efficiency criteria, the new strategy proposes free competitiveness, economic liberalization and the reliance on the market for the assignation of resources; if the strategy of the IPIA and that of the Junta in general, sought primarily the promotion of minor-local capital, it was rural and small-scale biased and argued for the use of intermediate and indigenous technologies, the new strategy directly and expressly promotes capital centralization and concentration

and argues for the use of the highest technology; if the self-reliant strategy of the Junta recommended the full exploitation of the indigenous resources and a sectorally balanced development, current development policy will force Andalucía to specialize in those activities and sectors in which it has absolute comparative advantages; if the strategy of development of the Andalusian government was a strategy determined at the regional scale, and higher interests (national or European), were supposed to accommodate to those set up from below, development in the framework of the European single market will be determined from the 'top' (market mechanism) and its costs (increasing regional disequilibrium) assumed as a 'side-effect'; if the economic development of Andalucía was previously seen as the only task of the regional government, it is now considered as a shared objective of the region, the national government, and the Community. Hence, the bottom up, endogenous approach has to be complemented with top-down, redistributive regional policies. Finally, if during the first years of regional government the Junta pretended to consolidate the region as a political, economic, and social unity, European economic, social, and political integration has now become the main priority.

The first change in the development strategy of the Junta de Andalucía after 1986 was a sharp increase in total regional resources for the implementation of the different development programmes. Figure 7.3 shows the evolution of regional expenditure on the three policy sectors analyzed so far.

Figure 7.3 Evolution of the regional expenditure on roads, railway, and industry



The road programme was still the most important one, priorities, however, changed radically. Road development since 1987 has been oriented towards increasing the functional integration of Andalucía into Europe. The development of intra-regional axes and the consolidation a road network centered in the region has been

substituted for the objective of increasing regional external accessibility. This has led to the consolidation of a radial motorway network, which connects the main regional capitals with north Spain and Europe. Economic growth is expected to diffuse through the urban hierarchy from the highest level (European metropolis), to the lowest one (regional capitals).

The objective of increasing the external accessibility of the region has also guided the railway policy of the Junta since 1987. From a position of clear marginality within the strategy of development of the regional government, railway became an important programme in budgetary terms. Nonetheless, instead of improving the quality and service of highly uneconomical lines, or further developing intra-regional railway lines as the first regional railway plan suggested, the Junta addressed its efforts to developing the new high-speed railway line between Madrid and Seville. Again, opening up the region has replaced the objective of increasing the economic, cultural, and human relations within Andalucía, laid down in the *Statute of Autonomy* and promoted during the first years of regional government.

Finally, the self-reliant strategy of industrial promotion implemented by the IPIA during the first years of regional government has been replaced by an exogenous industrial strategy. This strategy has been combined with measures to promote the creation of new innovative firms and sectors; i.e an European-inspired endogenous strategy of economic reconversion.

The coherence of the new development strategy of the Junta de Andalucía with current economic circumstances is absolute. Firstly, by allocating priority to the development of the transport system connecting the region with 'core areas', it helps the functional integration of national and community territories; secondly, by encouraging the transfer of plants from predominantly core-regions into Andalucía it stimulates capital mobility, economic efficiency, and the selective utilization of specific regional resources; and finally, by fostering the modernization and introduction of new technologies in the regional productive structure it facilitates a more efficient use of regional, national and Community resources. To what extent these objectives, and the new development strategy of the Junta as a whole, are equally beneficial for the region, for Spain, and for the Community as a whole, or what is the same, for local, national, or multinational capital, is a question that will be answered subsequently.

Assuming, on the one hand, present economic circumstances, which imply regional openness and regional economic integration into large-scale interaction systems,

and, on the other, the existence of a linear path of development that is followed by all the regions and territories, it would be possible to define an ideal model of regional economic development (see Figure 7.4).

Figure 7.4 Theoretical model of regional economic development

Stages of development	Type of region	Development Strategy
PHASE 1	Backward	Endogenous development
PHASE 2	Industrializing	Innovation-oriented endogenous strategy + exogenous development
PHASE 3	Core	Technopolis

This theoretical model, based on theory as well as on experience, defines an ideal development sequence that allows, theoretically, a region to attain an outward-looking and highly extroverted economic development without losing, however, regional control over the development process. This model suggests also—from a synchronic perspective—, a different level of appropriateness of the different development strategies—exogenous vs. endogenous— according to regional economic structure and potential for development.

In principle, a pure exogenous development strategy should be implemented only in central regions. Those are, in fact, the only areas that may benefit from an exogenous development of the type classified as technopolis. As Friedmann points out (1986, p.205), that type of *self-directed development* is only possible in regions that lie at the crossroads of the global economy and are based on large cities that function as world centres of control, production, and capital accumulation.

Intermediate or so-called industrializing regions could implement a combination of endogenous and exogenous strategies. Different from peripheral regions, where the development of the internal industrial sector is rather limited, or from industry-declining regions, particularly, those affected by sectoral crisis, in which their industrial fabric has been almost completely destroyed, the problem of intermediate areas is not the lack of economic potential and dynamism, or the lack of an important and relatively dense manufacturing sector but the relative backwardness of their production units. A technology-led endogenous strategy directed to modernize and restructure their industrial sector seems, therefore, to be the most adequate. This endogenous policy could, nonetheless, be combined with the attraction of foreign,

high technology firms. Firstly, since these areas have an important endogenous potential, the possibility of attracting high technology firms instead of merely branch plants is higher than in peripheral areas. Secondly, because in those regions there exists an important industrial base and capacity and receptivity for innovation, the possibilities of benefiting from the diffusion effects are also higher. An ideal situation would be the specialization of the region in key sectors in which they have some kind of comparative advantage, tradition, and expertise, and the subsequent attraction of leading multinational firms which fit into such milieu. In that way, the endogenous and exogenous sector would complement each other and could set in motion a virtuous circle of economic growth.

Finally, peripheral or monostructured industrial regions, should primarily address development in an endogenous way. This is so mainly for three reasons. Firstly, their potential for an exogenous development as that of core areas is usually limited. This means that a policy directed to attract high technology firms or to create a technopolis in the region may well lead to the creation of regional enclaves. Secondly, since the attraction of high technology firms seems to require the development of a small but highly competitive internal sector, this should be the first step in the development process. And finally, in order to be able to assimilate the technology diffused and the modernization impulses brought about by the external sector, the region has previously to have the necessary industrial base for doing that. In summary, an exogenous strategy of development seems the most adequate for central regions, the endogenous approach becomes a necessity in backward and old-industrial areas, and intermediate and so-called industrializing regions can simultaneously implement both of them.

From a diachronic perspective, the development sequence of this theoretical model would be as follows. Starting from a situation of economic backwardness or industrial decline, in which the main symptoms of the regional economy were lack of local entrepreneurship, undiversified economic structures, limited innovation capacity, etc. an endogenous strategy would be implemented with the objective of developing the regional industrial basis (stage 1). Once the local entrepreneurship has been mobilized and the local population educated and prepared to innovate and assimilate new technologies, a technology-led strategy (stage 2) would allow the technological upgrading (product and process innovation) of the internal manufacturing sector. The region would then become a highly productive and export-oriented economy; regional specialization, technical and technological expertise and the creation of a favourable environment for innovation would allow the area

to attract those high technology large companies that fit into such local milieu. In the end (stage 3), a technopolis or high technology industrial complex rooted in the local manufacturing and technological tradition would develop. The process had concluded, and the region attained an exogenous and outward-looking development that is, nonetheless, regionally controlled.

According to the industrial and technological development of Andalucía, it would have been necessary to start by a definite endogenous strategy. This endogenous strategy should have consisted of: firstly, the identification of endogenous industrial comparative advantages and key sectors of activity in which to underpin the regional economic development; secondly, the setting up of a comprehensive plan for the modernization and restructuring those sectors ensuring that they become sufficiently competitive; and finally, the development of the necessary measures to give an international dimension to those competitive firms and sectors. Different from the European-inspired, innovation-oriented policy, this endogenous strategy should have started from the very bottom, since the objective is not to modernize and mobilize the endogenous potential but to create it. A sector-based approach and a definite intervention of the state in the restructuring process seems also necessary.

Nonetheless, such a strategy for developing the indigenous industrial sector has not existed in Andalucía. In its place, the Junta has actually inverted the logical sequence of development drawn up in our theoretical model. Apparently, the strategy of the regional government is a combination of endogenous and exogenous policies. It seems that, following the example of intermediate regions, such as the Swiss Jura-Arc, Languedoc-Roussillon in France, or Dortmund in the Ruhr area, the Junta de Andalucía has tried to leap the first stage of development. Nonetheless, because the conditions in the region are not the same than those of intermediate areas, the implementation and the outcomes of such a dual strategy are rather different.

Firstly, whereas in other more industrialized European regions the endogenous industrial policy has been directed to maximize obvious existing competitive strengths (for instance, Baden-Württemberg, Valencia, Emilia-Romagna, the French Montpellier region, and the Swiss Jura Arc. See Chapter 2), the Junta attempted regional structural change via a horizontal technology policy. Instead of concentrating on key sectors of activity and ensuring that these become sufficiently competitive to underpin the regional economy, the Junta tried to compete on a broad front stimulating new activities, high-technology sectors that have no connection with the traditional industrial base, and with the regional expertise and know-how.

The endogenous industrial policy of the Junta has not been a strategy for economic restructuring but a strategy for reconversion. As explained in Chapter 2, the main difference between them is that whereas in the first case the policy tries to create from what already exists (sectors, firms, technologies, etc.), in the latter, the strategy is directed not to mobilize the endogenous potential but to create it from zero. This approach of the Andalusian regional government is, nonetheless, coherent with the endogenous potential theory. As analyzed in Chapter 2, this European-inspired endogenous policy is, by definition, a horizontal, technology-led policy. It is an *efficient regional policy* that considers regional development as the result of the intervention of many atomistic and autonomous producers. Regional economic specialization is seen, similarly, as a process of natural selection; the result of the specialization strategies of particular local firms.

With such assumptions and philosophy, it is logical to expect that the endogenous potential policy has very limited impact in those regions in which the internal industrial sector does not need to be modernized and restructured, but created from the outset. As showed in Chapter 2, this endogenous policy, recommended by the Community and extensively implemented throughout Europe, was successful in mobilizing the endogenous potential but ineffective in those areas where such a potential did not exist from the outset. It is not a strategy geared towards the needs of depressed areas (backward, such as Andalucía; and old industrial regions affected by sectoral crisis), in which the problems are not entirely of a technological nature, but derive from, for example, the characteristics of their sectoral composition, their non-competitive small-firm base, the problems associated with branch plant development, takeover by large corporations of local firms, etc. The extent to which these long-standing and deep-rooted problems could be resolved by this innovation-oriented strategy appear questionable.

Nonetheless, despite the non-interventionist approach of this endogenous potential theory, several industrializing regions (the most successful ones), attempted a more interventionist role, followed a sector-based approach or interpreted technological innovation as the progressive technical upgrading of existing and new firms linked to the regional industrial tradition. The Junta, however, not only reproduced mimetically a development theory that is not geared towards the requirements and necessities of the region, but it also did so inadequately, ignoring some of the characteristics that appear as fundamental in the success of other European experiences.

The failure in the implementation of a coherent endogenous policy adapted to the particular circumstances of Andalucía came also associated with an incorrect understanding of how the relationships between the exogenous and endogenous development occur. Accordingly, whereas in intermediate regions the endogenous development was always seen as a precondition for the attraction of high technology firms, in Andalucía, however, the process was inverted. It is the attraction of those firms that is expected not only to modernize and reconvert the regional productive structure, but also, to mobilize the indigenous industrial potential. That explains why, whereas in the first regions simultaneity and comprehensiveness has guided the implementation of both types of development policies (the case of Dortmund is significant in that respect), in Andalucía, the only coordination had been the location of the business innovation centres and incubator facilities near to the two technology growth poles created in the region since 1987: Cartuja'93 and the technology park of Málaga.

Finally, whereas in industrializing regions the endogenous sector has always been the motor of development, in Andalucía it plays a dependent and subsidiary role. As shown in Chapter 6, the most important programme for the modernization and development of the internal industrial sector (consolidation of the embryonic industrial complexes) has been brought about, directed, and controlled by the external sector (contracts with Mc Donnell Douglas and with Rover-Santana). The sectoral specialization and the technological improvement experienced by this new regional subcontracting sector has been exogenously determined, though the regional government has guided and fostered the process.

In conclusion, trying to leap the first stage of development, the Junta mimetically reproduced a development policy that is not adapted to the economic and social characteristics of Andalucía. As a result of that, the mixed endogenous-exogenous development policy became in fact a pure exogenous strategy. The attraction of high-technology firms and branch plants into the region is expected to mobilize the endogenous potential (via backward and forward linkages and through the development of subcontracting contracts), to modernize the endogenous sector, to define the sectoral specialization of the region, and, finally, to convert it into a technological leader. The process has been inverted and instead of leaping the first stage of development the strategy of the Junta has become, in fact, the reversal of the development sequence drawn up in our theoretical model. In this context, and as a way of rationalizing necessity, it is assumed that to follow the subsequent development steps is unnecessary, and that the region can invert the process of economic

development becoming a pole of technological innovation without having to pass through the 'first industrial revolution' (Castells, 1989b).

ECONOMIC AND POLITICAL IMPLICATIONS

Apparently, the regional government has not only assumed the idea of a linear path of development but also, the possibility of reversing this. Nonetheless, the strength of such assumptions can be questioned by experience (growing disparities between rich and peripheral regions despite the wide implementation of regional policies throughout the world in recent decades) as much as by theory.

First of all, the creation of a growth pole (technopolis) in a peripheral region requires the attraction of high-technology leading industries. Nonetheless, the possibilities for a backward area to attract this type of industry are very limited. It is well known that, different from producers of earlier agglomerations, high-technology firms have high locational requirements (Oakey and Cooper, 1989). Industrial and technological tradition, local know-how, high qualified labour and a relatively large number of enterprises that are either engaged in high-technology activities or have the potential for doing so, seem to be prerequisites for attracting this type of firm.

This means that the attraction of foreign capital in a region such as Andalucía, where these industrial and technological conditions do not exist can lead only to the creation of enclaves. This is so for several reasons. Firstly, the comparative advantages that Andalucía has—cheaper labour than in more developed areas and some competitive regional resources—, can only attract branch plants, which do not develop usually backward and forward linkages with the endogenous sector. Secondly, if the region succeeded in attracting high-technology leading industries, the regional productive structure would not be able to assimilate and adapt the development impulses brought by them. The lack of a competitive and highly productive internal industrial sector and the technological backwardness of the region, would impede the diffusion effects of those propulsive industries.

Therefore, by leaving the development of Andalucía on the impulse of external forces while abandoning the internal sector, the regional government is not actually inverting the logical sequence of development but, instead, impeding the region from changing its position in the national and international division of labour. Nonetheless, this situation is not the only responsibility of the regional government. It is well known that underdevelopment brings economic and political dependency,

and that limits the national/regional capacity for decision and action. The more developed an area is, the larger its capacity to control its development process. Therefore, as an underdeveloped and peripheral region, Andalucía has structural obstacles for addressing internally its development process and for implementing the development strategy that would be necessary to change its position in the prevailing unequal spatial division of labour. The subordinated role of the Junta only reflects the limited decision power of Andalucía.

The shift in the development policy of the Junta de Andalucía towards a strategy directed to increase the functional integration of the region into larger-scale systems has also had important political repercussions. As discussed previously, the self-reliant strategy of the Junta did not have impressive economic results; nonetheless, it guaranteed the regional government political acknowledgement and legitimation from the local population. It was a development strategy demanded from below.

The change in the external economic and political conditions forced the regional government to implement a development strategy more coherent with prevailing circumstances. That is, to support the internalization process of capital and the creation of national and regional champions. Nonetheless, the lack of potential regional champions in Andalucía meant that local minor capital was simply abandoned and that the strategy implemented only benefited competitive national and foreign capital. On the other hand, the internal conditions —economic underdevelopment, popular mobilization, and the claim for a territorially integrated development—, did not have changed. The self-reliant development strategy was still demanded from below, though it was not allowed from above. Inevitably the combination of both elements, an efficient economic policy that did not favour Andalucía and the subsequent abandonment of the populist political practice, led the regional government to a legitimation crisis.

In spite of the efforts made by the socialist regional government to attract public resources into the region, the extraordinary amount of money that has been poured into Andalucía and Seville by the different governments (European Community, national government, and the Junta), and the favoured treatment given to Andalucía as against other Spanish regions, the socialists were rejected from the Town Hall of Sevilla in the 1991 municipal elections. A coalition between the conservative party and the nationalist Andalusian party (Partido Andalucista) took its place. The 1993 general elections also brought an important fall in the number of socialist votes in Andalucía.

As shown in Figure 7.4 the most significant change in the development strategy of the regional government in the middle 1980's was a sharp increase in total public resources for the implementation of the different development programmes. The small-scale, rural-biased projects of the first years of regional government were replaced by spectacular demonstration projects: the A'92 motorway, the high-speed railway line between Seville and Madrid, Cartuja'93, the Andalusian technology park, etc. Logically, this new position of Andalucía in the national economic and political arena, and the impressive impact of those spectacular development projects should have had, apparently, direct and immediate political benefits for the socialist party. Nonetheless, the position of Andalucía in the current international economic restructuring process is all but favourable, and despite the efforts made by the national and regional governments to improve that position, the negative consequences of that process are already too evident for the Andalusian population. Since the socialist party and the regional government identified themselves with the autonomy, and political decentralization and regional economic development were seen by the Andalusians as structurally interlinking elements, the present economic situation only brings scepticism and a legitimization crisis for the regional government.

8. CONCLUSIONS

The analysis of regional planning policy of the Junta de Andalucía during the 1980's allows us to conclude the following:

1. Regional planning policy of the Junta during this period has been subsidiary and functional. Subsidiary in the sense that it functioned as a reactive public activity adapting itself to changing general macro-economic and political conditions, and functional because it fostered functional integration and capital accumulation at a large scale when pressures to support the internationalization process of capital appeared, and political legitimation when such pressures were non-existent.

While this reactive, yet utilitarian, character of regional policy seems to affect equally all regions and countries, the implications on them are substantially different, depending on the position of the region or country in the international division of labour. Under periods of economic growth all national and regional governments are forced to promote the integration interest of the overall productive system. This leads to the implementation of development strategies that favour economic expansion, capital accumulation and globalization, technological development, and functional integration; i.e. classic exogenous development policies. Nonetheless, whereas in rich and so-called industrializing regions, in which there is an important capitalist sector, or in Kafkalas' words, where potential regional champions exist (Kafkalas, 1987. p.311), this development strategy may favour the internal sector as much as the external one, in peripheral and underdevelopment regions this exogenous strategy leads only to the actual abandonment of local and non-competitive capital, and to the subordination of regional interest to the interest of the overall economic system.

This explains why, despite its being a development strategy demanded from below, the self-reliant strategy had to be abandoned by the Junta de Andalucía in the middle of the 1980's, though this implied for the regional government a legitimation crisis and contradicted its own sense of distributive justice.

2. According to that, the identification of the regional government with the defense of the regional interest seems to be a fallacy. As a part of the state, the regional government is subject to the same pressures as the central government is, and its policy fluctuates favouring political legitimation or economic accumulation according to the specific economic and political, internal and external circumstances. All the regional governments neither defend the 'general' interest of the regional population or a territorially integrated development, nor do so in any economic circumstance.

Taking the experience of Andalucía as an example, while considering the lessons learnt from modern regional theory and policy in Europe (see Chapter 2), it is possible to define a general and tentative model that synthesizes the contours that regional policy might take —favouring economic accumulation at different scales and/or political legitimization—, according to external and internal, economic and political conditions (see Figure 8.1).

Figure 8.1 The role of the State: Economic accumulation vs. political legitimization

AREA	NATIONAL AND INTERNATIONAL ECONOMIC CONJUNCTURE		SPHERE
	RECESSION	ECONOMIC GROWTH	
BACKWARD AREAS	Self-reliant development strategy (equity) ↓	Policy directed to support the internationalization process of capital ↓	Economic
	Popular mobilization and political legitimization	Legitimation crisis and rupture of the regional social pact	Political
CORE AND INDUSTRIALIZING AREAS	Endogenous potential development strategy (efficiency in the use of internal factor) ↓	Policy directed to support the internationalization process of capital ↓	Economic
	Nationalist ideology	Political stability and legitimization	Political

Under periods of national and international economic recession, when attacks on redistributive, top-down regional policies become more acute, most regions will tend to shift towards more inward-looking development strategies. The limited possibilities of relying on exogenous factors as a regional development alternative force them to base development on the exploitation of endogenous potentials and capital. Nonetheless, whereas in peripheral and underdeveloped regions that endogenous strategy may well take the form of a self-reliant strategy (which implies a territorially integrated development), in more advanced regions this endogenous policy will surely imply a mere shift towards the promotion of regional competitive capital. This may be so for several reasons.

Firstly, in more advanced regions, the existence of a relatively important internal capitalist sector means that the regional government will probably be forced to support the interest of the regional capital and to promote competitive local firms, even though as a way of preventing the collapse of the regional economy. In peripheral regions, however, the lack of such an internal capitalist sector means that the regional government is 'freer' to defend a territorially integrated develop-

ment and, therefore, to implement, as the Junta de Andalucía did, an inefficient, small-scale, rural-based economic policy that favours mainly local-minor capital.

Secondly, it is known that the more developed a region is, the more heterogeneous its social structure appears since the development of capitalist social relations transform traditional dual social structures into more complex ones (Mattos de, 1990). This means that the possibility for a regional government to establish a regional social pact, to promote regional coalitions, and to implement a development policy that favours the *general interest* of the regional population will be greater the less advanced a region is. Accordingly, whereas in more developed regions the political dimension of the development strategy would appear as a secondary issue, in the latter political mobilization would constitute an essential ingredient, if not the most important ingredient, of that policy.

Finally, the more underdeveloped a region is the worse its position in the national and international division of labour is and, therefore, the more attractive appears a political discourse that directly alludes to dependency relations, economic subjugation, and territorial disintegration; i.e. the political discourse of the self-reliant strategy. Accordingly, whereas in more developed regions the political discourse would take the form of economic efficiency, regional productivity and modernization, in peripheral and underdeveloped regions only a 'socialist' and radical political discourse would satisfy the leftist ideology of the local population.

In summary, whereas in peripheral regions, where capitalist economic, social and political relations are not fully developed, a logical response to a period of economic recession could be the implementation of a genuine self-reliant strategy, in the case of more industrialized regions the severest economic recession would hardly lead to the defence of 'selective spatial closure', to a territorially integrated development, and to the substitution of functional units for territorial units. Whereas in the first case, political legitimation would be linked to popular mobilization, in the latter, economic efficiency and nationalist ideology, would be quite enough to guarantee regional political stability.

In periods of economic growth, however, when redistributive mechanisms and diffusion models of economic development acquire renewed vigour, the regional governments of both developed and underdeveloped regions will be forced to support the internationalization process of capital and the strengthening of regional champions. Nonetheless, as suggested before, whereas in more developed areas such a development policy may help the expansion of the internal sector and,

therefore, benefit the exogenous sector as much as the endogenous one, in less developed regions, the lack of local entrepreneurship and the lack of potential regional champions will lead only to the abandonment of the internal sector and to implement a development policy that benefits only competitive foreign capital. Accordingly, whereas in the first case political legitimization is guaranteed, or at least is not threatened, in the latter, the implementation of such an exogenous development policy will lead only to a legitimization crisis and to the rupture of a social pact, which required economic recession for its maintenance. Therefore, whereas in peripheral and underdeveloped regions, political legitimization and economic accumulation on a large-scale seem to be contradictory elements, in more developed areas they may even be complementary.

This theoretical model might explain, for instance, why in Andalucía the creation of the regional government led to the implementation of a genuine self-reliant development strategy, in which the political content of the development policy and the redistributive issue were so emphasized, whilst in Catalonia those aspects were totally ignored; and why integration into the EC and the shift in the economic conjuncture brought about a legitimization crisis in Andalucía (despite the favourable treatment given by the Socialist Party to the region against other autonomous communities in Spain), whilst in Catalonia they only increased the political power of the conservative regional government.

In summary, the identification of the regional government with the defense of the regional interest seems to be more an ideology than a reality. The more underdeveloped and marginal a region is, the larger the possibilities for the regional government to implement, in a period of economic recession, a territorially integrated development policy that will satisfy the general interest of the local population, but also, the larger the risk of losing political legitimization and credibility when the economic conjuncture changes and the regional government faces the necessity of supporting the internationalization process of capital.

3. Finally, the analysis of the regional planning policy of the Junta de Andalucía during the 1980's can also give some lessons related to regional theory. The contribution that present regional theory makes to peripheral and underdevelopment regions is, as may be concluded from the Andalusian experience, disappointing.

The self-reliant strategy, a development strategy apparently tailored to the characteristics of peripheral areas, is a reactive policy in economic terms, yet pro-active

politically. In spite of its direct allusion to dependency theory and of its emphasis on the economic aspects of the development policy, it is economically marginal, its main objective being decentralization and legitimation of the new regional governments, the main beneficiaries of the proposed redistribution of powers. It is, furthermore, a naive development policy since it ignores the economic and political conditions over which it tries to act; i.e. capitalism and the nation state. Far from constituting a new development model and an alternative to the modernization paradigm as its proponents suggest, self-reliance is an unrealistic and inconsistent development strategy. Accordingly, its implementation will never help a peripheral region to change its position in the international division of labour.

The contribution of modern European regional theory and policy (i.e. endogenous potential development strategy), to peripheral regions, has not been more satisfactory. As explained in Chapter 2, the approach of developing the endogenous potential was initially designed and established for the restructuring of areas of industrial decline (shipbuilding, iron and steel, textile and clothing and fishing areas). Nonetheless, with the event of European enlargement, the approach was generalized to an alternative model of regional development applicable as well to backward and peripheral regions. Accordingly, it was transferred from the 'non-quota' section to the general Fund section in order to allow for a broader application.

The endogenous potential development strategy, however, responds neither to the characteristics of peripheral areas nor to their requirements and necessities. This is so for several reasons. Firstly, the endogenous potential development strategy is an innovation-oriented policy, the main objective of which is the modernization and technological upgrading of local productive structures. The problem of peripheral and backward regions, however, are not entirely of a technological nature, but derive from, for example, the characteristics of its sectoral composition, its non-competitive small firm base, the problems associated with branch plant development, take-over by large corporations, etc. The extent to which these long-standing and deep-rooted problems can be resolved by this innovation-led strategy is more than questionable. Secondly, the endogenous potential development policy may be an appropriate strategy for the restructuring of local productive structures, peripheral regions, however, do not need restructuring but reconversion. Finally, it is a strategy directed to mobilising the endogenous potentials, backward areas, however, do not usually need to mobilize the endogenous potentials but to create them from zero.

In conclusion, at the beginning of the 1990's multiple versions of endogenous and exogenous development strategies —local development, endogenous potential, technopolis, inward investments—, made up the armoury of regional policy in Europe. Nonetheless, none of them seems to respond to the characteristics, requirements, and necessities of underdeveloped and peripheral regions like Andalucía.

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