

# INDICATORS OF DYNAMISM, INNOVATION AND DEVELOPMENT AND THEIR APPLICATION IN ANDALUSIAN INTERMEDIATE CITIES

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The process of economic globalization related to the present technological revolution has fostered a new abstract space of networks that interacts with the concrete space of places and has become the dominant form of spatial articulation of power. This involves the existence of new territorial imbalances due to the appearance of 'winning territories' while others stay in a marginal position or are even excluded from the system (Veltz, 1998; Caravaca, 1998...).

It must not be forgotten, nevertheless, that territorial innovative and competitive capacity contributes to integration into the world system, but not always favours good living conditions for all the inhabitants in these areas. In this sense, it is especially important to seek a development model able to make compatible economic competitiveness (economic development), welfare (social development), environmental sustainability (sustainable development) and the decrease of territorial imbalances (territorial cohesion).

Within this context, the urban system has become a relevant territorial resource, since it can contribute not only to foster development processes but to favour them to be spatially balanced.

Intermediate cities have become key actors in urban systems, both in the academic literature and in spatial planning and development. This is because they have played a very important role as a link between large cities and rural areas, and therefore enabling the territorial dissemination of development.

In order to analyze the behaviour of intermediate cities from this perspective, it is necessary to use indicators that reflect not only their socio-economic dynamism and their innovative capacity, but also indicators showing their welfare, environmental conditions and quality of life of their inhabitants.

Whithin this methodological framework, the aim of this paper is to identify, select and systematize some indicators of the dynamism, innovative capacity, welfare and environmental quality of these cities, and test their application in Andalusia. Due to underlying limitations related to the nature of this research, we had to select the most significant and most reliable indicators.

This research is focused on the autonomous community of Andalusia, Spain's most populated region with 7,357,558 inhabitants, nearly 20 % of the Spanish population (Censo de Población y Viviendas, INE, 2001). It is especially relevant that Andalusia has a quite spatially balanced urban system, with intermediate cities in four major areas: urban agglomerations, coastal areas, open countries and fertile lowlands near the Guadalquivir river and the depression between the mountain range of the Cordilleras Béticas, called Surco Intrabético.

The paper has five sections: the first one contains the theoretical framework on which the research is based; a second section explores Andalusian intermediate cities' socio-economic dynamism; the third section deals with their innovative capacity; the fourth section is focused on their welfare and environmental sustainability; and finally the fifth section is devoted to conclusions.

The indicators selected to assess socio-economic dynamism in Andalusian intermediate cities are 27, dealing with a) population dynamics, b) income levels, c) local labour markets, d) main economic functions, and main features of e) agricultural, f) industrial and g) tourism sectors. The results show that in the last years intermediate cities have been more dynamic than the regional average, although it should be kept in mind that some of these cities are part of urban agglomerations, and therefore grow because of the expansion of suburbanization, the development of transport and communication systems and the elevation of central city land prices which involves the peripherization of some economic activities.

Intermediate cities in coastal areas have also experienced recent population and economic growth, though mostly related to tourism or intensive agriculture. Non-coastal, non-metropolitan intermediate cities experiencing relevant growth are related either to the presence of local production systems or to their function as main urban centers of rural areas. The latter, usually called «agrotowns», are located along the Guadalquivir river Valley and are still agriculture-based.

As for innovation indicators, the 14 ones selected are related to a) qualified human resources for innovation, b) innovative effort, c) innovation absorption ability, d) services and infrastructure for innovation and e) environmental innovation. The most innovative intermediate cities are located on the main urban agglomerations. Some coastal intermediate cities are also dynamic in this sense, with a relevant presence of information and communication technology industries and intensive agriculture, as well as tourism. Apart from that, inner intermediate cities out of the hinterland of urban agglomerations are especially innovative considering that their socio-economic dynamism is rather poor. Since the latter all share a large presence of manufacturing activities, this could be interpreted as manufacturing being the economic activity developing a bigger innovative effort in Andalusia.

The indicators selected to assess social welfare and environmental quality are 10, dealing with a) population features like ageing, presence of foreigner population and presence of illiteracy; b) availability or basic resources like access time to hospitals, distribution of

primary school and rate of substandard housing and c) environmental quality, mainly water quality and availability, and rate of soils 'sealed' by roads, urbanization or mining activity.

Intermediate cities with higher levels of social welfare are located along the coastline, followed by those in urban agglomerations and the ones related to local production systems. On the contrary, inner intermediate cities are lower in the rank because of higher substandard housing, sealed soils or subterranean water pollution.

Especially good is the situation in metropolitan intermediate cities regarding access time to hospitals, presence of sub-standard housing and, with the exception of Granada's urban agglomeration, sewage disposal operation.

Intermediate coastal cities perform better in sub-standard housing and access time to hospitals. Notwithstanding, a difference is to be made between the Atlantic coast and the Western Costa del Sol, with sealed soils problems, and the rest of the Mediterranean coast where waste disposal is the most important environmental drawback.

Inner intermediate cities are commonly, no matter their population and economic dynamism, historic cities with more frequent housing problems, especially in the old part of town. The percentage of sealed soils is usually higher because of their longer urbanization process.

The main conclusions resulting from this research are the following:

As a general rule it is more and more necessary to generate new indicators available for local/municipal scale and able to assess urban dynamics.

As for the Andalusian region, it seems that the most dynamic intermediate cities in economic and innovation terms are located in urban agglomerations of Western Andalusia, on the coast and in local production systems. Nevertheless, cities with a higher presence of manufacturing activities are more likely to perform better in terms of innovation, whereas demographic growth is more frequent in cities relying on labour intensive activities like tourism or intensive agriculture.

Unlike the latter, inner intermediate cities and those out of urban agglomerations seem to be less dynamic and competitive.

Smoother contrasts in welfare show how difficult is to get economic dynamism and innovative behaviour to have an influence on better social conditions. Therefore, on the basis that territorial development is complex by nature, its encouragement needs not only socio-economic dynamism, competitiveness and innovative behaviour, but also those services and facilities increasing the quality of life of the population.

This statement reinforces the role of intermediate cities on territorial development processes instead of questioning it, since intermediate cities can be an in-between stage in the diffusion of economic and social dynamism from large cities to rural areas.

In close relation to this, it must be taken into account that public authorities and societies are made to foster both social and territorial cohesion, promoting solidarity-based behaviours typical of intelligent territories, which are those that advance from economic growth situations to a real territorial development and therefore contributing to the improvement of the quality of life and welfare of their entire population and avoiding all kinds of social exclusion or segregation.

