A demo-geographic analysis of the small localities south of Mar del Plata, Argentina (1991-2001)

Sofía Estela ARES

Universidad Nacional de Mar del Plata

Resumen

En relación con el crecimiento demográfico de las localidades ubicadas al sur de Mar del Plata (Partido de General Pueyrredon) el problema es establecer el aporte de los saldos vegetativos y de los saldos migratorios. Las bases de datos censales permiten la aproximación indirecta al comportamiento vegetativo; con respecto a las migraciones, no es posible calcular saldos de movilidad. Los resultados se obtuvieron mediante el procesamiento cuantitativo de datos censales y muestran un proceso de envejecimiento en las localidades mencionadas y la probable preeminencia del componente migratorio en el crecimiento demográfico.

Palabras clave: poblamiento, localidades menores, estructura demográfica, migraciones.

Abstract

A look on the south of Mar del Plata city; the smaller localities from a demo-geographic perspective (1991-2001)

In relation to the population increase of the localities found to the south of Mar del Plata (General Pueyrredon District) the main problem is to establish the contribution of the vegetative and migratory balances. Census data allow an indirect approach to the vegetative behavior but in relation to migrations it is not possible to calculate mobility balances. The results were obtained through the quantitative analysis of census data that showed an aging process in the mentioned localities and the probable prominence of the migratory component in the population increase.

Key words: populate, small localities, demographic structure, migrations.

Introduction

General Pueyrredon partido (PGP) (564,000 inhabitants in 2001), in the southeast from Buenos Aires is generally known for the economic and demographic characteristics of Mar del Plata city (524,553 inhabitants\(^1\) in 2001). However, beyond this administrative center, there are spaces devoted to

---

\(^1\) In the calculation of the population totals, we took into account people living in individual homes and people who are part of houses surveyed on the street. Residents of collective households were excluded.
industrial and agricultural activities, in them, but throughout the roads, exist minor localities\(^2\) whose population does not exceed 10,000 in any of the cases.

Mar del Plata has had very high demographic/population rates throughout history. However, they started to decrease in the 70’s (Lucero, 2004) and almost simultaneously to this reduction, started a period characterized by a significant population increase in the minor localities. This phenomenon has been scarcely researched up to present (Mikkelsen, 2007; Ares, 2008).

In the period between the national census from 1980 and 1991, the agglomerations settled next to Autovía 2 recorded the highest inter-census annual growth rates (Sagua, 2004); whereas in the following ten-year period the situation took a new direction occurring mainly in the south (table 1). Hence, based on a previous evaluation of the growth rates, we decided to focus on the towns located in the south of Mar del Plata, throughout the “Interbalnearia” route number 11.

In views of the growth in the demographic/housing processes in the small localities of the PGP, the first question that arises to the phenomenon is if this expansion is essentially caused by: a) vegetative growth; b) processes of distribution of the population within the district; or c) the contribution of migrations.

In finding an answer to this, it is important to determine two facts: which demographic characteristics are to be found in the areas of recent population and the origin of the inhabitants. That is, on the one hand, we shall determine the demographic structure of these towns; this is done in order to indirectly estimate its vegetative growth and on the other, we shall research the place of residence five years before the census survey from 2001.

This paper has as objective to shed light on the specific conditions of the demographic growth in the population centers of the route 11 south. This will be specifically carried out in terms of demographic structure and territorial movements of the population.

This report consists of three sections. The first is of methodological nature. It describes the procedures, sources and techniques used in the calculation of indexes. The second describes the general characteristics of the population processes obtained after the analysis of the annual inter-census growth rates.

\(^2\) The spatial units in the area of study can be called neighborhoods or localities, depending on the criteria. From the census statistics, in the last two Population and Housing Census, the census area corresponding to the area of study are included in the rural fractions no. 63 and 64, and two other areas that belonged to the 59 fraction were included in 2001. Based on this classification and on the characteristics of the spatial units, we took the proposal made by Vapñarsky and Gorojovsky (1990), who consider the locality (town or city) as agglomeration. This opinion was adopted as census criterion in the INDEC since 1991. That is, localities are considered the “… areas of highly compact edification, which are interconnected by means of a dense network of streets”, and “It would not be possible to demand, also, the agglomeration to be defined as continuous edification area… two or more adjoining edification areas whose limits are no more than two kilometers along the shortest way are here considered components of a single agglomeration (Vapñarsky and Gorojovsky, 1990: 127). In accordance to these limitations, which were taken on by the INDEC, we will analyze two localities and one neighborhood (Los Acantilados).
We also included a demographic characterization that includes issues related
to the demographic structure (sex and age, masculinity rate, child-woman ratio,
proportion of the three functional groups of ages, average age). The variables of
the study included in the third part are place of origin and habitual residence place
of the population.

### Methodology and databases

The data that we use was taken from the National Population Census of 1980 and
The two latter were processed using Redatam.

Two kinds of analysis were used. One is of a diachronic nature, between 1980,
1991 and 2001; and another of transversal characteristics which aims at being a
photography taken at the moment of the census survey in 2001.

The annual rates of population growth were calculated with the formula of
exponential growth. They were chosen based on their precision compared to other
forms of calculation, and considering that the demographic growth is regarded as
a continuous process more than a series of periodic changes (Barclay, 1962: 33).
Its formula is transcribed as follows:

\[
\text{TCA} = \text{initial population} \times \left(1 + \text{rate of growth}\right)^t
\]
\[ r = \ln \left( \frac{N_2}{N_1} \right) \times 100 \]

Where ln is the natural logarithm (e base); \( N_2 \) is the final population; \( N_1 \) is the starting population, and \( t \) is time (exact number in years).

As a way to measure the vegetative contribution to the demographic growth, we evaluated the child-woman ratio (CWR). Elizaga states that this ratio “provides an approximate measure of the fecundity level” (1979:108). The CWR is advantageous in the sense that it can be calculated using census data and allows making comparisons between two or more populations (Elizaga, 1979).

The formula used to obtain that measure is the following:

\[
HNW = \left( \frac{\text{niños}(0-4)}{\text{mujeres}(15-49)} \right)
\]

Where CWR is the child-woman ratio; children 0-4 is the population of children from zero to four years of age, and women 15-49 is the population of women from 15 to 49 years.

That is, this ratio links the population of children from zero to four years to women in fertile age (15 to 49 years in age) and the results show, for each census area, the number of children per 100 women.

The database of the 1991 census does not differentiate between the population by sex and age groups. Hence, the value of the child-woman ratio was calculated by estimation. The procedure consists of applying the masculinity index at the moment of birth, 0.4878, to the total population between 15 and 49 years of age. This way, we obtained an approximated value of women in fertile age. In order to obtain the child-woman ratio for 2001, we directly created the tables that were necessary by means of Redatam.

The origin of the inhabitants was determined by means of the indicators contained in the databases from the census. In the case of the census of 1991, the analysis is limited to the place of birth; whereas in the survey from 2001, we also included data related to the place of residence occupied five years before the census survey.

In the case of the indicator labeled as ‘previous place of residence’ and ‘functional groups of age’, we obtained segregation indexes. By means of the Global spatial index of segregation (GSIS) one can analyze the behavior of each category (Buzai, 2003), in this case, the three etarean groups on the one hand and the previous place of residence (another country, another province, another town of the province) within the area of study as a whole. The formula that was used is the following:

\[
ISEG = k \sum_{i=1}^{n} |a_i - b_i|
\]
In which: \( k \) is a constant (0.50); \( b_i \) is the category whose distribution is to be determined and \\
\( a_i \) is the total population of the spatial unit.

The result from the GSIS was adjusted with the formula that is based on the hypothesis of the homogeneous distribution:

\[
HD = | (100/n) - 100 |
\]

Where:

HD = máximo posible value for the GSIS  
GSIS = (GSIS/HD)*100

This index suggests certain uniformity, which is related to the differential distribution of the category under study with regard to the total population.

Also, the areal spatial segregation index (ASSI) is used to determine the participation of the indicators that were selected taking an indicator as base in each spatial unit (Buzai, 2003). This is a local analysis, and in order to construct the corresponding maps, we used the values obtained with the following formula:

\[
ASSI = \frac{b_i}{a_i}
\]

Where: \( b_i \) is the category whose distribution is to be determined and \( a_i \) is the total population of the spatial unit.

**The area of study**

The units of analysis that were selected are located in the south of Mar del Plata city (38°00’ south latitude, 57°33’ west longitude); on the route 11 (map 1). Its specific characteristics are mainly related to its location in a privileged territorial division which includes beaches and abundant forests. Its current territorial configuration is strongly related to the nature of the division of land, whose original goal was to build residential neighborhoods used for summer or weekend housing, that is, second residences.

At present, far from those first objectives, these agglomerations have, above all since 1980, positive rates of demographic growth that are associated with stable population settlements.

They also differ much from the aimed homogeneity and can be generally differentiated by the quality and quantity of its constructions, as well as by the general characteristics that are part of the contexts of these neighborhoods. Three great spatial units are recognized and they have certain disparities between them:
Los Acantilados, Chapadmalal and El Marquesado. This fact is mostly noticed in Chapadmalal, given the fact that it is constituted by five census areas, each have its own neighborhood denomination and characteristics that make them different, as it was recognized in a personal visit. The official denomination and the census nomenclature are detailed in the following table:

### TABLE 2

<table>
<thead>
<tr>
<th>Denomination of special units</th>
<th>Censal denomination: fraction, radius</th>
</tr>
</thead>
<tbody>
<tr>
<td>Los Acantilados Barrio</td>
<td>5932, 5933, 6406</td>
</tr>
<tr>
<td>Chapadmalal (Playa de los Lobos, Estafeta Chapadmalal, Santa Isabel, Arroyo Chapadmalal, San Eduardo de Chapadmalal)</td>
<td>6305, 6306, 6307, 6308, 6309</td>
</tr>
<tr>
<td>El Marquesado (El Marquesado and San Eduardo del Mar)</td>
<td>6310</td>
</tr>
</tbody>
</table>

Source: own elaboration from INDEC data (2001) and from primary data obtained from direct observation.

### Populating and population, their main features

The two elements of the demographic growth, the vegetative balance and the migration balance, are difficult to determine considering the available census data.

Despite these difficulties we attempted an indirect approach. We made it through the study of the demographic composition and structure on the one hand, and the origin of the inhabitants that live in the area of study, on the other.

Migrations are usually defined as the geographic movement of people within a limit, with the purpose of establishing a new residence, of permanent or semi-permanent nature (Haupt and Kane, 2004: 35). The National Institute of Statistics and Census (INDEC) take on this definition and takes countries, provinces and administrative areas/departments as units of analysis in the mobility dimension. This way, processes that involve a change in the usual place of residence and that do not imply trespassing political-administrative limits are excluded. That is, this concept excludes movements that could be called local migrations or residential mobility and that, just as the extra-local migrations, also give rise to changes in the demographic structures of the places of origin and destination.

Another difficulty lies in the criteria adopted at the moment of performing the survey. This occurs so because it was decided to survey individuals in the place where they spent the night before previous to the survey (in the case of the Census of 2001, the night from Friday 16th to Saturday 17th, in November) this was done without considering if that was their usual place of residence (Documents from the Base of Users, INDEC). This factor could bias the results in areas considered as “second residences”.

144
Limiting the study of the changes in place of residence to migrations only, according to the delimitations they were subject of, does not allow capturing phenomena such as residential mobility. This way, it would be interesting to broaden these categories in future surveys; above all because the processes of demographic redistribution, both in metropolitan areas and in networks of minor localities are a specific characteristic that has to do with the Latin American realities in general. In this regard, several studies demonstrate how the traditional long-distance demographic flows nowadays share their significance with movements of intra-metropolitan nature (Pinto Da Cunha, 2002; Cerruti and Bertoncello, 2003; Celade, 2006). According to Celade (2006): “… the historical movement of poor people to the periphery is added to that of the well-off families to rural zones close to the metropolis, from which they mobilize to work and study”.

Map 1 Localities of General Pueyrrendon Partido
Based on these processes, Pinta Da Cunha sustains the need to rethink the meaning that living “out” of the urban area has. He asserts that:

The increase of housing in the zones considered as rural, the increase in the non-agricultural activities in these zones and the spread of the city towards the rural space not only makes us think of the need of a rigorous conceptual revision of the old urban/rural dichotomy, but also to carefully think of the tendencies shown by statistical data, sometimes disconnected from the socio-spatial realities (Pinto Da Cunha, 2002: 17).

The aforementioned disconnection between data and reality forces us to look for other strategies of research with the purpose of explaining the dynamic of the population.

In the case of the PGP, there is a network of minor localities whose development would be related to the so called “intra-metropolitan” flows and these include displacements between populated centers of the political-administrative unit. As Cerrutti and Bertoncello state, these migration flows tend to occur from the center to the periphery and the growth in the periphery has usually been accompanied by territorial expansion (2003: 12).

Total population and annual inter-census growth

By means of the data provided by the INDEC (1980, 1991 and 2001) one recognizes the increase of the population size in some areas of the PGP and, above all, in the area of study, where the 1991-2001 annual rates of inter-census growth outnumber those values from the period from 1980 to 1991.

Graph 1 shows the totals of population and the rates of medium annual inter-census growth. The values for each census moment show that most of the populated centers experienced significant changes between 1991 and 2001. Hence, it is thought that the 90’s were the break point in order for a new stage of higher demographic dynamic to start.

In these processes of territorial movement, factors essentially related to the search of another lifestyle are present. These new factors highlight a new estimation on the great spaces and the natural areas, this occurs above all in people who lived in Buenos Aires or in the administrative areas of the south and southwest of the Metropolitan Area of Buenos Aires (Mikkelsen, 2007; Ares, 2008).

But growth has certain discrepancies. Between 1980 and 1991, Arroyo Chapadmalal registered a significant loss of population, although it also showed a recovery in the following ten-year period. In contrast, San Eduardo de Chapadmalal is the special case in the period from 1991 to 2001, and according to census data, it is possible to state that it lost population. These neighborhoods are located in Chapadmalal and the reasons for these fluctuations are still to be determined.
In view of the extended growth in most of the territorial section that was selected, it is of interest to recognize the weight of vegetative and demographic factors as well as their expansion. We will firstly analyze the behavior of the variables that are associated to vegetative behavior.

**Demographic characteristics and vegetative growth**

The vegetative or natural growth derives from the balance between mortality and natality. However, it is not possible to reconstruct this equation with the databases that were provided by the official statistics. We therefore decided to research the special demographic characteristics that contribute to state some hypothesis on the natural growth of the population.

**GRAPH 1**

**POPULATION AND INTER-CENSUAL ANNUAL GROWTH RATE (1980-2001)**

As an indirect approach to one of the components of the natural growth we made use of the child-woman natality ratio. The values from 1991 and 2001 are presented in graph 2 and show significant changes in the demographic behavior.

In 1991, the CWR shows an unequal situation, in which El Marquesado stands out with a value higher than 80 percent, whereas in the rest of the neighborhoods values range from 50 to 65 percent. In 2001, it shows a generalized decrease and the fall of the CWR is very significant in the neighborhoods that had higher values in the previous census.

The changes in the structure of the population correspond both to natural growth and social processes. It could be said that, in general, the abrupt changes would be directly associated to migration or to residential mobility.

One of the elements of the demographic structure is the composition according to ages. In the entire rural sphere of PGP and in the case of the minor localities, it has been possible to determine the prevalence of people who are 65 or older (Ares and Mikkelsen, 2007). Data from the areal spatial segregation index (ASSI) can be analyzed in map 2. Some characteristics of the witness space are:

- ASSI for the age groups from 0 to 14 years of age: between zero and one. That is, there is not spatial segregation for these sets in comparison to the rest of the population.
- ASSI for the age groups from 15 to 64 years in age: between zero and one in Los Acantilados, Playa de los Lobos, Santa Isable, Arroyo Chapadmalal and El Marquesado. It has values between one and two, which show an incipient process of segregation in comparison to other age groups, in Estafeta Playa Chapadmalal and San Eduardo de Chapadmalal.
- ASSI for the age groups from 65 years and older: between two and three in all the spatial units that were considered with the exception of Santa Isabel. These values demonstrate the existence of a strong process of spatial segregation in these etarean groups, which duplicate and even triplicate the rest of the population.

It was possible to determine that the cases with high concentration of older adults coincide with spatial units that have a medium and high socio-economic condition (Ares and Mikkelsen, 2007). However, the high segregation of these etarean groups allows visualizing places with differential demands that are related to the age or stage of the cycle of life of the people. It also allows supposing that the contribution of natural growth would not be high in the case of the demographic increase of these towns.

In order to perform a more detailed analysis of the situation, we performed a comparison with the participation, within the area of study, of the three great functional groups for the census surveys from 1991 and 2001.
The data is presented in graph 3 and shows that the group of transitory passives (TP, 0 to 14 years in age) had a slight increase, that is, it would be possible to think of a small amount of births.

People included in the potentially active population (PAP, 15 to 64 years) decreased their proportion in almost six percent. Lastly, the definitive passives (DP, people being 65 or older) had an increase of almost 5 percent. Certain hypotheses can be stated to this respect:

• The decrease of PAP is due to the passing of time and the following transference of people towards the category of definitive passives (DP).
• Despite the changes seen in the child-woman ratio, the proportion of children would be, on average, maintained through time
• Emigration of potentially active population.
• Immigration of definitive passives.
Having determined the weight that the large age groups in each neighborhood have allows demonstrating the existence of a demographic regime that is between mature and old. The calculation of the medium age of the population (graph 4) reaffirms the situation of generalized aging and in the values obtained for the years 1991 and 2001; one notices a significant increase, with the exception of Playa de los Lobos and San Eduardo de Chapadmalal.
With regard to the composition of the population by sex, the masculinity ratio has been calculated for the years 1991 and 2001 (graph 5). In 1991, this ratio was high. In the case of 2001, one can see, in general, the existence of masculinity ratios superior to 100, in which the areas closest to units of agricultural production stand out, these units include: Santa Isabel, San Eduardo de Chapadmalal and El Marquesado.

The decrease in the number of males per 100 women between 1991 and 2001 was significant. This is, populations tended to equilibrium or created a new distinction, but now in favor of the feminine groups. The decrease of the masculinity ratio could be related to the increase in the tourist economic sector and to changes in the kinds of agricultural production, which increasingly dispenses of labor force.

The decrease in the masculinity ratio would be stressed proportionally to the reduction of the distance to Mar del Plata, such as in the case of Los Acantilados and Playa de los Lobos.
The demographic characteristic can be seen in the population pyramids of each locality. In the case of Los Acantilados (graph 6) there is a significant demographic base, especially considering its etarean contribution to the group from 10 to 19 years. At the same time, there is a low presence of youths from 20 to 29 years and to this specific characteristic one shall add the higher existence of people between 30 and 49 years. These are characteristics that point out to a settlement of young families with children younger under 20 years; another sign of this situation is the balance between genders in the groups from 30 to 59 years in age.

In Chapadmalal\(^3\) (graph 7), the base is significant and it is defined by the contribution, in a proportional way, of the groups from 0 to 19 years. This town would have more capacity of demographic retention of youths, or, would be

---

\(^3\) Graph 7 collects data corresponding to the different neighborhoods that are part of Chapadmalal, as specified in table 2.
GRAPH 5
MASCULINITY TRATIO (1991 AND 2001)

chosen by etarean groups of low age to start the formation of families. One infers
that in the conformation of the demographic structure, marriages of different ages
would be a significant participation. This is demonstrated in the balance between
males and females in the etarean groups up to 49 years in age.

El Marquesado (graph 8) is a still undefined area with regard to its demographic
behavior. The composition and structure of its population is very heterogeneous
and shows the preeminence of males in almost all groups of age, with the
exception of those between 40 and 49 years, and also in those in 80 years.

To sum up, the populated centers under study have elderly demographic
regimes or ones in process to become old with proportions of population older
than 64 that are above the 10 percent in all the cases that were considered (2001).
The other side of the situation can be seen in its demographic potential according
to the high presence of youth between 0 and 14 years, as well as in the population
in fertile age. It shall not be disregarded that the rejuvenation of the neighborhoods
is subject to the capacity to attract and retain population in active ages.
Leaving the hometown, moving from the city or neighborhood sets people in an ambivalent situation; between the expectation of a better future and a feeling of distance from the world they know. This kind of displacement tends not to have the implications related to changing the country of residence, but it has effects on the spatial distribution of the population and on the migrants themselves (Celade, 2006).

As the cited report arguments, population displacements have consequences both in the people who change their place of residence and in the original and recipient populations. The structural changes affect the demographic composition of the populations, the total population in each territorial section and, in the future, affect the rates of population growth. As a result of this, they demonstrate the significance of the analysis made on the territorial mobility.

However, data from the National Census do not allow determining the points of origin and destination of the territorial mobility within the administrative area so that two kinds of analysis were used. In the first place, and for whole political-administrative unit, indexes of general and areal segregation were calculated.
specifically for the variable that indicates the place of residence five years before the census. This first approach has as objective to contextualize the situation of the towns under study.

It is appropriate to clarify that the term segregation is not used in a negative sense; it is used instead to refer to the territorial difference that allow identifying the areas that have exhibit the physical individuality and the specific cultural features of the individuals who live in them (Zorbaugh, 1974: 86; quoted by Buzai, 2003: 37). In this regard, Castells refers to segregation as a tendency that allows finding spaces with strong internal social homogeneity, but with great differences within it (1974).

In a second instance, in the neighborhoods that were selected, we researched the place of birth and place of residence corresponding to a date five years before the census surveys.

At the scale of administrative areas, GSIS has the values shown in table 3 and one confirms that not only is the provision of migrants important, significant is also the fact that they do not have a homogeneous distribution. In this regard, people who lived previously in another country stand out.

These characteristics are further analyzed through the ASSI that corresponds to the previous place of residence (maps 3, 4 and 5). The relative values corresponding to the population that lived in another town of the Buenos Aires province show the significance that the population from this origin has in the growth of the minor localities of the PGP.
We also found that former residents of other countries are more segregated with regard to the total population, above all in the units of analysis located in the northwest and west of the PGP. Their high concentration is mainly seen in the areas with disperse rural population. Some places with grouped population, but very related to the primary economic activities have also a considerable segregation.

On their side, the migration from the Argentinean provinces (with the exception from that of Buenos Aires) is one of the specific characteristics of the settlement in the PGP. The ASSI for this category has, in most areas, values above two. This index demonstrates that the proportion of population that lived in another province is at least two times the proportion of the total population.

Current data on migration continue showing that PGP is an recipient area for population that changes the place of residence in search of better labor opportunities and better living conditions. With regard to the national and international migrants, it is clear that there is a distribution associated to the localization of productive activities such as the primary sector, the horticulture or the exploitation of quarries; and the secondary sector such as the fabrication of bricks.

The different indexes of areal segregation also help us understand the processes of territorial mobility to the towns along route 11. The ASSI recorded for the population that lived in another town of the province of Buenos Aires five years before the Census shows the existence of strong differences in Estafeta Playa Chapadmalal, Santa Isabel and San Eduardo de Chapadmalal. In these places, the proportion of population with the aforementioned characteristic tends to be two times higher than in the rest. It is hence possible to think that this settlement of population has received heavy contribution from other towns of PGP, as well as people who lived in other districts of the Buenos Aires province.

On the other hand, the ASSI that corresponds to the population that lived in other provinces shows high segregation values in certain sector of the Los Acantilados neighborhood; as well as in Playa Los Lobos, Estafeta Playa Chapadmalal and El Marquesado. These last would be recent migrants that have probably found labor or housing situations that are favorable without having to make a residential scale in Mar del Plata.

Despite the limitations of the databases we could establish that 75 percent of the people surveyed live usually, since at least five years, in the locality where they were considered for the census. Also, 11 percent of the current residents lived in another locality or town of the Buenos Aires province, although it is not possible to determine if they lived in the PGP or in another administrative area. Finally, a negligible percentage lived in another province and almost 10 percent had not yet been born (graph 9).
MAP 3

AREA SPATIAL SEGREGATION INDEX
POPULATION WHICH FIVE YEARS AGO SINCE DID NOT LIVE IN ARGENTINA

Source: own elaboration on INDEC, CNPV and H data.
GESPyT cartography
MAP 4
AREA SPATIAL SEGREGATION INDEX
POPULATION WHICH FIVE YEARS AGO LIVED IN ARGENTINA, BUT OUTSIDE BUENOS AIRES PROVINCE

Source: own elaboration on INDEC, CNPV and H data.
GESPyT cartography
MAP 5
AREA SPATIAL SEGREGATION INDEX
POPULATION WHICH FIVE YEARS AGO LIVED
IN OTHER LOCALITY IN BUENOS AIRES PROVINCE

Source: own elaboration on INDEC, CNPV and H data.
GESPyT cartography
Graph 9 also shows the emigration condition for the area of study. One distinguishes that among those who currently live in another locality of the Buenos Aires province; almost 15 percent lived previously in another locality of the south axis. In this case, it is also impossible to determine which the spatial units of origin (previous residence) and destination were; neither is it possible to corroborate if the changes in the place of residence were within the limits of PGP or beyond them. This situation is repeated in the cases of the current residents in other provinces (11 percent lived in the selected areas at this time) and in another country (50 percent lived in any of the chosen locations).

Regarding the place of birth, there is not a differentiation between those born in PGP and those from the rest of the Buenos Aires province. The places with higher proportion of population born in other provinces are Arroyo Chapadmalal, San Eduardo de Chapadmalal and Estafeta Playa Chapadmalal. Foreigners, on their side, tend to concentrate in El Marquesado, Los Acantilados and Santa Isabel.

Final considerations

In view of the demographic/housing processes of expansion, in the south corridor of General Pueyrredon Partido, we researched on the vegetative and migration components that take part in said growth process. The two axes of the paper were: a) the demographic characteristics related to the vegetative or natural behavior, and b) the origin of the inhabitants, demonstrating, by means of the indicators, the previous residence and place of birth. Both lines of work contributed to determine some specific characteristics of the demographic growth in the area.

The first aspect, the demographic characteristic, was developed based on the analysis of different indicators. In a summarized way, it is possible to say that the area shows a decrease in the child-woman ratio accompanied by certain reduction in the masculinity ratio and an increase in the medium age.

The behavior of the child-woman ratio, between 1991 and 2001, reflects a decrease in the proportion of children (from 0 to 4 years) which is related to that of women in fertile age. It is also outstanding that there was a slight increase in the percentage participation of the minors from 0 to 14 years in the same temporal period. This etarean group demonstrates the existence of a demographic potential

---

<table>
<thead>
<tr>
<th>Previous residence place</th>
<th>Adjusted ISEG</th>
</tr>
</thead>
<tbody>
<tr>
<td>In other country</td>
<td>55.90</td>
</tr>
<tr>
<td>In other province</td>
<td>30.74</td>
</tr>
<tr>
<td>In other Buenos Aires province</td>
<td>30.70</td>
</tr>
</tbody>
</table>


* Lack of data is because these communities were not identified by the 1980 National Census.
that will remain in time only if the young-mature population is retained in the localities.

In the global structure by ages one sees the decrease of the potentially active population and the increase in the group of people who are 65 or older. That is, processes of emigration and immigration would be taking place and would promote the transformations in the demographic structure. The population aging would then explain the decrease in the child-woman ratio and the slight increase in minors from 0 to 14 years.

In the composition of the population by sex one sees a decrease of the masculinity rates, which is probably associated to the gradual changes in the economic activities, which acquire a more urban nature, that is, related to the provision of services. Another possible cause of the feminization is the demographic aging and the higher life expectancy recorded for women.
The second aspect refers to the origin of the population and represents a way to approach the incidence of the territorial mobility on the process of population of these spatial units. It is worth mentioning that the processes of mobility do not imply, only, transformation in the people who change their residence, they also create structural changes in the population and affect the rates of growth both in a negative and positive way; therein lies the significance of the analysis made on them.

It was not possible to further study the origin of the population, but it is important to highlight that in Estafeta Playa Chapadmalal, Santa Isabel and San Eduardo de Chapadmalal there is a significant concentration of population that five years before the Census lived in another locality of the Buenos Aires province. Also, the population that lived in other provinces shows high segregation values in certain sector of the Los Acantilados neighborhood; as well as in Playa Los Lobos, Estafeta Chapadmalal and El Marquesado. These would be recent migrants who have probably found positive situations without having to make a residential scale in Mar del Plata.

Regarding the place of birth, there is not any discrimination between people born in PGP and in the rest of the province of Buenos Aires. The places with higher proportion of population born in other provinces are Arroyo Chapadmalal, San Eduardo de Chapadmalal and Estafeta Playa Chapadmalal. Foreigners, on their side, tend to concentrate in El Marquesado, Los Acantilados and Santa Isabel. Consequently, it is assumed that in the population process of the south area, the contribution of effectives from different localities of PGP and other districts of the Buenos Aires province would be significant.

With regard to these details, it was proved that 11 percent of the current residents lived (five years before the 2001 Census) in another locality or town of the Buenos Aires province, although it is not possible to determine if they lived in PGP or in another administrative area back then. Finally, a very inferior percentage lives in another province and almost 10 percent had not been born yet. These set of data also allowed determining the existence of processes of emigration, a circumstance which proves what has been previously mentioned.

To sum up, the results demonstrate the presence of populations in process of aging and some changes in the composition of the population. In both cases, they are issues that influence in a negative way the natural growth of the population, so that it is not very probable that the expansion that the chosen localities experienced is related to the high positive vegetative balances.

Based on these considerations, it is believed that the demographic growth in the selected area is mainly linked to the positive balances of territorial mobility. As it has been mentioned, the lack of higher details in the census databases does not allow the calculation of the mobility balances or its punctual analysis; at least at the scale of the department or administrative area, of the places of origin and destination.
In view of these difficulties, it is clear that it is necessary to broaden, in the census surveys, the level of analysis of the territorial movements of the population. We acknowledge that having disaggregated data would enable the analysis of the local and extra-local migratory flows in order to determine their contribution, or lack of it, to the growth of the localities. Likewise, it would be possible to determine the preference of some places in detriment of others and to correlate these results to socio-economic variables that allow explaining the processes of territorial distribution of the population.

In this regard, to identify the combined role of the territorial mobility of the population and of the vegetative behavior is a significant step to determine and locate new potential needs and demands in the territory.

Bibliography


BARCLAY, George, 1962, Técnicas del análisis de la población, Biblioteca Interamericana de Estadística Teórica y Aplicada, Comisión de Estadística del Instituto Interamericano de Estadística, University of Princeton.


ELIZAGA, Juan Carlos, 1979, Dinámica y economía de la población, Celade, Santiago de Chile.


MIKKELSEN, Claudia, 2007, “No me banco las hormigas, yo me voy de la ciudad. Los cambios de residencia en el Partido de General Pueyrredon”, in Lorena SÁNCHEZ, Observar y escuchar. Mar del Plata analizada por jóvenes investigadoras, Edem, Mar del Plata.


**Sofía Estela ARES**

She holds a B.A. in Geography from Mar del Plata National University (Argentina). She is currently enrolled as student at the Ma. in Social Sciences and Humanities at the Quilmes National University in Argentina. She holds a research grant at Mar del Plata National University and she is a researcher of the Grupo de Estudios sobre Población y Territorio (Group of studies on population and territory) (GESPyT). She has also extended her teaching functions, due to a research grant, to Social Geography and Applied Cartography.

E-mail: ares.sofi@gmail.com