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 the fact that 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 metropolitan identification among the Barcelona metropolitan population. First, we analyze the relationship between place of residence and metropolitan identification. Second, we explore the shaping of the orientations of citizens regarding the governance structure of the MAB, with particular interest in the central role of the city of Barcelona. Results underscore the role of the core city and the results of residential mobility in shaping both metropolitan identity and governance orientations.

Keywords— metropolitan areas, metropolitan identity, metropolitan governance, suburbanization, democracy, local government

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 is 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 has fewer than 1,000 inhabitants. On the other hand, only 36 municipalities integrate the 3.5 million metropolitan citizens within a highly populated and

^{*}To be published in the "Citizens in City-Regions" special issue of the *Journal of Urban Affairs* [forthcoming].

densely urbanized metropolitan area, with a number of medium-sized to small-sized cities surrounding Barcelona, and integrated into a closely 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 (Agranoff, 2010). 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, transportation, health, education, social welfare, language, and culture (Aja and Colino, 2014). In turn, municipalities also present directly elected legislatures, which elect the mayor, but have weak fiscal autonomy. Actually, the share of local government expenditure in Spain shows that the distribution between levels of government in the last 30 years has evolved mainly with an increase of expenditure at the regional level at the expense of the central level, while the local government share has remained basically constant since then (around 13%) (Bosch and Espasa, 2006). This in turn adds complexity to the inter-governmental relations within this three-tier structure (Bolleyer, 2006; López-Nieto, 2008; Solé-Ollé and Sorribas-Navarro, 2008). Part of the municipal revenue comes from direct and indirect taxes (e.g., on property and property transactions), but most of it comes from transfers from the central government. In this sense, further decentralization that gives more.

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 as embodying 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 and parties. First, in Catalonia separate elections are held for national, regional, and local legislatures, and the turnout rate in regional and local elections has been notable (averaging a turnout rate of 61% over eligible voters). 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 Metropolitan Area of Barcelona (MAB) represents an exception in the Spanish context. In formal legal terms, a "metropolitan area" in Spain 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 so —as in Barcelona and Valencia during the 1990s—it has been for 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 the consolidation phase) 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 few decades, metropolitan governance has not been a prominent issue on the political agenda, either at the national level or 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 to 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 various 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 of orientations to 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 at either the state or regional level. Only very recently has the Spanish census agency provided consistent data on links between municipalities based on mobility. Nevertheless, this step has not been supplemented by an effort to establish accurate boundaries for the about 25 metropolitan areas with a population of 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.

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

Table 1: Definitions of the city-region of Barcelona.

Definition	Population 2012	% total pop.	Area (km^2)	Density (hab/km^2)	Institutions	Represent- ation
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

Statistics) classification. Provinces are the districts in legislative elections in Spain and a second level of local government throughout the country. Their indirectly elected assembly and executive boards have the responsibility to assist the municipalities within their boundaries, typically in municipal tax collection and cross-boundary public service delivery (e.g., waste management). The province of Barcelona includes 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 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: Spatial structure of the municipalities of the Barcelona city-region (2012)

	Metropo	olitan area	Metropol	itan region	Province of	of Barcelona
Population range	# 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

Inside the province, the metropolitan region of Barcelona includes 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 has been 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 used. 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 various 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) includes 3.2 million inhabitants and 36 municipalities; most of them 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 the areas of public transportation, environment, economic development and urban planning. Despite this new design, the MAB is not directly elected: mayors and councilors of the various 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 the urban region of Barcelona is. 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. Various factors 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 demographic evolution similar to the biggest Spanish cities (see Figure 1) 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 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 onward the growth has continued, but its pace has been slower, and over the last two decades urban areas have evolved toward 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 citizens who moved out of the city to the surrounding municipalities, thus

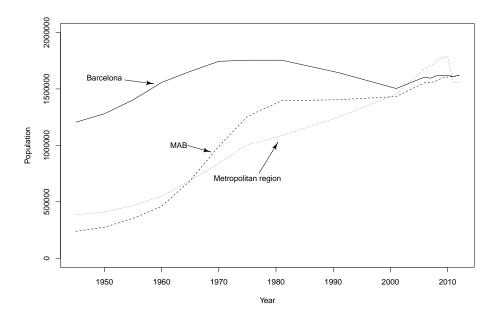


Figure 1: Evolution of the population in Barcelona, the Metropolitan Area of Barcelona (MAB), and the rest of the metropolitan region.

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 in housing prices and supply) and the capacity of commuting (higher motorization and public transportation).

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 populations in central cities; they represented 17% of total population of the City of Barcelona in 2012. Its population has been stable at 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 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 municipality other than 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 highly 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, debate about the specific implementation of metropolitan governance has focused only 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.¹

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 included the three existing metropolitan entities, to prepare institutional transition to the Metropolitan Area of Barcelona (MAB). The law on the MAB was passed on July 2010, putting an end to 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 factors. 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 partisan logic (political alliances at the local and regional level) than to any other criteria. Moreover, the City of Barcelona has traditionally 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 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 as large as 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

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

vision and to design the main guidelines of the development of the metropolis (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 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 their involvement was ultimately very limited and they could not join the association.

Underlying the Metropolitan Strategic Plan was a shared weariness toward institutional fragmentation and the belief that a single, common metropolitan authority would perform better for local interests. Indeed, in 2010 all political parties voted 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 factors 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 exclusive participation of major interest groups and organizations. Fifth, the significant level of residential mobility within the (already blurred) metropolitan boundaries would make it difficult for a metropolitan identification to take hold.

3 Hypotheses

According to the context given above, metropolitan identity might be in part explained, if not by strong institutionalization, by long-term cooperation among metropolitan municipalities (Heinelt and Kübler, 2005; Tomàs, 2009). Given the natural democratic weakness of this model of inter-municipal cooperation (Kübler and Tomàs, 2010), we expect metropolitan identity to be deeply rooted in the territory, based on the unbalanced relationship between one large and strong center (Barcelona) and a number of much smaller surrounding entities—as explained by Lidström and Schaap in the introduction to this volume—in contrast with other types of identification (e.g., subjective national identity). 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. Thus:

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

Although empirical findings are still highly dependent on specific models of local government, a growing corpus of literature shows that the expansion of metropolitan regions can affect both traditional patterns of municipal attachment (Swianiewicz and Lackowska, 2008) and the arena upon which citizens may be willing to decide politically (Lidström, 2013, 2010, 2006). In our case, given the central role of the city of Barcelona in the MAB, and given the size and fragmentation of the rest of metropolitan municipalities, we expect that the stronger metropolitan identification within the core city of Barcelona translates into specific political orientations regarding metropolitan governance. In particular, we expect to find that citizens of Barcelona present a city-regional political orientation, an expansive, dominant view of metropolitan governance (i.e. higher support for a unified metropolitan government) than citizens of the surrounding metropolitan municipalities, who will prefer that their local governments retain their current power. Thus:

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

Furthermore, another common concern in this volume is the extent to which there is significant variation in city-regionalism among citizens (see the introduction to this special issue by Lidström and Schaap), and how individual-level and contextual-level variables interact. In particular, 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 might expect that, leaving Barcelona aside, city size may have an effect on metropolitan identity among the citizens of the surrounding metropolitan municipalities. If this were the case, part of the difference in metropolitan orientation between citizens of Barcelona and others could be explained by specific features of smaller cities.

The literature on size and democracy, though, has not yet reached an agreement on the effects of city size on political attachment and participation. In general, the research in this field falls into either side of the debate that opposes the "small-is-beautiful" perspective with the "bigger-is-better" approaches (Kelleher and Lowery, 2004). According to the "small-is-beautiful" approach, people living in smaller communities tend to present higher levels of electoral turnout and attachment to their municipalities, and stronger levels of civic participation (Dahl and Tufte, 1973; Oliver, 2001). Moreover, unlike small cities, larger municipalities produce sparse social networks that erode the connection of citizens with their communities and their interest in local politics, thus making identification, civic action and participation less likely. During the fifty years of discussion so far (Alford and Lee, 1968; Verba and Nie, 1972; Blais, 2000), the "small-is-beautiful" understanding of the problem has received more empirical support (Geys, 2006). Following the

same reasoning as in the relationship between city size and attachment to municipality, and the metropolitan area being a meso level of government linked to inter-municipal cooperation and dependent on municipal elections, we might expect that the community features that affect attachment of citizens to their municipalities might also affect their attachment to the metropolitan level. Thus:

Hypothesis 3a All else being 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 (with the exception of Barcelona).

However, studies that report data supporting the opposing idea are not rare (Matsusaka and Palda, 1999; Oliver, 2000), and some of them have been able to identify relevant factors that, when accounted for, dissolve the effect of city size on participation Lyons et al. (1992); Kelleher and Lowery (2004, 2009) or in community engagement (Magre et al., 2015). For instance, stronger attachment to communities might be explained not 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 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. Some literature, moreover, identifies residential mobility as a key factor that can milden the effect of city size. Either measured at the individual (Kasarda and Janowitz 1974), aggregate level (Caren, 2007), or a combination of both (Magre et al., 2015), residential mobility seems to be a strong demobilizing factor for local political activity (Sellers et al., 2013).

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 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 of Hypothesis 3a to be plausible, especially due to residential mobility. Thus:

Hypothesis 3b All else being 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 (with the exception of Barcelona).

4 Data and method

We use data from a survey carried out within the MAB in 2013. The sample is 800 individuals (age 16 years 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

interviewee through quota crossed by sex and age. Data have been weighted according to the actual population 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 metropolitan identification of the respondents 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 means "full identification" with the MAB. Similar scales were used in the questionnaire to measure the level of identification of respondents toward their municipality, Catalonia and Spain.

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

4.2 Independent variables

The main independent variable for our first and second hypotheses is 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.² Table 3 contains a summary of these variables.

5 Evidence

5.1 Distribution of 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 4 shows that, despite its recent institutionalization, there is widespread knowledge about its existence. However, the table also shows that, despite the fact that 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).

A second way of measuring metropolitan identity is to compare it to the level of identification with other political entities, namely their municipality, Catalonia, and

²The models in the empirical part of the paper do not directly control for social class or status. Although the data include respondents' occupation, which can be recoded into the standard EGP 7-class scheme (Goldthorpe, 1997), the resulting variable is correlated with the level of education. Due to problems of collinearity, we use the level of education as a proxy for social status.

Table 3: Descriptive information of the independent variables.

Variable	Percentage	N
Area of Residence		
Barcelona city	51.2	400
Metropolitan Area	48.8	400
Knowledge of the		
$Metropolitan\ Area$		
Yes	89.8	717
No	10.2	70
Age		
16 - 29	18.6	149
30 - 44	30.7	246
45 - 59	22.7	182
60 +	28.0	223
Education		
Less than primary	3.0	24
Primary	24.3	195
High School	19.6	156
Vocational	20.0	160
University	33.1	263
$City\ size$		
< 20,000	4.9	40
20-100,000	25.3	207
$> 100,\!000$	18.4	151
Barcelona	51.4	400
Length of residence		
Less than 2 years	1.3	11
2-5 years	3.7	30
6 to 10 years	9.8	77
11-20 years	15.0	118
>20 years	29.4	230
Whole life	40.5	310

No answer and Do not know have been omitted.

Percentages are weighted according to sample design.

Table 4: Knowledge of the Metropolitan Area of Barcelona among citizens.

	Do you live in the				
	metrop	oolitan a	rea of B	arcelona?	
Residence	Yes	No	NA	N	
Barcelona Metropolitan Area	96.75	2.0	1.25	400	
(without Barcelona)	82.50	15.50	2.00	400	

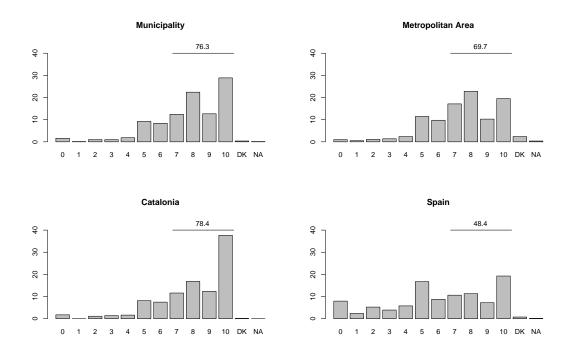


Figure 2: Four types of identification among the metropolitan population with the respondents' own municipality, the metropolitan area, Catalonia, and Spain.

Spain on a 0 to 10 scale. Results presented in Figure 2 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, for an average of 7.81), while the proportion 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 reveal 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), the proportion dropping to 50 percent with respect to Spain (average of 6.11).³

³Indicators of Catalan and Spanish national identity in Catalonia may be sensitive to current problems regarding the relation between Catalonia and Spain. Subjective national identification variables are not used in this paper.

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 will 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 5 shows the distribution of metropolitan identity of 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 facilitate interpretation, the 0-10 scale has been collapsed into three categories of metropolitan identification: low, medium, and high. 4

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 for 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 year-olds present greater percentages of people having a high level of metropolitan identification. A similar pattern occurs for the relationship between level of education and metropolitan identification, where less educated citizens present lower percentages of high identification (and a significant percentage of negative answers).

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 seems to hold only for extreme cases, not in the middle-range categories of community size.

Table 6 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 shown in Model 1, controlling for knowledge of the MAB, people living in the surrounding metropolitan area present on average lower levels of metropolitan identity than those living in Barcelona. Moreover, 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.⁵

⁴These categories are not evenly distributed in terms of scale points: the lower level scores 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 had relevant percentages of respondents.

⁵City size has not been included in the model due to its correlation with the area of residence. The city

Table 5: 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^a	Std. Dev.	N
Area of residence							
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
Knowledge of the Metropolitan Area							
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
Gender							
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
Age							
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
Education							
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
City size							
< 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

^a No answer and Do not know have beem omitted.

Living in Barcelona 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? According to Hypothesis 2, citizens of Barcelona will show higher support for a unified metropolitan government than citizens of the surrounding metropolitan area.

Table 7 shows the result of the logistic regression of area of residence on support for the direct election of a single mayor for the whole MAB. The first column presents the gross effect of area of residence on a unified metropolitan government. In effect, citizens

size variable includes a single category for Barcelona, which exactly overlaps with one of the categories of the area of residence.

Table 6: Results of the OLS regression model of area of residence on the level of metropolitan identification.

	Level of metropolitan identification		
	(Model 1)	(Model 2)	
(Constant)	7.318***	7.185***	
	(0.269)	(0.557)	
Area of residence [Ref. Barcelona]			
Metropolitan Area	-0.270^*	-0.355**	
	(0.152)	(0.154)	
Knowledge of MAB [Ref. No]			
Yes	0.262	0.266	
	(0.257)	(0.256)	
Age[Ref. 16-29 y.o.]			
30 to 44 y.o.		0.420^{*}	
		(0.220)	
45 to 59 y.o.		0.240	
-		(0.232)	
60 + y.o.		0.461**	
		(0.228)	
Education [Ref. $<$ Primary]			
Primary		0.091	
		(0.477)	
High school		0.150	
		(0.490)	
Vocational		-0.017	
		(0.491)	
University		-0.557	
		(0.479)	
Observations	778	776	
\mathbb{R}^2	0.007	0.032	
Residual Std. Error	2.064 (df = 775)	2.047 (df = 766)	

Note:

*p<0.1; **p<0.05; ***p<0.01

Table 7: Logistic regression model of the effect of place of residence (Metropolitan area vs. city of Barcelona) on agreement to elect a single mayor for the Metropolitan Area

	Agree to elect a single mayor for the metropolit			
	(1)	(2)	(3)	(4)
(Constant)	0.333***	0.268	-0.224	0.264
,	(0.100)	(0.254)	(0.530)	(0.837)
Area of residence [Ref. Barcelona]				
Metropolitan Area	-0.303**	-0.294**	-0.395^{***}	-0.428**
	(0.142)	(0.147)	(0.153)	(0.160)
Knowledge of MAB [Ref. No]				
Yes		0.067	0.065	0.102
		(0.241)	(0.246)	(0.249)
<i>Age</i> [Ref. 16-29 y.o.]				
30 to 44 y.o.			0.100	0.127
			(0.218)	(0.222)
45 to 59 y.o.			-0.287	-0.219
			(0.227)	(0.242)
60 + y.o.			-0.118	-0.030
			(0.224)	(0.254)
Education: [Ref. < Primary]				
Primary			0.853^{*}	0.848^{*}
			(0.456)	(0.457)
High School			0.704	0.676
			(0.470)	(0.474)
Vocational			0.951**	0.931**
			(0.471)	(0.473)
University			0.227	0.193
-			(0.459)	(0.462)
Length of residence [Ref. <2 years]			, ,	, ,
2 to 5 years				0.008
•				(0.757)
6 to 10 years				-0.464
·				(0.687)
11 to 20 years				-0.488
-				(0.676)
>20 years				-0.582
				(0.677)
Whole life				-0.592
				(0.664)
Observations	800	800	798	798
Log Likelihood	-549.003	-548.969	-536.787	-535.344
Akaike Inf. Crit.	1,102.006	1,103.937	1,093.574	1,100.688

*Note: *p<0.1; **p<0.05; ***p<0.01

living in the surrounding metropolitan cities present a significantly lower level of support for electing a single metropolitan mayor than 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-term or lifelong residents have significantly different views on the issue than recent settlers. Yet, none of these variables has a significant effect on support for a unified metropolitan government (except two educational categories). Moreover, the AIC criterion indicates that the inclusion of more variables increases neither the quality nor the selection of the model significantly, which isolates the area of residence, specifically at the center of the metropolitan area, as a key factor shaping political orientations to governance.

5.2.2 Metropolitan identity on the periphery

We now focus our attention on the surrounding municipalities of the MAB. We want to test whether, sorting Barcelona out of the sample, community size, length of residence and municipal attachment have an effect on citizen identification with the metropolitan area. When we considered the whole sample in Table 5, we observed an unclear effect of community size on metropolitan identification. Table 8 shows the results only for respondents living in the surrounding metropolitan cities.

Table 8: Description of the level of identification with the Metropolitan Area of Barcelona only for respondents from the surrounding metropolitan municipalities.

	Level of metropolitan identification						
	Low [0-4]	Medium [5-6]	High [7-10]	NA	Mean^a	Std. Dev.	N
City size							
< 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
Length of residence							
< 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

^a NA omitted.

People in larger cities present a higher level of metropolitan identification than those in cities smaller than 20,000. Smaller cities present 10 percentage points fewer people with high levels of metropolitan identification than larger cities. The difference doubles when comparing with 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 a single metropolitan mayor.

The first column in Table 9 confirms that, compared to people living in medium-sized metropolitan cities, citizens of smaller metropolitan cities tend to show, on average, a lower degree of metropolitan identification, lending 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 few years, resulting in a higher proportion of people with shorter lengths of residence in smaller cities.

Table 9: Results of the OLS regression model of city size on metropolitan identification (Barcelona excluded).

	Level of metropol	itan identification
	(Model 1)	(Model 2)
(Constant)	7.401***	7.509***
	(0.152)	(0.242)
City size [Ref. 20-100,000]		
< 20,000	-0.701^*	-0.674^{*}
	(0.374)	(0.380)
> 100,000	-0.148	-0.141
	(0.235)	(0.238)
Length of residence [Ref. Whole life]	, ,	, ,
< 2 years		-0.117
·		(0.723)
2 to 5 years		-0.211
•		(0.571)
6 to 10 years		-0.326
·		(0.370)
11 to 20 years		-0.046
·		(0.341)
> 20 years		-0.137
		(0.287)
Observations	388	388
\mathbb{R}^2	0.009	0.011
Residual Std. Error	$2.134~({\rm df}=385)$	2.145 (df = 380)
Note:	*p<0.1; **	p<0.05; ***p<0.0

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 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 present 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 high proportions of the 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 unceasing 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 in Catalonia and Spain, which were strongly related to labor needs, recent survey data (Porcel, 2011) report family cycles and the quest for better living environments as the main factors that explain recent residential mobility, all stimulated by dramatic growth in the housing supply and lower prices in the smaller cities, facilitated by closely-knit 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 9, 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. In fact, recent findings Magre et al. (2015) also indicate that the effects of city size and length of residence on local community engagement and identification can be blurred in contexts of moderate to high levels of residential mobility. Our results should be interpreted cautiously. First, because the subsamples corresponding to the lower categories of the length of residence are not large enough (see Table 8). 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 destinations of residential mobility Pujadas (2009).

6 Discussion

This paper has attempted to shed 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 based on an already multi-tier government structure, metropolitan citizens in Barcelona show high levels of knowledge and identification with their metropolitan area.

In order to explain metropolitan identity, we have explored two sets of hypotheses related to the evolution of the MAB. The results are summarized in Table 10, showing the direction in which the explored factors explain our main response variables. On one hand, institutionalization of the MAB has been constructed around the role played by the city of Barcelona, which has historically been central and includes most of the metropolitan population. In this sense, the results are in accordance with one of the broad questions posed by Lidström and Schaap in the introduction to this volume—i.e., that living in the core city of the Metropolitan Area explains part of the variation in metropolitan identity. In particular, citizens within Barcelona city not only have better knowledge of the MAB and higher levels of identification with it (thus the + sign in Table 10), but present distinct political orientations toward metropolitan governance, lending

⁶A χ^2 test was performed between the two variables: $\chi^2(15, N = 776) = 96.22, p = 0.00$.

Table 10: Summary of the results obtained in the analyses.

Independent variables	Dependent variables				
	Metropolitan identity	Metropolitan governance (a single metropolitan mayor)			
Area of residence					
Core city (Barcelona)	+	+			
Metropolitan area	_	_			
Age					
16-29	_	_			
30-44	+	+			
45-59	#	#			
60+	+	+			
Education	#	#			
Length of residence	+	_			
City size					
> 20,000	_	_			
20,000 - 100,000	+	#			
> 100,000	#	+			

⁺ expresses a general positive effect on the dependent variable

wider support to the proposal of having a single mayor for the whole metropolitan area as opposed to the status quo.

A second set of conflicting hypotheses has tested the effect of city size on metropolitan identification. The theory behind these hypotheses is based, on one hand, on 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 in the MAB, with deep implications for political behavior, might also have a counter-effect on orientations to the metropolitan area, specifically depressing metropolitan identification. The 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, but as shown in Table 10, larger cities do not present clear trends.

Finally, according to the third research question driving the work of this volume, we have also explored the existence of individual-level factors to explain differences in metropolitan identity and governance orientations. In this regard, the results show that, when controlling for knowledge of the metropolitan area and area of residence, otherwise relevant factors such as age and education show no clear trend, although older citizens tend to present both higher levels of metropolitan identity and wider support for a unified metropolitan government. Furthermore, our results indicate that length of residence may have a complex effect on metropolitan orientations. On one hand, citizens with longer periods of residence in their municipalities also show higher levels of metropolitan identity. On the other hand, the longer citizens live in their municipalities, the less the likelihood

⁻ expresses a general negative effect on the dependent variable

[#] expresses no clear effect on the dependent variable

that they will support the election of a single mayor for the whole metropolitan area.

Although the limitations of our data indicate that the results should be treated with caution, our findings are promising. On one hand, this is the first study ever to explore patterns of identity in the Metropolitan Area of Barcelona and, to our knowledge, any metropolitan area of Spain. On the other hand, our results contribute to the exploration 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 should include a qualitative assessment of the meaning of "being metropolitan" among the citizenry, which would allow for exploration of the specific elements that are recognized as "metropolitan", how citizens envision their own metropolitan identity, and whether citizens of the central city and suburbia 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 exploration.

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