

# Being metropolitan: the effects of individual and contextual factors on shaping metropolitan identity

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## Abstract

While the single institution of the Metropolitan Area of Barcelona (MAB) is a recent creation, some form of institutional cooperation among most of metropolitan municipalities has been functioning over the last 40 years. However, despite there is ample evidence about municipal and national patterns of identification in Catalonia, no data about political orientations or patterns of identity toward the metropolitan area among the metropolitan population have been gathered so far. Using new survey data we explore two main features of the metropolitan identification among the Barcelona metropolitan population. First, we analyze the relationship between municipal attachment and metropolitan identification. Second, we explore the shaping of citizens' orientations regarding the governance structure of the MAB, with particular interest in the central role of the city of Barcelona.

## 1. Introduction

Metropolitan governance in Barcelona is a complex matter. At an upper level, Barcelona is the capital city of Catalonia, one of the 17 decentralized regions (autonomous communities) of Spain. At a lower level, Barcelona is mapped onto a highly fragmented local system.

Catalonia has 947 municipalities and a population of 7.5 million, half of which concentrated in the metropolitan area of Barcelona. This results in an unbalanced territory in terms of both urban and population density. On one hand, the median Catalan municipality is under 1,000 inhabitants. On the other, only 36 municipalities integrate the 3.5 million metropolitan citizens within a highly populated and densely urbanized metropolitan area, with a number of medium- to small-sized cities surrounding Barcelona, and integrated into a close-knit network of subway, highways, railroads, and bus lines.

Despite the multi-tier structure of government and the high level of municipal fragmentation, both levels of government are institutionally and politically relevant. Institutionally, both regional and municipal tiers of government are strong. Catalonia has ample legislative and executive powers over a wide range of areas such as housing, urban and

regional planning, agriculture, transport, health, education, social welfare, language, and culture. In turn, municipalities also present directly elected legislatures, which elect the mayor, but have weak fiscal autonomy (most of the revenues coming from the central government). The Spanish local government belongs to the Napoleonic model (Hesse and Sharpe 1991), characterized by strong local identity at the expense of local autonomy. In other words, the essence of local government is political rather than functional. Local governments are considered to embody territorial communities and office holders are expected to represent the interests of their communities in relation to other tiers of government. This “political localism” (Page 1991) explains local fragmentation and the advocacy for keeping small units of government.

Politically both municipal and regional levels of government have also been deemed relevant by citizens. First, in Catalonia separate elections are held for national, regional, and local legislatures, and turnout in regional and local elections has been notable (averaging 61% for both). Second, due to the existence of a specific Catalan national identification and the strong institutionalization of both regional and local governments, citizens present consistently high levels of knowledge and identification with both tiers of government.

The creation of the MAB represents an exception in the Spanish context. In formal legal terms, in Spain a “metropolitan area” is an organizational arrangement that may be set up by an Autonomous Community when the coordination of action among several linked municipalities is rendered necessary. Each regional government is entitled to decide whether these linkages exist and to institutionalize the formal arrangements among the municipalities involved. However, few regional governments have made use of this prerogative and when they have done—as in Barcelona and Valencia during the 1990s—it has been with very limited purposes.

Actually there are no incentives to promote and encourage the consolidation of metropolitan areas as organizational arrangements to deal with complex urban issues. Due to the specific features of the Spanish political system—and especially those that refer to its territorial structure—the consolidation of autonomous communities has been the priority. Indeed, the development of other forms of local autonomy that could potentially challenge the power of the new (and in phase of consolidation) political actors has been systematically postponed to a later stage. Although acknowledged in communities of experts as one of the main challenges to global governance for the next decades, metropolitan governance has not been a prominent issue in the political agenda, neither at the national level, nor at the

individual level of each Autonomous Community (Navarro and Tomàs 2007).

Moreover, no data about political orientations or patterns of identity toward the metropolitan area among the metropolitan population have been gathered so far. As a result, citizen preferences and orientations on the governance structure of the metropolitan area have been largely ignored.

In this paper we explore metropolitan identification among the Barcelona metropolitan population. The paper has two main objectives. First, to explore and explain the level of identification toward the metropolitan area compared to the different existing types of identification among the Barcelona metropolitan population, with particular interest in the relationship between municipal attachment and metropolitan identification. Second, we aim at better understanding the orientations regarding the governance structure of the MAB, with particular interest in the central role of the city of Barcelona in shaping citizen preferences regarding metropolitan governance.

We proceed as follows. In section 2, we offer a brief overview of the MAB focusing both on its irregular institutionalization process, and on its demographic and geographic features. In section 3 we present the main hypotheses of the paper, and section 4 describes the data and methods. Section 5 presents and discusses the main results. Finally, we draw general conclusions and discuss further research.

## **2. Development and evolution of the Metropolitan Area of Barcelona**

Unlike Canada or the United States, Spain lacks a unified statistical classification of urban areas both at the state and regional level. Only very recently the Spanish census agency has provided consistent data on links between municipalities based on mobility. Nevertheless, this step has not been complemented by an effort to establish accurate boundaries for the about 25 metropolitan areas with a population over 200,000 likely to exist in Spain. As a result, no official definition allows for a clear distinction between *urban* and *metropolitan* areas in Spain. In particular, up to three definitions of the urban region have been adopted in the area of Barcelona: city-region, metropolitan region and metropolitan area. Each one refers to a different territory and implies the operation of different institutions, as summarized in Table 1 and Table 2.

[Table 1 around here]

Catalonia is one of the 17 Spanish regions. The Barcelona city-region is taken to cover the spatial extent of the province of Barcelona—one of four within Catalonia—, classified as NUTS3 within the European NUTS (Nomenclature of Territorial Units for Statistics) classification. Provinces are the electoral districts in legislative elections in Spain and a second level of local government throughout the country. Their indirectly elected assembly and executive boards have responsibilities in assisting the municipalities within their boundaries, typically in municipal tax collection and cross-boundary public service delivery (e.g., waste management). The province of Barcelona gathers almost 75 percent of the Catalan population and contains 311 municipalities and 11 counties (which are supra municipal authorities created by the Catalan Parliament in 1987). The urban structure of the city-region is that of a significantly high proportion of the overall population concentrated within a few small towns and cities, with a correspondingly small proportion of the population spread out widely across the wider city-region. Table 2 shows that over 50% of the population of the city-region lies within 7 municipalities with populations above 100,000. By contrast just over 20% of the population resides in 161 municipalities smaller than 20,000, distributed over more than 87% of the city-region.

[Table 2 around here]

Inside the province, the metropolitan region of Barcelona gathers 164 municipalities. Naturally this territory presents a higher population density than the city-region, and is considered the second ring of the Barcelona agglomeration (sometimes also known as “the metropolitan arc” because of the system of cities surrounding the metropolitan area). The metropolitan region is considered the functional area of Barcelona by urban planners, geographers and architects since the 1960s (Artal 2002). On several occasions, metropolitan plans were drafted taking this scale into account. However, a narrower conception of the metropolitan reality—the metropolitan area—was always adopted. The idea of the metropolitan region as the adequate functional space for planning was finally consolidated in the late 1990s with the creation of the Metropolitan Authority of Transport. This consortium formed by different levels of administrations is responsible for

the cooperation, coordination, planning and financing of public transit services and infrastructures, thus fostering mobility across most of the city-region through the integration of public transit systems.

The Metropolitan Area of Barcelona (MAB) gathers 3.2 million inhabitants and 36 municipalities; most of them are immediately contiguous and some cities are physically adjacent and connected by subway to Barcelona. Created in July 2010 and officially constituted after the local elections of May 2011, the MAB has responsibilities in public transport, environment, economic development and urban planning. Despite this new design, the MAB is not directly elected: mayors and councilors of the different municipalities have seats in the metropolitan council according to their population. The political relationship of citizens living in the metropolitan area is therefore articulated through local elections.

There is not, in conclusion, a single conception of what is the urban region of Barcelona. Actually, other research on spatial dynamics within the wider metropolitan region has yielded alternative interpretations of the true extent of the functional metropolitan urban region of Barcelona.

Different reasons explain this disparity of definitions: geographic and demographic and political.

## **2.1 Geography and demography of the Metropolitan Area of**

### **Barcelona**

In the last 50 years, the metropolitan area of Barcelona has experienced a demographic evolution similar to the biggest Spanish cities. Three main phases of evolution have been commonly distinguished (Nel-lo 2004, Martí-Costa et al. 2011). From 1960 to 1975, big cities grew with the arrival of migrants from rural Spanish regions. The City of Barcelona experienced an accelerated population growth during the 1960s and the 1970s, reaching 1.9 million inhabitants in 1979, while the Metropolitan Area of Barcelona reached 3 million.

From 1975 onwards the growth has continued, but its pace has been slower, and over the last two decades urban areas have evolved towards a relative sprawl model. The second phase (up until the 1990s) is characterized by a process of suburbanization and an increase of inter-municipal metropolitan migrations. Central cities suffered from a steady loss of population who moved out of the city to the surrounding municipalities, thus increasing the

population of second-ring municipalities. For instance, in 1996, the City of Barcelona had 1.5 million citizens, while the metropolitan region of Barcelona reached 4.2 million (Serra 2003). Two factors explain this process: the housing market (differences of housing prices and supply) and the capacity of commuting (higher motorization and public transport).

Starting in 2000, the present trend involves an increasing consumption of land, a loss of population in central municipalities, and increased growth occurring in metropolitan peripheries with relatively lower density patterns. This phase is characterized by two simultaneous trends. First, the arrival of foreign population to central cities; they represented 17% of total population of the City of Barcelona in 2012. Its population has been hitherto stable around 1.6 million inhabitants. Second, and paradoxically, there has been an increase of intra metropolitan migration, especially towards the metropolitan region. Catalan and Spanish societies have been historically characterized by their low residential mobility, with individuals making few changes of residence in their lifetime. This trend has changed in the last decade. In 2007 around 15% of the Catalan electorate lived in a different municipality to that in which they had lived 10 years earlier (Alberich 2010). These changes presented a predominant direction of movement that can be best summarized as a shift “inside out and from large to small” (Alberich 2010)—the migratory flows have been from the Barcelona conurbation towards the regions lying in the interior of Catalonia, and from the more populated municipalities to smaller cities.

Summing up, there are clear differences in the concentration of population in urban areas and the weight of the central city (Barcelona). This weight decreases when the whole city-region (either the province of Barcelona or the metropolitan region) is taken into account. The weight of the city of Barcelona is really significant when taking into account just the metropolitan area.

## **2.2 Institutionalization of the Metropolitan Area of Barcelona**

Although the urban agglomeration of Barcelona has been progressively growing and the borders have become more and more blurred, debates on the specific implementation of the metropolitan governance have only focused on the narrower conception of the metropolitan area—i.e., only 36 municipalities. Indeed, the city of Barcelona and its inner metropolitan ring have shared the same institutional organization, regional plan and management of services

for the last 40 years.<sup>1</sup>

From 1974 to 1987 there was a metropolitan government, which was abolished by the Catalan Parliament and replaced by two special districts (public transportation and environment) and a voluntary association of inter municipal cooperation, each one covering a different number of municipalities. In 2009 the municipalities of the MAB decided to create the Consortium of the Metropolitan Area of Barcelona, which gathered the three existing metropolitan entities, to prepare the institutional transition to the Metropolitan Area of Barcelona (MAB). The law on the MAB passed on July 2010, putting an end to the institutional fragmentation with the creation of a new metropolitan body. However, several definitions of the urban agglomeration coexist—e.g., the Metropolitan Authority of Transport currently covers more than 200 municipalities, going beyond the metropolitan region of Barcelona.

This gap between the political and functional urban agglomeration (Young and Garside 1982) is due mainly to political reasons. As explained above, the demographic weight of the City of Barcelona has decreased over the years in favor of the larger metropolitan region and the city-region. Nevertheless, within the limits of the MAB the City of Barcelona still accounts for 50 percent of the population. The inclusion or exclusion of some municipalities (passing from 27 in 1987 to 36 in 2010) responds more to a partisan logic (political alliances at the local and regional level) than to any other criteria. Moreover, traditionally the City of Barcelona has been representative of “the metropolitan” due to its political leadership among other municipalities. Indeed, the operation of the previous metropolitan government (the Metropolitan Corporation of Barcelona) was characterized by the conflicts between the mayor of Barcelona—Pasqual Maragall—and other suburban mayors who accused Maragall of being too dominant. The new institution created in 2011 had the approval of the mayors, but the perception that the City of Barcelona tends to dominate the metropolitan area has not disappeared. Actually, the mayor of Barcelona is the president of the MAB, and the budget of the City of Barcelona in 2012 was four times larger than the budget of the MAB.

Parallel to the institutionalization of the metropolitan area there has been a process of metropolitan strategic planning, conceived of as the instrument to integrate a collective vision and to design the main guidelines of the development of the metropolitan (Tomàs 2005). In 2003 the first Strategic Metropolitan Plan was approved, including 36 municipalities. It was revised in 2007 and a second Strategic Metropolitan Plan was approved in 2010. The Metropolitan Strategic Plan includes the participation of representatives from 36

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<sup>1</sup> For a historical account of metropolitan governance in Barcelona, see Tomàs (2010).

municipalities and other actors such as employer organizations, trade unions, chambers of commerce, Fair of Barcelona, Port and Airport of Barcelona, and universities. Other municipalities within the second ring or the metropolitan arc demanded a role in the process, but finally their involvement was very limited and they could not enter the association.

Underlying the Metropolitan Strategic Plan was a shared weariness towards institutional fragmentation and the belief that a single, common metropolitan authority would perform better for local interests. Indeed, in 2010 all political parties gave their vote for its creation. However, both the process of strategic planning and the approval of the law on the metropolitan area have been directed by political elites, without actual citizen participation.

In conclusion, a number of reasons would indicate that the existence of a metropolitan identity among the population of the Metropolitan Area of Barcelona is quite unlikely. First, the metropolitan institutional path has been far from straightforward and clearly dominated by the metropolitan center (Barcelona). Second, albeit recent, the recent metropolitan institution is not elected as are the strongly institutionalized upper and lower tiers of government in Catalonia. Third, such identification would take place in an already rich cognitive political map, characterized by strong subjective national identifications (either Spanish or Catalan) and equally strong levels of attachment to municipalities. Fourth, the process of metropolitan strategic planning has been led by political and economic elites with an exclusive participation of major interest groups and organizations. And fifth, the significant level of residential mobility occurred within the (already blurred) metropolitan boundaries would make it difficult for a metropolitan identification to settle down.

### **3. Hypotheses**

According to the context given above, metropolitan identity might be in part explained, if not by strong institutionalization, by the long-term cooperation among metropolitan municipalities, and we expect it to be deeply rooted in the territory, based upon the relationship between one large and strong center (Barcelona) and a number of much smaller surrounding entities, in contrast with other types of identification (e.g., SNI).

In this scenario, what we first expect to find is that due to its demographic and historical weight, the city of Barcelona has a specific effect on metropolitan identity. Hence:



Hypothesis 1 All else equal, the citizens of Barcelona will have a stronger metropolitan identification than the citizens of the surrounding metropolitan municipalities.

Aside from the intensity of their metropolitan identification, we also expect that given the central role of the city of Barcelona in the MAB, and given also the size and fragmentation of the rest of metropolitan municipalities, the citizens of Barcelona will present specific orientations regarding metropolitan governance. In particular, we expect to find that citizens of Barcelona present an expansive, dominant view of metropolitan governance (i.e. higher support to a unified metropolitan government) than citizens of the surrounding metropolitan municipalities, who will prefer their local governments to retain their current power. Thence:

Hypothesis 2 All else equal, the citizens of Barcelona will present a higher support to a unified metropolitan government than the citizens of the surrounding metropolitan municipalities.

Furthermore, besides the effect of Barcelona as the metropolitan core and other possible individual-level variables such as education and age, city size may exert an effect on metropolitan identity on its own. Since there is ample size variation among metropolitan municipalities, we could expect that, leaving aside Barcelona, city size may have an effect on the metropolitan identity among the citizens of the surrounding metropolitan municipalities. If it were the case, part of the difference in metropolitan orientation between citizens of Barcelona and the rest could be explained by specific features of smaller cities.

The literature on size and democracy has emphasized that people living in smaller cities present higher levels of electoral turnout, attachment to their municipalities, and stronger levels of civic participation (Dahl and Tufte 1973, Oliver 2001). Following the same reasoning as in the relationship between city size and attachment to municipality, and being the metropolitan area a meso level of government linked to inter municipal cooperation and dependent upon municipal elections, we might expect that the community features that affect citizens' attachment to their municipalities might also affect these citizens' attachment to the metropolitan level. Thus:

Hypothesis 3a All else equal, the citizens of smaller metropolitan cities will have a stronger level of identification with the metropolitan area than those

living in larger metropolitan cities (without Barcelona).

Yet, the assumptions made for Hypothesis 3a have not rested unchallenged. For instance, stronger attachment to communities might not be explained by city size but by lower levels of urbanization or even by endogenous factors that confound the effect of city size (Verba and Nie 1972). Besides, other factors such as length of residence (Kasarda and Janowitz 1974) and the size of the city-region (Lidström 2010) have been found to have significant effects on community attachment and political orientations, sometimes beyond city size.

Traditionally the Catalan model of local government has produced strong ties with the municipality, and city size is a strong predictor for electoral turnout at every level (Magre et al. 2011). Moreover, social and economic indicators show that small metropolitan cities are not rural areas, but the result of the large scale process of metropolitan residence mobility occurred during the last 15 years, which has yielded an uneven allocation of mobile population within the MAB, producing an urbanization burst and population growth of small metropolitan communities (Otero-Vidal and Serrano 2013). Considering these factors we might expect the opposite to Hypothesis 3a to be plausible, especially due to residential mobility. Hence:

Hypothesis 3b All else equal, the citizens of smaller metropolitan cities will have a weaker level of identification with the metropolitan area than those living in larger metropolitan cities (without Barcelona).

## **4. Data and method**

We use data from a survey carried out within the MAB in 2013. The sample is 800 individuals (16 years old or older) with at least one year of residence in Catalonia. The sample follows a distribution of 400 individuals for the city of Barcelona, and 400 from the metropolitan area. Within each distribution, the sample is stratified on municipal population size, with random sampling of units (households) and final selection of the interviewed person through quota crossed by sex and age. Data have been weighted according to the actual population weight of each territorial area. The total sample error is  $\pm 3.46\%$  (95.5% C.I.,  $p=q=0.5$ ). For each territorial area the sample error is  $\pm 4.9\%$  (95.5% C.I.,  $p=q=0.5$ ).

### **4.1 Dependent variables**

The intensity of the respondents' metropolitan identification is our outcome variable in hypotheses 1, 3a and 3b. Metropolitan identity is measured through a 0 to 10 scale, where 0 means "no identification" and 10 "full identification" with the MAB. Similar scales were used in the questionnaire to measure the respondents' level of identification towards their municipality, Catalonia and Spain.

On the other hand, support to a unified metropolitan government (Hypothesis 2) is measured through the question "Would you agree or disagree on the direct election of one single mayor for the whole metropolitan area?" It is a categorical variable with value 1 if respondents agree to have one single mayor for the MAB, and 0 otherwise.

## **4.2 Independent variables**

The main independent variable for our first and second hypotheses is the area of residence, which has only two values: Barcelona, or the rest of the metropolitan area. Hypotheses 3a and 3b include city size and length of residence as main predictors. Finally, we use individual-level controls such as age and level of education.

# **5. Evidence**

## **5.1 Distribution of the metropolitan identification**

We approach the extent to which citizens have a metropolitan identity in two ways. First, we explore the degree of knowledge among the metropolitan population about the fact of living within the boundaries of the MAB. **Table 3** shows that despite its recent institutionalization, there is widespread knowledge about its existence. However, the table also shows that despite knowledge of the MAB is high in all areas of residence, most respondents living in the city of Barcelona (96.75 percent) know that their city belongs to the MAB, while knowledge is less widespread (but still high) among those living in the surrounding metropolitan municipalities (82.5 percent).

[**Table 3** around here]

A second way to measure metropolitan identity is to compare it with the level of identification towards other political entities, namely their municipality, Catalonia, and Spain through a 0 to 10 scale.

Results presented in Figure 1 show that, despite its weak institutionalization, metropolitan identity is quite high, with slight differences in the distribution of identification between the municipality and the MAB. Three out of four metropolitan citizens present a high identification with their own municipalities (between 7 and 10 on the scale, average of 7.81), while the percentage of citizens that present such high identification with the Metropolitan Area drops slightly to 70 percent (average of 7.42).

In contrast, the difference of identification between national entities is sharp. Data show a very uneven distribution of identifications with Catalonia and Spain, with almost 80 percent of the metropolitan population showing a high level of identification with Catalonia (average of 8.03), and this percentage dropping to 50 percent with respect to Spain (average of 6.11).<sup>2</sup>

[Figure 1 around here]

## **5.2 Center vs. Periphery and metropolitan identification**

### **5.2.1 The role of the center in metropolitan identity**

Focusing on our first hypothesis, we expect that the citizens of Barcelona present a stronger level of identification with the MAB, which in turn would be in accordance with their higher level of knowledge about the MAB.

Table 4 shows the distribution of metropolitan identity among the metropolitan population along different variables. For each variable we present the percentage of respondents at each level of identification with the MAB. In order to ease interpretation, the 0-10 scale has been collapsed into three categories of metropolitan identification: low,

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<sup>2</sup> Indicators of Catalan and Spanish national identity in Catalonia may be sensitive to the current problems regarding the relation between Catalonia and Spain. Subjective national identification variables are not used in this paper.

medium, and high.<sup>3</sup>

[Table 4 around here]

The results show that, as expected, citizens of Barcelona present higher levels of metropolitan identity than citizens of the surrounding metropolitan area. This holds both for the percentage of respondents that present a high level of identification, and in their average level of metropolitan identification. Moreover, respondents with better knowledge of the MAB present higher levels of metropolitan identification.

Besides, metropolitan identification does not seem to present a neat sociodemographic profile. In effect, for all variables, most respondents present high levels of metropolitan identification, with average levels above 7 in all relevant cases. We may observe, first, that identification with the MAB is a bit higher (on average) among older citizens than among younger ones. However, other age groups such as 30-44 present higher percentages of people having a high level of metropolitan identification. A similar pattern occurs regarding the relationship between level of education and metropolitan identification, where the less educated present lower percentages of high identification (and a significant percentage of No Answer). Finally, respondents from smaller communities present an overall lower level of metropolitan identification than people in any other larger type of community. However, the pattern does only seem to hold for the extreme cases, but not in the middle range categories of community size.

[Table 5 around here]

Table 5 presents the results of the OLS model testing Hypothesis 1. Despite the low proportion of variation explained by the model, the area of residence proves a strong predictor of the level of metropolitan identification. As showed in Model 1, controlling for knowledge

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<sup>3</sup> These categories are not evenly distributed in terms of scale points: the lower level gathers 5 points (0-4), the medium level 2, and the higher level 4. Due to the unbalanced distribution of the values of identity (especially municipal and metropolitan), the decision was made so that the categories gathered relevant percentages of respondents.

of the MAB, people living in the surrounding metropolitan area presents on average smaller levels of metropolitan identity compared to those living in Barcelona. Moreover, the area of residence proves robust to further controls such as age and education. Of these covariates, only age shows some effect on the level of metropolitan identity, with older and middle-aged citizens showing higher levels of metropolitan identity than younger citizens.<sup>4</sup>

Living in Barcelona, then, seems to be a key factor in the level of metropolitan identity. But, is it also a key factor in explaining different orientations towards metropolitan governance? Hypothesis 2 poses that citizens of Barcelona will show higher support for a unified metropolitan government than citizens of the surrounding metropolitan area.

[Table 6 around here]

**Table 6** shows the result of the logistic regression of area of residence on the support to the direct election of one single mayor for the whole MAB. The first column presents the brute effect of the area of residence on a unified metropolitan government. In effect, citizens living in the surrounding metropolitan cities present a significantly lower level of support to electing one single metropolitan mayor compared to those living in Barcelona, the coefficient being robust to the addition of potentially strong controls such as length of residence. We would expect that long time or lifelong residents have significantly different views on the issue than recent settlers. Yet, none of these variables has a significant effect on the support to a unified metropolitan government (except two educational categories). Moreover, both BIC and AIC criteria indicate that the inclusion of more variables does increase neither the quality nor the selection of the model, which isolates the area of residence, and specifically being at the center of the metropolitan area, as a key factor shaping political orientations regarding governance.

### 5.2.2 Metropolitan identity in metropolitan periphery

We now focus our attention on the surrounding municipalities of the MAB. We want to

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<sup>4</sup> City size has not been included in the model due to its correlation with the area of residence. The city size variable includes a single category for Barcelona, which exactly overlaps with one of the categories of the area of residence.

test whether, sorting Barcelona out of the sample, community size, length of residence and municipal attachment have an effect on citizens' identification with the metropolitan area. When we considered the whole sample in Table 4 we observed an unclear effect of community size on metropolitan identification. Table 7 shows the results only for those respondents living in the surrounding metropolitan cities.

[Table 7 around here]

People in larger cities present a higher level of metropolitan identification than people in cities smaller than 20,000. Smaller cities present 10 points less people with high levels of metropolitan identification than larger cities. The difference doubles when comparing to cities between 20,000 and 100,000. Moreover, results not reported here show that people in smaller metropolitan cities also present a lower degree of knowledge of the Metropolitan Area and are less eager to elect one single metropolitan mayor.

The first column in **Table 8** confirms that, compared to those people living in medium-sized metropolitan cities, citizens in smaller metropolitan cities tend to show, on average, a lower degree of metropolitan identification, giving support to Hypothesis 3b.

Although our data are too limited to allow for a full explanation of this phenomenon, the data show that respondents living in smaller cities were mainly born in Barcelona or the rest of Catalonia, but not in other metropolitan cities, they present higher levels of education, and speak mainly Catalan. This is coherent with the consistent population loss of Barcelona during the last years, resulting in a higher proportion of people with shorter lengths of residence in smaller cities.

[Table 8 around here]

The picture is, therefore, in accordance with the direction of residential mobility from the metropolitan center to the periphery that has taken place in the metropolitan region of Barcelona, resulting in a significant population growth of smaller metropolitan cities (Alberich 2010), and a suburbanization process that has fostered a tentacular model of urban growth in cities that still presented lower levels of urban density (Pujadas 2009).

This situation, in turn, is part of a general process of metropolitanization of the area of Barcelona since the mid 1990s, in which the city of Barcelona has received a large share of foreign immigrants at the same time that large proportions of native population have

sprawled to the metropolitan periphery, even beyond the boundaries of the MAB. In this sense, census data regarding residential mobility between the 1990s and 2011 report an unstopped growth of the volume of residential movements towards smaller metropolitan cities (below 50,000 inhabitants), with positive net migration rates consistently over 30% in the case of cities below 10,000 during the last 15 years (Pujadas 2009).

Unlike classical migration patterns historically occurred in Catalonia and Spain, which were strongly related to labor needs, recent survey data (Porcel 2011) report family cycles and the seek for better living environments as the main factors that explain recent residential mobility, all stimulated by a dramatic growth in housing supply and lower prices in those smaller cities, and facilitated by the close-knit weave of metropolitan highways, subway, railroads, and bus lines.

The relationship between residential mobility and city size may explain the results of the second column of Table 8, when we control for length of residence. Note that the coefficient indicating a lower degree of metropolitan identification is smaller, but remains significant. Besides, no significant effect of the length of residence on the metropolitan identity arises. Yet, again, the results should be interpreted carefully. First, because the subsamples corresponding to the smaller categories of the length of residence are not large enough (see Table 7). Second, and perhaps more importantly, because, as we just pointed out, in our case length of residence and city size are actually not unrelated variables, since smaller cities have been favored as destination of residential mobility (Pujadas 2009).<sup>5</sup>

## 6. Discussion

This paper has aimed at shedding some light on the understanding of citizen orientations and patterns of identification toward the Metropolitan Area of Barcelona. Despite being recent, indirectly elected, weakly institutionalized, and built upon an already multi-tier government structure, metropolitan citizens in Barcelona show high levels of knowledge and identification towards their metropolitan area.

In order to explain metropolitan identity, we have explored two sets of hypotheses related to the evolution of the MAB. On one hand, the institutionalization of the MAB has been built around the role played by the city of Barcelona, which historically has been central, and

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<sup>5</sup> A  $\chi^2$  test was performed between both variables:  $\chi^2(15, N = 776) = 96.22, p = 0.00$ .



gathers most metropolitan population. In this sense, results show that living in the center of the Metropolitan Area explains part of the variation in metropolitan identity. In particular, not only citizens within Barcelona have better knowledge of the MAB and higher levels of identification with it, but they present distinct political orientations towards metropolitan governance, giving wider support to the proposal of having one single mayor for the whole metropolitan area compared to the status quo.

A second set of conflicting hypotheses have tested the effect of city size on metropolitan identification. The theory behind these hypotheses is built upon, on one hand, the known effect of city size on the determinants of political participation and civic attachment. In this sense, we hypothesized that people living in smaller communities would present higher levels of attachment to the metropolitan area. On the other hand, we also expected that the recent, large-scale process of residential mobility occurred in the MAB, with deep implications in political behavior, might also have a counter effect on the orientations regarding the metropolitan area, specifically depressing metropolitan identification. Results tend to support our second view—people living in smaller metropolitan cities show lower levels of metropolitan identification than those living in larger communities.

Although the limitations of our data indicate that results should be handled with care, our findings are promising. On one hand, this is the first study ever to explore the patterns of identity in the Metropolitan Area of Barcelona and, to our knowledge, of any metropolitan area within Spain. On the other hand, our results contribute to the study of the complex relationship between place and movement, between living in a metropolitan center and the effects of intense processes suburbanization on the relationship between citizens and the political system.

Further research on this topic will tackle a number of research questions that were not dealt with at this stage. In particular, it shall include a qualitative assessment of the meaning of “being metropolitan” among the citizenship, which shall allow the exploration of what specific elements are recognized as “metropolitan”, how citizens envision their own metropolitan identity, or whether citizens from the central city and suburban citizens differ in their conceptions of their metropolitan identity. We are convinced that conducting this further research will provide a better understanding of metropolitan identity, which is in need of more thorough explorations.

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Table 1. Definitions of the city-region of Barcelona

Definition	Population 2012	% total pop.	Area (km <sup>2</sup> )	Density (hab/km <sup>2</sup> )	Institutions	Representation
Catalonia	7,570,908	100	32,113	236	4 provinces, 41 counties, 947 municipalities	Direct
City-region (province of Barcelona)	5,552,050	73.3	7,728	718	1 province, 11 counties, 311 municipalities	Indirect
Metropolitan region	4,798,143	63.4	3,239	1,481	7 counties, 164 municipalities	No representation
Metropolitan area	3,239,337	42.8	634	5,111	1 metropolitan authority, 4 counties, 36 municipalities	Indirect
City of Barcelona	1,620,943	21.4	99	16,340	1 municipality	Direct

Source: Idescat

Table 2. Spatial structure of the municipalities of the Barcelona city-region (2012)

Population range	Metropolitan area		Metropolitan region		Province of Barcelona	
	# municip.	% of total population	# municip.	% of total population	# municip.	% of total population
> 300,000	1	50.0	1	32.1	1	29.2
200-300,000	2	14.8	4	17.8	4	16.2
100-200,000	1	3.7	2	4.8	2	4.4
50-100,000	7	15.6	11	15.0	12	15.0
20-50,000	11	12.0	22	13.6	25	14.2
5-20,000	11	3.6	65	14.3	88	16.5
<5,000	3	0.3	59	2.3	179	4.5
Total	36	100	164	100	311	100

Table 3. Percentage of citizens of the Metropolitan Area of Barcelona who know that they live in it

<i>Do you live in the metropolitan area of Barcelona?</i>				
<b>Residence</b>	<b>Yes</b>	<b>No</b>	<b>NA</b>	<b>N</b>
Barcelona	96.75	2.00	1.25	400
Metropolitan Area (without Barcelona)	82.50	15.50	2.00	400

Figure 1. Four types of identification among the metropolitan population with the respondents' own municipality, the metropolitan area, Catalonia, and Spain

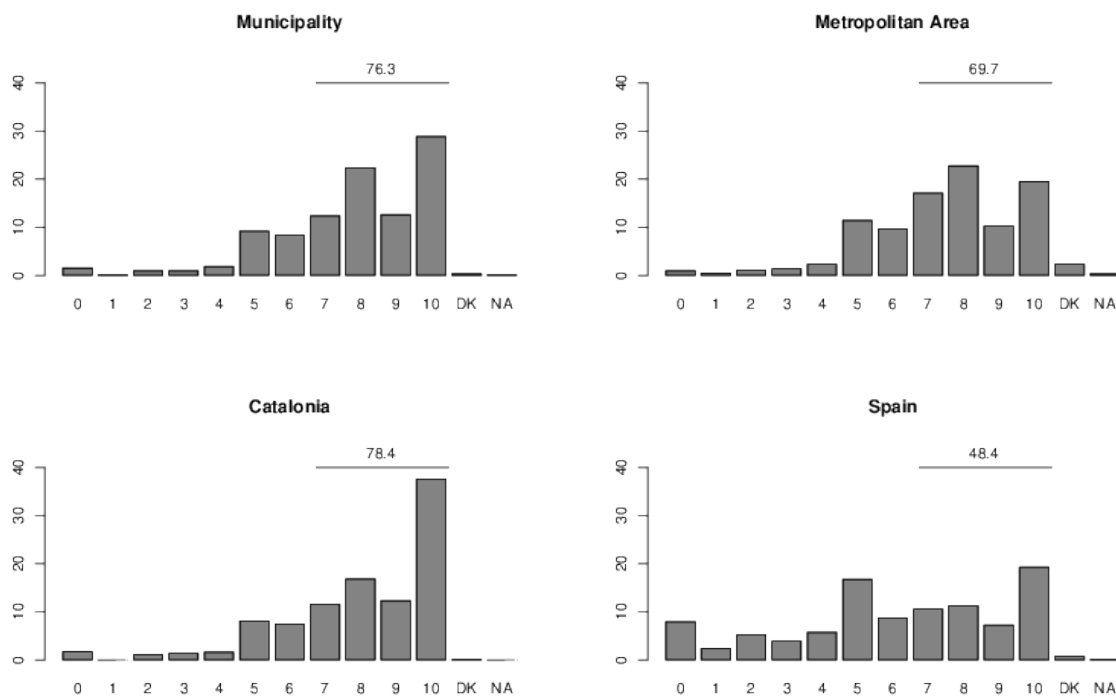


Table 4. Description of the level of identification with the Metropolitan Area of Barcelona through a set of individual variables

	Level of metropolitan identification						
	Low [0-4]	Medium [5-6]	High [7-10]	NA	Mean <sup>a</sup>	Std. Dev.	N
<i>Area of residence</i>							
Barcelona city	3.00	21.50	72.50	3.00	7.76	2.01	400
Metropolitan Area	5.00	25.75	66.75	2.50	7.08	2.10	400
<i>Knowledge of the Metropolitan Area</i>							
Yes	4.02	22.96	70.78	2.25	7.47	2.09	717
No	4.26	28.62	62.86	4.26	6.92	2.06	70
<i>Gender</i>							
Male	6.00	26.39	65.77	1.84	7.06	2.22	382
Female	2.12	21.00	73.29	3.59	7.76	1.90	418
<i>Age</i>							
16 - 29	3.34	26.00	68.59	2.07	7.18	1.94	149
30 - 44	3.59	22.32	72.48	1.61	7.43	2.04	246
45 - 59	6.06	23.03	67.63	3.27	7.33	2.19	182
60 +	3.12	23.77	69.05	4.06	7.64	2.14	223
<i>Education</i>							
Less than primary	4.10	20.90	62.71	12.29	7.57	2.19	24
Primary	5.60	20.96	70.82	2.62	7.59	2.25	195
High School	1.31	23.63	73.15	1.90	7.69	1.87	156
Vocational	3.06	19.29	73.91	3.74	7.45	1.99	160
University	4.92	28.06	65.08	1.94	7.12	2.10	263
<i>City size</i>							
< 20,000	5.00	42.50	52.50	0.00	6.52	2.42	40
20-100,000	4.35	20.77	72.46	2.42	7.21	1.95	207
> 100,000	5.96	27.15	63.58	3.31	7.07	2.22	151
Barcelona	3.00	21.50	72.50	3.00	7.76	2.01	400

<sup>a</sup> No answer and Do not know have been omitted.

Table 5. Results of the OLS regression model of area of residence on the level of metropolitan identification

	Model 1	Model 2
(Intercept)	7.57*	7.43*
	(0.10)	(0.50)
<i>Area of residence</i> [Ref. Barcelona]		
Metropolitan Area	-0.27*	-0.35*
	(0.15)	(0.15)
<i>Knowledge of MAB</i> [Ref. No]		
Yes	0.26	0.27
	(0.26)	(0.26)
<i>Age</i> [Ref. 16-29 years old]		
30 to 44 y.o.		0.41*
		(0.22)
45 to 59 y.o.		0.25
		(0.23)
60 + y.o.		0.46*
		(0.23)
<i>Education</i> [Ref. < Primary]		
Primary		0.09
		(0.48)
High school		0.15
		(0.49)
Vocational		-0.02
		(0.49)
University		-0.56
		(0.48)
<i>N</i>	778	778
<i>R</i> <sup>2</sup>	0.01	0.03
Resid. sd	2.06	2.05

Standard errors in parentheses

\* indicates significance at least  $p < 0.1$

Table 6. Logistic regression model of the effect of place of residence (Metropolitan area vs. city of Barcelona) on the agreement to elect one single mayor for the Metropolitan Area

	Model 1	Model 2	Model 3	Model 4
(Intercept)	0.33* (0.10)	0.27 (0.25)	-0.19 (0.53)	0.29 (0.83)
<i>Residence</i> [Ref. Barcelona]				
Metropolitan area	-0.30* (0.14)	-0.29* (0.15)	-0.40* (0.15)	-0.43* (0.16)
<i>Knowledge of MAB</i> [Ref. No]				
Yes		0.06 (0.24)	0.06 (0.24)	0.10 (0.25)
<i>Education:</i> [Ref. < Primary]				
Primary			0.84* (0.45)	0.83* (0.45)
High School			0.68 (0.47)	0.65 (0.47)
Vocational			0.93* (0.47)	0.91* (0.47)
University			0.20 (0.46)	0.16 (0.46)
<i>Age</i> [Ref. 16-29 years old]				
30 to 44 y.o.			0.10 (0.22)	0.13 (0.22)
45 to 59 y.o.			-0.29 (0.23)	-0.21 (0.24)
60 + y.o.			-0.12 (0.22)	-0.03 (0.25)
<i>Length of residence</i> [Ref. <2 years]				
2 to 5 years				0.00 (0.75)
6 to 10 years				-0.46 (0.68)
11 to 20 years				-0.49 (0.67)
>20 years				-0.58 (0.67)
Whole life				-0.59 (0.66)
<i>N</i>	800	800	800	800
AIC	1102.01	1103.94	1095.56	1102.68
BIC	1139.48	1160.15	1301.69	1402.49

Standard errors in parentheses

\* indicates significance at least at  $p < 0.1$



Table 7. Description of the level of identification with the Metropolitan Area of Barcelona only for respondents from the surrounding metropolitan municipalities

	<i>Level of metropolitan identification</i>							
	Low [0-4]	Medium [5-6]	High [7-10]	NA	Mean <sup>a</sup>	Std. Dev.	N	
<i>City size</i>								
< 20,000 -	5.00	42.50	52.50	0.00	6.52	2.41	40	
20-100,000	4.35	20.77	72.46	2.42	7.21	1.94	202	
> 100,000	5.96	27.15	63.58	3.31	7.06	2.22	146	
<i>Length of residence</i>								
< 2 years	9.05	27.62	63.34	0.00	6.94	2.97	11	
2 to 5 years	6.69	16.64	76.67	0.00	7.18	1.96	30	
6 to 10 years	4.98	25.16	67.30	2.56	7.22	2.37	77	
11 to 20 years	3.28	24.84	69.37	2.51	7.23	1.84	118	
> 20 years	4.63	24.11	68.75	2.51	7.38	2.23	230	
Whole life	3.12	22.66	70.78	3.44	7.62	1.93	310	

<sup>a</sup> NA omitted.

Table 8. Results of the OLS regression model of city size on metropolitan identification

	Model 1	Model 2
(Intercept)	7.40*	7.37*
	(0.15)	(0.22)
<i>City size</i> [Ref. 20-100,000]		
< 20,000	-0.70*	-0.67*
	(0.37)	(0.38)
> 100,000	-0.15	-0.14
	(0.23)	(0.24)
<i>Length of residence</i> [Ref. > 20 years]		
< 2 years		0.02
		(0.71)
2 to 5 years		-0.07
		(0.56)
6 to 10 years		-0.19
		(0.35)
11 to 20 years		0.09
		(0.32)
Whole life		0.14
		(0.29)
N	388	388
R <sup>2</sup>	0.01	0.01
Resid. sd	2.13	2.15

Standard errors in parentheses

\* indicates significance at least at  $p < 0.1$