Medium-sized Cities in Spain and Their Urban Areas within National Network

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Abstract: Traditionally, medium-sized cities have been compact urban centres, which have also emerged as satellite nuclei within metropolitan areas of larger cities. However, urban dispersion models have led to growth in population and the increasing urbanisation of large cities’ peripheral areas. This article will analyse medium-sized cities in Spain, as well as their urban areas within the national urban network. Medium-sized cities will be defined herein, and their urban areas of influence will also be established. The increase and growth in area and population of the so-called medium-sized cities draws a new map of urban relationships. Empirical analysis will resort to a nuclear, demographic source, the population of urban areas. Source data will be analysed both statistically and cartographically. Finally, a spatial analysis of Spain’s urban network will be presented as the main method used to obtain results, with a characterisation of Spain’s urban system and the role of cities in such system being displayed. There is a trend which aims at re-balancing the permanent configuration of the country’s urban network. The article concludes with a typology of medium-sized cities regarding their relative position in the territory. This research contributes to the current scientific debate on the dynamics of urbanisation in the environment of medium-sized cities.

Keywords: urban geography; urban system; urban dispersion; urbanisation; urban typologies; city systems

1. Introduction

Let’s take a drive
Through the sprawl
Through these towns they built to change [1]

Medium-sized cities have been, generally speaking, regional nuclei which have played the role of a market, producing and—above all—distributing goods and services; they have also structured the network of road and transport infrastructures and, very frequently, have managed a political and administrative unit (in Spain, the so-called “province”). Recent developments in urbanisation which have appeared over the last decades in these cities have altered their traditional compact, intense and dense structure, paving the way towards new forms and extensive and more dispersed territorial structures, which have been accompanied by morphological, functional and social transformations: from centralisation to a kind of post-modern dispersion [2]. The phenomenon of urban dispersion is applied following the criteria of Anas, Arnott and Small [3]. They take in account the diffusion
of functions and urban uses to spaces increasingly distant from the central city, and with areas of separation from each other, the product of a process of urban decentralisation.

This article proposes to participate in the debate on the current dynamics of urbanisation in the environment of medium-sized cities. In recent years, there has been a proliferation of studies on intermediate urban nuclei. This interest appears in works of large regional global groups, mainly of European middle-sized cities [4]. The definitions of ‘medium-sized city’ or ‘intermediate city’, reflecting its main territorial structuring role [5], are very diverse in the world. These are nuclei that act as a link between higher and lower urban levels, establish relationships with other cities and territories of the same hierarchical level, and act as intermediaries between the big city and rural spaces. However, there is currently no standard definition of medium-sized cities [6]. In fact, calls into question the true need for a final definition on this complex phenomenon with diffuse limits [5]. In this sense, in this article, we understand the medium or intermediate city as follows:

A medium-sized city would be defined as a centre of social, economic and cultural interaction. It also constitutes a centre for more or less specialized goods and services for a population group that exceeds the limits of its own municipality. It has stabilized as a regulatory centre for relations through transport and information infrastructures at the regional, national or even international level and, furthermore, for understanding that these nuclei are, in most cases, the home of the public institutions of the administration, with all the social aspects that this function entails [5].

Recently, the process of urban growth has extended to the peripheral areas of medium-sized cities. In this article, the term peripheral area is understood in the context of the Spanish urban system. Thus, the central intermediate city corresponds to the municipal area of the main nucleus, and its peripheral urban area with the municipal terms that surround the central city. In these peripheral municipalities, there has been a strong urban expansion in recent years. However, in Spain, the responsibility for urban planning and for administering certain urban services is the responsibility of each municipality. The administrative separation clearly marks a political division of urban responsibility. For this reason, it is easy to distinguish between a central city and its peripheral area, which is formed by very interrelated spaces, in terms of the movements of people and flows of goods and services with the main city, but is administratively separated. In most of the peripheral areas, there has been an intense process of urbanisation at the expense of neighbouring rural nuclei. This is a process more typical of recently urbanized areas in less developed countries than in areas as urbanized as Spain [7]. The trend in such nuclei and their surrounding areas is the progressive occupation of territory, which involves assuming part of the residential role which was, until so recently, reserved for the city centre [8]. This process has developed under random logics that have acted with uneven intensity at the different urban scales. For example, dynamics in medium-sized cities which are linked to large metropolitan areas have evolved differently from those which are situated far away from a large urban nucleus [8]. In addition to this, urbanisation has a unique geographical specificity by virtue of the very nature of the spaces and areas being created and produced [9]. The current medium-sized city looks like a dispersed one; in the case of Spanish cities, different diffuse processes can be found, as shown in this article.

In a general way, since the 1980s, and, particularly, between 1990 and 2008’s economic meltdown, there has been an intense process of urban dispersion in Spain, involving all medium-sized cities. These recent dynamics may be linked to the real estate boom and the increasing artificialisation of land, a speculative bubble that has had extremely serious environmental, territorial and socio-political consequences and has given rise to unsustainable areas [10]. In fact, an intense process of urbanisation, without adequate urban planning, can end up creating serious natural and anthropogenic risks [11]. There has been a subversion of urbanisation, which has allowed a housing bubble burst in Spain [12]. The growth of Spanish cities was encouraged, to a large extent, by the capitalist system, which is a trigger factor towards fragmentation and territorial discontinuity [13]. Thus, an alliance was established between business and political lobbies by virtue of which the city adopted its well-known
role as a growth machine [14]. This fact has given rise to the usual unsustainability and destructiveness of neo-liberal forms of urbanisation [15].

In Spain, the development of urbanisation encouraged expansive growth based on classifying large areas of land as urban and favouring urbanisation. Empty urbanism has spread the urban phenomenon and urbanisation networks throughout the territory [16]. This recent diffuse growth of Spain’s urban medium-sized areas has involved heavy consumption of land and considerable consequences, including rising costs and expenses in infrastructure and equipment [17], as well as deep environmental impacts [18]. With the crisis of 2008, the Spanish urban growth model broke down and resulted in extremely serious effects, both social and territorial [19,20]. Urban vulnerability has been generated in Spain’s medium-sized cities [21].

Spain’s medium-sized cities experienced a frantic pace of growth between 2000 and 2008, which dropped dramatically after the economic downturn. A moderate urbanisation process is regarded as optimal for good integration, intelligibility and social access [22]. Contrary to such a model, in just two decades, the Spanish territory has seen the effects of the greatest process of rise and fall of real estate activity in its history [23]. In short, massive urban growth led to a deeply unsustainable mismatch in the medium term, which ended up provoking a crisis that has been particularly intense and long-lasting in Spain.

The final outcome of this process has been that average Spanish cities have gone from more or less compact and continuous structures, especially in provincial capital cities inland, to more dispersed and discontinuous ones, which extend beyond their respective urban areas. Currently, urban structures are characterized by de-centralisation and dispersion, with interaction between agglomerative and dispersive forces which operate at different spatial levels. This fact generates spatial structures that are complex and prone to multiple balance schemes, as well as ties of dependence [3]. Forces operate at different spatial scales. Within this novel reality, processes of residential de-concentration and creation of real urban areas have taken place, with a model of suburbanisation becoming deeply ingrained, cities growing outwards into the periphery. Concentrated urban settlements have given way to urban sprawl formulae [24], favoured by lighter urban control in urban areas surrounding the core city [25]. Harmful effects of sprawl are amplified in this way [26,27].

Finally, dispersion in medium-sized urban areas is likely to give rise to polycentric urban areas, with a different and renewed centrality, as French sociologist Lefebvre remarked in 1968 [28]. Polycentricity improves cities’ economic efficiency [29]. The small and medium-sized towns are the basis of polycentric urban development [30]. Riguelle, Thomas and Verhetsel [31] have proved the implications of polycentrism in the urban system of Belgium. In this article, a broader understanding of the Spanish urban system will be dealt with, together with the role played by medium-sized cities and how massive differences have appeared, both territorial and geographical. It is linear coastal axes (with their growth being defined by the 0–10-km strip from the coastline) [32] and, above all, the centrality of the largest metropolitan areas that determine this urban system [25]. In other areas, medium-sized cities still display distinctive monocentric features. These facts make it impossible to generalize about the idea of polycentrism for the entire urban network throughout Spain. Nevertheless, examples of polycentric urban spaces do appear, as will be remarked upon herein. In fact, it will be shown that Spanish medium-sized cities form three types of structures. The first case is monocentric urban areas, where the main functions are held by a single main urban nucleus to which the majority of the flows of the surrounding municipalities are directed. The second case is bi-centric, where the main functions and flows are shared by two middle cities. Finally, the polycentric case, where several cities are the centres and end up creating complex urban subsystems.

The research presented in this article contributes to the discussion about the current dynamics of urbanisation in the realm of medium-sized cities. Hildreth [33] claims that there is a relative lack of published material on medium-sized urban centres, compared to the extensive publications on large cities. However, currently, medium-sized cities are progressively gaining momentum in the field of urban research [34]. Such interest is shown in the works of large regional groups worldwide, mainly
on European medium-sized cities [35,36], but also on others, such as American ones [37]. In most cases, as in this article for Spain, specific national examples are analysed: Obrebalski [38] for Poland and the Czech Republic; Escudero and Somoza [25] for Spain; Lamovsek, Drobie and Zaucer [3] for Slovenia; Riguelle, Thomas and Verhetsel [31] for Belgium; Adam [34] for Germany; Erickcek and McKinney [39] for the United States; Wiberg [40] for Sweden; Hall, Marshall and Lowe [41] for England and Wales and Hildreth [33] specifically for England; Zimmermann [42] for Croatia; Ganguly [43] for India; Poppe [44] for Egypt, etc.

The key question for research in the present article is: what is the role of medium-sized cities and their areas of influence within Spain’s urban network? The main goals of the present study arise from the question mentioned above: to analyse the distribution of the population in Spain’s medium-sized cities and their peripheral areas according to their demographic size; to check whether the model of urban dispersion has really taken place in the typology of these cities; to perform a cartographic analysis of medium-sized cities within the urban network nationwide; and, finally, to study the degree of polycentrism or monocentrism that these middle urban areas display, thus establishing a typology of such nuclei. The results obtained will be adjusted to these goals.

The work aims at helping understand the Spanish urban system and, in particular, Spanish medium-sized cities at present.

2. Materials and Methods

The present article follows a deductive methodology based on the spatial analysis of the locations of medium-sized cities and their peripheral areas, as well as the relationships established between them derived from their proximity and relative position with the administrative structure. The first step was the literature review of published works on this subject, both theoretical and case studies. The work carried out in Spain was paid particular attention. Subsequently, the delimitation of the size of the medium cities and their peripheral areas was decided. Then, the empirical data was transferred to a Geographic Information System. The results of the investigation were obtained by the analysis of maps. These results were obtained from a phenomenological, rather than positivist, point of view through a descriptive and qualitative analysis.

The first and most complex step was to establish what the medium-sized Spanish cities were. Given that a more or less accepted and complete definition of a medium-sized city does not exist [5], from a quantitative perspective, a pragmatic definition can be established [34], although it will always be incomplete. The delimitation of an intermediate position must start from the range of the variable. Based on an exclusion principle, the medium-sized city would be the one that is neither small nor large [45]. However, the diversity of values proposed in different studies demonstrates the insufficiency of using the population criterion exclusively [46]. Its size threshold has still not been correctly defined [5]. Even so, globally, the UN delimited them in 1996 with a value of between 100,000 and 2–3 million inhabitants [47]; the World Bank considers this category to be up to one million inhabitants [48]; the European Union has established limits that vary between 100,000 and 250,000 [49], and between 20,000 and 500,000 [50]. At a global academic level, Henderson [51] delimits them as being between 100,000 and 500,000. Kunzmann [52] establishes the demographic size of the European medium cities as being between 20,000 and 200,000. In fact, the size of medium-sized cities varies with the scale of the analysis [46].

The concept of the medium-sized city itself is neither rigid, nor can it be determined only by size. However, for research purposes, it is necessary to try and define such a notion by sizing it, the number of inhabitants being the most frequently recurring factor for doing so. Actually, the size of the average city varies depending on the analysis scale. As a starting point, this study regarded medium-sized cities as those with a population ranging from 50,000 to 300,000 inhabitants. We agree with Andrés [5] that 50,000 inhabitants should be the lower limit to define a medium-sized city. Subsequently, the same criteria are followed as the work of Ganau and Vilagrasa [48], who, also starting from 50,000, consider that 300,000 residents is an upper limit adjusted to the Spanish urban context to define these
intermediate nuclei. This approach is necessary, but cannot be other than arbitrary, which is the reason a scale-analysis approach has been applied, taking into account the uniqueness of Spain’s urban network. In this way, the definition of medium-sized cities was ultimately inferred according to their relative position in the territory on the basis of the administrative provincial division.

The next step was the definition of the urban area of each average Spanish city. It was decided to adopt a local scale in order to study the effects of diffuse urbanisation in the environments of medium-sized cities. This article is based on the existing interactions between nearby population centres. For this it was necessary to delimit, in a pragmatic way, some criterion that delimits the possible periphery from the central city. In this way, a crown with a radius of 30 km from the main nucleus is established to define the intermediate urban areas following the same criteria applied in the Spanish literature by Mallarach and Vilagrasa [53]. For this purpose, Adam’s approach [34] of a crown-shaped area with a radius of 30 km from the main nucleus was also established. For this cartographic treatment, like Bounoua et al. [54] and subsequent elaboration of cartography, Arc Gis 10.3 software was used. Accordingly, spatial analysis becomes the main methodology applied in the present article.

This research was carried out on the basis of one main source: data from the Municipal Register of Inhabitants from the National Institute of Statistics [55], with this source supplying the annual population figure at the municipal level, as well as enabling demographic analysis through overall figures. The statistical treatment of the source was implemented using Excel 2016 software.

3. Results and Discussion

This study considers medium-sized cities to be those with a population of between 50,000 and 300,000 inhabitants in the Municipal Register of Inhabitants of 2016 (National Institute of Statistics, 2017, thus following the same criteria as Ganau and Vilagrasa [48]). The overall number of this group of cities amounts to 133, having added Teruel (35,564 inhabitants) and Soria (39,171 inhabitants) to this figure. Although these two cities do not reach the defined demographic threshold standard, they distinctively fulfil an urban function within a vast rural environment. This exception is also taken into account in Bellet and Olazábal’s work [56].

Some of these medium-sized cities are relevantly linked, both spatially and functionally, to large ones. Spain has 13 large cities—those with more than 300,000 inhabitants (only Madrid and Barcelona have more than one million). On the second level, which is defined as being in the range above half a million and below one million inhabitants, we find, in this order, Valencia, Seville, Zaragoza and Malaga. Finally, Murcia, Palma de Mallorca, Bilbao, Alicante, Cordoba and Valladolid are between 300,000 inhabitants and half a million.

Each and every large city is located in a different province. One third of them are situated in the autonomous regions of Andalucía (three) and Valencia (two). The other two thirds are each distributed in other autonomous regions. Castilla-La Mancha, Extremadura, Galicia, Cantabria, Asturias, La Rioja and Navarra do not have any cities with more than 300,000 inhabitants.

Lack of large cities is associated with diversity in the location of medium-sized cities throughout our geography. Urban centres of this kind can be found in each and every autonomous region and in all the provinces that—for Cordoba, Valladolid and Zaragoza—have a city of more than 300,000 inhabitants, but no medium-sized city. A map with the distribution of medium-sized and large cities is displayed herein. At the same time, an area of influence has been generated around each of the medium-sized cities with a 30-km crown-shaped area (Figure 1).

The map shows the role played by medium-sized cities as the backbone element of the territory. They have a wide implantation, not without a somewhat heterogeneous distribution, which allows more than a hundred medium-sized cities to be featured, shaping the object of the present study. The regional administrative division and, particularly, the provincial one, are structural aspects that define the territorial organisation of the Spanish state. This happens, above all, inland, with a high degree of correlation between medium-sized cities and provincial capitals. The administrative
structure of Spain is divided into three territorial scales as a product of very different processes that have occurred throughout its history. The local scale has been forming since the Middle Ages, leading to more than 8000 municipalities in Spain today. In the first half of the nineteenth century, the municipalities were grouped into provinces, following the model of the territorial administrative division of France. These 50 provinces remain practically the same today. Finally, with the creation of the current democratic State in 1978, an administrative division of 17 regions emerged, known as autonomous communities, with a high level of self-government. These autonomous communities bring together one or several provinces and the municipalities that are within these provinces. The autonomous communities do not dissolve the previous administrative organisation, but integrate it. Throughout this process, provincial capitals, mostly medium-sized cities, have been carrying out important administrative and organisational functions for more than 150 years.

![Figure 1. Map with medium-sized urban areas and cities of Spain. Source: CNIG [57], INE [55] and own elaboration.](image)

The spatial analysis of the map displaying the location of medium-sized and large cities makes it possible to distinguish a minimum of three typologies: the medium-sized cities linked to the large cities, coastal medium-sized cities, and inland ones [25]. The criteria for defining and organising these medium-sized urban centres are utterly diverse. One of the first approaches can be established by their spatial layout. These categories are not exclusive in themselves, since some cities may belong to more than one typology. The goal is characterising them by analysing their position within the territorial framework rather than classifying them.

3.1. Medium-Sized Cities Linked to Large Cities

Gravitational models [58] have made it possible to explain, to some extent, the influence and attraction of large cities on demography, goods and services. On average, the larger a city is, the larger and more populated the satellite nuclei located in its surroundings are. This phenomenon is clearly
noticeable in Spain’s urban system. Almost one quarter of medium-sized cities fall within a radius of less than 30 km of large cities, which becomes particularly significant not only in the two large metropolitan areas of the country, namely Madrid and Barcelona, but also in the areas of Valencia, Seville, Bilbao, Malaga, etc.

Madrid has 17 municipalities, with more than 50,000 inhabitants, in a radius of less than 30 km, which amounts to 2,122,773, to which the 2,882,860 inhabitants of Madrid’s central core must be added. The demographic size of Madrid’s medium-sized cities is nearly the same as that of the main city. Barcelona, in turn, has 1,496,266, with its metropolitan area consisting of 16 medium-sized cities, which amount to 1,832,373. In this case, the medium-sized cities outnumber the metropolis in demographic terms.

Other medium-sized cities linked to large ones are significantly smaller in size than the corresponding central core. For example, in Valencia, the third city of Spain in population, with 790,201 inhabitants, two medium-sized cities are located within its metropolitan area, with 148,616 inhabitants (Torrent 80,762 and Paterna 67,854). In the metropolitan area of Seville, there are three medium-sized cities in its vicinity: Alcalà de Guadaira, Dos Hermanas and Utrera, with a total population of 259,609, of which slightly more than a half belong to Dos Hermanas, compared to 690,566 inhabitants registered in the municipality of Seville in 2016. Zaragoza (661,108) remains an oasis in Aragon’s regional demographic desert, and not a single medium-sized city can be found either in its periphery or within the whole province. By contrast, Malaga, with a population of 569,000, has five medium-sized cities in its immediate surroundings, adding up to an overall 369,176 inhabitants. These five cities are coastal areas, traditionally touristic, both on a hotel and residential basis, along Costa del Sol. Such urban nuclei are Vélez-Málaga, Mijas, Fuengirola, Benalmádena and Torremolinos, which seem closer to the profile of medium-sized cities linked to the coast than to medium-sized metropolitan nuclei, a completely different case from the rest of large cities.

3.2. Coastal Medium-Sized Cities

Medium-sized cities located on the coast will be presented in this section. Proximity to the sea, and in addition, low altitude, are defining elements of the concentration of the population at a global level [59]. In Spain, we can find some further aspects, ranging from climate to the economy. 1957’s Development Plan involved profound changes in the country; its most obvious effects being of an economic nature: the transition to a consumer society, and the emergence of massive economic activities such as tourism, linked to our extensive coastline and mild climate. In turn, economic development led to a displacement of the labour force from rural areas linked to the primary sector to the industrial and service sectors [60].

In coastal areas, significant development of manufactures arose, together with a boost of the touristic activity and a steady growth in population. At a national level, there were important centrifugal migratory forces which led to redistribution of the population. Eight of the thirteen largest-sized cities are located on the coast, all except for Cordoba, Madrid, Seville, Valladolid and Zaragoza. In turn, a large number of medium-sized cities are located along Spain’s large coastline. Not all of these coastal cities can be solely and exclusively linked to the tourist phenomenon as their reason for reaching the rank of urban nuclei and medium-sized cities. However, it seems demonstrably true that tourism has influenced, to a greater or lesser degree, the development of important urban areas along the Spanish coastline. It must be added that the population phenomenon linked to residential causes can increase urbanisation in coastal areas during certain periods of the year. We will not take this approach into consideration, since it goes beyond the scope of the present article. However, a significant concentration of medium-sized cities in coastal areas, especially in the so-called Mediterranean arc, can be observed.
3.2.1. The Mediterranean and Southern Corridor

The Mediterranean Corridor refers to the whole coastal strip that ties together the East of Iberian Peninsula through several transport infrastructures. The specific study of Mediterranean cities has previously preoccupied different scholars [61,62]. 53 medium-sized cities are located along the Mediterranean coast, in which more than five million people currently live. This group includes the metropolitan areas of the aforementioned Barcelona, Valencia and Malaga, as well as those of Alicante and Murcia. Therefore, we can make a distinction between medium-sized cities:

1. Catalan medium-sized cities. Heterogeneous layout, from two medium-sized inland cities, namely Gerona and Figueras, to coastal ones (Reus and Tarragona). In the middle, Barcelona’s large metropolitan area, somewhat away from which influence we can find Manresa (inland) and Vilanova i la Geltrú (coastal).

2. Levantine: This group includes the cities of the Valencian Community and the Region of Murcia, displaying an urban continuum which starts at twofold Castellon de la Plana-Villarreal and extends to Lorca. These cities display a more heterogeneous pattern, acting as a certain counterweight to inland locations. Valencia has the medium-sized cities of Sagunto, Alcira and Gandia, representing some of the most buoyant economic sectors in the area: agriculture, industry and tourism. The number of inland cities is significantly higher in the area of Alicante. The continuum of Elda-Petrer, Orihuela, Elche and Alcoy is located inland, as opposed to the touristic cities of Benidorm, Torrevieja and San Vicente del Raspeig, near the city of Alicante. Similarly, Murcia’s regional area maintains its provincial capital inland, with the towns of Lorca and Molina del Segura, with Cartagena on the coast.

3. Andalusian: Andalusian cities have been widely analysed in the scientific literature [63]. The Strait of Gibraltar separates the Mediterranean area from the Atlantic coast of Andalusia. From the coast of Almeria to the towns of Algeciras and La Linea de la Concepción, in the province of Cadiz, 10 cities are spread out, mainly on the Costa del Sol, in the province of Malaga. The vast majority of these cities have eminently touristic characteristics. Also, we must add El Ejido, with intensive agriculture, as well as Algeciras’s Bay (province of Cadiz), with industrial and port activity. In this same province, facing the Atlantic Ocean, six medium-sized cities can be found in the vicinity of Cadiz’s Bay. This is the largest concentration of this type of city (not being close to a larger urban nucleus as a reference), forming a remarkable conurbation.

Far and disconnected from the aforementioned continuum, we find the provincial capital of Huelva’s coastal area, a medium-sized city with a unique pattern in the province, which is usually that of the capital city. This model is replicated in most inland provinces and only emerges in Huelva as far as coastal provinces are concerned.

3.2.2. Iberian Peninsula’s North Coast

On the northern side of the Iberian Peninsula, a clear distinction can be made between the group of Galician cities facing west and the northern cities along the Cantabrian coast.

In the provinces of La Coruña and Pontevedra, in addition to their respective provincial capitals, two cities with a purely industrial character are located in the area, namely Ferrol and Vigo. At least, they should be regarded as having originally been industrial, since the city of Ferrol has undergone an intense process of industrial sector restructuring, while Vigo maintains its distinctive manufacturing personality [64]. The twofold pattern (provincial capital with another industrial city) is a model that recurs repeatedly in many provinces, both on the Atlantic coast and inland. It is another typology of medium-sized cities in their provincial distribution. Galicia’s analysis is complete with the other two provincial capitals, Lugo and Orense, and its regional capital, Santiago de Compostela.

Along the Cantabrian coast, Asturias’s organisation revolves around the well-known Asturian “Y” (Oviedo, Gijon and Aviles), to which the town of Siero must be added [65], as well as the cities of Santander and Torrelavega, in the region of Cantabria. Finally, in the Basque Country, we find Bilbao with its estuary and the cities linked to its metropolitan area (Guecho and Baracaldo). In addition,
Guipuzcoa, the pattern of a provincial capital and a city of industrial development, San Sebastian and Irun, is replicated.

In all these provinces, and with the exception of Lugo, more similar to an inland province for its capital and for not having any outstanding nucleus on its coast, the capital city–industrial nucleus pattern is repeated.

### 3.2.3. Non-Peninsular Medium-Sized Cities

Within this area of medium-sized urban nuclei, we can find very different realities in the non-peninsular territories belonging to the Spanish State. On the one hand, the autonomous cities of Ceuta and Melilla have a defensive historical background, and the role played by the Spanish government in their administration justifies their demographic size and their unique idiosyncrasy. On the other hand, there are two archipelagos, also with obvious differences between them. The Balearic Islands concentrate their population in the main island, Mallorca, and, in particular, in its capital, Palma. The Balearic urban system also displays an intense tourist coastal occupation [66].

In the Canary Islands, we find Las Palmas de Gran Canaria as a city of reference in the autonomous region, although the same consideration may well be given to the city of Santa Cruz de Tenerife, due to its insular character, even with only 203,585 inhabitants. In addition to the capital of the island of Tenerife, six more cities can be added to the list of medium-sized cities, with a total of 719,576 inhabitants. Except for the case of Arrecife, on the island of Lanzarote, all of them are located near the provincial capitals. In these medium-sized Canary cities, tourism is definitely a determining factor.

### 3.3. Inland Medium-Sized Cities

The huge shift regarding the distribution of the population in the second half of the last century in Spain resulted in severe depopulation. While cities along the coast were boosted, and the population moved from the centre towards the periphery, the peninsular inland areas, especially the rural world, suffered from chronic depopulation, a phenomenon which still remains present. These internal migrations occurred, basically, from rural areas to growing cities, towards provincial capitals, especially to Madrid and the main coastal cities [60]. Although the main centres of internal migration in Spain were mainly large cities and their metropolitan areas, provincial capitals played a role as the first focal nucleus of reception. These medium-sized cities have been the true joining nuclei of the inland peninsula.

In every non-coastal province, at least one urban agglomeration may be found that coincides, in all cases, with its provincial capital. It must be remarked that both Soria and Teruel were included for this reason, although they are the only cities that do not reach 50,000 inhabitants. Likewise, those provinces with at least one city with more than 300,000 inhabitants must be mentioned, regardless of whether or not they have medium-sized cities linked to their metropolitan areas: Cordoba, Madrid, Seville, Valladolid and Zaragoza. In turn, some provinces have more than one medium-sized city. This is the case of Linares in the province of Jaen, Puertollano in Ciudad Real, Talavera de la Reina in Toledo, Ponferrada in Leon, and Merida in Badajoz. The duality between industrial city and provincial capital occurs in many provinces, regardless of their location. The justification and location of these cities is clearly linked to an economic and industrial sector with the exception of Mérida, which has the special characteristic that has been designated as autonomous capital of Extremadura, resulting in a far higher number of regional administrative institutions-based in the city. A similar example can be found in Galicia (Santiago de Compostela). Larger cities, such as Gerona, Granada and Lugo must be mentioned as medium-sized inland cities, with the peculiarity of being situated in coastal provinces.

### 3.4. A Typology of Spanish Medium-Sized Cities According to Their Role within the Urban Network

This article has analysed medium-sized cities within the national urban network. The location of each medium-sized city responds to particular and understandable criteria at a local level. Also,
research responds to a nationwide scale, based on the administrative division of the different provinces. Such a structure is highly related to the medium-sized cities’ system, especially inland, except for places where there is an arbitrary geographical threshold (50,000–300,000 residents) and also related to the important development focus and attraction that the national capital and its metropolitan area entail.

Finally, a medium-sized city typology may well be inferred (Figure 2) according to the relative position in the national territory on a provincial administrative basis, which involves a preliminary idea that needs to be shaped through future research and contrasted, as well, with further local studies.

Figure 2. Medium-sized cities typology. Source of information: CNIG [57], INE [55] and own elaboration.

In this way, first and foremost, monocentric medium-sized cities are highlighted. This concept comprises the main capital provinces, which are a clear example of an administrative unit. It must be pointed out that the great importance of the administrative function in specific areas is reinforced with other functions, such as industrial or touristic functions. The creation of a new administrative structure and the establishment of such units as provincial capital cities in 1833 involved a significant benchmark in the growth and distribution of the current urban system. This fact is confirmed by the fact that, one hundred and fifty years later, the regional administrative system was established on the basis of the provinces, and the regional capitals are the provincial capitals, with the exception of the examples found in Galicia and Extremadura. It is in these two regions that the newest capital cities, which were established over the past quarter of the 20th century, became part of the group of medium-sized cities.

Bicentric medium-sized cities are described here. They are those cities that have been developed for a reason other than their administrative function. It has been noticed that, in many Spanish provinces, both coastal and inland, such a pattern is replicated, with a variety of different motivations for each one. Thus, in addition to the provincial capital, medium-sized cities have emerged with a
similar demographic organisation (although there are exceptions: one in favour of the provincial capital, Santander, with respect to Torrelavega, and the other in favour of the ‘other city’, Vigo, which is much more populated and has a larger urban economy than Pontevedra, which is the provincial capital).

Thirdly, we find medium-sized cities that are part of polycentric urban areas. These are cities that are grouped around a spatial pattern, which is a more eclectic and diverse group and integrates cities such as those in Cadiz’s Bay or the continuum of tourism-based cities, like those along Costa del Sol in the province of Malaga.

The fourth and final group is formed by medium-sized cities connected to the metropolitan areas of large cities. These are cities that have grown around the peripheral areas of the two largest Spanish metropolises, Madrid and Barcelona, and, to a lesser degree, the cities in the immediately inferior demographic category.

3.5. Discussion

The topic of medium-sized cities is an open debate in the core of the disciplines dedicated to urban studies. The lively discussion is because there is no agreement on the definition of what a medium-sized city is, and there is no consensus on its delimitation. Virtually every author has ended up defining a medium-sized city in a different way and has ended up establishing their own delimitation criteria. Based on a literature review, this article has adopted a functional definition of what a medium-sized city is. However, in a pragmatic way, it ended up delimiting them as nuclei that have between 50,000 and 300,000 inhabitants, based on an academic reflection of the previous articles about medium-sized cities in Spain. In other contexts, this delimitation would vary.

The main contribution of this article is the establishment of a classification of the medium cities of Spain. It is a subjective typology, made by the authors, and is unpublished and original. For this same reason, it is open to discussion.

Finally, a phenomenological and holistic analysis has been preferred through the detailed study of the obtained cartography. Previous work by some of the authors [25] has already dealt with the reality of Spanish medium-sized cities from a quantitative point of view. With this prior knowledge, it has been preferred to use a deductive method, relying on description to obtain qualitative results.

4. Conclusions

This article has approached a major understanding of the Spanish urban system with respect to the role that medium-sized cities have and how larger territorial and geographical differences appear. This research contributes to the discussion on the current dynamics of urbanisation in the environment of medium-sized cities.

Having established the objective for the study based on demographic data, a first cartographic analysis of the location of the medium-sized cities and large cities on the map disclosed at least three different typologies: medium-sized cities linked to big cities, coastal cities, and inland cities. The analysis based on this simple categorisation at a regional and provincial scale led to some of the most relevant results of the article; an innovative classification of medium-sized cities and their urban area within the national network through their role in the territorial scheme. Cities are divided into monocentric, bicentric, polycentric and metropolitan urban areas. This innovative typology was mapped in Figure 2. In this sense, the methodology used can be extrapolated to any other national urban system, both European and extra-European, and even to more complex urban networks of large regional groups. Medium-sized cities play a major role in most national urban systems; for this reason, similar studies are of interest to understand the role they play in each state. In fact, a future investigation could make a joint analysis of European medium cities, as do Stathakis and Tsilimikgas [67], based on the typology defined in Spain. Establishing classifications, as has been done in this research following the applied method, allows a better understanding of reality. The purpose of the article was to re-open the debate for future research on other important issues, such as to analyse the particularities of the spatial planning framework in Spanish medium-sized cities.
Ultimately, the article reflects on the importance of medium-sized cities as a connecting link between two main points: increasing depopulation of rural areas and massive concentration of population, assets and services in large cities and coastal areas. Medium-sized cities, especially inland, are able to help and have to help to maintain the demographic tissue of the country. It is necessary to continue exploring the causes and reasons of the growth and prevalence of certain cities over others within the Spanish urban system.

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