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# **RETURN MIGRATION TO THE BRAZILIAN** SEMI-ARID NORTHERN REGION

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#### Abstract

In a strict sense, the migrant to return is understood by the individual who left their region of birth, he resided for some time in a different region and with certain time returns to its place of origin. In this context, the objective of this study was to analyze the process of return migration in the municipalities of the northern brazilian semiarid (SemiSet), between the periods 1995/2000 and 2005/2010 and estimate the return flows in the region. This region is composed by 755 municipalities, located above the São Francisco river, in the states of Rio Grande do Norte, Ceará, Paraíba, Pernambuco, Alagoas and Piauí. We used the Demographic Censuses of 2000 and 2010, which adopted the criterion "fixed date" for definition of the returnes. It has been observed that in relation to the region of origin (former residence) of returnees, in the period 1995/2000 predominated the return of individuals from the Southeastern region of the country. In the period 2005/2010, reverses the position between the Southeast and Northeast, with a reduction of 29% of those who came from the East and an increase of 48% between the returned from the own Northeast

Keywords: migration; return migration; semiarid northern.

#### **Resumo / Resumen**

#### MIGRAÇÃO DE RETORNO PARA A REGIÃO DO SEMIÁRIDO SETENTRIONAL BRASILEIRO

Em um sentido estrito, o migrante de retorno é compreendido pelo indivíduo que deixou sua região de nascimento, residiu por algum momento em uma região diferente e com certo tempo retorna a seu local de origem. Neste contexto, o objetivo desse trabalho foi analisar o processo de migração de retorno nos municípios do Semiárido Setentrional brasileiro (SemiSet), entre os períodos 1995/2000 e 2005/2010 e estimar os fluxos migratórios de retorno na região. Essa região é composta por 755 municípios, localizados acima do rio São Francisco, nos estados do Rio Grande do Norte, Ceará, Paraíba, Pernambuco, Alagoas e Piauí. Utilizou-se os Censos Demográficos de 2000 e 2010, sobre os quais adotou-se o critério "data fixa" para definição dos retornados. Observou-se que em relação à região de origem (residência anterior) dos retornados, no período 1995/2000 predominou o retorna dei indivíduos oriundos da região Sudeste a país. No período 2005/2010, inverte-se a posição entre a região Sudeste e Nordeste, com redução de 29% daqueles que se deslocaram do Sudeste e um aumento de 48% entre os retornados do próprio Nordeste.

Palavras-chave: fluxo migratório; migração de retorno; semiárido setentrional.

#### MIGRACIÓN DE RETORNO PARA LA REGIÓN DEL SEMIÁRIDO SEPTENTRIONAL BRASILEÑO

En un sentido estricto, el migrante de retorno es comprendido por el individuo que dejó su región de nacimiento, residió por algún momento en una región diferente y con cierto tiempo regresa a su lugar de origen. En este contexto, el objetivo de este trabajo fue analizar el proceso de migración de retorno en los municipios del Semiárido Septentrional brasileño (SemiSet), entre los períodos 1995/2000 y 2005/2010 y estimar los flujos migratorios de retorno en la región. Esta región está compuesta por 755 municipios, ubicados encima del río São Francisco, en los estados de Rio Grande do Norte, Ceará, Paraíba, Pernambuco, Alagoas y Piauí. Se utilizaron los Censos Demográficos de 2000 y 2010, sobre los cuales se adoptó en el período 1907, ceara, raranoa, Pernambuco, Alagoas y Piauí. Se utilizaron los Censos Demográficos de 2000 y 2010, sobre los cuales se adoptó el criterio "fecha fija" para la definición de los retornados. Se observó que en relación a la región de origen (residencia anterior) de los retornados, en el período 1995/2000 predominó el retorno de individuos oriundos de la región Sudeste del país. En el período 2005/2010, se invierte la posición entre la región Sudeste y Nordeste, con reducción del 29% de aquellos que se desplazaron del Sudeste y un aumento del 48% entre los retornados del propio Nordeste.

Palabras-clave: flujo migratorio; migración de retorno; semiárido septentrional.

# INTRODUCTION

In Brazil, the migratory dynamics were accentuated in the period between 1930 and 1970 (BAENINGER, 2005), which was marked by an accelerated economic advance, unevenly among the major regions of the country. Conjuncture in which emerged one of the greatest phenomena of the national migration dynamics, which highlights the departure of numerous Northeastern towards the Southeast of Brazil. Since 1980, reversed If the direction of the mainstream of the national migration, due to impacts on the economy d centers urban country (Moura; TEIXEIRA, 1997). Thus, they emerged new migratory currents in the country, which highlights the phenomenon to return migration, especially of a vast quota to population for the Northeast (OLIVEIRA, OLIVEIRA, 2011).

Return is a complex process like migration, and in a strict sense, the return migrant is understood by the individual who left his or her birth region, resided for some time in a different region, and eventually returns to his or her place of origin. Rescuing some classic authors who have focused on the definition of migration, from Ravenstein (1885) to Courgeau (1973), one has that the return movement is implicit in the definition of migration. The motivating factors of a decision to return, according to Oliveira and Jannuzzi (2005) sometimes is due to a non-cultural adaptation and or failure in the destination with the non-insertion in the job market.

Also, other studies indicate the emergence of new attraction factors in the region of origin as influencers in return decision making (YANG, 2003). Just as the decision to migrate may be associated with employment opportunities in the destination, the return flow may come from the change in economic dynamics, both in the destination and the region of birth (OLIVEIRA et al, 2015 and CASSARINO, 2013).

On the other hand, achieving success at the destination by entering the job market can also be an important driver of return. Retirement is an example of this, whereby the individual can choose to enjoy the benefit in his or her homeland, often for reasons of a quest for more tranquility as one gets older, which is linked to being close to family and friends (SIQUEIRA; MAGALHÃES; SILVEIRA NETO, 2006). Situation is to which refers the possible contribution of networks relations social in return decision, especially kinship and friendship (FUSCO, 2001).

Jiménez and Rodríguez (2006) state that the emigration movement is given as something transitory, of defined duration for a minimum time necessary to solve the problems that motivated its departure, thus having the inherent return to this period of resolution.

Therefore, this paper aims to analyze the return migration process in the municipalities of the Brazilian Northern Semiarid (SemiSet) between 1995/2000 and 2005/2010 and to estimate the return migratory flows in the region.

# THEORETICAL RATIONALE

A starting point for analyzing return migration in the northeastern semiarid focuses on the rescue of the context of the process of leaving this population. In this sense, the 1930 marked the beginning of the acceleration of the urbanization process in Brazil, triggering several social, structural and economic changes. It was a period evidenced by the beginning of industrialization, concentrated in the metropolitan centers of the Southeast region of the country, arising from an expansion of the coffee economy, which developed and accentuated the market in the region (PATARRA, 2003; BRITO; HORTA; AMARAL, 2001). According to Santos, Menezes Filho and Ferreira (2003) migrants in Brazil were positively selected by leaving the regions with one slow development budget to target the areas with sharp development, which came to aggravate inter-regional inequality in the country.

The metropolitan region of the state of São Paulo and the Rio-São Paulo axis formed the basic nucleus of the Brazilian urban system, as they had strong impacts on regional and national urbanization, through the various transformations of its coffee-based export cycle. for example, the implementation of transportation lines, which came to boost the urban and economic development of the region (FARIA, 1978). On the other hand, during the same period the economy of the Northeast region suffered a long period of crisis, with severe droughts that caused a significant drop in its production. Which was based mainly on the production of sugar cane and cotton in its eastern coastal part, besides the practice of

livestock and leather production in the semiarid region (FARIA, 1991).

This scenario of crisis in the Northeast stands out as the main triggering factor of mass emigration from the Northeast towards the Southeast region, mainly to the state of São Paulo. Thus, the increase in migratory flows translated into a significant increase in the resident population in the urban areas of the country.

According to Faria (1991) on the main aspects of Brazil's urbanization process, it was observed that society achieved high rates of economic growth between 1945 and 1980, thus undergoing several structural changes. Surg and, since 1960 an urban-industrial society, fueled by increasing periods of migration from the countryside to the city. The urban population growth occurred in the limited number of urban centers, concentrating large population contingents in a few metropolitan areas and regional capitals. In 1980, between twenty and thirty years, three hundred and eighty-six new cities with more than twenty thousand inhabitants appeared. In addition to about thirty agglomerations with more than three hundred and fifty thousand inhabitants, totaling a total of 40 million people.

Through the industrialization process, structural changes in the country's production were presented, encouraged by selective and strategic public investments in the countryside, boosting the regional differentials, which caused strong migratory movements to the cities, leading in 1980 to about 30 years. million people the total living in cities where they were not born. During this period, the emergence of the urban peripheries in the metropolitan centers, in the form of slums and tenements, of poor housing with no basic sanitation and transportation.

According to Brito, Horta and Amaral (2001), in 1940 Brazil had about 30% of the population living in urban areas. Over the decades there was a sharp increase in this percentage, reaching in 1970 to exceed the percentage of the rural population (55.9%). In 1980, the percentage increased to 67.6%, which continued to grow over the decades. At the last census in 2010 are already 84.4% of the population in urban areas. Thus, the authors state that most of this urban demographic growth is explained by the increase in rural-urban migratory flows, especially considering the children who had rural migrants, as an indirect effect of the movement.

In the 1960, the Northeast region experienced a period of recession in the region's economy, which resulted in the departure of approximately 2.2 million people (RIBEIRO; CARVALHO; WONG, 1996) and in the following decade more than 3 million people left the region. On the other hand, the Southeast in this period had a net gain of 816 thousand people in its population, only through migration and in the following decade reaching about 2.2 million people (OJIMA; FUSCO, 2015).

In this sense, the industrialization and urbanization experienced in the southeastern metropolitan centers were preponderant for the accelerated increase of the arrival of immigrants in the region. Because they are the biggest investment pickers by industrialization, São Paulo and Rio de Janeiro were the main receiving states of immigrants from this flow (CARVALHO; GARCIA, 2006). It is estimated that in the period between 1960 and the late 1980s approximately 43 million people left the countryside towards the cities. A large part of this contingent comes from the Northeast and Minas Gerais (BRITO; HORTA; AMARAL, 2001).

In the period of 1970 through the demographic census it was noted that the migratory movement was accentuated in the age group considered as young population, from 15 to 29 years old. Thus, revealing the attraction factor for job opportunities, generated by the acceleration of the industrialization process in the urban centers of the country.

## Overview of Return Migration in Brazil

From 1980 onwards there was a strong change in the trend of the national migration flow, with a new reality experienced by the immigrant receiving centers, going through major economic crises, thus obtaining high rates of unemployment and increased urban violence. Thus, a significant inversion of the national migratory flow was promoted, discouraging the permanence of the immigrant in the big cities (CUNHA, 1998).

Thus, the Northeast region, being in the 1960 one of the regions that sent most immigrants to the others, due to contrast factors experienced at the time, according to Cunha and Baeninger (2001), from the 1970 onwards an unprecedented increase in immigration to their states, with a large participation of

the return movement.

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During this process local aspects began to expand the economic structure of the Northeast. For example, the growth of the Camaçari (Bahia) petrochemical complex, tourism in the coastal region and the production and exportation of fruit, both triggering the absorption of a potentially immigrant population, as well as encouraging the flow of returnees to leave the Southeast. This in turn, experiencing so pronounced in the years 1980 the major economic crises present in the Brazil, being marked by rising unemployment, fall consumption, increase external debt, decline of Gross Domestic Product (GDP), increased inflation, which have been reflected d the country high debt ratios (NASCIMENTO, Oliveira, 2015).

Regarding the decade of 1970 and the years 1980 and 1990 took place changes in the migratory pattern of the Brazilian regions, and the reduction of population gains of the old areas of population attraction (East, North and Midwest), also registering a significant reduction of capital flows and intensification from the years 1980 migratory countercurrent (CUNHA; BAENINGER, 2001).

According to Siqueira, Magalhães and Silveira Neto (2006) this strong change in the migratory pattern in the Northeast, is attributed to a greater capacity of population attraction. In the Northeast, according to Queiroz (2014), a flow of 26.40% of returnees in relation to the total number of immigrants in the region, which increased to 38.70% between 1986/1991, and increased to 43.47% between 1995/2000, expressing in this period the total of 22% of all participants of the national migratory flow. The region has a share of the total return flows of the country of approximately 40% of the total reemigrants in 1995/2000 and 37.53% in the 2005/2010 period (BAPTISTA; CAMPOS; RIGOTTI, 2017).

Therefore, return migration is currently one of the main phenomena of population flow and its occurrence has become increasingly present in recent decades in Brazil (SIQUEIRA, MAGALHÃES, SILVEIRA NETO, 2006). It is seen that regions that traditionally forgiveness would m population as the state of Minas Gerais and the Northeast, presented in the last decades a strong recovery of the population emigrated.

# **METHODS**

### Region of study: Northern Semiarid

In this work, the Northern Semiarid Region (Figure 1), which is part of the Brazilian semiarid region, was defined as a study region, which in turn has the current delimitation established by Ordinance n° 89 of the Ministry of National Integration, of 16th March 2005, in review the area defined by SUDENE (Northeast Development Superintendence). This ordinance was based on the following technical criteria: i. Average annual rainfall less than 800 mm; ii. Aridity index up to 0.5 calculated by the water balance relating precipitation and potential evapotranspiration between 1961 and 1990; iii. Risk of drought greater than 60%, based on the period between 1970 and 1990.

The SemiSet, also known as the "northern backlands", is made up of 755 Brazilian semi-arid municipalities in the northern portion of the São Francisco River. It covers the northeastern states excluding Bahia, Maranhão and Sergipe, occupying approximately 485,917.2 km<sup>2</sup>, with about 14.1 million inhabitants corresponding to 47% of the population of all semiarid (about 22.5 million people) according to the Census 2010.

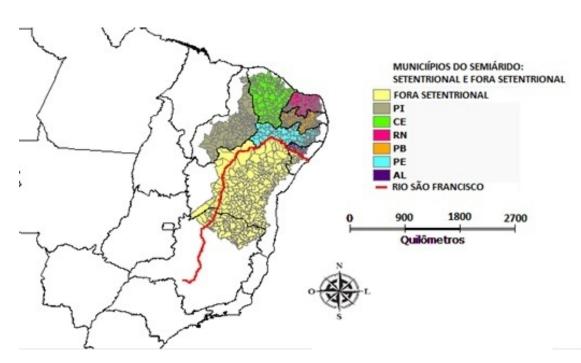


Figure 1 - Semi-arid municipalities: Northern and Northern Brazil by UF, 2015.

### Database

In order to identify the return migratory movement, the following variables were used: municipality of current residence and municipality of previous residence (fixed date). In addition, the following variables were constructed: i. Non-migrant: Individual who at the reference date resided in a municipality that makes up the SemiSet and was a native of the SemiSet; ii. Immigrant: Individual resident in a municipality that makes up the SemiSet, but exactly five years prior to the Census lived in a municipality outside the SemiSet; iii. Emigrant: Individual who exactly five years prior to the Census resided in a municipality outside the SemiSet, but now resides in a municipality that composes it; iv. Returning Migrant: Individual born in a municipality that makes up the SemiSet and was re-registered in the municipality of birth. Importantly, full return migrants (short term), those initially residing in a locality, emigrated and returned before the census date were not captured (BAPTISTA; CAMPOS; RIGOTTI, 2012).

To identify the return migrant in the Brazilian Demographic Census microdata from 2000 and 2010, produced by the Brazilian Institute of Geography and Statistics (IBGE), the following filters were required;

•Filters applied in the 2000 Census for returning SemiSet migrants:

VariableFiltered Response

V0415 - Have you ever lived in this municipality?2 - No

V0417 - Born in this municipality?1 - Yes

V4250 - Municipality of residence on 31/07/1995? Municipalities outsider SemiSet.

•Filters applied in the 2010 Census for returning SemiSet migrants:

VariableFiltered Response

V0618 - Born in this municipality?2 - Yes but lived in another municipality or foreign country.

V6264 - Municipality of residence on 07/31/2005? Municipalities outsider SemiSet.

Finally, the applications of these filters, as well as the manipulation of the census database in general, were performed using the statistical software IBM SPSS STATISTICS 20 (Statistical Package for the Social Sciences). SPSS allows you to pull frequencies, sort data, and perform crosses between distinct variables. For the formulation of tables and figures, Microsoft Excel 2013 application software was used and TerraView-4.2.2 software was used for plotting maps.

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## Measurement Techniques

About the analysis and measurement of the migratory flow of SemiSet, the following are some indices, concepts and formulas that were applied: i. Migratory Balance (IE). This is the difference between immigrants and emigrants from a given region; ii. Migration Effectiveness Index (SM / (I + E)). It is the ratio of the migratory balance and the total of immigrants and emigrants from a given region. This index varies between -1 and +1, being classified as follows, -0.13 to -1.00 - area of migratory loss, -0.12 to 0.12 - area of migratory turnover, 0.13 to 1.00 - migratory retention area; Net Migration Rate ((SM / Pn) \* 100): This is the ratio of the region's migratory balance to its total population at the end of each period; iii. Net Immigration Rate ((I / Pn) \* 100). This is the ratio of the number of immigrants from the region to their total population at the end of each period; iv. Net Emigration Rate ((E / Pn) \* 100): This is the ratio of the number of emigrants in the region to their total population at the end of each period; iv. Net Emigration Rate ((E / Pn) \* 100): This is the ratio of the number of emigrants in the region to their total population at the end of each period; iv. Net Emigration Rate ((E / Pn) \* 100): This is the ratio of the number of emigrants in the region to their total population at the end of each period; iv. Net Emigration Rate ((E / Pn) \* 100): This is the ratio of the number of emigrants in the region to their total population at the end of each period.

# **RESULTS AND DISCUSSION**

# Overview of interregional return migrations, 1995/2000 and 2005/2010

According to Nascimento and Oliveira (2015) the change in the direction of migratory currents in the Northeast region, from 1970, with the return of part of northeastern emigrants was driven by the release of population attraction factors in the SemiSet. With the development of medium-sized towns in the region, it makes it endowed with urban functions and specific economic activities, the receipt of investment of companies, industries and refinery projects in the region, besides the river transposition San Francisco and railroad Transnordestina, as also the internalizing universities and expansion of federal institutions which triggered the real estate industry and is commerce site.

Analyzing the migratory flows and current trends in the organization of space of the SemiSet through the Census from 1970 to 2010, we observe the population displacements that occurred in the rural-urban sense of this region. Moreover, the predominance of the population in the urban area in the SemiSet is recent, occurring only from 1991, that is, twenty years after that observed in Brazil. Having in 2010, a population of the SemiSet residing in urban area equivalent to 63.8%, lower than the 67.9% of the country in 1980, and located well below the 84.4% registered in 2010. This effect the late development was possibly due to a marked loss of population through emigration to other regions of the country, the process of economic development, and cultural aspects of the region. According to Ojima, Costa and Calixta (2014), despite the high degree of urbanization in 2010, only about seven out of ten individuals who migrate towards SemiSet move to an urban area.

The SemiSet , although with a slow pace of urban growth compared to the national, presented during the urbanization process the emergence of the so-called attraction poles (Campina Grande / PB, Juazeiro do Norte / CE) , which according to Santos (2003), These are areas whose annual average rainfall exceeds 1,000mm, the so-called "humid islands", which are characterized as agricultural granaries, with economic and demographic differentials in the region, which make them regional centers of population attraction. For example, the increase in irrigated fruit growing in the São Francisco River valley, Açu, Mossoró and Baixo Jaguaribe. In addition to the growth of production in the regions that develop dairy farming activities, located in the semiarid of Alagoas and agribusiness (goat, beekeeping, sheep, tobacco and cashew).

Another important factor of population attraction was the emergence of new cities from the breakdown of municipalities. Due to the creation of new public offices and jointly the emergence of a trade based on this mass of civil servants (SANTOS, 2003).

Analyzing the panorama of the interregional migrations (fixed date) of SemiSet in the periods 1995/2000 and 2005/2010 through Table 1, it was seen that in the locality there was a negative migratory balance, in both analyzed periods. This balance being decomposed by UF, the behavior is reproduced in all, emphasizing that the migratory movement is considered individually to each municipality contained in the SemiSet. It was also observed between periods a fluctuation in the

migratory balance of the states, highlighting in 1995/2000 the state of Paraíba with the largest negative balance and the state of Piauí with the lowest negative balance. In the following period, Ceará presented the largest negative balance and Rio Grande do Norte the lowest negative balance.

The Net Migration Rate of SemiSet municipalities in the first period was -1.18, achieving slight contraction in the following period. What represented a net loss of individuals from SemiSet municipalities, is also observed in the aggregate by state, with greater intensity in the state of Alagoas, which remained in the following period, thus demonstrating a greater power of population expulsion from the municipalities in AL SemiSet.

The Net Immigration Rate of SemiSet municipalities in the first period was 3.41 and decreased in the second period by about 18%. Fact with which it can - it identifies r one intensity decays arrival of new immigrants to the location, which was repeated when disaggregated by UF. Although there is a reduction in immigration, on the other hand, the Net Emigration Rate between periods also reduced significantly (by about 13%), somewhat softening the result of the migration balance.

Period	UF	Population	I	E	SM	IEM	TLM	TLI	TLE
1995/2000	Ы	970.489	33.965	44.038	- 10.073	-0,13	-1,04	3,50	4,54
	CE	4.216.674	162.495	174.579	- 12.084	-0,04	-0,29	3,85	4,14
	RN	1.604.343	47.861	69.020	- 21.159	-0,18	-1,32	2,98	4,30
	РВ	1.970.302	60.342	105.394	- 45.052	-0,27	-2,29	3,06	5,35
	PE	3.246.659	106.383	143.290	- 36.907	-0,15	-1,14	3,28	4,41
	AL	843.945	27.693	54.499	- 26.806	-0,33	-3,18	3,28	6,46
	SemiSet	12.852.412	438.739	590.820	- 152.081	-0,15	-1,18	3,41	4,60
	РІ	1.045.538	27.645	59.651	- 32.006	-0,37	-3,06	2,64	5,71
	CE	4.724.731	133.574	178.847	- 45.273	-0,14	-0,96	2,83	3,79
	RN	1.764.742	50.241	60.727	- 10.486	-0,09	-0,59	2,85	3,44
2005/2010	РВ	2.092.420	54.715	91.164	- 36.450	-0,25	-1,74	2,61	4,36
	PE	3.655.837	106.035	125.187	- 19.151	-0,08	-0,52	2,90	3,42
	AL	900.539	25.972	54.372	- 28.400	-0,35	-3,15	2,88	6,04
	SemiSet	14.183.807	398.181	569.948	- 171.767	-0,18	-1,21	2,81	4,02

Table 1 - Immigration Volumes (I), Emigration (E), Migration Balance (SM), Migration Effectiveness Index (EMI), Net Migration Rate (TLM), Net Immigration Rate (TLI) and Net Emigration Rate (TLE) of the SemiSet Municipalities by Federation Units (UF), in the periods 1995/2000 and 2005/2010.

In this context of transformations in the behavior of migratory dynamics, the SemiSet region according to Ojima and Fusco (2016) is particularly impacted by structural and economic changes. Between 2000 and 2010 in the region's municipalities, there was a sharp increase in municipal GDP, from 30.1% to 33.2%. This increase means that there is a large share of resources from activities related to public services, public jobs and cash transfers, which reflects a greater dependence of municipalities on the "public machine". According to the authors, this profile means in terms of its relations with population dynamics, especially migration, the existence of positive or negative aspects that reflect on the local migratory dynamics.

Regarding the Interregional Migration Effectiveness Index, as shown in Table 1, it was noted that the municipalities of SemiSet as a whole experienced intense population mobility, characterized by the loss of part of it with the index remaining negative in both periods, although it presents a slight reduction and a fluctuating behavior if aggregated by state. Therefore, there was a migration loss, but with the index being close to zero, that is, slightly below an effective migration turnover (even with negative values). Among these aspects, the municipalities of Alagoas and Paraíba presented themselves as regions of population expulsion, which did not change between the periods.

Since the municipalities of the state of Piaui suffered a large increase in population loss, as one of the poorest states and worst indicators of quality of life in the country, in the last two Census, probably its loss on its agricultural frontier. The increasing population expulsion also occurred in the municipalities of Ceará, leaving an effective migration turnover in the first period, leading to a loss, a fact that occurs inversely in the states of RN and PE.

About the 4% reduction in the total number of emigrants from SemiSet municipalities, if we explore the region of destination of the emigrants (Table 2) in the 1995/2000 period, there is a predominance of individuals going to the Northeast region itself (municipalities out SemiSet ), a fact contrary to the historical trend of the movement, and Southeast second, situation which supports the view that a strong internal dynamics in the region. In the period 2005/2010, there was a reversal of position between the Southeast and Northeast region, showing slight cooling (5%) of the Northeast and an increase of 3.6% of migratory exchanges with the Southeast region.

	UF	Destination Region							
Period	Source	Total	North	Northeast *	Southeast	South	Midwest		
	Ы	44,038	3.7%	34.2%	41.4%	0.7%	20.0%		
	СЕ	174,579	5.0%	48.4%	38.5%	1.1%	7.0%		
	RN	69,020	2.1%	67.9%	22.0%	1.4%	6.5%		
1995/2000	РВ	105,394	2.7%	39.0%	48.3%	1.3%	8.7%		
	РЕ	143,290	3.1%	40.9%	49.1%	0.9%	5.9%		
	AL	54,499	1.5%	46.4%	48.2%	1.2%	2.7%		
	SemiSet	590,820	3.4%	45.9%	42.0%	1.1%	7.6%		
	Ы	59,651	3.1%	25.0%	49.5%	1.1%	21.3%		
	CE	178,847	3.5%	44.8%	42.1%	2.8%	6.8%		
2005/2010	RN	60,727	2.4%	72.2%	17.5%	1.3%	6.6%		
	РВ	91,164	1.9%	36.8%	50.8%	2.4%	8.1%		
	РЕ	125,187	2.5%	42.1%	47.3%	2.5%	5.6%		
	AL	54,372	1.0%	40.8%	49.8%	2.3%	6.0%		
	SemiSet	569,948	2.6%	43.4%	43.5%	2.3%	8.2%		

Table 2 - Total Emigrants from SemiSet municipalities by destination region and origin FU, from1995/2000 to 2005/2010.

• Excluding SemiSet municipalities.

## Migration flow back to northern semiarid municipalities

As seen, the SemiSet is discerned as a region that has experienced significant population loss over time, which is present in its migratory flow. Although from 1970 onwards the return of currents to the region has intensified, which has cooled such a loss. Therefore, it is of fundamental importance for social policies and for the development of the regions (OJIMA; FUSCO, 2015), to verify how these currents were presented and to understand the characteristics of the return movement and their effects.

For Ribeiro, Carvalho and Wong (1996) recall, the return of the population to their region of birth causes several direct and indirect demographic effects in the localities involved, depending on the flow volume and the profile differentiation of the returnees with the residents.

Analyzing the migratory return flow to SemiSet municipalities, in the periods 1995/2000 and 2005/2010 (Table 3), according to the fixed-date criterion, there is a 16% increase in return migrants from 30.7% in the first period to 35.5% in the final period.

Period	Total population	Non-migrants	Total Immigrants	Return Immigrant	Reason returned / immigrant
1995/2000	12,852,412	9,325,923	438,739	134,876	30.7
2005/2010	14,183,807	10,002,350	398,181	141,321	35.5

Table 3 - Total Population of SemiSet , Non-Migrant, Immigrant and Returning Immigrant Municipalities , 1995/2000 and 2005/2010.

Despite this increase, in absolute terms there was a percentage reduction of 9% in the total number of immigrants in the region between the periods considered. This is evidence that there is a growth in the power of population attraction of returnees of SemiSet municipalities, because even with a smaller number of immigrants there was an increase in the proportion of returnees.

Regarding the region of origin (previous residence) of the returnees (Table 4), it is noted that in the 1995/2000 period the return of individuals from the Southeast region of the country predominated, confirming a historical trend of the movement. Except in the case of the municipalities of the state of Rio Grande do Norte (observing in aggregate by state), where the largest number of returnees came from the Northeast itself (municipalities that are outside of SemiSet). In addition, it was demonstrated the importance of the return flow to the state of Piaui of individuals from the Midwest of the country, due to the end of the agricultural expansion that was passing, which in previous decades was motivating the departure of a contingent of northeastern emigrants.

In the period 2005/2010, the position is reversed between the Southeast and Northeast, with a reduction of 29% of those who moved from the Southeast and a 48% increase among returnees from the Northeast. With this, the understanding is ratified about the growth of the short-term internal migration dynamics in the region, as well as the reduction between migratory exchanges with the Southeast, which may be recurrent to the reduction of emigration to the region.

Thus, there is a strong internal dynamic in the region, since the capitals and some metropolitan regions of the six states are not contained in the SemiSet. This fact may be justified by urban growth and investment in public policies, which according to Ojima (2015) is configured by a considerable evolution, in the last two censuses, the HDI in the region, more than doubled, especially in the middle cities. This scenario is characterized by the increase in the offer of services and jobs, which makes these cities attractive to the return of the population, especially at an economically active age.

Period	UF Return	Region of Origin							
		Total	North	Northeast *	Southeast	South	Midwest	IGN <sup>s</sup>	
1995/2000	PI	12,957	4.8%	24.1%	57.2%	1.3%	12.1%	0.6%	
	CE	49,788	4.7%	40.0%	46.2%	1.5%	6.6%	1.0%	
	RN	12,134	5.6%	50.0%	36.1%	1.1%	6.8%	0.3%	
	РВ	23,204	2.5%	29.9%	57.7%	1.0%	7.8%	1.1%	
	PE	29,398	2.0%	37.2%	54.7%	1.1%	3.9%	1.1%	
	AL	7,394	1.5%	44.0%	49.0%	1.5%	2.8%	1.1%	
	SemiSet	134,876	3.7%	37.3%	50.4%	1.3%	6.5%	0.9%	
2005/2010	PI	9,773	3.5%	32.3%	45.6%	1.2%	17.3%	0.6%	
	CE	53,549	3.6%	61.9%	28.6%	1.0%	4.8%	1.0%	
	RN	17,473	1.4%	72.6%	20.3%	0.9%	4.7%	0.3%	
	РВ	21,084	2.0%	37.5%	51.9%	1.9%	6.8%	1.1%	
	PE	30,748	1.5%	52.9%	41.4%	0.8%	3.1%	1.1%	
	AL	8,694	1.7%	55.2%	39.8%	1.1%	2.0%	1.1%	
	SemiSet	141,321	2.5%	55.2%	35.7%	1.1%	5.4%	0.9%	

Table 4 - Total Returning Immigrants in SemiSet municipalities by region of origin and return FU, from1995/2000 to 2005/2010.

- \* IGN Did not have place of origin information.
- Excluding SemiSet municipalities.

Therefore, analyzing the return flows from the perspective of the SemiSet urbanization process, which in turn was shaped by the emergence of cities of population attraction, which, according to the 2010 census, stood out as cities that received above of 1,000 returned in the 2005/2010 period: Caucaia (CE) with 5,582 returned, Caruaru (PE) with 2,693, Sobral (CE) with 1,839 and Campina Grande (PB) with 1,597.

## CONCLUSIONS

Although the Northeast region has historically presented itself as an area of population expulsion, mainly due to the loss of labor, in the last decade the migration scholars in Brazil have shown significant changes in their migratory dynamics, mainly by the back currents of return. Although negative migratory balances remain in the northeastern states, it is possible to notice an intensification of the intraregional migratory dynamics, especially in the case of the Northeastern Northern Semiarid. It is important to note that when considering a change in the migratory context of the region, it may undergo significant changes in the age structure and sociodemographic profile of the population of the SemiSet, derived from this flow of returnees, and may or may not be beneficial for the localities involved, the region of origin and destination.

From the point of view of the cities that stood out for the largest contingent of returnees in the cut, through the present study, given their limitations, we can state that their performance was directly related to the differential of economic development presented in these locations, which elucidates the strengthening of intraregional movements in the region. Although this trend cannot be explained by the dynamics of retention of smaller municipalities, because they do not have the same characteristics, they also had their relevant contribution to the evidenced changes.

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Thus, from the results achieved in this research it is concluded that the return migrations already have their importance in SemiSet, besides a tendency to significantly impact the development of the municipalities of the locality. In addition, it is concluded that although return attraction differentials have been presented among the cities of the region, as they are considered cities of attraction in the region, due to their contribution to the reduction of the northeastern population's departure from their region of birth, it is possible to understand them as new destination options for northeastern migrants and as areas of absorption of migrants from other regions of the country.

In this sense, some questions may be suggested for further studies, considering the association between return migration and the economic development of SemiSet municipalities. It is necessary to highlight the impacts that would generate the expansion of several factors that could reduce emigration and attract more returnees. for clipping. For example, the creation and expansion of federal incentives for the development of local production, especially in the existing poles cities, this also for income transfer programs, such as Bolsa Família, since according to Fusco (2001) there is a relevant influence networks of relations partners in the decision to return, especially kinship and friendship.

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