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A Demografia do Império Português.  
Fontes, métodos e resultados, 1776–1882

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# Settlers for the empire: the demography of the Azores Islands (1766–1835)

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## Resumo

Os Açores foram, a partir de 1427, um dos primeiros territórios a serem povoados no Atlântico. Durante o século XVIII o arquipélago manteve taxas de mortalidade relativamente baixas e uma natalidade elevada que permitiu um excedente periódico de população. Os açorianos foram utilizados pela Coroa para ocupar várias parcelas do império. Este texto apresentará uma descrição e interpretação das estruturas e movimentos de população destas ilhas, durante o final do antigo regime, uma época em que a população era entendida como um recurso para políticas de Estado, utilizado no controlo das fronteiras coloniais e na execução de actividades económicas.

**Palavras-chave:** demografia, império, mobilidades, ilhas, Açores.

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## Abstract

The Azores were one of the first territories to be settled in the Atlantic, after 1427. During the eighteenth century the archipelago kept a relatively low mortality and high birth rates allowing periodic surplus of population. Azoreans were often enlisted by the Portuguese crown to occupy its empire. This text will present an overview of the structures and population movements of these islands, during the late ancien régime, a time when populations were understood as a resource for State policies, used in the control of colonial borders and in the implementation of economic activities.

**Keywords:** demography, empires, migrations, islands, Azores.

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## **Settlers for the empire: the demography of the Azores Islands (1766–1835)\***

**Paulo Teodoro de Matos**

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The Atlantic archipelagos of Azores, Madeira and Canary Islands are the first attempts to build new societies, organized according to European models, in recently discovered territories. Half way to the Americas, close to Africa and in the middle of major maritime routes the Atlantic archipelagoes became important ports of call, places for the experimentation of social, economic and cultural models and areas for the recruitment of populations employed in the occupation of other geographical areas, mostly in the Americas. They were, at the same time, peripheral islands and decisive interfaces between the European metropolitan territories of the Iberian empires and its new colonial areas.

The Azores were settled from 1427 onwards. Since the seventeenth century its population became instrumental to crown policies regarding the occupation and control of several areas of Brazil. During the eighteenth century Azoreans were again used to settle and consolidate colonial borders in Rio de Plata region. The archipelago continued to be a sort of intermediate area between colonial spaces and the metropolitan kingdom until 1834, when the Azores formally became a new province of European Portugal. However, even under this new administrative and political configuration the archipelago kept strong links with transatlantic emigration, first to Brazil and later to the United States of America. The Azores were a sort of last border of the European peasant societies and never imported large contingents of slaves. The islands kept a relatively low mortality and high birth rates that allowed a persistent surplus of population that was periodically used by the Portuguese crown to settle and occupy its empire with single men and women, families, soldiers and conscripts.

Between 1766 and 1835 the archipelago of the Azores underwent extensive changes in its political, economic and social structures. The slow transition from the Old Regime to Liberalism brought changes, but it also

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manifested continuities in certain areas. The political and administrative system that governed the islands was gradually transformed during this seventy one years. Royal administration and local elites incorporated new protagonists and some economic activities emerged, like the export of oranges and the potato and maize farming. However, migratory movements and the exodus of people from the islands continued to be an important demographic factor. Most of these movements of individuals, families, soldiers and conscripts were directed to Brazil. A period of slow population growth, during the last decades of the 18<sup>th</sup> century, was followed in the Azores by a steady increase and economic expansion after the 1800s. The demography of the islands is a mirror that reflects these processes of transformation and must be also understood in relation with the emerging political ideas and power practices. The “populationist ideals of mercantilist policies” now saw populations as the main source of for the wealth of a nation, the raw material used to project plans for economic growth and to build new political and administrative frameworks.<sup>1</sup> A shortage of people in a particular area was associated to poverty, and to situations of crisis and economic collapse. Populations were also a resource for State policies, used in the control of colonial borders and in the implementation of new economic activities.

The goal of this text is to present an overview of the structures and population movements in the archipelago and to transform them, whenever possible, into indicators and orders of magnitude. We will evaluate the population oscillations, taking into account the size of the islands and the distribution of the various age groups. In a second level, we will examine the demographic behavior, birth rates, mortality rates and net migration rates. This dynamic analysis of the different variables will help us to calculate the numbers and main trends for migration movements. Finally it is our goal to determine growth rates, providing new evidence to understand social action and social structures, namely inter-island mobility, marriage rates and infant mortality rates.

## The sources

With the creation of the captaincy-general in 1766, the Azores, as well as Portugal’s overseas territories, experienced improvements in the area of population statistics. The first comprehensive population count was carried out in 1747, and in the 1760s standard models were introduced that listed

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<sup>1</sup> Artur Boavida MADEIRA, *População e Emigração nos Açores (1766–1820)*, Cascais, Patrimonia, 1999.

people of “communion” age, the number of deceased divided into age groups, and the total number of baptisms.<sup>2</sup> Between 1766 and 1775 a series of reports were produced, but were insufficient to calculate with certainty the islands’ population. In most of the islands these surveys were done between 1766 and 1769, except for S. Miguel where they were carried out between 1770 and 1775.<sup>3</sup>

More extensive and sequential data only became available for the archipelago as a whole after 1776.<sup>4</sup> The decree of 5 May 1776 made it obligatory for an annual map to be elaborated by all the parishes specifying the number of men (divided by ages: 0–7, 7–15, 15–60 and 60+), and women (0–7, 7–14, 14–40 and 40+), as well as the total number of births and deaths. The data collection process was to be centralized in the person of the captain-general, who in turn would work with the Crown magistrates and *corregedores*, then send it to the Secretary of Overseas Territories. The base for these population surveys was the diocesan clergy, who had the responsibility of collecting the information—mainly from the confessional rolls and parish registries—and delivering it to the bishopric. These procedures were not exclusive to the archipelago; all overseas governors were required to follow these directives.<sup>5</sup>

Although the same model was used until the establishment of Liberalism, it should be noted that comprehensive maps were produced at the end of the eighteenth century.<sup>6</sup> There are detailed descriptions of inhabitants for several of the islands in 1799, specifying gender, marital status, age structures by exact age or age groups, as well as lists of marriages and deaths per age group. Also at this time the first references of “blacks” and “mestizos” appear. The population tables for the island of Terceira in 1800 provides, for the first time, information about the number of clergy and the surveys

<sup>2</sup> See the law of 2 August 1766 whereby the bishop was directed to send these reports every year in José Guilherme Reis LEITE, *O Códice 529 — Açores do Arquivo Histórico Ultramarino: a Capitania-Geral dos Açores durante o Consulado Pombalino*, Angra do Heroísmo, DRAC, 1988, p. 89.

<sup>3</sup> A. B. MADEIRA, op. cit., 1999a, pp. 31–49; Paulo MATOS, “Population Censuses in the Portuguese Empire, 1750–1820. Research Notes,” *Romanian Journal of Population Studies*, vol. VII, no. 1, Jan.–Jun. 2013.

<sup>4</sup> A. B. MADEIRA, op. cit., 1999a, pp. 31–49; Norberta AMORIM and Hermínia MESQUITA, “Uma perspectiva da população açoriana no século XVIII,” *O Faial e a Periferia Açoriana nos séculos XV a XIX*, Horta, Núcleo Cultural da Horta, 1998, pp. 365–6.

<sup>5</sup> See for the case of Brazil, Dauril ALDEN, “The Population of Brazil in the Late Eighteenth Century: A Preliminary Study,” *The Hispanic American Historical Review*, vol. 42, no. 2, 1963, pp. 177–80. It is likely that this decree was issued to accompany the political orientations that determined the survey of 1776 carried out by Pina Manique in the provinces of the mainland and of the Kingdom.

<sup>6</sup> P. T. MATOS, art. cit.

carried out. This year also saw the introduction of more specific information regarding the professions of the inhabitants of the Azores. Arrangement by age groups and gender became more common, as well as the division into categories like “single,” “married” or widowed.<sup>7</sup>

The political instability of the early 1830s was strongly felt in the Azores but did not inhibit the production of statistics. In the area of demographics, namely population counts, a significant number of lists of inhabitants were produced as a result of the decree of 26 November 1830.<sup>8</sup> These listed all residents per household in each parish, as well as their professions and ages, and resulted in extensive records for 1832 for several islands.<sup>9</sup> Lists of ordinances were also drawn up, enabling the government of the Azores to follow the new directives issued on the mainland for the Kingdom.<sup>10</sup> However, quantitative accuracy depended on the inquisitors, and despite instructions from the captaincy-general, parish priests and municipal officers did not always proceed in the best way, nor did they always observe “a regular calculation of the number of their inhabitants.”<sup>11</sup>

It should be noted that although there is quite an abundance of statistical information for the first three decades of the nineteenth century, it is quite dispersed in archival terms and years of production, making it difficult to reconstruct the islands’ overall population. In this sense, even though the earlier population maps of 1766 and 1776 offer more limited information, they allow for easier production of series because they encompassed all the islands.

For quantifying the Azorean population, structures and behavior, we mostly used sources from the Arquivo Histórico Ultramarino (the Overseas Historical Archive) for the period between 1766 to 1801, which were made available and previously analyzed by Artur Madeira, and in part, by Maria Norberta Amorim and Maria Hermínia Mesquita. For the nineteenth century we used a significant collection of population tables, mostly from the Public Library and the Regional Archive of Angra do Heroísmo, which provided a reliable picture of the evolution of the inhabitants of this archipelago.

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<sup>7</sup> Artur Boavida MADEIRA, *População e Emigração nos Açores (1766–1820)*, Ponta Delgada, Universidade dos Açores (apêndice documental policopiado), 1997, p. 125.

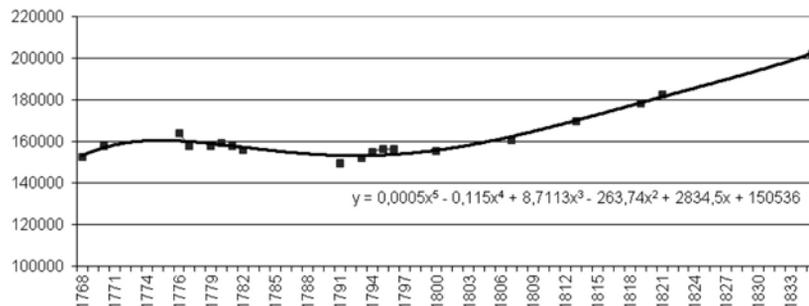
<sup>8</sup> Paulo Teodoro de MATOS, *O Nascimento Fora do Matrimónio na Freguesia da Ribeira Seca da Ilha de São Jorge (Açores): 1800-1910*, Braga, NEPS, 2007, p. 27.

<sup>9</sup> P. T. MATOS, op. cit., p. 27.

<sup>10</sup> A. B. MADEIRA, op. cit., 1999a, pp. 143 and 155. João Pedro FERRO, *A População Portuguesa no Final do Antigo Regime (1750–1815)*, Lisboa, Editorial Presença, 1995.

<sup>11</sup> A. B. MADEIRA, op. cit., 1999, p. 153.

## The evolution of the number of inhabitants



1 Evolution of the Azorean population 1768-1835<sup>12</sup>

Period	Azores	Mainland	
1768-1776	0.91		
1776-1791	-0.61	0.06	0.6
1791-1800	0.45		
1800-1807	0.47		
1807-1819	0.88	0.76	0.13
1819-1835	0.79		

2 Annual average growth rates for the archipelago of the Azores and the Mainland (1768-1835)<sup>13</sup>

In global terms, between 1768 and 1835, the Azorean population registered a moderate increase, with an annual average growth rate (AGR) of 0.43%. There were, however, several different growth rates during the time span under analysis. In the second half of the eighteenth century, between 1776 and 1792, there was a considerable decrease in the population (-0.61%), whereas the previous period (1768-1776) registered an annual increase of almost 1%. The drop in population numbers in the 1780s in almost all the islands coincided with a succession of blights and droughts, which affected agricultural production and resulted in a deterioration of living conditions.

According to Artur Madeira, these growth fluctuations were linked to both the continual departures of married couples between 1747 and 1753, which affected the evolution in some of the islands of the central group,

<sup>12</sup> Given the significant set of records used for this demographic study, we listed the different sources in the bibliography.

<sup>13</sup> Cf. figures for the archipelago in appendix 1. Data for the mainland in *Anuário Demográfico de 1968*, LXV (retrospective 1527-1960). For the Continental population see also J. P. FERRO, *op. cit.*, p.32.

and to widespread military conscription in the islands of São Miguel and Terceira during the 1760s and 1770s.<sup>14</sup> The departure of men aged thirty and under, who were vital elements for the continuity and stability of a population would end up “conditioning, in certain periods, population growth” in the archipelago even more than the emigration of individuals or families.<sup>15</sup> Unfortunately, quantitative studies and orders of magnitude are still lacking, even if provisional, that could provide better information about the permanent effects of departures through emigration, conscription and inter-regional migratory movements.

Although the 1790s registered an increase in the Azorean population, this only became permanent and systematic in the nineteenth century. The growth rate registered for the periods of 1791–1800 and 1800–1807 (c. 0.45%) almost doubled in the following periods, specifically from 1807–1819 and 1819–1835, with 0.88 and 0.79% respectively.

When compared with the mainland (1800–1835), the differences revealed were so considerable that they can be regarded as opposite trends. While the mainland registered an annual growth rate of 0.6% between 1768 and 1801 and was relatively consistent with the rest of Europe, the Azores had practically no growth (0.06%). On the other hand, during the Napoleonic invasions and the Liberal wars of the first decades of the nineteenth century, the islands registered rapid growth, estimated at an annual rate of 0.76%; in the Kingdom that increase was practically insignificant, remaining below 0.13% per year.

The rapid increase after 1807, can, in our opinion, be related to long term changes in agriculture and the availability of food. The progressive predominance of maize became accentuated in the eighteenth century, turning into a staple food that helped improve the diet of the populations, though food crises were not eradicated.<sup>16</sup> The introduction of the potato at the end of the 1780s and its widespread cultivation in the following decades created a safeguard against cereal blights.<sup>17</sup>

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<sup>14</sup> A. B. MADEIRA, op. cit., 1999, pp. 77–8.

<sup>15</sup> *Idem, ibidem*, p. 49.

<sup>16</sup> Avelino de Freitas de MENESES, *Os Açores nas Encruzilhadas de Setecentos (1740–1770)*, Ponta Delgada, Jornal de Cultura, 2 vols., 1993–1995, pp. 31–77 and 143.

<sup>17</sup> Luís Meireles do Canto e CASTRO, *Memória sobre as Ilhas dos Açores e Principalmente sobre a Terceira*, Paris, 1834, pp. 31–2; Margarida Vaz do Rego MACHADO, *Agricultura, Abastecimento, Conflitos de Poder. São Miguel 1766 a 1806*, Ponta Delgada, Jornal de Cultura, 1995, pp. 61, 73–137; *Idem*, “O milho nos finais de Setecentos na ilha de São Miguel,” *Arquipélago — História*, 2.ª série, vol. I., 1995, pp. 175–88; Paulo Teodoro de MATOS, “A população da ilha de São Jorge na última década de Setecentos: estrutura e comportamentos” in *O Faial e a Periferia Açoriana nos séculos XV a XIX*, Horta, Núcleo Cultural da Horta, 1998, pp. 551–82.

Period	Santa Maria	São Miguel	Terceira	Graciosa	São Jorge	Pico	Faial	Flores	Corvo	Azores
1768-1776	0.48	0.51	0.73	1.35	1.85	1.62	0.75	1.86	0.75	0.92
1776-1791	-1.66	-1.11	-0.45	-0.43	-0.52	-0.29	0.44	-0.34	-0.21	-0.61
1791-1800	0.78	1.18	-0.34	-0.80	-0.27	0.87	-0.86	1.69	0.63	0.44
1800-1807	-0.50	-0.01	0.47	1.38	0.81	0.22	2.32	-0.21	0.44	0.47
1807-1819	-0.25	0.41	1.52	1.80	1.27	-0.56	2.39	0.91	1.22	0.88
1819-1835	0.51	0.94	0.94	0.05	0.15	1.97	-0.29	1.15	-1.17	0.80
1768-1800	-0.44	-0.07	-0.12	-0.09	0.14	0.51	0.15	0.78	0.27	0.06
1800-1835	0.04	0.57	1.04	0.91	0.67	0.75	1.14	0.80	-0.03	0.76
1768-1835	<b>-0.19</b>	<b>0.26</b>	<b>0.49</b>	<b>0.43</b>	<b>0.41</b>	<b>0.63</b>	<b>0.67</b>	<b>0.79</b>	<b>0.11</b>	<b>0.43</b>

3 Annual average annual growth rate in the islands of the Azores (1768-1835)

The evolution of the inhabitants of the Azores was discontinuous for each island, and for the period under analysis profound differences and growth rates are revealed for each one. There were, however, several common points. In the first place, the demographic recession recorded in the archipelago from 1776 to 1791 (-0.61% per year) seems to have reached all the islands, except for Faial, where the biggest drop in baptisms occurred in the mid-eighteenth century.<sup>18</sup> The islands to the East were the most affected, with rates around -1.11% and -1.66% for S. Miguel and Santa Maria, respectively. This fact reflected the severity of recurring wheat and food crises in the archipelago. Between 1767 and 1769 all the islands were affected by a series of shortages.<sup>19</sup> The same occurred in 1779, 1781, 1787 and 1790 in the island of São Miguel, in 1782 in Flores, in 1777 and 1779 in Graciosa, in 1779 and 1785-1786 in Pico, Faial and São Jorge, in 1791 and 1795 in Santa Maria, and in 1777 and 1795 in the island of Terceira.<sup>20</sup> Data shows that the crises were more intense in the island of S. Miguel, the results of which were seen during the 1780s by the larger number of deaths over births.<sup>21</sup> Like in previous demographic patterns of the Old Regime, the crises of 1781 and 1787 were followed by plagues and epidemics.<sup>22</sup> More recently,

<sup>18</sup> The high demographic growth in Faial between 1776 and 1791 can be included in the island's demographic recovery after a period of depression. N. AMORIM and H. MESQUITA, op. cit. 353.

<sup>19</sup> A. de. F. de MENESES, op. cit., 1995, p. 143.

<sup>20</sup> N. AMORIM and H. MESQUITA, op. cit., p. 372; J. D. RODRIGUES, op. cit., pp. 104-10. For a previous period (1740-1770) see a list of these crises in A. de. F. de MENESES, op. cit., 1995, p. 143.

<sup>21</sup> N. AMORIM and H. MESQUITA, op. cit., pp. 359 and 373.

<sup>22</sup> José Damião RODRIGUES, 2003. *São Miguel no Século XVIII. Casa, elites e poder*, Ponta Delgada, Instituto Cultural de Ponta Delgada, 2 vols., 2003, pp. 216-8.

José Damião Rodrigues referred to the weak population growth he had calculated for the islands of Terceira, São Miguel and Santa Maria between 1776 and 1796, attributing it to successive military recruiting campaigns.<sup>23</sup>

Although a lot has been written about the migratory movements, epidemics are a historical variable of the islands that has received little attention. In 1806, at a time of quite strong population growth, we know that there was an outbreak of smallpox in some of the islands. In June 1807 the Crown decreed that inoculation should be carried out, and a surgeon was sent to the Azores in 1808.<sup>24</sup> But despite the archipelago being a pioneer region in these medical practices, in 1834 Luís Meireles do Canto e Castro complained about the lack of interest shown by town councils and royal authorities towards inoculation. Smallpox remained a scourge that exacerbated an already high infant mortality rate, and neither the populations, nor the civil and ecclesiastic authorities realized the importance of adopting preventive measures.<sup>25</sup> Consequently, the causes of mortality and slow response of administrative institutions remained the same as in the Old Regime. The islands continued to follow, in this matter and most others, a pattern that prevailed in the provinces of the mainland, and would only change over a long period of time.

The various constraints on population growth were, however, not enough to brake a phase of population growth in 1807–1835 in all the islands, with the exception of Santa Maria and Pico. Faial in particular, but also Terceira, Graciosa and S. Jorge, registered growth above the islands' average. During the period 1800–1835 the island of São Miguel registered moderate growth (0.57%), but recovered from the previous period when its growth had dropped. The main engines of this demographic dynamism now were Faial (1.1%), Terceira (1%), and Flores (0.8%).

In global terms, between 1768 and 1835 all the islands registered a demographic increase, except for Santa Maria. The most intense growth occurred in Flores, Faial and Pico, medium growth in Graciosa, S. Jorge and Terceira, and quite low in the islands of São Miguel and Corvo. In principle this growth should have taken place in the islands with the biggest demographic size, São Miguel and Terceira, which had the potential and resources to transform and develop new economic activities and promote

<sup>23</sup> J. D. RODRIGUES, *op. cit.*, p. 118.

<sup>24</sup> Official letter of the Captain General, 20 May 1806, *Arquivo dos Açores*, vol. X, 407; António Lourenço da Silveira MACEDO, 1871. *História das Quatro Ilhas que Formam o Distrito da Horta*, vol. I, Angra do Heroísmo, Direcção Regional dos Assuntos Culturais, 1871, p. 294; Francisco Ferreira DRUMMOND, *Anais da Ilha Terceira*, vol. III, Angra, 1850, p. 71.

<sup>25</sup> L. M. do C. e CASTRO, *op. cit.*, pp. 22–8; J. D. RODRIGUES, *op. cit.*, pp. 216–7.

new crops like the potato, which was introduced in the late 1780s.<sup>26</sup> Nonetheless, it was also these territories, closer to the centers of power and better connected to commercial and shipping networks that could supply larger contingents of married couples, individual emigrants or conscripts. The fact that they played a small role in the population growth of the archipelago sheds light on the persistent weight of rurality, reduced urbanization, and lack of growth opportunities for new economic sectors. The island of S. Miguel did not manage to become the catalyst of Azorean demographic growth; it lost inhabitants between 1768 and 1800, and only re-entered a stage of rapid growth in the 1820s, interestingly, in parallel with the production and export of oranges. Faial, on the other hand, reinforced its demographic weight significantly; since the beginning of the nineteenth century the town of Horta played an important role in shipping and trade with the US, exporting large amounts of wine, and despite records of food shortages in 1785, the crisis of the 1780s had been less severe there.<sup>27</sup> It is possible that the demographic recovery in that decade generated an excess of residents in the channel islands, some of which were recruited to repopulate the Alentejo in enlistments carried out by Pina Manique in 1787.<sup>28</sup>

### Age structures

Analysis of eighteenth century Azorean age structures is hindered both by a shortage of sources, and their difficult analysis due to very irregular age divisions. Despite this obstacle having been overcome in the nineteenth century, the shortage of documents encompassing the entire archipelago in this period makes any comparison between the islands very difficult.

In global terms, data indicates that the sex ratio (SR) was situated somewhere between 86% and 90% for the period of 1776 to 1839. These figures show a surplus of females and a certain gender imbalance; in stable populations it is estimated that the SR oscillates between 90% and 94%, given the fact that women have a higher life expectancy than men. However, certain types of emigration, particularly of families, did not generically affect this indicator because in theoretical terms the exodus of thousands of couples to Brazil did not overly affect the gender ratio.

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<sup>26</sup> M. V. do R. MACHADO, op. cit.; FRANCISCO TEIXEIRA DE SAMPAIO, 1983. "Relatório agrícola [1798]," *Arquivo dos Açores*, vol. XIII, Ponta Delgada, 1983, 518–28; L. M do C. e CASTRO, op. cit., pp. 34–7.

<sup>27</sup> ELISA LOPES DA COSTA, "Novos destinos para as gentes açorianas em finais de Setecentos: Terras de Além-Tejo um espaço a povoar?," in *O Faial e a Periferia Açoriana nos séculos XV a XIX*, Horta, Núcleo Cultural da Horta, 1998, p. 406; N. AMORIM and H. MESQUITA, op. cit., pp. 373–4.

<sup>28</sup> E. L. da COSTA, op. cit., p. 419, doc. 4, 22 July 1786.

Year/period	1776	1777	1779	1780	1781	1782	1791	1793	1795	1796	1807	1813	1821	1832-1839
Sex ratio	87	90	90	89	90	90	87	86	86	87	86	87	89	89

4 Overall sex ratio in the Azores (1776–1839)

The sex ratio in the various islands registered strong oscillations, some of which were possibly explained by inaccurate registration. In general terms, and the average for the period of 1776 to 1839 shows that the lowest percentages were found in S. Miguel (84%), Graciosa (85%) and Santa Maria (86%). Without counting Graciosa, the remaining islands in the central group showed a relative balance (89%–92%), and even more intense for the Western group: 94% for Flores and 95% for Corvo. The low proportions of men in São Miguel, the most populated island, might be related to the intensity of military recruitment. There is abundant evidence that S. Miguel played a major role in the massive recruitments (some of them forced) of the late eighteenth century and early 1800s.<sup>29</sup>

Data regarding population structures of the archipelago for 1807–1808 shows the young nature of these populations, with an average of 34% and few elderly residents: 6%. Among the islands with the youngest populations were Graciosa, Faial, Flores and Corvo, whereas São Miguel and mainly Santa Maria had numbers slightly below average. Graciosa had the highest percentage of elderly inhabitants (8%), followed by São Miguel (7%), while in Flores the presence of people over 65 was very small (2%). It is important to notice such low proportions of elderly in some islands, as Flores and Corvo. This might be a consequence of a more intense migration of elderly during the late eighteenth century. Looking the data for 1821 the proportion of inhabitants over 65 raises to 5.5% in Flores and Corvo taken together.

The age dependency ratio (ADR), which measures the active age population against the non-economically active age population, showed an average of 66 non-active individuals for every 100 active ones. The most advantaged were the islands of Santa Maria, Pico, and S. Jorge with numbers below average, while in Graciosa, Flores, and Faial show higher ADR than average.

<sup>29</sup> A. B. MADEIRA, 1999, op. cit., pp.239–48; Ricardo Manuel Madruga da COSTA, *Os Açores em Finais do Regime de Capitania-Geral (1800–1820)*, vol. I, Horta, Núcleo Cultural da Horta, 2005, pp. 200–2.

Indicators	Santa Maria	São Miguel	Terceira	Graciosa	São Jorge	Pico	Faial	Flores	Corvo	Azores
<b>0–14 young people</b>	29.9	32.8	33.1	35.3	33.2	33.7	34.8	40.2	35.9	33.7
<b>15–64 potentially active</b>	64.6	60.4	60.7	56.8	61.3	61.6	59.4	57.7	59.8	60.4
<b>65+ elderly</b>	5.5	6.8	6.2	7.9	5.5	4.7	5.8	2.1	4.2	6.0
<b>Maternity index<sup>30</sup></b>	46.3	52.6	49.5	55.1	46.8	47.6	49.6	57.8	50.3	50.7
<b>Total dependency rate</b>	54.8	65.5	64.8	76.1	63.1	62.4	68.4	73.2	67.2	65.7
<b>Permanent celibacy M %</b>	25.9	17.6	19.9	11.1	15.9	10.9	12.0	5.9	10.0	15.6
<b>Permanent celibacy F %</b>	27.0	28.3	31.6	28.4	27.3	21.4	28.9	16.9	14.3	27.2

##### 5 Population structure indicators for the Azores archipelago (1807–1808)

In terms of reproductive behavior, the maternity index relates the number of people under 4 with the female population of childbearing age (15–49). Although this indicator is rudimentary, and consequently needs to be reinforced with the crude birth rate, it revealed a larger reproductive capacity in the islands of Flores, Graciosa and São Miguel, and a much lower one in Santa Maria and São Jorge. Furthermore, the possible effects of a higher infant mortality rate in certain islands, or more intense migratory movements could have been responsible for the alteration in this indicator.

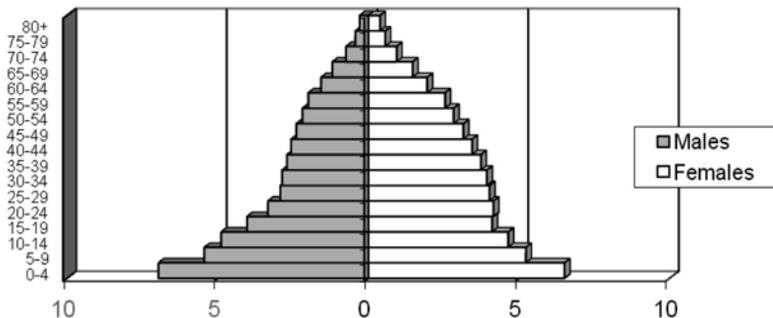
Celibacy, referring to individuals who remain unmarried by age fifty, was quite high in the archipelago, and was evidence that there were the many restrictions on marriage, especially for women. In general terms, around 16% of Azoreans remained single, with a higher percentage (27%) for women, but there were big variations. Without forgetting some possible mistakes in the sources and their small size, in Flores, Corvo and even Pico there appears to have been more access to marriage for both sexes. On the other hand, marriage was significantly restricted in the islands of Santa Maria, São Miguel and Terceira, all of which displayed celibacy figures above the archipelago's average.<sup>31</sup> The average celibacy percentage for females in the Azores was

<sup>30</sup> Maternity index is calculated by dividing children (M/F) by the total number of women in fecundity age (15–49). It is an indirect estimation of fertility when there is lack of data on the number of births. The indicator is poor because mortality of children 0–4 is already deducted. However due the lack of systematic data on annual births in the Azores this measure is useful.

<sup>31</sup> For 1801, Norberta AMORIM and Maria Hermínia MESQUITA found a considerably permanent celibacy for Terceira and S. Miguel for both sexes. However most likely, this may be the consequence of different methods of calculation (N. AMORIM and H. MESQUITA, *op. cit.*, *op.* 362). Thus while those authors use cohort analysis, while we used Hajnal's method (Hajnal, 1969) = 15+, being 5Tx the celibataries proportion in the age group x, x+5 of the census.

slightly lower to that of the mainland, where in 1801 around 30% of individuals remained single; celibacy among the male population was much lower, being estimated at 24% in mainland, although data pertaining to the mainland hide regional variations, especially between the north and the south.<sup>32</sup>

Let us focus on the analysis of the age structures for 1807–1808. The age pyramid of the islands showed that the Azores had a young population, but also a high child mortality rate (1–5 years), as seen by the decline in children under 4 and the subsequent age group. Individuals under nineteen showed a gender balance, but the age group over 20 felt the effects of migration, especially regarding men. While the emigration of married couples resulted in a decrease in population growth and not in the sex ratio, the low MR among people between the ages of 20 and 40 reveal a definite scarcity of working-age men in 1807–1808 due to recruiting. This indicates that there was undoubtedly a migratory flow of working-age men—mainly to Brazil, but also to the mainland, and other overseas territories. The numbers of soldiers conscripted in the eighteenth century most certainly would have had repercussions on the population structure of the Azores as well. According to Artur Madeira, between 1776 and 1798, the number of men recruited was 3,815.<sup>33</sup> Military conscription continued in the following decades, whereby the gender imbalance may well have continued into the nineteenth century. Madruga da Costa presents an estimate of 4,000 young men recruited destined mainly for Brazil in the period of 1800–1820.<sup>34</sup>



6 Age pyramid of the archipelago of the Azores for 1807–1808<sup>35</sup>

<sup>32</sup> J. P. FERRO, *op. cit.*, p. 56.

<sup>33</sup> A. B. MADEIRA, *op. cit.*, 1999, pp. 239–48.

<sup>34</sup> R. M. M. da COSTA, *op. cit.*, vol. I, pp. 200–2.

<sup>35</sup> Decennial levels were converted to quinquennial (J. Manuel NAZARETH, *Demografia. A Ciência da População*, Lisboa, Presença, 2004, pp. 146–7.

In 1807–1808 there were approximately 74 men for every 100 women between the ages of 20 and 39, but with great variations among the islands. Corvo, Faial, Graciosa, Terceira and São Jorge had a sex ratio situated between 64% and 70%, while São Miguel, with 77%, was close to the average. Pico, Santa Maria and Flores had a more balanced level with percentages between 81% and 87%. The global SR for each island showed substantial alterations in certain age groups, so they should be interpreted with caution. For example, in São Jorge, where the global MR was more balanced (87%), there was a discrepancy between residents in the 20 to 40 age group (71%). Despite the island of S. Miguel displaying a slightly lower global SR (85%), it had a smaller disparity in the above mentioned age group (77%).

%	Terceira		São Miguel	
	1801	1813	1801	1813
Active Men	58	57	57	57
Active Female	63	63	63	62
SR 20–49	81	72	73	77
20–49/Total Pop.	40	39	38	39
Global sex ratio	92	87	82	85

7 Population structure indicators for the islands of Terceira and São Miguel (1801 e 1813)

Analysis of the population structures for 1801 and 1813 in the islands with bigger statistical dimension, São Miguel and Terceira, reveals opposite trends according to age and sex. The island of Terceira registered a decrease from 92% to 87% in its global SR for 1801 and 1813, particularly visible in residents between the ages of 20 and 49: 81% in 1801, to 72% in 1813. On the other hand, the island of São Miguel with a bigger imbalance between sexes throughout the period under study, registered a bigger leveling out between 1801 and 1813. In these twelve years its global MR grew from 82% to 85% while the ratio for residents between 20 and 49 rose from 73% to 77%. This data could well indicate that there was an intensification of migration surges on the island of Terceira, particularly of males.

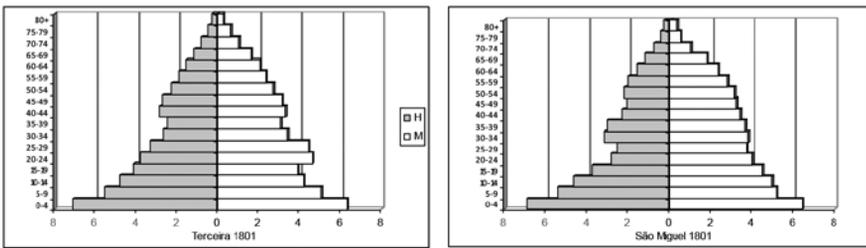
Although the 1801's Terceira and São Miguel age pyramids show predominance of working-age men, the so-called “hollow classes,” clearly indicate both the intensity of couples and recruiting emigration and the dynamics of the mortality rate. In Terceira these effects are revealed by individuals of both sexes between the ages of 30 and 39, that is, the generations born between 1762 and 1771. We also know that several of the islands were affected by successive crises and food shortages during the 1760.<sup>36</sup> On

<sup>36</sup> A. de F. de MENESES, *op. cit.*, vol. I, p. 143.

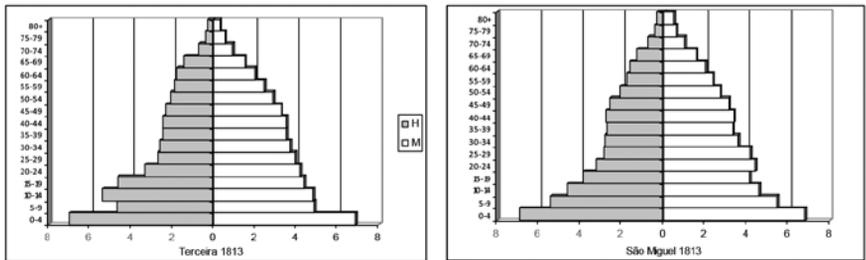
the island of São Miguel similar effects were seen for the male population, especially for those between the ages of 20 and 29 (the generations born between 1772 and 1779), and between 45 and 49 (born between 1752 and 1759). The low figures for the second age group may be partly related to the intense military conscription of 1774 and 1775.<sup>37</sup>

Although the island of Terceira underwent a significant increase in growth rate after 1800, there was still a clear predominance of working-age males in 1813. Nonetheless, the pyramid continues to display a young society as well as low fecundity control. In São Miguel, which also experienced a population increase after 1800, the structure remained young, with the gender imbalance between the ages of twenty and forty-nine less accentuated in relation to 1801 and to the island of Terceira in 1813.

Data on age and sex structure for the archipelago is available for 1821. By comparing the figures with the ones available for the years 1807-1809 and 1819 data seems to very of good quality. In this year the overall sex ratio was 88.1%, while in 1807-1809 the figure as 86.5%. This indicates that although the prevalence of male emigration and the military circumscriptions in the late eighteenth-century-early nineteenth, the Azorean population's structure tended to be less imbalanced.



8 Age pyramids for the islands of Terceira and São Miguel in 1801



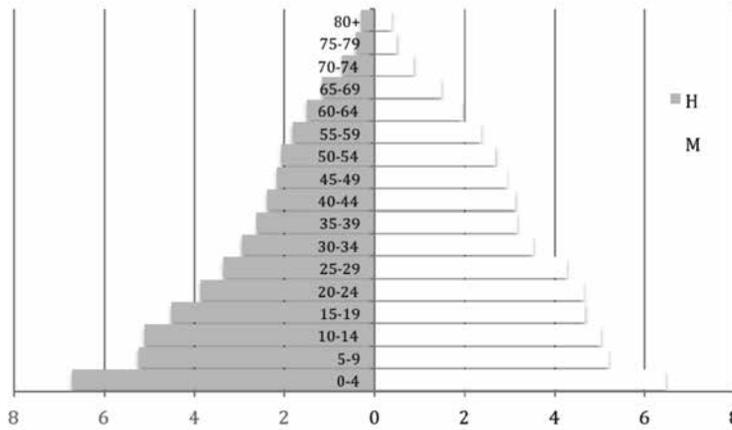
9 Age pyramids for the island of Terceira and São Miguel in 1813

<sup>37</sup> A. B. MADEIRA, *op. cit.*, 1999, p. 247.

Year	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80+	Overall
1807-1809	105.6	101.7	76.3	72.4	75.0	77.5	80.5	77.3	73.2	86.5
1821	102.7	99.4	81.1	83.1	75.2	77.0	77.6	82.1	79.3	88.1

10 Sex ratios by age groups in the Azores archipelago, 1807-1809 and 1821

Both figures 10 and 11 illustrates a less skewed imbalance between men and women with emphasis on the age groups 20-30 and 30-40. As we will see this more balanced structure, moreover in the marriage ages (20-40 years) is certainly related with the important fertility increase in the archipelago in the early nineteenth century. Thus, the demographic analysis of the Azorean structures in the beginning of the century, do show a clear reality. Although the central and local impositions to dislocate couples to Brazil and recruit soldiers the intensity reduced allowing the fast fertility recuperation and therefore an intense population growth in the first three decades of the nineteenth century (figure 2).



11 Age pyramids for the Azores archipelago in 1821 (%)

## Population movements

The population statistics that emerged in the sequence of the new royal orders were intended mainly to count the inhabitants and their distribution by gender and the men of military age. Data regarding the movement of people—births, marriages and deaths—became, therefore, less frequent and indispensable, and the level of information is reduced. Only after 1799 do we have reports for the number of marriages per island, specified by age

groups and gender.<sup>38</sup> Also after this year several population tables discriminate the number of deaths by sex and age groups. At this point in the research it is possible to quantify the birth and mortality rates between 1776 and 1800, although with some gaps. With the new typology of the sources posterior to 1800 allow a more profound analysis, but there are few tables, and little geographical scope. For marriages, the only data available is for the nineteenth century, but it is dispersed and fragmented.

Crude Rates and Net Balance	Santa Maria	São Miguel	Terceira	Graciosa	São Jorge	Pico	Faial	Flores	Corvo	Azores
<b>CBR 1776–1783</b>	32.2	28.7	31.9	26.1	30.2	29.1	32.6	34.0	37.1	30.1
<b>CBR 1791–1796</b>	28.9	38.9	35.6	34.4	35.1	32.9	34.2	43.6	35.8	36.3
<b>CDR 1776–1783</b>	25.0	39.0	26.3	21.0	20.2	18.8	21.0	26.5	23.6	28.5
<b>CDR 1791–1796</b>	26.0	29.5	28.0	20.5	21.3	19.5	21.7	21.9	13.6	25.3
<b>Total CBR (1776–1796)</b>	30.7	33.3	33.6	29.9	32.4	30.8	33.4	38.4	36.5	32.9
<b>Total CDR (1776–1796)</b>	25.5	34.7	27.1	20.7	20.7	19.1	21.3	24.4	19.1	27.1
<b>NB 1770</b>	7.2	-10.2	5.7	5.1	10.0	10.4	11.6	7.5	13.4	1.6
<b>NB 1790</b>	3.0	9.3	7.6	13.9	13.8	13.4	12.6	21.7	22.2	11.0
<b>Total NB</b>	<b>5.3</b>	<b>-1.3</b>	<b>6.6</b>	<b>9.1</b>	<b>11.7</b>	<b>11.7</b>	<b>12.1</b>	<b>14.0</b>	<b>17.4</b>	<b>5.9</b>

12 The evolution of crude birth and death rates, and net balance in the Azores (1776–1796) ‰

The crude birth rates and crude death rates (CBR and CDR) are, by their very nature, merely rough indicators of fertility and mortality, but indispensable for historical demography in the absence of more precise data. The numbers for the entire period show that the CBR reached 33‰ in the last quarter of the eighteenth century, an almost identical rate as that of the mainland in 1801 (34‰), which in turn was pretty much within the European context.<sup>39</sup> The Azorean mortality rate, even in troubled times like 1780s, reached a rate of 27‰ for the timespan under study, lower than the mainland, where in 1801 the average was 30.4‰.<sup>40</sup>

The global figures for CBR were relatively homogeneous for the islands, although higher in the Western group. This is perfectly in consonance with the high percentage of young people in Flores and Corvo, which was lower in Graciosa, Santa Maria and Pico. The death rate had shown

<sup>38</sup> P. MATOS, op. cit.

<sup>39</sup> Mário LESTON BANDEIRA, *Demografia e Modernidade. Família e Transição Demográfica em Portugal*, Lisboa, Imprensa Nacional, 1996, p. 158.

<sup>40</sup> *Idem, ibidem*, p. 156.

intriguing differences within the islands. The highest figures were for S. Miguel (34.7‰) and the lowest for Pico, Corvo, S. Jorge, Graciosa and Faial (ranging between 19.1‰ and 21.3‰). The island of S. Miguel augmented the insular average, showing an abnormally high rate even for national standards. The crisis of 1780–1781 probably had a strong influence given the exceptional CDR, around 54‰ and 72‰, respectively. Unfortunately, one of the main gaps in the demographic history of the archipelago is the scarcity of in-depth studies regarding mortality factors, especially addressing potential differences between the islands. Nevertheless the studies of Maria Norberta Amorim and Paulo Teodoro de Matos have shown the low intensity of mortality in Pico and S. Jorge. Although one can blame children mortality underestimation these authors linked the longevity in these islands with the scarce intensity of epidemics, the more consumption of fish and sea-food and probably to less skewed social inequalities by contrast with São Miguel.<sup>41</sup>

The little data available for the nineteenth century is for the periods of 1799–1801, 1807–1809 and for the year 1821, with breakdown at the island level. In 1799–1801 the CBR rose to 37.6‰, overtaking the national average, possibly as a consequence of recovery after the crisis at the end of the eighteenth century. In 1807–1809 this variable suffered a slight regression, registering 34‰, but in 1821 the indicator raised to an impressive 40.6‰. In terms of mortality, the figures were very similar in the last quarter of the eighteenth century, falling from 28.8‰ to 25.2‰—slightly under those for the mainland during the same period. It is perhaps interesting to note that in both periods the net balance of the archipelago was identical (8.8‰), which once again highlights the interdependence of the birth and death rates. In 1821 this indicator was even reduced to 21.4‰. This is a quite exceptional low figure for this time-period according with the European standards, but can be merely conjectural.

An overview of both crude and death birth rates over the whole period—1776–1819—show us an interesting fact. Birth rates show a persistent increase tendency (30,1‰ and 40,6‰ in 1776–1783 and 1821, respectively). This may reflect very clearly the impact of the massive migration to Brazil promoted by the Crown in 1747–48 and in the 1750 and 1760's decades. As seen before the number of couples enrolled to migrate to Brazil decreased significantly in the 1770s. Then Azorean fertility tended to increase significantly.

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<sup>41</sup> P. T. MATOS, *op. cit.*

Crude Rates	Santa Maria	São Miguel	Terceira	Graciosa	São Jorge	Pico	Faial	Flores	Corvo	Azores
<b>CBR 1799–1801</b>	34.6	33.7	40.5	38.0	44.3	-	40.2	-	-	37.6
<b>CBR 1807–1808</b>	31.3	32.2	39.3	34.9	34.0	30.7	33.2	49.5	36.8	34.0
<b>CDR 1799–1801</b>	22.5	36.4	24.9	17.1	20.5	-	15.4	-	-	28.8
<b>CDR 1807–1809</b>	22.1	28.8	20.8	13.3	34.4	21.1	22.2	27.7	6.4	25.2
<b>NGR 1799–1801</b>	12.1	-2.7	15.6	20.9	23.8	-	24.8	-	-	8.8
<b>NGR 1807–1809</b>	9.2	3.4	18.5	21.6	-0.4	9.6	11.0	21.8	30.4	8.8

13 Evolution of the crude birth rates and the crude death rates in the Azores (1799–1809) %

Despite the small size of the universes being analyzed, some strong lines appear to be confirmed regarding the intra-regional distribution of the variables. The birth rate was higher in the islands of Terceira, Graciosa, Faial and Flores, but had declined in the island of São Miguel by the beginning of the nineteenth century. There was great oscillation in the mortality rate, and again S. Miguel stood out, especially in the period of 1799–1801, when deaths continued to exceed births. The CDR seems to have been quite moderate for the islands of Pico—a historical fact previously established by Maria Norberta Amorim—Faial, Graciosa and to a certain degree, S. Jorge.<sup>42</sup> Terceira’s CDR was within the insular average between 1776 and 1796, but seems to have experienced a significant decrease in the early nineteenth century. Future research in the areas of anthropology and history of medicine will hopefully shed light on the causes for such big disparities in the mortality rate. Factors such as undernourishment, outbreaks of epidemics, poor maternal healthcare, inadequate childcare, and lack of clean water may have contributed to these differences.

Apart from the order of magnitude of both crude rates in the different islands, the difference between them, also called natural growth, is of significant relevance. This revealed quite a lot of oscillations between the islands, with particular distinction in Flores, Corvo, Faial, Pico and S. Jorge in the second quarter of the eighteenth century. In the beginning of the nineteenth century Terceira also registered very strong natural growth.

<sup>42</sup> Norberta AMORIM, “O Pico (séculos XVIII a XX). A ilha açoriana mais poupada pela morte,” *Revista de Demografia Histórica*, XXII, II, 2004, segunda época; Gilberta ROCHA, *Dinâmica Populacional dos Açores no século XX*, Ponta Delgada, Universidade dos Açores, 1991, p. 151.

Period	Average Pop.	CBR	CDR	Natural growth rate	Gross migration rate
1768-1776	157,793	32.9	25.4	7.5	1.6
1776-1782	159,328	30.1	28.5	1.6	-10.1
1782-1791	152,489	35.9	26.1	9.7	-14.4
1791-1796	152,571	36.3	25.3	11.0	-2.1
1796-1807	158,312	36.1	25.5	10.6	-8.1

14 Gross migration rate in the Azores (1768-1807) %<sup>43</sup>

Based on the population surveys carried out between 1766 and 1807, and on the crude rates, we can calculate the gross migration rate of the archipelago for five consecutive periods. We would like to point out that this is a tenuous calculation since it is grounded on crude rates. The surveys also have limitations that condition the final results, so the migration rates should be viewed with some reserve. However, they do reveal certain trends for the established periods. Comparing this chronology with the history of the archipelago we see that during the period from 1768 to 1776 there are no records of departures of married couples. We only find records for conscripted soldiers in São Miguel, and what is probably a continuation of individual emigration. The Crown's reduced interest in recruiting Azorean families coincided with the establishment of the captaincy-general, which, according to Artur Madeira, reinforced the mechanisms of administrative and police control of the population. This author also argues that the growth was unquestionably positive for part of the period under study, particularly for the years from 1766 to 1770.<sup>44</sup> The trends show a substantial increase in departures during the period between 1776 and 1782. During this time there were a number of wheat crop crises, which may have accelerated the exodus of Azoreans. This trend intensified in the following period, 1782-1791, when the food shortage reached its peak, affecting the different islands successively. After the crises, in the period between 1791 and 1796, the archipelago's population recovered some of its numbers, which probably resulted in a drop in emigration, but between 1796 and 1807 there was again an increase in departures. The development of colonial Brazil continued to

<sup>43</sup> Gross migration rate was obtained by the following calculation: a) estimation of the total number of migrants (difference between inter-censal estimated population and enumerated population); b) the result was then divided by the average population of the considered period multiplied per 1000.

<sup>44</sup> A. B. MADEIRA, *op. cit.*, 1999, p. 77.

attract people to its urban centers; there are also records of continued illegal emigration during these years.<sup>45</sup>

Nuptiality is a demographic variable related with birth rate, though marriages are not the only direct indicator of the birth rate. But in pre-industrial societies, where the fertility control tended to be low, nuptiality did closely condition it. The figures available for 1799–1808 show that on average, a crude marriage rate (CMR) of 7.2‰ was within the context of the national average, which in 1802 was between 6‰ and 7‰.<sup>46</sup>

	Santa Maria	São Miguel	Terceira	Graciosa	São Jorge	Pico	Faial	Flores	Corvo	Azores
CMR	5.9	7.5	8.0	5.6	8.3	6.4	6.4	7.8	5.1	7.2

15 Crude marriage rates for the archipelago (1799–1808) (‰)

São Jorge and Terceira stood out from the rest of the archipelago, with figures clearly above the average. It is possible that there was greater mobility in these more populated islands, particularly in the urban centers, where more marriages occurred because of the larger number of available services and because of needs associated to military life. For example, between 1827 and 1832, 65% of male newlyweds from the parish of the See in Terceira came from outside the parish;<sup>47</sup> but it is unclear if marriage in these places resulted in the settlement of the newlyweds. In the more prosperous and populated islands cities attracted people from remoter and poorer parishes—a city was only a city if it attracted peasants from the surrounding areas. Permanent internal dislocation was often associated to marriage and mobility between parishes, and to the allure of cities and towns. In the smaller islands and in the remoter parishes, there is evidence that marriages with outsiders occurred. Norberta Amorim estimated for three parishes in the south of Pico, between 1770 and 1830, almost 5% of the residents were not local. In the second half of the eighteenth century, 14.6% of male newlyweds in those parishes came from outside; for women the number was smaller, only 5.3%.<sup>48</sup> In her study of Criação Velha, in Pico, Hermínia

<sup>45</sup> R. M. M. da COSTA, *op. cit.*, pp. 206–7.

<sup>46</sup> J. P. Ferro, *op. cit.*, p. 56.

<sup>47</sup> Biblioteca Pública e Arquivo Regional de Angra do Heroísmo, Registos Paroquiais, Ilha Terceira, Matrimónios (1829–1835).

<sup>48</sup> Norberta AMORIM, *Evolução Demográfica de Três Paróquias do Sul do Pico (1680–1980)*, Braga, Instituto de Ciências Sociais/Universidade do Minho, s/d, pp. 109–11.

Mesquita calculated that between 1801 and 1839, 19.5% of newlyweds were from outside the parish. Yet out of the total number of non-local newlyweds, 64.1% came from nearby parishes.<sup>49</sup> Paulo Matos estimated for the parish of Ribeira Seca on the island of São Jorge, for a longer period (1800–1850), that out of about 15% of marriages one of the spouses was non-local; of those, 71%, were from S. Jorge.<sup>50</sup>

Although Azoreans circulated little around the archipelago, certain indicators, like marriages, show that the islands weren't as isolated as is often thought. Studies for the first half of the eighteenth century describe population migration between the islands, which was stronger in the central group.<sup>51</sup> There are records of migration between Santa Maria and São Miguel, and even the isolated island of Flores registered some migration to Faial, the biggest urban center of the region at that time.<sup>52</sup> In the first decades of the nineteenth century the increase in population may have caused the growth of the number of dependents, causing the population to circulate with more frequency.

Most of the internal population flow occurred among rural laborers and domestic servants, craftsmen and merchants. Beggars and indigent people, which comprised a quite sizeable group in the days of the Old Regime, also circulated. Seen as a dangerous class they were subjected to several municipal regulations that were intended to restrict their wandering. The cyclical food crises enlarged the numbers of these vagrants, endangering the security of people, goods and farm products, whereby the control over these groups was reinforced.<sup>53</sup>

The authorities of the captaincy-general tried to control the population flows, and asked the Crown magistrates to prevent the exodus of people from smaller islands that were considered to be in danger of depopulation. For example, in 1806, the royal delegate in Santa Maria was asked to tighten control over departures to São Miguel. In some cases the Crown magistrates demanded the return of individuals who had left to other areas of the archipelago without proper authorization.<sup>54</sup>

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<sup>49</sup> Maria Hermínia Morais MESQUITA, *Evolução Demográfica na Criação Velha. Paróquia do Sul do Pico (1801–1993)*, Angra do Heroísmo, DRAC, 1998, pp. 51–2.

<sup>50</sup> P. T. MATOS, op. cit., p. 181.

<sup>51</sup> Avelino de F. de MENESES, *Gentes dos Açores: o número e a mobilidade em meados do século XVIII*, Ponta Delgada, UA, policopiado, 1997, pp. 56–8.

<sup>52</sup> Avelino de F. de MENESES, “O giro das gentes: migrações açorianas nos espaços insular e metropolitano em meados do século XVIII,” *Ler História*, no. 31, 1996, p. 70.

<sup>53</sup> A. de F. de MENESES, art. cit., p. 71.

<sup>54</sup> R. M. M. da COSTA, op. cit., p. 206.

However, unlike the regions of the mainland where large contingents of rural laborers moved around to work in the grain and grape harvests, there are no records of large scale movements or organized networks of migrant workers. In other words, it was rare for a peasant or a landless worker in Terceira to leave for Graciosa and work in the grape harvests, or for a resident of S. Jorge to get on a boat to go work in the wheat fields of Terceira, or any of them to go to Pico to work on a daily basis for the grape growers of Madalena. Even so, in studies of the southern part of the island of Pico, Norberta Amorim demonstrates that even in the eighteenth century, permanent movement away from the community “was not less than a third of the initial population of each generation.”<sup>55</sup> In 1820, when Sá da Bandeira took refuge in the house of the British consul William Read in Terceira island during the Liberal Wars, all the servants were from São Jorge.<sup>56</sup> According to his *Diário da Guerra Civil* (Diary of the Civil War), the Azoreans continued to emigrate to Brazil, and residents of islands like São Jorge left for São Miguel, Terceira, and other islands where they could earn better wages. In 1834, Luís Meireles do Canto e Castro, remarked that in Terceira “every day many people are coming in from other islands to serve in the houses of the city, and some to work as laborers.”<sup>57</sup> Existing records indicate that these populations that moved and migrated between the various islands were mainly male, but there was also a smaller female contingent, apart from the number of women who worked as domestic servants.

The list of inhabitants produced in 1832 for the parish of the See in the city of Angra (Terceira island) provides important elements for understanding internal mobility, especially in the central group of islands. Out of the 2,233 residents registered, 31% were from outside the island. Although these numbers were somewhat inflated by the presence of the Liberating Army (most of which came from the mainland), the number of residents from the island of S. Jorge (9%), Pico (5.6%) and Graciosa (3.3%), all mainly “servants,” is still relevant. Despite São Miguel’s demographic superiority, only 18 (0.8%) individuals from that island lived in the Angra parish, where the military and merchants predominated.

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<sup>55</sup> N. AMORIM and H. MESQUITA, op. cit., p. 354.

<sup>56</sup> Marquês de Sá da BANDEIRA, *Diário da Guerra Civil (1826–1832)*, vol. II, Recolha, notas e prefácio de José Tengarrinha, Lisboa, Scara Nova, 1976, pp. 74–5.

<sup>57</sup> L. M. do C. e CASTRO, op. cit., p. 17.

	S. Maria	S. Miguel	Terceira	Graciosa	S. Jorge	Faial	Azores
<b>Men</b>	27.7	26.2	27.3	28.0	30.4	28.0	27,3
<b>Women</b>	28.7	25.0	26.5	28.5	29.7	25.5	26,4

16 Average ages of first marriages in the Azores (1799–1827)<sup>58</sup>

Existing data regarding marriage movement provides information for 1799–1801, for all the islands except Pico, Flores and Corvo. There is also data for S. Miguel and Terceira, for the years of 1811, 1813 and 1827, making it difficult to come up with an accurate average for the whole period. The data for these two islands is more reliable, due to their size and the larger amount of surveys. Without counting Pico, Flores and Corvo, we can conclude that in 1799–1801 the average age for first marriages in the archipelago was estimated at 27.3 for men and 26.4 for women.

These figures were comparable to those throughout Western Europe, where the average age for first weddings was high, despite the different regional variables between North and South, and Catholicism and Protestantism.<sup>59</sup> In Continental Portugal it is estimated that during the same time period, men married between the ages of 26 and 28.<sup>60</sup> The archipelago was within the average, but compared to national and European standards, it had a somewhat late marriage age. Marriage patterns have always been important instruments for the management and transmission of property since they are directly related to inheritance systems. High rates of permanent celibacy and late marriages, which reduced the (marital) fertility age of women, were forms of lowering the number of children and potential heirs. Some research has been carried out, although fragmented and confined to the more remote islands, which has demonstrated the prevalence of post-mortem inheritance practices among most of the social groups. In other words, land was often distributed after the parents died. This practice, in a society of neolocal residence, tended to encourage later marriages

<sup>58</sup> Universe of 7433 individuals (3706M and 3727F) was composed as follows: Santa Maria (3392 individuals), for the years of 1800 and 1801; S. Miguel (4847) for the years of 1801, 1810, 1811, 1813 and 1827; Terceira (1446), for 1800, 1801 and 1813; Graciosa (128) for 1799 and 1801; São Jorge (424) for 1800 and 1801; Faial (478), for 1800 and 1801.

<sup>59</sup> John HAJNAL, “European Marriage Patterns in Perspective” In D. V. Glass, D. E. C. Eversley (ed.), *Population in History. Essays in Historical Demography*, London, Edward Arnold Publishers, 1969; Jack GOODY, *The European Family*, Oxford, Blackwell Publishers, 2000, pp. 100–15.

<sup>60</sup> J. P. FERRO, op. cit., p. 56.

because of the need to accumulate essential goods before setting up a new household.<sup>61</sup>

In terms of the mortality rate, the information collected allows us to calculate the infant mortality rate (IMR) for some of the islands between 1799 and 1813. Despite the data being fragmented and referring to a short period of time, the differences were clear. São Miguel had an extraordinarily high rate, especially for 1801, which reflected a trend that had been occurring in this island for some time. However, in 1811–1812 these numbers continued to be considerable in the archipelago.

Year	Santa Maria	São Miguel	Terceira	Graciosa	São Jorge	Pico	Faial
1799					126		
1800				110	153	124	139
1801	275	406	208				
1810							
1811		263				164	
1812							
1813							

17 Infant mortality rates in the Azores (1799–1813) (%)<sup>62</sup>

In a second place were the high rates in Santa Maria and Terceira, with a fairly low variable in the remaining islands. It should be noted that for Flores and Corvo there was no data. These differences are quite remarkable, and to a great degree explain the aforementioned magnitude of the CDR's. In fact, in 1801 the IMR figures registered in the mainland were the extremely high numbers of 188 and 357%.<sup>63</sup> In this context, for 1811–1812 São Miguel had figures comparable to Lisbon, which in 1801 had reached 257%.

It is important to remember that the IMR was inflated by the abundance of abandoned children in the various foundling wheels (anonymous drop-off points for unwanted babies), particularly in the larger cities and towns of each island. This fact, which needs further analysis, can help us explain the differences registered in the various territories. Between 1790

<sup>61</sup> P. T. MATOS *op. cit.*; Paulo Silveira e SOUSA, *Território, Poder, Propriedade, Elites Locais. A Ilha de São Jorge na segunda metade do século XIX*, Lisboa, ISCTE, (dissertação de licenciatura policopiada).

<sup>62</sup> Data for the island of Pico based on M. N. AMORIM, *art. cit.*, p. 62 (px – probability of death between the ages of x and x+1, by decades).

<sup>63</sup> J. P. FERRO, *op. cit.*, p. 57.

and 1796 in Angra do Heroísmo the annual average of children deposited in foundling wheels was 104—30% of the total birth rate of the city—while the death rate among abandoned children in their first year was 76‰ in this time-frame. José Acúrcio das Neves, the Crown magistrate for Angra, attributed part of this high death rate (even when compared to Lisbon) to the low wages earned by wet nurses. These were often obliged to accept other people’s children “as punishment,” and survive as “abject and filthy wet nurses, whose milk transmits to the children the sordid diseases they are infected with.”<sup>64</sup> Between 1820 and 1830 the annual average of abandoned children was 132, which still represented 30% of baptisms. Although the death rate dropped to 66%, it was still significant, even compared with other foundling wheels on the mainland.<sup>65</sup> In truth, during this period the death rate of these children reached 23% of the total number of deaths in the city of Angra. Using the mortality curve for Terceira in 1801 and 1813, we can conclude that 68% of deaths of children under the age of one year were abandoned children.

If we substitute the abnormally high numbers for 1801 in the island of S. Miguel with data registered for 1811–12, we can estimate the life expectancy at birth of the male population in the Azores at 38.4, and at 39.6 for women. These values indicate that Azoreans had high longevity compared to Europe, since this indicator (M/F) for Great Britain and France in 1820 is estimated at 41.0 and 38.9, respectively.<sup>66</sup> Even with the major phenomena of abandoned children, this fact appears to confirm that there was probably a population surplus, for which there were no corresponding economic factors. In any case, there are many discrepancies between the island of S. Miguel and its high mortality rate and the other islands, which in general had a good natural birth rate. It is possible that in S. Miguel mortality was the main variable regulating demographic growth, with migration playing a secondary role, whereas on the other islands the stronger migration flows would have prevailed as a form of inhibiting natural population growth.<sup>67</sup> These are, therefore, relevant possibilities in view of the available demographic

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<sup>64</sup> Cf. ANTT, *Ministério do Reino*, “Mapa dos expostos que tem nascido e morrido na cidade de Angra desde 1790 a 1796,” maço 614.

<sup>65</sup> Biblioteca Pública e Arquivo Regional de Angra do Heroísmo, “Mapa das 4 freguesias desta cidade de Angra;” ANTT, *Ministério do Reino*, maço 260, caixa 344 (correspondência relativa aos Açores).

<sup>66</sup> This dataset can be accessed at <https://www.clio-infra.eu>. Van Zanden, J. et al., *How was life?: Global well-being since 1820*. Paris, OECD Publishing, 2014, p. 109.

<sup>67</sup> N. AMORIM and H. MESQUITA, op. cit., p. 374.

data, although they lack further research of a demographic nature, namely in terms of mortality crises.

## Conclusion

Between 1766 and 1822 the population dynamics of the Azores can be divided in two phases. During the first one, prior to 1800, the population showed little overall growth. Contrary to what we would assume nowadays, it was the smaller islands that contributed the most to the total increase in the archipelago's population. Terceira and São Miguel grew at a slower rate, displaying also higher mortality rates. The latter would even lose population. Around 1807 the growth rate soared. The archipelago as a whole grew at far superior rates, overtaking those verified on the mainland, which was still suffering the consequences of the three successive Napoleonic invasions (1807-1811). The island's population was generally young, partly as a result of the high birth rates. In some age groups, particularly among young adults, the effects of migration, and secondarily of conscription levies, were patent, as well as some mortality crises and epidemics, which unfortunately are very scarcely studied. The high rates for celibacy and average age at marriage were the first regulating mechanisms to affect this growth, except for the island of São Miguel. The mortality rate in the archipelago was lower than that registered in continental Portugal. Again, the island of São Miguel displayed much higher levels, perhaps due to food shortages, epidemics, or the proportionately larger number of deaths of abandoned children and infant mortality. Unfortunately, all these factors need new and more profound research.

The establishment of the captaincy-general in 1766 generated an increase of quantitative information, which in recent decades has been well explored by historical research. Nevertheless, quantitative series and orders of magnitude are still missing, which kept us from producing more precise calculations. In terms of mortality, there is still information missing about both infant mortality and about the main causes of death. There is also a lack of orders of magnitude for the displacement of population in the interior of the archipelago, as we don't know what weight these movements had and what islands attracted or repelled populations. However, due to the periodic demographic surplus of its European, catholic and peasant communities, its geographical location and position in key maritime routes the overall archipelago never stop sending farmers, soldiers, artisans, laborers, families and single men to several regions of the Portuguese empire, mostly in the Atlantic.

## Appendix 1 Evolution of the Azorean population (1768–1835)

The numbers in italics are from a parceled estimate.

Year	Population	Average annual growth rate
1768	<i>152,138</i>	-
1770	<i>157,780</i>	1.84
1776	163,677	0.61
1777	157,760	-3.62
1779	157,865	0.03
1780	159 060	0.76
1781	157,713	-0.85
1782	155,576	-1.35
1791	149,266	-0.46
1793	151,794	0.84
1794	154,920	2.06
1795	156,296	0.89
1796	156,101	-0.12
1800	<i>155,247</i>	-0.14
1807	<i>160,414</i>	0.47
1813	<i>169,652</i>	0.94
1819	<i>178,248</i>	0.83
1821	<i>182,416</i>	1.16
1835	<i>202,423</i>	0.80

### Demographic sources

The population lists and surveys used in this chapter come from A. B. MADEIRA, op. cit., 1997, pp. 164, 166, 169, 171, 173, 175, 177, 179 and 181. Almost all of these population tables were transcribed and corrected by that author (A. B. MADEIRA, op. cit., 1999a, policopied documentary appendix).

The following sources were also used:

Santa Maria: 1807 — Biblioteca Pública e Arquivo Regional de Angra do Heroísmo [BPARAH], *Capitania-geral*, Population Maps (1795–1815). Islands of S. Miguel and S. Maria.

São Miguel: 1807, 1810 and 1811 — BPARAH, *Capitania-geral*, Population maps (1795–1815). Islands of S. Miguel and S. Maria; 1819; 1827, BPARAH, *Capitania-geral*, Faial and Pico (1789–1825), maço 5.

Terceira: 1790–1796 — Arquivos Nacional da Torre do Tombo, *Ministério do Reino* [ANTT]), maço 260; 1798, 1807 e 1813, BPARAH, *Capitania-geral*, População, Ilha Terceira no. 2; 1820–1830, “Mappa das 4 freguezias da Cidade de Angra...,” ANTT, *Ministério do Reino*, maço 259.

Graciosa: 1799–1850 — Paulo Teodoro de MATOS, «Santa Cruz da Ilha Graciosa (1799–1850). População, grupos familiares e profissões», *Arquipélago. História*, 2.<sup>a</sup> série, vol. IV, no. 2, 2000, 257–8; 1809 — BPARAH, “Mappa dos habitantes... 1809,” *Capitania-geral*, Graciosa, Juiz de fora (1768 a 1811), maço 33; 1822 — António Borges do Canto MONIZ, *Ilha Graciosa (Açores). Descrição Histórica e Topográfica*, Angra, Imprensa da Junta Geral, 1883, p. 65.

São Jorge: 1790–1799 — P. MATOS, op. cit., 1998, 552–78); 1807 — BPARAH, *Capitania-geral*, Mapas da população (1808–1841); 1807–1827 — Paulo Teodoro de MATOS, «Gentes da ilha de São Jorge nos anos de 1825–1827», *Revista Arquipélago- Ciências Sociais*, no. 9–10, 1996, pp. 177–213.

Faial: 1808, 1809, 1813 — BPARAH, *Capitania-geral*, População, maço 5.

Pico: 1808, 1809, 1813 — BPARAH, *Capitania-geral*, População, maço 5.

Flores e Corvo: 1808, 1810 — BPARAH, *Capitania-geral*, População, maço 6.

Açores: 1794 — “Mappa geral dos habitantes...,” ANTT, *Ministério do Reino*, maço 614; 1821 — “Mappa da população e fogos das ilhas dos Açores...,” António Homem da Costa Noronha, Luiz de Barcellos Merens, Biblioteca Nacional de Lisboa, colecção de Iconografia; 1833, “População da Província Ocidental...” BPARAH, *Capitania-geral*, População, maço 6.

Angra do Heroísmo district: 1835 — “Mappa estatístico...,” ANTT, *Ministério do Reino*, maço 2013.

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