

CRISIS AND RESTRUCTURATION IN THE VALENCIAN METROPOLITAN AREA¹

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1. INTRODUCTION.

In this paper we present the results of the analysis of the changing socio-economic structure of the Metropolitan Area of Valencia between 2001 and 2011, unveiling trends of recent territorial restructuring. Then, using the spatial typology found in this territorial analysis, we study the recent dynamics of industrial investment, one of the most important economic variables for the formation of the metropolitan area and often considered as a strategic factor in economic recovery. The analysis shows how an increasingly territorial and functional differentiation process is taking place leading to higher levels of economic segregation. The industrial activity, one of the most important economic forces to order to understand the creation process of the metropolitan, the investment recovery recorded in the years 2011-2013 is taking place with remarkable concentration patterns (at spatial, sector and firm level); this high polarization processes are probably affecting both the chances of economic recovery and the territorial future of the metropolitan spatial model.

2. METHODOLOGY.

A principal component analysis based on 26 defining variables of socioeconomic, demographic and residential areas has been applied. A subsequent cluster technique was used in order to make up territorial groups within the AMV defined according to functional criteria (Salom, J. Fajardo , F., in press).

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The *Principal Component Analysis* (PCA) is very useful to build underlying variables that are partially or fully interrelated. To facilitate the interpretation of the results, a rotation has been applied to the correlation matrix by VARIMAX method. The statistical analysis was performed using the version 22 © IBM SPSS program.

Cluster methodology is designed to create homogeneous groups of cases or entities and allows to develop a typology or classification and to analyze their development. The strategy of cluster analysis is to find the structure of the data that is not readily apparent by visual inspection. Since the classification variables come from factor analysis and are therefore already standardized, it was not considered necessary to apply any prior transformation to the data.

As territorial framework has been used the AMV delimitation drawn up by José María Feria (Feria, 2008) based on a functional concept of the city and where the variable mobility residence to work is the key to the definition of the metropolitan areas. The basic territorial unit used to analyze the internal structure was the municipality, due to the difficulties encountered in obtaining information at the census district level from Census 2011. Only in the case of the municipality of Valencia has been possible to use wide information at the district level. Thus, the final number of territorial units analyzed is 89, 70 municipalities and 19 districts of the city of Valencia.

Finally, we used the sub-metropolitan results of principal component analysis and subsequent cluster analysis as the territorial basis for analysis of industrial investment and, thus, determine whether new economic metropolitan structures have also some potentiality for the analysis of recent economic transformations taking place.

3. THE NEW TERRITORIAL STRUCTURE OF THE VALENCIA METROPOLITAN AREA.

The principal component analysis allowed to retain above six factors, which includes a 76.2% of the variance of the data:

- 1) The first component (24.4% of explained variance) can be defined as an indicator of low socioeconomic status
- 2) The second component, similar to the previous (23.1% of explained variance) can be defined as representative of the consolidated city.
- 3) Factor 3 (11% of the variance) and 4 (7.5%), meanwhile, appear related to recent immigration processes (total and non-EU).
- 4) Finally, component 5 (5.7% of the explained variance) and 6 (4.6% of the explained variance) represent sociodemographic variables related to the life cycle and recent urban dynamics.

Subsequently, the *cluster* analysis allowed us to define, after inspection of the dendrogram and graph showing the relationship between the number of clusters and the merger ratio, nine groups of units. Their main features were:

1) Central area and first ring: The metropolitan center appears organized in successive rings from the central districts that constitute the urban CBD

- Group 1: It consists of the central districts of the municipality of Valencia characterized by positive values in the components related to the consolidated city, good socioeconomic status, and non-EU immigration.

- Group 2: Corresponds to the outlying districts of the city of Valencia, located around the central districts, with similar socioeconomic and demographic features to the previous group demographic, albeit with lower values.

- Group 3: It is, along with the group 4, a second ring around the city of Valencia, which binds the municipality of Llíria, located on the second metropolitan crown.

- Group 4: This group includes only two territorial units (Albalat dels Sorells and 17th district of Valencia (Pobles Nord), showing a strong agricultural character

2) Second metropolitan ring: Unlike the first metropolitan ring, the second ring is organized into sectors in which the axes of communication play an important structuring function.

a) North-West Sector:

- Group 5: It brings together municipalities that have a high socioeconomic level, moderate levels of immigration (EU origin), strong demographic dynamics and little recent urban growth.

- Group 6: This group can be considered a subset of the previous one. It is composed of the municipalities of Rocafort, La Eliana and Godella, along with the 6th arrondissement (Pla del Real) of Valencia, with more pronounced characteristics than the previous group

b) Radial axes North / South-East / West:

- Group 7: north-south axis (from Sagunto to Silla) and the east-west (from Quart de Poblet to Chiva) AMV, with strong industrial character.

- Group 8: This includes some municipalities in l'Horta Nord (Bonrepós i Mirambell, Canet, Massalfasar and Vinalesa, with a more agrarian character

3) Metropolitan Periphery: We consider metropolitan periphery to the constituent municipalities of group 9, which occupy an interstitial position between the transverse axes mentioned above.

Compared to the 2001 metropolitan structure, in 2011 the main differences point to a deepening in functional segregation processes within the AMV as well as a breakdown of concentric predominant territorial model early in the century, which leads in the second metropolitan crown to a more complex territorial structure with a greater weight of the radial sectors articulated by the main axes of communication. These changes have fundamentally affected the municipalities in the second metropolitan ring.

4. INDUSTRIAL CRISIS AND METROPOLITAN INDUSTRY.

Although at the beginning of the current crisis (2009-2010) industrial investment in the metropolitan area was affected more intense and immediately than in the whole region, in the subsequent period (2011-2013) it is also in this area where some recovery is more clearly seen. This differential behavior can have different explanations and need to be explored in further research. As a working hypothesis, it could be argued that the urban economies of metropolitan areas are becoming more powerful and advantageous than the typical location economies of specialized industrial districts.

This more positive overall performance of the industry in the AMV shows different dynamics at a sub-metropolitan level. There is a polarization process of the industrial location within the metropolitan area as a result of the dynamics introduced by the crisis, the collapse of the previous model of growth, and the spatial patterns showed by the most dynamic industrial activities. From a regional perspective, the most dynamic industrial space is limited to Almussafes pole and north and west axes of the metropolitan area (Groups 1-2-7), while the south axis does not show such a positive behavior. The spatial concentration of industrial investment since 2011 is growing, so that more dynamic spaces (Almussafes and north and west axes) gather 86% of the metropolitan industrial investment.

A spatial concentration also binds a remarkable sectoral and corporate concentration. Much of this investment responds to a few large scale projects (chemical, automobile, food), sometimes linked to foreign companies. Only seven industrial mega-projects (with an average investment of 126 million euros each), located in the most dynamic spaces, account for 81% of all industrial investment recorded from 2011.

5. CONCLUSION.

Recent processes such as increased immigration and the effects of the economic crisis appear to have accelerated the process of change in the territorial structure of the metropolitan area of Valencia, which has evolved into more complex structures from

the relatively simple ring model that characterized early XXI century. The analysis shows that, in relation to industrial activity as compared to other socioeconomic variables, territorial differentiation increasingly has a marked functional character, which also shows signs of socioeconomic segregation. In the industrial sector, one of the most important economic forces that consolidated the AMV as we know it today, the recovery of investments in the last years (2011-2013) is occurring with remarkable sectoral and corporate concentration and polarization, which affects both the chances of economic recovery and the future of the territorial model of the metropolitan area.