
CIDADES, Comunidades e Territórios



Residential Trajectories in Lisbon Metropolitan Area: an exploratory approach.

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Abstract

This paper analyses the residential trajectories of Lisbon Metropolitan Area inhabitants who were born between 1945-1975. The analysis was carried out using a longitudinal approach that, in contrast to the traditional transversal ones, emphasizes the diachronic aspects by reconstituting the residential biography of each respondent in the survey (N=1500), which was implemented during the second half of 2011. The research underlies three essential dimensions of residential trajectories: 1) location and geographical direction; 2) the housing model that is directly related to the morphology of the territories; 3) the housing tenure, which is of profound interest in the current Portuguese context because of the economic crisis that is diminishing the propensity for homeownership. Due to the plethora of data, this paper will focus on the first dimension with two purposes: 1) to identify the dominant trajectories (e.g.: countryside-periphery, Lisbon centre-periphery, periphery-periphery, etc.); 2) to discuss the various sociological profiles of the protagonists in each of those dominant trajectories, in order to understand the multiple combinations and intersections of variables (social class, generation, household type), which characterize and differentiate each other.

Keywords: Lisbon Metropolitan Area; Residential Trajectories; Life-course; Generations.

1. Introduction

This paper presents the first discussion of the results of a representative survey on residential trajectories that was conducted on the Lisbon Metropolitan population born between 1945 and 1975. It is part of a project financed by the Portuguese National Foundation for Research and is called “Residential Trajectories and Metropolization: continuities and changes in the Lisbon Metropolitan Area”⁴. The main purpose behind this pioneer research regarding the reality of Portugal is to increase knowledge about the current population’s

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movements throughout this metropolitan territory⁵. The research used a mixed methodological rationale by bringing together a quantitative approach (survey) and a qualitative one (interviews). The main purpose of the survey was to define and characterize the dominant types of residential trajectories within Lisbon's Metropolitan Area, essentially in regard to its geographical direction. This has been done through a longitudinal perspective (implying the reconstruction of individual lives concerning housing, profession and family). Interviews have been made afterwards with the aim of deepening the types of trajectories previously found.

We begin with a brief discussion on the issue of residential trajectories and it includes a reference to a methodological dualism between transversal and longitudinal perspectives. After that, we present the Lisbon Metropolitan Area (LMA) and its main development features. The methodological procedures used are discussed next: after an explanation of the conditions of the survey application (sample and structure of the questionnaire), we present the procedures relative to the treatment of the longitudinal data and those used in the assessment of the types of residential trajectories.

The presentation of the results, which comes after this methodological clarification, includes the following elements:

- 1) An analysis of the global movements for each generation that identifies the main trajectories of the three generations studied (1945-1954; 1955-1964; 1965-1975). At the time of the survey (2011), these generations lived in the LMA, either in the city of Lisbon or in both of its peripheries: the Northern or the Southern Lisbon Metropolitan Area.
- 2) The identification of the different residential trajectory types (clusters), both for the whole population and by area to apply optimal matching analysis for clustering.
- 3) An exploratory characterization of the specificities of individuals pertaining to each of these trajectories. For this, we use a logistic regression procedure with the following independent variables: sex, generation, household type, social class and housing tenure.

2. The Study of Residential Trajectories

The richness of the study of residential trajectories lies in its multiple dimensions and scales, and above all in its articulation: on the one hand, we have a macro scale relative to the territorial processes of social recomposition; and on the other hand a micro scale related to the residential and biographical pathways of individual life-courses.

In fact, the aim of studying residential trajectories in this project is to improve primarily the knowledge of the metropolization process in the Lisbon area, namely from a diachronic perspective. Metropolization implies the coexistence of several aspects (Dubresson, 2001: 13): 1) the “*sprawl*”, the growing expansion of the inner city to its surroundings; 2) functional specializations; 3) the reinforcement of socio-spatial inequalities; 4) the spreading of individuals daily-life spaces; 5) the intensification of mobility. The main questions explored in our study are: What types of geographical pathways have made the actual inhabitants of Lisbon Metropolitan Area, and who are the protagonists of those movements? The starting point of those questions assumes that: 1) there is a lack of Portuguese research on this issue; 2) there is this dominant assumption (based simply on an impressionistic approach) that the majority of people living in the Lisbon Metropolitan Area were forced to move out of the city and that they do not live there “only” because they can't. Therefore, in opposition to this impressionistic vision, our initial hypothesis was the following: *individuals tend to practice “stable” residential trajectories* (when moving, they remain in the same area or in that of their partner; i.e., they usually choose similar areas), *which guarantees them the continuity of a spatial familiarity/identity that they appreciate and which cushions the practical and emotional disruptive impacts of changing homes.*

⁵ We express our sincere gratitude to Catherine Bonvalet and Christophe Imbert (INED) for their remarks and important contributions.

Among the issues regarding residential trajectories, a concept that was initially introduced by Rossi in 1955, it is possible to identify two different theoretical and methodological traditions (Bonvalet and Brun, 2002; Dieleman, 2001):

1) First, there is a tradition, which was developed and implemented essentially within geography with a strong implementation in Anglo-Saxon countries, Nordic countries, and also in the Netherlands (Clark, Deurloo, Dieleman, and Mulder). This is based on the assumption that residential “needs” depend on several phases through the life-cycle. The approach might incorporate a macro context (the housing market, or social and economic conjuncture). Until recently, this approach was based exclusively on transversal methodologies, something that has recently changed.

2) The second tradition is practiced primarily in the fields of sociology and demography (Courgeau, Bonvalet, Lelièvre, Grafmeyer, and Després), and it has been developed mostly in the French-speaking world. It is based essentially on the assumption that residential behaviour depends on biographical and relational contexts, which is methodologically reflected in a pioneer adoption of a longitudinal approach.

This approach (Ruspini, 2003) is a methodological result of a life-course “theoretical perspective” which guides the research on individual lives through a contextual framework (Elder, 2004):

a) in temporal terms that are relative to the individual as well as to the social and historical period time – both cases based on an articulation of synchrony (event) and diachrony (course of time);

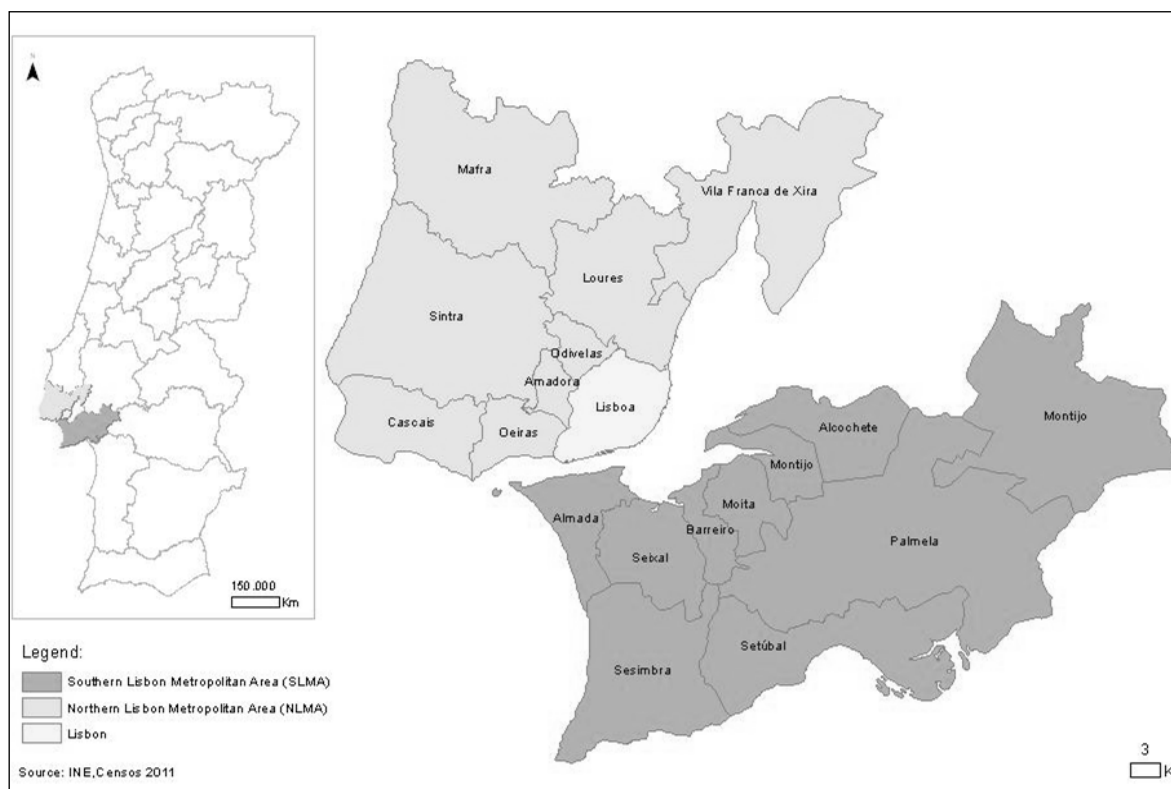
b) in spatial terms. Thus, space is composed of several interdependent dimensions, such as: 1) built environment, the morphological and urbanistic structure; 2) social space whose importance derives from the fact that the comprehension of individual lives must be framed within their social networks (which is directly connected to social class); 3) “identity”, which is related to the symbolic and emotional aspects of individual attachment to places (Feijten, 2010). Thus, there is this notion of “spatial attachment or anchoring”, which is basic to the understanding of residential “choices” made by individuals (Authier et al., 2010).

In Portugal, Fonseca (1990) conducted one of the few investigations into this issue through a direct articulation of the metropolization process, following its initial phases throughout the decades of the 60's and the 70's, when the rural exodus had its strongest impact. From that period to the present time, several dynamics regarding population as well as space have been taking place in the LMA. Nevertheless, their knowledge remains largely underexplored.

3. Research Context and Methodology

3.1. Characterization of the Lisbon Metropolitan Area

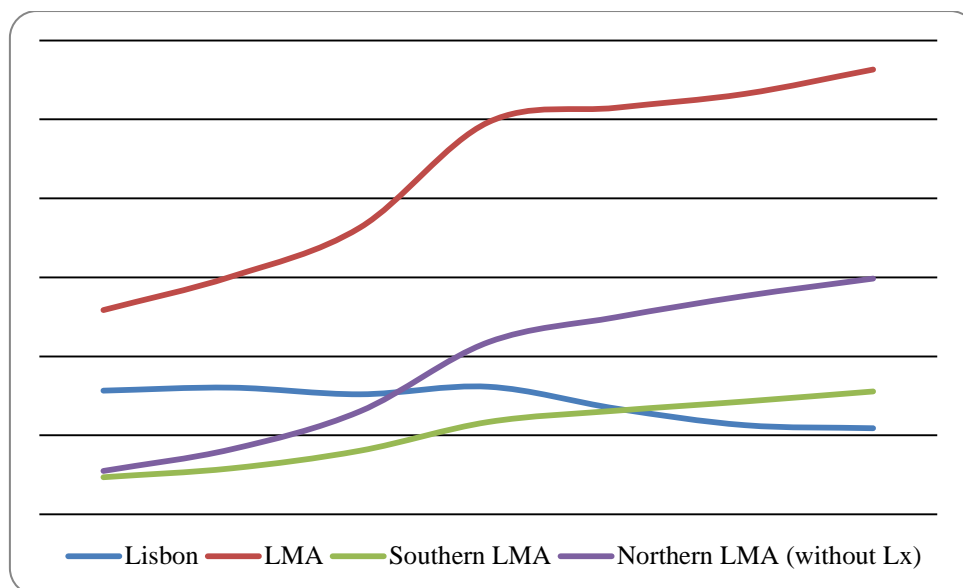
The Lisbon Metropolitan Area (LMA) is composed of 18 municipalities, 9 in the north bank of Tejo (including Lisbon) and the other 9 in the south bank. It has an area of 2,962.4 km² and a population of 2,815,851 (Source: 2011 Census), which represents 27% of Portugal. On the other hand, the total population of the city of Lisbon is currently (according to the same source) 545,245, representing 19% of the global population of the LMA.

Figure 1. Map of the Lisbon Metropolitan Area with its three areas highlighted.

Source: INE, Censos 2011.

Lisbon's metropolization process soared during the decades of the 1950s and 1960s. Several aspects characterize this period (Pereira and Marques, 2011):

- 1) The beginning of Lisbon's population decline during the 60's, although it was temporarily interrupted in the 70's with the massive return of the population coming from Portuguese former colonies. This migration phenomenon resulted from the 1974 Revolution.
- 2) A very heterogeneous population dynamic inside the city of Lisbon with the most central/historic and old areas contributing to a decrease from the 60's onwards. In the outlying areas, modern housing contributed to huge growth in the same period. However, the most recent data show some changes in that process, with the beginning of the recovery of some central areas. Moreover, the effective population decline in the city of Lisbon registered by the last census is surprisingly much lower than the previsions realized in 2009.
- 3) A rapid and intense growth of the Northern LMA, in comparison to the Southern LMA. This is explained by the territorial continuity of the former in relation to the city of Lisbon. As shown by the previous map, the Southern LMA is separated from Lisbon by the river (Tejo), which indeed is a real barrier.
- 4) A spreading process like an oil slick. The municipalities that are near Lisbon grew first, followed by those that are in an intermediate position, and finally those that are more distant. During the decade of 2001-2011, the municipalities with higher growth rates were the most peripheral ones.

Chart 1. Evolution of Lisbon Metropolitan Area (1950-2011).

Source: Statistics Portugal

The geographical specificities of the LMA, particularly the existence of a river with a great distance between the two margins, had a great impact on the structuring of this territory. Thus, the physical separation between those two areas results in a strong differentiation, both in terms of social structure as in urbanism. Concerning the first, the Northern Lisbon Metropolitan Area shows a structure that illustrates the geographical continuity in relation to Lisbon: its southwest is clearly marked by the preponderance of the higher social classes taking advantage of its proximity to the sea.

The remaining surrounding areas of Lisbon (in the Northern area) are mainly composed by lower social classes, essentially employees. It should be noted that Lisbon, aside from its mainly “individualistic” family structure strongly marked by an accentuated ageing of the population, reproduces in a certain way that social division of space between the west and the east that characterizes several European cities: a division that shows “impoverishment” as we move from the west to the east. In turn, the southern metropolitan area presents a general social structure marked by the lower classes in comparison with the north. It is worth mentioning the relevance of the proletariat. On the other hand, it has a territorial settlement more disperse and a greater weight of detached housing, two features that make a superior difference in relation to the northern area and essentially to the city of Lisbon: a city dominated by apartments, and the only part of the metropolitan area where we still have some equilibrium between ownership and renting.

3.2 The survey of the resident population of the LMA

As mentioned before, this paper discusses some of the results of a survey which was conducted between July 2011 and January 2012 on the resident population of the LMA that was born between 1945-1975. The sample that aims to be representative of that population has a confidence level of 95% ($\lambda=0.95$), a maximum error E inferior to 2.6%, and a survey population of 1500 individuals ($n=1500$). As we expected great dispersion in the studied variables, we collected a stratified random sample instead of a simple random sample. So, the variables of stratification used are gender, age and one based on geographical criteria that fits the purposes of this research, which divides the LMA into three areas:

1. Northern Lisbon Metropolitan Area, excluding Lisbon
2. Southern Lisbon Metropolitan Area
3. Lisbon

Because of that high expected dispersion, the number of individuals surveyed was the same for each area (500), a procedure that allowed us to collect a non-proportional sample (Neyman). However, this also implied replacing the real structure of the population distribution during the data treatment, in order to legitimize global analysis of the LMA as well as to compare the three areas which have different weights within the whole (see chart 1). So, we first used a weight that introduces the real proportionality of the population by area, and then a second one in order to replace the distribution by gender and age of the population in each area. The sample corrected with these two weights will be the one used within the global analysis of the LMA, which will often include comparisons between areas.

Table 1. Survey Sample.

	LISBON	NORTHERN LMA	SOUTHERN LMA	Total
Sample realized (intra-area analysis)	500	500	500	1500
Sample with weights (inter-area analysis)	280	814	406	1500

Source: Own elaboration.

The structure of the questionnaire articulates several sets of questions that have two different rationales: 1) a traditional aim for a transversal characterization of the respondents and their residential situation in the present; 2) a more heterodox and longitudinal rationale whose purpose is to reconstruct their residential, professional (which also permits the reconstruction of their social class) and familial trajectories. This paper focuses essentially on the second rationale, residential trajectories, through the use of sequential analysis (optimal matching), which was complemented afterward with clustering techniques that enable grouping trajectories with similar patterns, thus creating a typology that integrates different types of trajectories.

4. Results: Residential Trajectories

4.1 Timings of metropolization: the constitution of the LMA through an inter-generational approach

The following results show the residential movements registered within the LMA performed by each of these three generations:

1. 1945-1954. The generation born after Second World War, whose residential autonomy occurred between the 60's and the 70's during the end of the Portuguese dictatorial regime (1933-1974) and the beginning of democracy that resulted from the April 1974 Revolution. They were active participants in the first period of metropolization, and they lived through the national (housing) modernization process.

2. 1955-1964. The generation whose residential autonomy coincided with the aftermath of the revolution and the 80's, generally a transitional period between the most important two turning points in recent Portuguese history: revolution and integration into the European Union.

3. 1965-1975. The great beneficiaries of joining the EU and of modernization (cultural, social and economic). It should be noted that this period was marked by both the educational democratization process and the country's new openness.

Relative to the educational level by generation, table 2 shows in a quite obvious way the differences between them: the majority (45%) of the first cohort has only a basic education (1st cycle), and the proportion of those who do not have any education level is equivalent to those who went to university (around 6%). The transitional character of the generation born between 1955 and 1964 exhibits a huge decrease in those with a 1st cycle education and an increase (of nearly 10%) of the population with a university degree. The majority still has a basic education level (2nd and 3rd). Finally, 25% of the last generation is composed of individuals with a university level education, and the proportion of those with basic education (1st Cycle) does not reach 5%, marking a decrease of 40% in relation to the first generation. Nevertheless, the majority has a secondary school education.

Table 2. Education by Generation.

EDUCATION LEVEL	GENERATION		
	1945-54	1955-1964	1965-75
None	5.7	1.7	0
Basic Education (1 st cycle)	46.3	18.9	4.4
Basic Education (2 nd and 3 rd cycles)	24.3	33.4	21.3
Secondary Education	13.5	26.1	43.8
Post-Secondary/ Bachelor	4.7	4.6	5.7
University	5.5	15.3	24.8
Total	100	100	100

We divided our sample into three parts, according to generations. The chart represents the repartition of the respondents year by year in the different areas, from birth to maximal age attained by the youngest of each generation at time of the survey. So the horizontal axis goes from 1 to 57 in cohort 1945-1957, 1 to 47 in the cohort of 1955-1964 and 1 to 36 in the cohort 1965-1975. This information was collected by asking people to describe all residential places from birth, with datation on arrival in every residence. With such axes limits, the distribution of residences can be graphed in a longitudinal way, and all people are present over the age period.

The captions indicate the 10 different places of origin and destination:

1. Lisbon, municipality
2. Northern Lisbon Metropolitan Area (NLMA)

3. Southern Lisbon Metropolitan Area (SLMA)
4. North Portugal (NP)
5. Central Portugal (CP)
6. South Portugal (SP)
7. Portuguese Islands (PI)
8. Former Portuguese Colonies
9. Brazil
90. Others

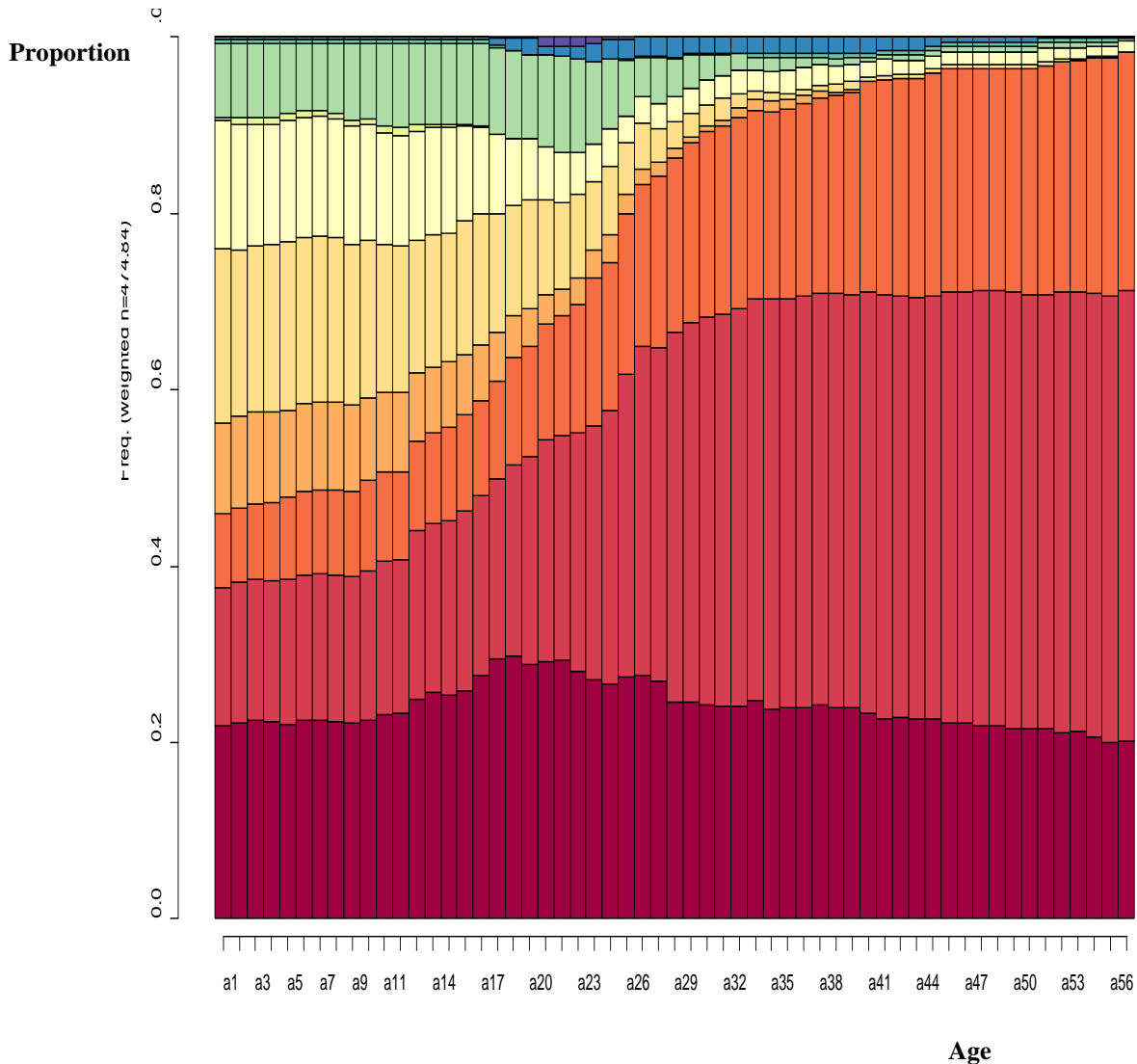
So, the following three graphics represent, as stated before, the residential movements performed by each of these three generations within the LMA. In the next graphs, the different areas will be coloured as following:



Conclusions will be different for the three generations, as explained below:

1945-1954

Within this cohort the original metropolitan population does not reach 50%. In fact, those that are originally from the LMA are 46.2%. 45.4% of the actual residents of the LMA in this cohort came from other areas of the country, primarily from the centre of Portugal, but also from the south and to a lesser extent from the north. Around 8% came from the former colonies, and they began arriving in Portugal during the 70's at the age of 25, around the date of the decolonization (1975). So, this generation is still an important protagonist of the rural exodus. The majority of the original residents of the LMA were from the city of Lisbon (48%), followed by those from the Northern LMA (34%) and finally by those from the Southern LMA (18%). Despite this fact, as time goes by, there is a notable movement to the peripheries, essentially to the Northern LMA, which at present has 53% of the LMA's residents in this cohort (Lisbon: 20%; Southern LMA: 28%). Regarding Lisbon's residents, there is some slight growth from the age 17 to the age 29, which possibly corresponds to a transitional moment: regarding some of those that came from outside the Metropolitan Area and afterwards progressively went to the periphery.

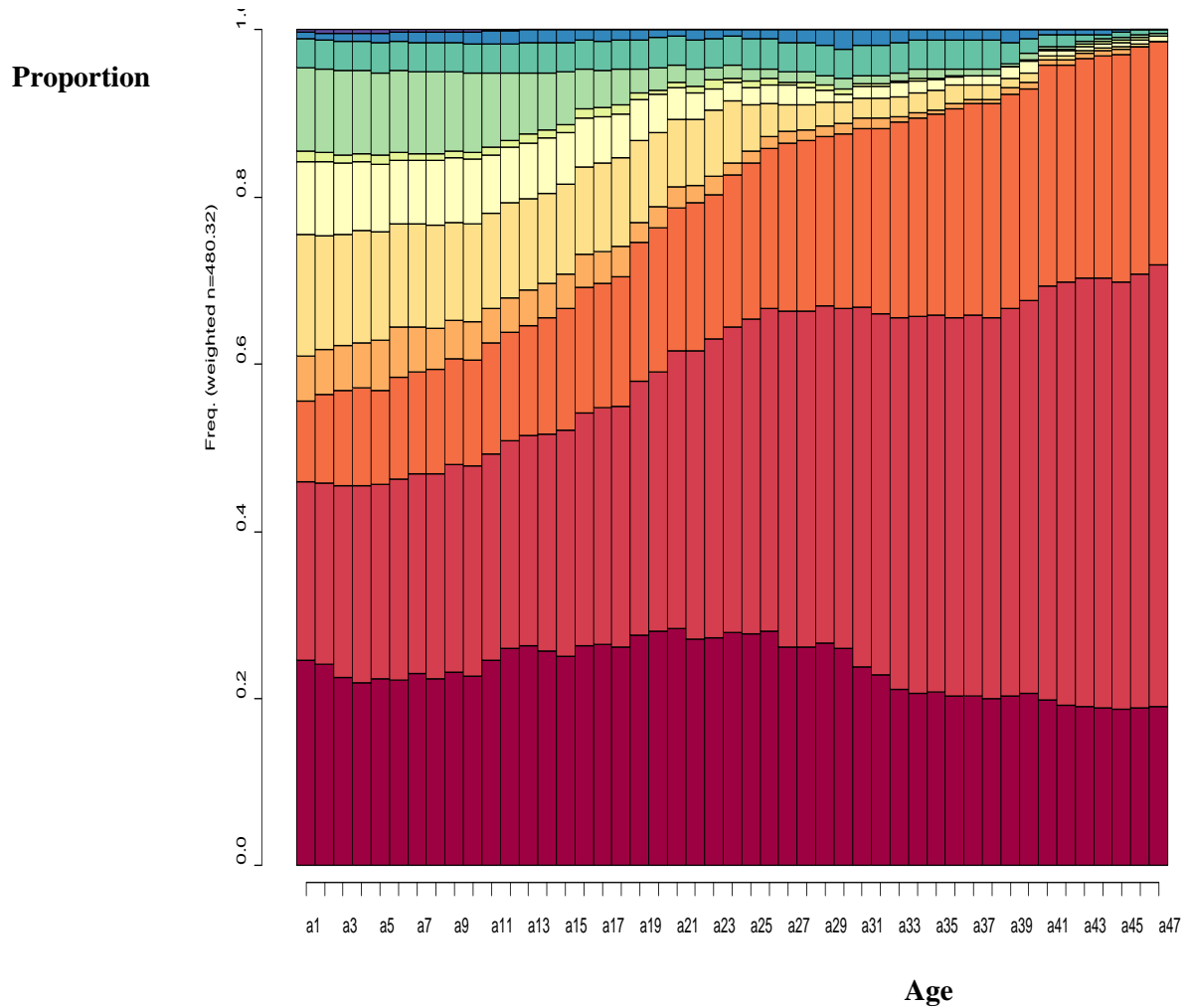
Figure 3. Residential Trajectories (total frequencies): 1945-1954.

Source: Own elaboration.

1955-1964

The above mentioned transitional character of this cohort is also quite visible in terms of residential trajectories. So, in this case the proportion of those that are originally from the LMA reaches almost 55% and the proportion of the rural exodus protagonists, those that came from inside the country, decreases by about 15% in relation to the previous cohort (they are, in this case, 30.8%). Therefore, aside from those that came from the former colonies (9.8%), who predictably arrived at an early age in comparison with individuals born between 1945 and 1954, this generation establishes – although very slightly – a new phenomenon: immigration from Brazil (3.5% of the actual LMA residents of this cohort came from Brazil). However, there is another aspect that is directly related to the original structure of the LMA and which differentiates this generation from the previous: the approximation of the proportion that is originally from the Northern LMA and Lisbon, 39% and 45%, respectively.

Figure 4. Residential Trajectories (total frequencies): 1955-1964.

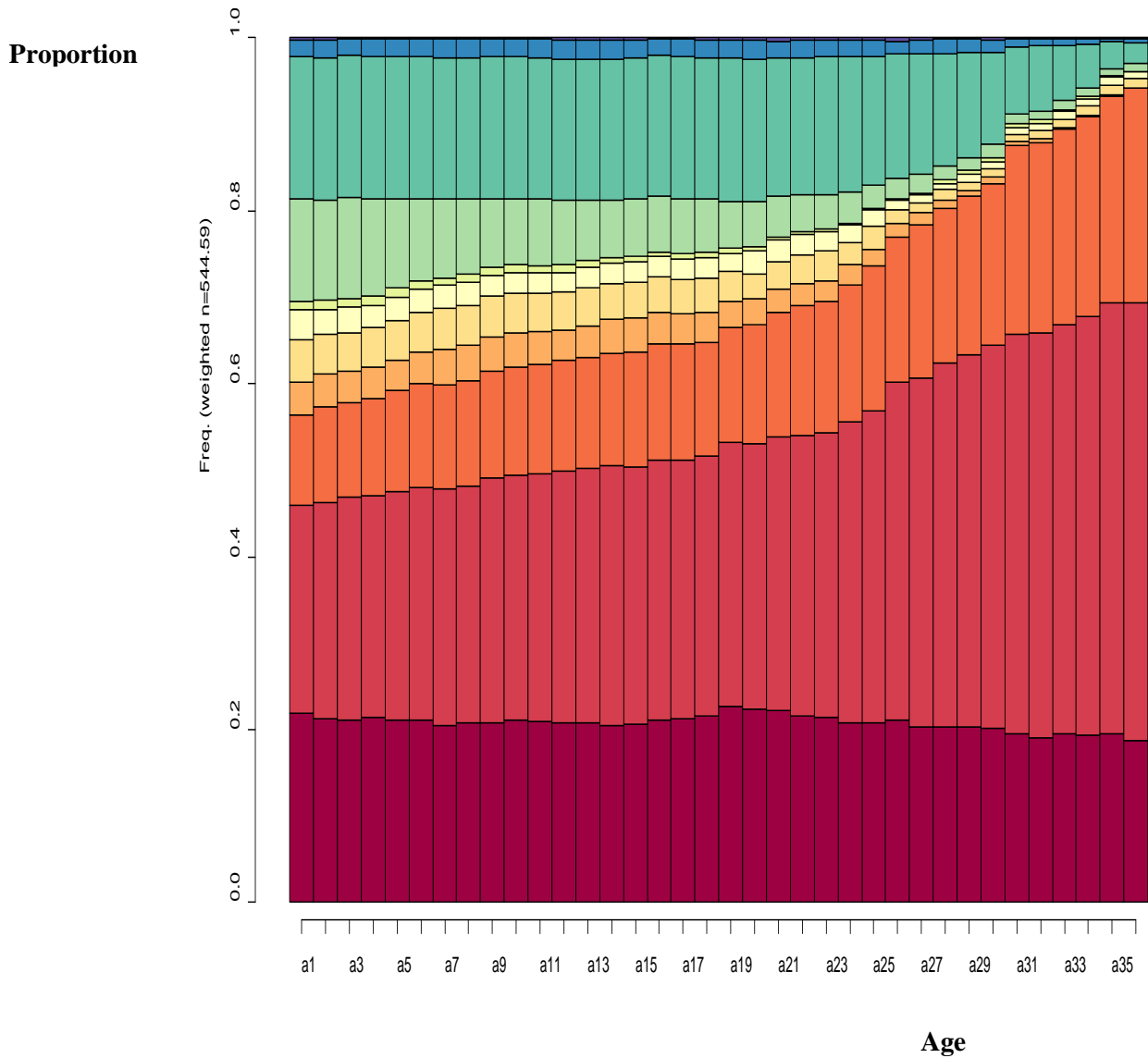


Source: Own elaboration.

1965-1975

The structure of this cohort represents a completely new situation giving rise to a new metropolization rationale, which stems essentially from one aspect: a huge decrease in people coming from the country through rural exodus (only 13% against 30.8% in the 1955-64 cohort and 45.4% in the first cohort). The majority of new residents in the metropolitan area are primarily immigrants from Brazil (16.7%) as well as the former colonies (11.6%), and the age of the former when arriving in Portugal is quite advanced (more than 25).

Figure 5. Residential Trajectories (total frequencies): 1965-1975.



Source: Own elaboration.

Aside from a divergent starting point marked by an increase in the proportion of those originally from the LMA, we can see in table 3 that the essential difference between the first and the last generation is the huge decrease in people coming from inside the country, which in turn is accompanied by a strong immigration phenomenon originating from Brazil.

Table 3. Origin of Lisbon Metropolitan Area's Population.

	LMA	Other areas of Portugal	Other Countries	Former colonies	Brazil	Total
1945-54	46.2	45.4	0.4	8.0	0	100
1955-64	54.8	30.8	1.0	9.8	3.5	100
1965-75	56.5	13.0	2.2	11.6	16.7	100

Source: Own elaboration.

4.2 Types of Residential Trajectories of the LMA: the dynamics of the constitution of a territory

As stated before, the main purpose of the present project is to define the type of trajectories that are the basis of the constitution of the actual metropolitan area, namely those that compose each of its three areas: Lisbon, the Northern Metropolitan Area and the Southern Metropolitan Area. For this, we performed a cluster analysis in order to group individuals with similar residential trajectories. The results are presented in the following three tables. These global clusters by area were constructed by assuming a maximum age of 36, which is precisely the maximum age of the last generation's youngest. Optimal matching techniques are used (Robette et Thibault, 2008) with the package *Traminer* of the software R, package developed at the Institute for Demographic and Life Course Studies (IDEMO), University of Geneva (Gabadinho et al., 2011)

The first and most important result, which corroborates our initial hypothesis, is that in all three areas the dominant clusters are those of permanence: people that always lived in the same area. This is especially evident in the city of Lisbon, where this cluster represents 50.4% of the respondents, but also in the other two areas: in the Northern Lisbon Metropolitan Area it represents 42.8%, and in the Southern Lisbon Metropolitan Area 37.4%.

The second most representative cluster in both peripheries is centrifugal: people that came (to the peripheries) from the city of Lisbon. Nevertheless, its weight is in both cases much lower than that of the permanent cluster; in the Northern Lisbon Metropolitan Area it represents 18.3% and in the Southern Metropolitan Area it represents 14.3%. On the other hand, in Lisbon, the centripetal cluster (constituted only by trajectories from the Northern Lisbon Metropolitan Area to Lisbon) appears in third place with almost 11%, following a hybrid one composed of people with multiple origins that represent 14.2%. It must be said that the higher probability of more movements between Lisbon and the Northern LMA (in both directions) than between Lisbon and the Southern LMA can be explained partially by the great territorial continuity of those two first areas. This is also the reason for the third cluster within the Southern LMA, which is geographically contiguous to the south of Portugal, where this cluster originates. In the other two areas (Lisbon and Northern LMA), the most representative cluster of individuals that came from inside the country are those who originate in the centre of Portugal, for the exact same reason of geographical continuity.

Table 4. Types of trajectories by area.

	Lisbon	Northern LMA	Southern LMA
Permanent	50.4	42.8	37.4
Centre of Portugal	10.0	11.8	8.9

South of Portugal	-	-	12.7
North of Portugal	-	-	5.6
Multiple Origins (essentially south and north)	14.2	12.3	-
Centrifugal	-	18.3	14.3
Centripetal	10.5	-	-
Inter-Peripheries (and others)	-	-	8.4
Former Colonies	5.4	6.9	7.9
Brazil	9.5	7.9	4.8
Total	100	100	100

Source: Own elaboration.

4.3 Which variables characterize the individuals performing each trajectory?

Next, we present the results of a logistic regression analysis applied to the whole sample of the LMA for the most relevant groups: 1) permanent, for the three areas of Lisbon, Northern LMA and Southern LMA; 2) centrifugal, including Lisbon- Northern LMA and Lisbon – Southern LMA; 3) Centre of Portugal – LMA (to all three areas); 4) South of Portugal – Southern LMA; 5) Brazil – LMA; 6) Former Colonies – LMA (Lisbon, Northern Area and Southern Area). The main purpose is to identify the variables with higher explanatory power in order to understand the specificities of individuals that perform those different types of trajectories. Therefore, the dependent variable is residential trajectory, and the independent variables are the following: sex, generation, social class (36 years), household type (36 years) and housing tenure (36 years).

Table 5. Significance Value by trajectory group associated with Wald's chi-square test.

	Sex	Generation	Social Class (36 y)	Type of Family (36 y)	Housing Tenure (36 y)
Permanent	ns	p<0.0001	p<0.0071	p<0.0001	ns
Centrifugal	ns	ns	p<0.0001	ns	ns
Centre of Portugal-LMA	p<0.0081	p<0.0001	p <0.0778	ns	p<0.0082
Brazil- LMA	ns	p<0.0001	p<0.0025	p<0.0001	p<0.0001
Former colonies-LMA	ns	p<0.0263	ns	p<0.0001	p<0.0242

Source: Own elaboration.

Table 6. Logistic regression estimates.

Variable	Category	Permanent	Centrifugal	Centre of Portugal -LMA	Brazil-LMA	Former colonies-LMA
Sex	Women	-0.1017	-0.0731	-0.5022***	0.1474	0.00234
	Men	0 (ref)	0 (ref)	0 (ref)	0 (ref)	0 (ref)
Generation	1	-0.5506***	0.3357*	1.5627***	-4.0103***	0.4491*
	2	-0.0531	0.1551	1.1714***	-1.5933***	-0.2631
	3	0 (ref.)	0 (ref.)	0 (ref.)	0 (ref.)	0 (ref.)
Social class (36 years)	Agricultural workers	-0.4266	-0.6779	1.3203***	-	-0.9785
	Entrepreneurs and executives	-0.2832	0.2576	0.3362	0.1771	0.1258
	Employees	0 (ref.)	0 (ref.)	0 (ref.)	0 (ref.)	0 (ref.)
	Industrial workers	0.1795	-0.7544***	-0.1033	-0.5712	-0.0501
	Professionals and managers	0.4514***	0.6312***	0.1618	-1.4679***	0.0246
	Self-employed	-0.00348	-0.5413	0.2072	0.3619	-0.5379
	Other	0.5342**	-0.8279*	0.4400		-1.5731*
Household Type (36 years)	Couples with children	0 (ref.)	0 (ref.)	0 (ref.)	0 (ref.)	0 (ref.)
	Childless Couples	0.0692	-0.0339	-0.2095	0.8675***	-1.0865***
	Single parents	-0.0689	-0.8951	0.2215	-0.0225	-1.0142
	Extended Families	-0.0578	-0.4966	-1.9141**	0.674	0.9258***
	One-person households	0.1967	0.3689	-0.3822	0.4825	-0.6041
	Several households with no familial relation	-1.7249***	-0.1525	0.409	2.2151***	-0.2915
Tenure (36 years)	Other	-0.7618	-0.0669	0.6909	0.8004	1.3037**
	Renting	-0.2053*	0.159	-0.4808**	1.2771***	0.4071*
	Home Ownership	0 (ref.)	0 (ref.)	0 (ref.)	0 (ref.)	0 (ref.)

*: $p < 0.10$, **: $p < 0.05$, ***: $p < 0.01$

Source: Own elaboration.

1. Permanent

There are three variables with statistic significance⁶ that explain the specificity of individuals in this trajectory, namely: 1) generation ($p < 0.0001$); 2) household type, ($p < 0.0001$); and 3) social class ($p < 0.0071$). As to the first variable, there is a greater chance that the youngest generation can be permanent in comparison with the first

⁶ For all the analyses, we assumed a significance level of $\alpha < 0.05$.

generation. Concerning the household type, the most important aspect is that a member of a family with no couple/parental structure reduces the possibilities of making a stable trajectory when compared with the reference modality of this variable: couples with children. Nevertheless, as this type of trajectory has a huge dimension and for this reason leads to a great dispersion, it is difficult for this short set of independent variables to have a very high explanatory power.

2. Centrifugal

In this case, the only variable with statistical significance is social class ($p < 0.0001$), namely for the categories of industrial workers, professionals and managers. Therefore, being a professional is a promoter element of a centrifugal trajectory in comparison to lower-level employees. The opposite is true for industrial workers, who have lower chances of leaving the city of Lisbon for its peripheries when compared to that same reference modality (employees). Thus, this is one of the most interesting results of this analysis, since it rejects the dominant ideas about individuals who tend to leave the city for the peripheries. In other words, those who make that trajectory are not only people forced to because they have lower social and economic power.

3. Centre of Portugal – LMA

There are four variables with statistical significance: a) generation ($p < 0.0001$); b) sex ($p < 0.0081$); c) social class ($p < 0.0778$); d) housing tenure ($p < 0.0082$). Regarding generation, we can say that the oldest, those born between 1945-1954, have higher chances of making this trajectory in comparison to the youngest generation, followed by those of the intermediate generation. Sex is also a significant variable for explaining the specificity of the individuals in this trajectory, since women have lower possibilities of moving from the centre of Portugal to the LMA. As to social class, only the agricultural workers have more chances of following this path in comparison to employees. Finally, in respect to tenure, we verify that tenants have less chance of making this trajectory compared to homeowners. In fact, this trajectory corresponds to one of the main trajectories of the “rural exodus”, which occurred mainly until the 70’s.

4. South of Portugal – Southern LMA

This trajectory has some similarities to the previous one, exactly because it reveals another trajectory to the LMA through a rural exodus process. Regardless, in this case the only variable with statistical significance is generation ($p < 0.003$). Unsurprisingly, individuals belonging to the two oldest generations have stronger chances of following this pathway when compared to the youngest.

5. Brazil- LMA

This is the most specific group, the one that has the higher number of variables with stronger statistical significance, namely: a) generation ($p < 0.0001$), with a quite lower possibility that the 1st and 2nd generations will make this trajectory; b) household type ($p < 0.0001$), where individuals who belong to families with no couple/parental structure exhibit rather higher chances of carrying out this trajectory when compared with couples with children, followed by childless couples; c) housing tenure ($p < 0.0001$), with renting as the highlighted category of this variable when compared to ownership which reinforces more the possibilities of coming from Brazil to the LMA; d) social class ($p < 0.0025$), which has statistical significance only in the case of professionals and managers. Therefore, individuals that belong to this social class have fewer chances than employees of making this trajectory.

6. Former Colonies-LMA

In this group, there are two variables with significance: a) household type ($p < 0.0001$), with the extended families having higher possibilities than couples with children of making this trajectory (in contrast, childless couples have lower chances than couples with children of making it); and b) housing tenure ($p < 0.024$), namely the modality “other”, which includes all the situations that fit neither in renting nor in ownership. This is understandable because of the significance associated with extended families, in which individuals living with close family members do not have any contractual relationship with the respective home.

5. Conclusions

To conclude, we highlight here some remarks:

1. There are some important differences regarding the social structure of the metropolization process over the last 50 years. In fact, the greatest contrast occurs between the first generation (1945-1954) and the third (1965-1975): on the one hand, the new metropolitan inhabitants who are older came mainly from within the country, namely the interior and rural areas. On the other hand, the youngest generation of metropolitan “newcomers” essentially came from abroad.

2. In the first case, the two most important areas of origin are the centre of Portugal and its southern area. The distribution within the LMA of those who came from those two areas is not random. Those who came from the centre have settled primarily in Lisbon and, most importantly, in the Northern LMA. In turn, those who came from the south have settled preferentially in the Southern LMA. This distribution is clearly explained by the geographical continuity of the centre of Portugal with both the Northern LMA and Lisbon, and of the south with the Southern LMA. The Tejo, the most important river in Portugal, divides the LMA and also is a barrier between the south and the north of Portugal.

3. In the second case, it is true that the new metropolitan inhabitants arrived primarily from abroad, but their foreign origin is not random here either. In both cases, they came from Portuguese-speaking countries, but with an important difference: part of them came from former Portuguese colonies and need to be distinguished between returnees (those that were forced to leave those ex-colonies after decolonization in 1975) and immigrants. The other part came from Brazil.

4. This great difference in the social structure of the metropolization process between those two generations is completely illustrative of two different events, not only the evolution of the LMA but also of the country, which is equally important. In fact, the former is essentially a consequence of the latter. Therefore, that first event represents a process of transition between a traditional society (mainly rural) and a modern one (mainly urban). The second event was essentially a product of the third generation forming a new society that was mainly urban and much more modern than the previous one, which is pronounced by its greater openness to the outside world.

5. Residential Trajectories are essentially a means to understand the processes that creates the social composition of a territory, in this case of the LMA. Here, there are three aspects that should be underlined:

5.1 The first corroborates our initial hypothesis by demonstrating the prevalence in each area of permanent residential trajectories: *individuals tend to follow “stable” residential trajectories (when moving, they remain in the same area, in that of their partners, or they tend to choose similar areas). This guarantees the continuity of a spatial familiarity/identity, which they value, and it cushions the disruptive practical and emotional impacts of changing homes.*

5.2 The second is relative to the centrifugal trajectories, i.e., those households that leave the city to settle in the peripheries. This is also a very interesting case. As the logistic regression showed, this trajectory is more specific to professionals and managers, one of the groups that is better positioned in the social hierarchy. This shows that,

contrary to some impressionistic ideas, leaving the city is not necessarily an involuntary action, but a step performed by people with more social and economic capital who probably prefer a housing model or lifestyle that differs from what the city offers. The question that should be asked next is the following: If this is true, what is the housing model and lifestyle that they seek in the peripheries?

5.3 The third is the great specificity of those who complete a residential trajectory from Brazil to the LMA. This is related essentially to household type and tenure. Nevertheless, we have reason to believe that there are some differences between these individuals within the three areas of the LMA, namely between Lisbon's residents and those of the peripheries. The following hypothesis should be confirmed or refuted by further research that extends our knowledge about this group: Lisbon is the first place where immigrants settle, and their progressive integration into local society takes them out to the peripheries, where they tend to live more like the "autochthones", in terms of their family life as well as their housing conditions.

REFERENCES

- Authier, J-Y., Bonvalet, C., Lévy, J-P (dir.) (2010), *Élire Domicile: la construction sociale des choix résidentiels*, Lyon, PUL
- Bonvalet, C., Brun, J. (2002), « Etat des lieux des recherches sur la mobilité résidentielle en France », in J-P. Lévy, F. Dureau, *L'accès à la ville. Les mobilités spatiales en questions*, Paris, L'Harmattan, pp.59-70
- Dieleman, F. (2001), "Modelling residential mobility; a review of recent trends in research", *Journal of Housing and the Built Environment*, vol.16, n° 3-4, pp.249-265
- Elder, H.G. Jr., Kirkpatrick Johnson, M., Crosnoe, R. (2004), "The emergence and development of life course theory", in J.T. Mortimer, M.J. Shanahan, *Handbook of the life course*, New York, Springer, pp.3-19
- Feijten, P. (2005), *Life events and the housing career: a retrospective analysis of timed effects*, Delft, Eburon Publishers
- Fonseca, M.L. (1990), *População e território: do país à área metropolitana*, Lisboa, Centro de Estudos Geográficos, Universidade de Lisboa
- Gabadinho, A., Ritschard, G., Müller, N.S., Studer, M. (2011), "Analyzing and visualizing state sequences in R with TraMineR", *Journal of Statistical Software*. Vol. 40 (4), pp. 1-37.
- Marques, P., Marques Pereira, S. (2011), *Trajectórias residenciais e Metropolização: uma análise introdutória a propósito da AML*, WP n.º 2011/10, Lisbon University Institute, DINÂMIA-CET.
- Robette, N., Thibault, N. (2008), "Comparing qualitative harmonic analysis and optimal matching. An exploratory study of occupational trajectories", *Population-E* (Ined), 63 (4).
- Rodrigues, W. (2010), *Cidade em Transição: Nobilitação Urbana, Estilos de Vida e Reurbanização em Lisboa*, Oeiras, Celta.
- Ruspini, E. (2003), *Introduction to Longitudinal Research*, London and New York, Routledge.