19

Population Growth, Composition and Educational Levels

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19.1 Introduction

The history of European populations was radically transformed during the nineteenth and twentieth centuries. All across Europe, population numbers grew at an unprecedented rate and the demographic structures of the past broke down. There was a transition from a demographic regime of high mortality and high fertility to one of low mortality and low fertility. There was large-scale occupational change, as agricultural populations shifted to industrial and service occupations. Occupational change, in turn, was connected to great changes in the territorial distribution of populations, among them urbanization. Finally, there was a huge increase in educational levels (Bairoch, 1997, vols. I and II).

The aim of this chapter is to provide a synthetic view of these demographic changes in modern Portugal and Spain (henceforth, 'Iberia'). The chapter is organized in four main sections. Following this introduction, Section 19.2 deals with population growth and its sources, with a particular focus on the demographic transition. Sections 19.3 and 19.4 succesively discuss the occupational and territorial distribution of the population. Section 19.5 considers education. Throughout the chapter, our focus will not be on making reciprocal comparisons between Portugal and Spain, or between different regions in Iberia, but rather on unifying the main features of the Iberian experience into a single, joint narrative.

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19.2 The Demographic Transition

Between 1800 and 2018, Iberia's population grew from 13 to 57 million inhabitants (Table 19.1). There were three distinct phases in this evolution. During the first phase, the nineteenth century, population grew at a modest rate. Population growth gained some momentum during much of the twentieth century, even if it never had an explosive magnitude. Finally, after having

Table 19.1 *Basic population figures for Portugal, Spain and 'Iberia' (Portugal + Spain).*

	1800[a]	1860[b]	1900	1930	1950	1980	2000	2018
Population numbers (million)								
Portugal	2.9	4.0	5.4	6.8	8.4	9.9	10.2	10.3
Spain	10.5	15.6	18.6	23.5	27.9	37.5	40.2	46.7
Iberia	13.4	19.6	24.0	30.3	36.3	47.4	50.4	56.9
Population growth[c]								
Portugal		0.5	0.8	0.8	1.1	0.5	0.2	0.0
Spain		0.7	0.4	0.8	0.9	1.0	0.3	0.8
Iberia		0.6	0.5	0.8	0.9	0.9	0.3	0.7
Age structure (%)								
Portugal								
Less than 15	33	34	34	32	29	26	16	14
15 to 64	61	61	60	62	64	63	67	64
More than 64	5	5	6	6	7	11	16	22
Spain								
Less than 15	35	35	33	32	26	26	15	15
15 to 64	59	62	61	62	67	63	68	66
More than 64	5	3	5	6	7	11	17	19
Iberia								
Less than 15	35[d]	35	34	32	27	26	15	15
15 to 64	60	62	61	62	66	63	68	66
More than 64	5[e]	3[e]	5	6	7	11	17	20

Notes: [a] 1801 for Portugal, 1797 for Spain; [b] 1864 for Portugal's age structure; [c] annual compound rate (%) – the figure for 1860 refers to the period 1800–1860, and so on; [d] less than 16 for Spain; [e] for Spain, we assume (in line with the data available for 1877) that two-thirds of the 60–69 age group corresponds to the 65–69 subgroup.
Sources: Baganha and Marques (2001: 33, 51–53, 55–56); Instituto Nacional de Estatística (2003; www.ine.pt); Nicolau (2005: 124–127, 144–147); Instituto Nacional de Estadística (www.ine.es).

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reached a peak in the 1970s, population growth began to decelerate and, except for a booming period in the years prior to the 2008 recession, became slower than ever before in the modern era.

Natural change (the difference between births and deaths) was the main driver of population growth for almost all of the period (Figure 19.1 and Table 19.2). Slow growth during the nineteenth century was associated with low rates of natural growth, while the acceleration of population growth during much of the twentieth century was driven by an acceleration of natural growth. The deceleration of population growth from 1980 onwards was also closely related to a reduction of the rates of natural growth. Only in the 1990s and especially in the 2000s, with close-to-zero natural growth, did foreign migrations come to drive demographic change.

Therefore, Iberia's population growth was strongly linked to the unfolding of the demographic transition (Figure 19.2). For most of the nineteenth century, population growth was slow because the risk of mortality remained high in most of Iberia, especially in the inland regions of the Peninsula. True, there was some progress in the escape from premature death. For instance, episodes of catastrophic mortality, which were still common and severe in the

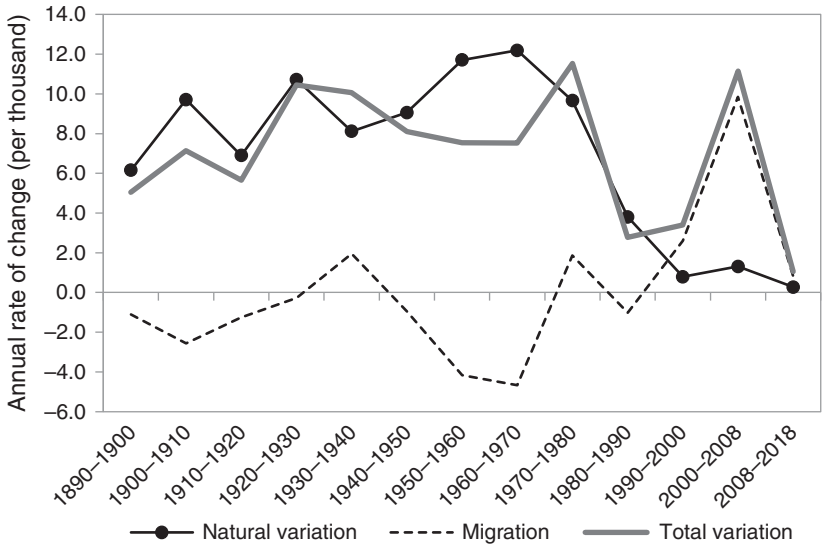

Figure 19.1 Iberian population change and its sources. Note: natural variation = births – deaths; migration = total variation – natural variation.
Sources: Baganha and Marques (2001: 51–53, 55–56, 59–62); Instituto Nacional de Estatística (2003; www.ine.pt); Veiga (2004); Nicolau (2005: 124–127, 144–147); Instituto Nacional de Estadística (www.ine.es).

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Table 19.2 *Sources of population change (average annual per thousand rates).*

	Portugal		Spain		Iberia			
							Contribution to population change (%)	
	Natural variation	Migration	Natural variation	Migration	Natural variation	Migration	Natural variation	Migration
1890–1900	9.3	−2.2	5.2	−0,8	6.2	−1.1	122	−22
1900–1910	11.5	−2.9	9.2	−2.5	9.7	−2.6	136	−36
1910–1920	8.8	−6.7	6.4	0.3	6.9	−1.3	122	−22
1920–1930	12.5	−0.2	10.2	−0.3	10.7	−0.3	103	−3
1930–1940	11.4	0.9	7.2	2.2	8.1	1.9	81	19
1940–1950	10.4	−1.5	8.7	−0.8	9.1	−1.0	112	−12
1950–1960	12.6	−7.9	11.4	−3.1	11.7	−4.2	155	−55
1960–1970	12.3	−15.6	12.2	−1.7	12.2	−4.7	162	−62
1970–1980	8.5	5.5	10.0	0.9	9.7	1.9	84	16
1980–1990	3.6	−3.5	3.8	−0.4	3.8	−1.0	137	−37
1990–2000	0.9	2.7	0.8	2.6	0.8	2.6	23	77
2000–2008	0.3	4.0	1.6	11.3	1.3	9.8	12	88
2008–2018	−1.7	−2.1	0.7	1.4	0.3	0.8	25	75

Sources: Baganha and Marques (2001: 51–53, 55–56, 59–62); Instituto Nacional de Estatística (2003; www.ine.pt); Veiga (2004); Nicolau (2005: 124–127, 144–147); Instituto Nacional de Estadística (www.ine.es).

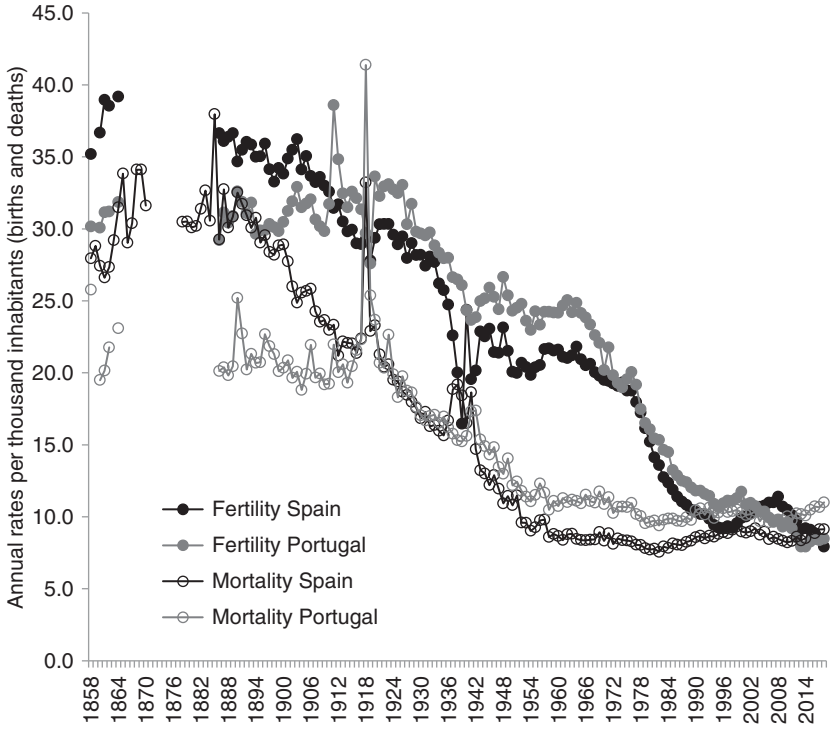

Figure 19.2 The demographic transition.
Sources: Baganha and Marques (2001: 33, 51–53, 55–56, 59–62); Instituto Nacional de Estatística (2003; www.ine.pt); Veiga (2004); Nicolau (2005: 124–127, 144–147); Instituto Nacional de Estadística (www.ine.es).

early years of the century (especially during the French invasion), came to be less dramatic as the century progressed. All in all, ordinary mortality remained high and both its structure, dominated by infant mortality, and its geography, with the interior regions performing worse than the coastal ones (and Spain performing worse than Portugal), were still very traditional (Pérez Moreda, 1999b; Barbosa & Godinho, 2001).

Why did mortality remain so high during the nineteenth century? An important factor was, of course, the state of medical science and technology at the time. For most of the century, the scientific understanding of some of the main diseases remained somewhat blurred, which was detrimental to the pace and direction of practical technological innovation in the area. Nor were there active pro-health policies. Partly due to budget constraints, partly due to a conscious non-interventionist policy stance, public spending in health

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(by central or local governments) remained low. In most cities, there was not much urban planning either, at least until around the 1870s and 1880s. Especially in working-class neighbourhoods, health and housing conditions deteriorated as population grew and effective systems of water supply, waste disposal and urban management were lacking (Cosme, 2006).

The economic evolution of Iberia was not propitious either. Economic growth lagged behind that of the rest of Western Europe and social inequality was on the rise (see Chapters 18 and 23). As a result, most households did not have the chance to substantially improve their diets, calorie intakes were close to subsistence for the lower classes and there were widespread deficiencies in proteins, vitamins and minerals. Moreover, the low productivity of Iberian agriculture (see Chapter 22) and the weakness of the rest of the food chain further constrained diet change. During much of the century, and particularly in its central decades, there were even nutritional crises during which the relative prices of basic foodstuffs (namely, cereal-based products) would rocket and major (even if local) episodes of social unrest would take place. It is unlikely that the shortcomings of Iberian diets had a direct impact on mortality, but they must have had an indirect impact through its effect on personal health and resistance to disease (Barbosa & Godinho, 2001; Cussó, 2005).

A new era took shape between around 1890 and 1980. Mortality began to fall substantially in Spain, which by the time of the First World War had bridged its gap with Portugal in this respect. From the 1920s onwards, the levels and trends of mortality became fairly similar in both countries. With some time lag, fertility also decreased. This gave way to a period of faster population growth, which was only occasionally interrupted by late episodes of catastrophic mortality such as the influenza of 1918–1919 and the Spanish Civil War of 1936–1939 (Ortega & Silvestre, 2006; Henrique & Rodrigues, 2008; Echeverri, 2018). Between around 1950 and 1975, in particular, Iberia experienced a baby boom similar to that in other parts of Western Europe, as mortality reached an all-time low while fertility was more resistant to change.

This new trend was made possible by the removal of the obstacles that for a long time had hampered the unfolding of the demographic transition. There was substantial progress in the scientific understanding of disease, and new vaccines, antibiotics and cures were made available. There was also a reorientation of public policies. From the late nineteenth century onwards, most local governments shifted towards a more active policy stance, including crucial areas for health such as water supply, waste disposal, urban planning and protection against epidemic contagion. Moreover, as the twentieth century progressed, both central governments constructed a network of modern hospitals oriented towards the provision of health care on a massive scale. This allowed for a rapid incorporation of new territories and social groups to the benefits of a modern public health system. There were also more efforts made

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to spread new ideas about personal hygiene, especially when it came to childrearing, by means of public information campaigns (Cosme, 2006; Pérez Moreda et al., 2015).

The economic situation was also more favourable. With some short-term exceptions, economic growth was faster and social inequality decreased (see Chapter 18 and 23). Therefore, household incomes increased substantially. Furthermore, there was substantial technological change in agriculture and a new food system emerged – one that was led by a relatively small number of food industries involved in mass production and capable of eliminating most inflationary pressures from food consumer markets. As a result, consumers' increasing purchasing power allowed them to transition to richer, more diversified diets. This reinforced the effect of technological change and pro-health public policies. Yet, it probably was a minor factor, as is suggested by the striking continuity in Spain's mortality decline during the 1940s, which was a period of falling household incomes and deteriorating diets (Pérez Moreda et al., 2015).

From the mid-1970s onwards there was a sudden decline in fertility that started a new demographic period. In the late twentieth century, natural growth became almost zero, which stood in sharp contrast to any other period in the modern history of the Iberian population. Of course, by 1975 fertility had already fallen well below its nineteenth-century levels. The Iberian demographic transition was not an explosive one and, with a moderate time lag in relation to the decline in mortality, couples had begun to adjust their fertility behaviour. Much of this adjustment had been based on rudimentary strategies of family planning that, as was the case with sexual abstinence and the interruption of intercourse, could be incorporated more or less harmoniously into the dominant Catholic value structure. The fertility decline was also underpinned by some secularization, especially in urban areas, as well as by shorter-term shifts towards lower nuptiality and a higher age at marriage (Leite, 2005; Henriques and Rodrigues, 2008).

What happened after 1975 was more radical, though. There was a steep decline in fertility as a result of both a decrease in the number of children per household and an increase in the mother's age at first birth (Mendes et al., 2016). This reflected forces that were also operating in other European countries. The male-breadwinner household model declined. On the basis of expanding educational levels and more widespread employment opportunities in the service sector, more and more women participated in the labour force in a stable way, which reduced their orientation towards reproduction and childrearing (Nunes, 1991; Gálvez, 2006). Moreover, childrearing itself increasingly became an activity that required a solid economic base. Whereas in the traditional society of the nineteenth century children had an economic function (as workers and as a future source of old-age economic support), in the late twentieth-century society children were mostly draining

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resources from the household during ever longer periods of formal schooling (and even during the early stage of their adult working life).

Still, the fall of fertility in Iberia went further than in other European countries and seems to require additional explanation. In the particular case of Spain, the trajectory of secularization may have played a part. In Spain and elsewhere in most of Europe, there was a history of secularization already going on prior to the 1970s or the 1980s. However, the death of Francisco Franco in 1975 led to the end of a dictatorship that for almost four decades had strongly advocated traditional Catholic values. The transition towards democracy accelerated a change in values that would have probably taken place anyway. Beyond values, the end of the dictatorship also implied a more ready access to modern contraceptives.

Furthermore, we should consider the fact that public policies in both Spain and Portugal were only weakly oriented towards the promotion of fertility. In the late twentieth century, both Iberian countries constructed welfare states that made a remarkable contribution to social cohesion and justice but were primarily oriented towards classical social protection (i.e. retirement pensions, transfers to the unemployed), health and education. In comparison to the rest of the European Union, public spending addressed to the promotion of fertility was low (Comín & Díaz, 2005). Nor were active policies set to make it easier for parents to find the right balance between working life and family life. A related problem was the segmented nature of the labour market and the way in which gender discrimination in the less attractive segments of that market discouraged fertility.

The steep decline in fertility accelerated the trend towards ageing, which in the previous decades had become noticeable (Table 19.1). Around 1980 Iberia had one of the youngest age structure in Europe. By 2000, and following particularly rapid changes at both the bottom and top of the age pyramid, the population older than 64 outnumbered (for the first time ever) the population younger than 15 (Moreira & Gomes, 2014). Barely one century earlier, before the full development of the demographic transition, the ratio between these two population groups had stood at 1 to 7. Ageing will be crucial for the demographic future of Iberia, but it is important to note that during the twentieth century the most prominent change was not extreme ageing, but rather the advent of 'mass maturity' (Pérez Díaz, 2003). By the start of the present century, the proportion of people aged between 15 and 64 was actually higher than ever before.

Foreign migration has become the main driver of population growth in Iberia during the last three decades. It is true that both Portugal and Spain had a previous history of emigration abroad. An early cycle of emigration had been directed towards Latin America in the late nineteenth and early twentieth centuries, while a more significant, second cycle had been oriented towards Latin America and especially Western Europe during the decades after the

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Second World War. None of them, however, came even close to driving Iberia's population change. The remarkable inflow of returning migrants coming back to Iberia in the 1970s from both Western Europe and the Portuguese ex-colonies was also secondary compared with natural population growth (Sánchez Alonso, 1995; Baganha & Góis, 1999; de la Torre & Sanz, 2008; Marques & Góis, 2012).

The inflow of foreign migrants starting in the 1990s was another matter, though. Foreign migrants from Latin America, Eastern Europe and Africa became the new drivers of population growth in both countries (Peixoto, 2007; Reher & Requena, 2009). This was not simply because natural growth had become close to zero in both countries: the size of these new immigration flows was remarkable on its own terms. In the particular case of Spain, the country in which these flows were more massive, the magnitude of foreign immigration in the 2000s went well beyond the orders of magnitude of the country's past experience as a country of emigration. However, immigration has greatly receded after 2008 and both countries are facing again the prospect of little, if any, population growth. After 2008 Portugal has actually started to lose population as a result of both negative natural growth and net emigration.

19.3 Occupational Change

We can identify three distinct stages in the evolution of Iberia's occupational structure. The chronology is similar to the one we have found for the demographic transition. During the first stage, the nineteenth century, Iberia was a predominantly agrarian society (Table 19.3). Even though industrialization and modern economic growth had started, there was no substantial movement of population out of agriculture and into the other sectors. The available data, which must be handled with great caution due to the lack of homogeneity of occupational categories through time, would even suggest some increase in the proportion of agricultural employment. Regardless of this possible late growth, it is clear that by the early twentieth century the agrarian population was still dominant in Iberia. This was in contrast to the situation in the rest of Western Europe, where the movement of population out of agriculture had already started.

Why was Iberia different in this respect? Obviously, industrial growth was much weaker than in the rest of Western Europe. As in most other countries, in Iberia the industrial and service sectors had productivity levels that were higher than that of agriculture, so that they could offer the prospect of higher average earnings (Lains, 2009: 335; Prados de la Escosura, 2017: 341–345). This could potentially be the basis for a massive transfer of agricultural populations into industrial and service occupations. However, during the nineteenth century the weakness of Iberian industrialization prevented the demand for non-agricultural labour from expanding rapidly (Silvestre, 2005). We must also take

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Table 19.3 *Occupation and activity.*

	1800[a]	1887[b]	1910	1930	1950	1981	2011
Occupation (%)							
Portugal							
Primary	55	62	58	51	49	19	3
Secondary	18	18	22	19	24	39	26
Tertiary	27	20	21	30	26	42	70
Spain							
Primary	61	69	68	47	50	16	4
Secondary	15	15	15	26	26	37	21
Tertiary	23	15	17	27	25	47	74
Iberia							
Primary	60	67	65	48	49	17	4
Secondary	16	16	17	24	25	38	22
Tertiary	24	17	18	28	25	46	73
Gross activity rate (%)[c]							
Portugal							
Total		50	43	37	38	39	50
Male		66	65	56	61	54	53
Female		35	22	19	17	26	47
Spain							
Total		40	38	37	39	34	50
Male		65	67	65	67	52	56
Female		16	10	9	12	17	45
Iberia							
Total		42	39	37	38	35	50
Male		65	67	63	66	52	55
Female		20	13	11	13	18	45

Notes: [a] 1797 for Spain. For Portugal we have assumed that activity rates were similar in urban and rural areas, that the total occupied population was a proportion of Iberia's similar to the one that we can actually observe in the earliest data available (1887), and that the breakdown of non-agricultural populations between secondary and tertiary occupations was similar to that of Spain in 1797; [b] 1890 for Portugal; [c] active population / total population.

Sources: Nunes (2001: 164); Llopis (2002a: 147); Nicolau (2005: 147–150); Palma and Reis (2019: 10); www.pordata.pt ('Emprego e mercado de trabalho'); Instituto Nacional de Estadística (www.ine.es); Instituto Nacional de Estatística (www.ine.pt).

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into account that during the nineteenth century both countries became specialized in agriculture in the new international division of labour, while the technological conditions of farming remained traditional. Iberian agriculture was among the least productive in Western Europe and absorbed large amounts of labour. As a matter of fact, agriculture acted as some sort of 'employer of last resort' – a fraction of the agricultural labour force was made up of underemployed populations (Veiga, 2004; Leite, 2005; Silvestre, 2007).

The transformation of Iberia's occupational structure took place later, from around 1910 onwards. During this second stage, there was a massive transfer of agricultural populations to secondary and tertiary occupations. This change was already remarkable during the period 1910–1930 and, after coming to a halt during the 1930s and 1940s, it resumed with even greater force after 1950. By 1980, the agricultural population represented less than 20 per cent of the labour force.

The key to occupational change was that economic growth was on average much faster than in the nineteenth century. As a matter of fact, the chronology of occupational change mirrors that of economic growth, which slowed down in the years of the Great Depression, the Spanish Civil War and the Second World War, and later experienced a golden age. The periods of economic growth greatly expanded the demand for non-agricultural labour and, since labour productivity remained much higher in industry and services than in agriculture, large amounts of agricultural labour had the chance to increase their earnings by shifting to the other sectors. Complementarily, occupational change was favoured by intense technological change within agriculture. What in the nineteenth century had been an organic, labour-intensive activity became (especially after 1950) an increasingly mechanized activity in which innovations such as tractors substantially reduced agriculture's capacity for labour absorption (see Chapter 22).

The rapid decline of agricultural employment after 1950 allowed Iberia to complete in barely a few decades a structural transformation that had taken around a century in the rest of Western Europe. All in all, the path was slightly different. While in early developers occupational change had been driven by the growth of industrial employment, in Iberia it was mostly the service sector that took the lead. In both cases, it was of course a combination of industry and services that took people out of the land, but in Iberia this combination was more biased towards services. To some extent, this prefigures the later experience of the Global South, in which the dominance of service employment over industrial employment has been even stronger (Bairoch, 1997, vol. III). There has not been a systematic analysis of this feature, but we can refer to a weaker process of industrialization in Iberia and a higher relevance of some service activities (i.e. tourism) within Iberia's model of economic growth (see Chapter 22). As a hypothesis, we should also consider the fact that the delay

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in Iberia's occupational change implied that the latter eventually took place at a time when public policies (in Iberia and elsewhere) were favouring job creation in activities such as administration, education and health, to a much larger extent than in the nineteenth century.

Finally, during the last two decades of the twentieth century we can identify the start of a third stage. Agriculture continued to decline, but now it was joined by industry. Services became the only expanding sector and by 2000 they amounted to more than 60 per cent of employment. Similarly to other parts of Western Europe, a new era of deindustrialization and tertiarization started.

Unlike in the case of classical occupational change during most of the twentieth century, intersectoral productivity gaps played now a minor role. Average labour productivity was actually lower in services than in industry. There were, however, crucial differences in the evolution of the demand for labour (Gonçalves, 2005; Collantes, 2017). Industry was hit hard by the oil crisis of the 1970s and, more generally, had much trouble at facing the competition coming from low-cost producers in the developing world. This was particularly clear in some of the sectors that had driven occupational change in the past, such as textiles, iron and steel production, and shipbuilding. Services, on the contrary, went on expanding. The consolidation of consumer societies in Iberia favoured a persistent expansion of employment in all sorts of commerce-related pursuits, ranging from supermarkets to specialized retailers. In a business environment of increasing functional specialization, there was also much growth in the area of services to firms. In connection with the expansion of Iberian welfare states, public service employment also increased notably.

During this period there was also a remarkable increase in women's participation in the labour force (Table 19.3). Similarly to other European countries, this must be put in relation to cultural changes in gender roles, rising educational levels among the female population, the expansion of employment opportunities in the tertiary sector and the mechanization of domestic work, made possible by the diffusion of electric home appliances (Nunes, 1991; Gálvez, 2006). The current state of research, however, does not allow us to be precise about the longer-term evolution of the female activity rate. The studies available at a micro level suggest that in the nineteenth and early twentieth centuries women were more involved in labour markets than the official, macro-level statistics show (Sarasúa and Gálvez, 2003). Moreover, in Iberia as elsewhere, quantifying female labour participation in agriculture is difficult, particularly in those regions where family farms were dominant.

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19.4 The Geography of Population

The spatial distribution of Iberia's population followed a chronology that is very similar to that of occupational change. During the nineteenth century, Iberia's population was mostly rural (Table 19.4). The urbanization rate was not particularly low for the region's level of economic development, but a number of cities, especially in the southern half of the peninsula, were actually 'agro-towns' with many farmers and agricultural workers. During the nineteenth century urbanization progressed slowly. There was of course net rural–urban migration, but the cities only absorbed a minor share of the countryside's natural population growth (Collantes & Pinilla, 2011; Rodrigues, 2010). Rural and urban populations grew then at fairly similar rates, at least until well into the nineteenth century. Nor were there great changes in the spatial distribution of population. There were a number of major, expanding cities, with the agglomerations around Madrid, Lisbon and Barcelona, in particular, growing from 100,000–200,000 to 400,000–600,000 inhabitants as the century passed (Reher, 1994: 26). There were also important regional differences, the coastal regions being more densely populated than the interior regions. This was a population geography that had started to take shape in the seventeenth century and remained relatively stable during the nineteenth century (Ayuda et al., 2010). Population growth seems to have been a bit faster in the southern regions than in the northern ones, at least in Portugal (Veiga, 2004).

Why was internal migration so limited? Iberia was a slow-growing economy, and this limited the capacity of cities and dynamic regions to attract population from the countryside and other, more backward regions. Only around Barcelona, Iberia's main industrial city at the time, had a migration basin emerged that was wide enough to spread beyond Catalonia and into other regions. Outside the remaining, smaller-scale migration basins, the cost of internal migration was a constraining factor, especially for the large number

Table 19.4 *Percentage share of population living in nuclei of 5,000 inhabitants or more.*

	1801	1860	1900	1930	1960	1981	2011
Portugal	16.1	13.4[a]	20.8	26.7	30.1	35.8	51.6
Spain	24.0[b]	22.5	29.3	37.0	50.6	68.4	74.9
Iberia	22.0	20.7	27.5	35.1	46.5	62.2	70.6

Notes: [a] 1864; [b] 1787.
Sources: Reher (1994: 25); Instituto Nacional de Estadística (www.ine.es); Instituto Nacional de Estatística (www.ine.pt).

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of low-income households prevailing in much of Iberia. Distance implied a high transport cost and made it less likely that there would be relatives and acquaintances at the destination to facilitate the social and economic assimilation of migrants (Silvestre, 2005). By making potential migrants less responsive to economic opportunities emerging in other regions, widespread illiteracy may have also hampered internal migration (Núñez, 1992; Beltrán & de Miguel, 2017).

In the case of rural–urban migration, moreover, we must realize that, even though the city was undoubtedly ahead of the countryside in terms of access to infrastructures and services, its advantage was not as prominent as it would be at a later stage. Educational and health services were still very rudimentary and, therefore, their provision was not subject to large economies of scale. Rural areas often had an endowment of schools or health posts that was mediocre but not much worse than that of cities. As a matter of fact, during the nineteenth century many cities experienced a deterioration of public health conditions, as was discussed in a previous section. All this contributes to explaining why the sizeable productivity gap between agriculture and the rest of the economy was not enough to move Iberia's rural population to massive internal migrations (Collantes & Pinilla, 2011).

Major changes would take place, again, between 1900 and 1980. It was then when Iberian society ceased to be predominantly rural and became predominantly urban. Rural–urban migration became massive, particularly during the 1920s and the period 1950–1975. Rural–urban migration basins became much wider and spread over hundreds of kilometres. In Spain, migrants from southern regions such as Andalusia would eventually flow towards northern destinations such as (for instance) Catalonia. Migrants from Alentejo would also move long distances in order to reach Lisbon, Setúbal or Porto. There would also be much interregional migration originating from other southern and interior regions, such as both Castiles in Spain and Trás-os-Montes in Portugal, towards destinations such as Catalonia, Madrid, the Basque Country, the Valencia region, Lisbon, Setúbal, Porto or Faro. This was joined by persistent flows of rural–urban migration within each region (Reher, 1994; Moreira and Rodriguez, 2008).

Consequently, there was impressive growth in both the size and the number of cities. The agglomerations of Madrid and Barcelona reached around four million inhabitants, while Lisbon came close to two million and another agglomeration (Valencia) exceeded one million (Reher, 1994: 26; Rodrigues, 2010: 332–345). The other side of this was the depopulation of rural communities all across Iberia, a process that became extreme and painful in many regions (Collantes & Pinilla, 2011).

The widening of migration basins also led to a substantial deepening of regional disparities in population distribution. The geography of population remained similar to the previous period, but the concentration in coastal

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regions and around Madrid went much further than in the past, as coastal regions grew much faster than the interior ones. This was perceptible in the early part of the twentieth century, but became particularly drastic during the quarter century after 1950. The Gini coefficient of provincial disparities in population density, which had been in the 0.27–0.33 interval for both countries around 1860, jumped from 0.36–0.39 in 1950 to a remarkable 0.51–0.54 in 1981 (Ayuda et al., 2010: 32).

What had changed in comparison to the nineteenth century? To begin with, industrialization and economic growth gained momentum and expanded the demand for non-agricultural labour at a generally faster rate. Contrary to the British experience of precocious occupational change, in Iberia, as in most other parts of Europe, there was not much occupational change in the countryside until well into the twentieth century. Most non-agricultural growth was heavily concentrated on a small number of industrial districts located in urban areas, and the rural economy remained highly dependent on farming until well into the twentieth century. Therefore, occupational change was tightly linked to urbanization. On the other hand, rapid urbanization was also favoured by the relative deterioration of living standards in the countryside. During the twentieth century (and especially after 1950) a more pronounced 'rural penalty' in the access to infrastructures and services took shape. In an era of rising expectations, scale economies in the provision of new educational and health services (such as secondary education and specialized health provision) mattered and made it much more difficult for rural communities to stand comparison to the urban lifestyle (Collantes & Pinilla, 2011).

Simultaneously, migration basins became wider and more fluid. The cost of moving was no longer so crucial, as household income was now generally higher than in the nineteenth century. The transition towards literacy (more on this later in this chapter) made populations become more responsive to migration as a means to seize new economic opportunities. Furthermore, as internal migration gained some momentum, it started a feedback mechanism – migration chains made it easier for immigrants to face the challenge of finding their place far away from home. All this contributed, especially after 1950, to the movement from some of Iberia's backward regions (especially in the south) to the migration basins structured around the urban systems of distant, more dynamic regions (Collantes & Pinilla, 2011).

All in all, in the last two decades of the twentieth century there were signs of a change of phase. 'Classic' urbanization ceased to progress so rapidly, particularly in Spain, and the bigger cities actually started to lose population while other, medium-sized cities and newly created residential peripheries gained it. Rural depopulation ceased to be so intense, and some rural areas even managed to grow in population again. Iberia entered thus an era of counter-urbanization and diffused urbanization (Collantes & Pinilla, 2011). In the main cities, especially in Spain, as the relative price of housing tended to rise

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rapidly, many middle-class households moved towards smaller cities and residential peripheries. Many of these households, moreover, had housing preferences that were different from those of most urban dwellers in the twentieth century and wanted to leave the environmental and psychological costs of urban life behind. This change in residential patterns was also favoured by the rise of dual income households and the spread of female drivers.

The regional distribution of population remained very unequal. The coastal regions and Madrid had population densities well beyond those of the interior regions, which in some cases came close to becoming 'demographic deserts' (Rodrigues & Oliveira, 2008). Yet, regional population disparities ceased to grow as rapidly as it had been the case during most of the twentieth century. Interregional migrations, in particular, were not so prominent. A crucial difference in relation to the previous period is that now the demand for labour was expanding in a much slower and more selective way. Unemployment rates actually reached very high levels, especially in Spain. Moreover, labour markets tended to become dual. There was a segment of stable, quality jobs that were safely protected by employment legislation alongside another segment of opposite characteristics (Gálvez, 2006). The latter could hardly be taken by much of the population as a reasonable basis for long-distance, interregional migration. Furthermore, at a time when (as we have seen) foreign immigration became important, the geography of the latter was not very similar to the traditional geography of Iberian populations. Some of the backward regions with a traditionally negative internal migration balance, such as Andalusia, received a sizeable inflow of immigrants, ranging from middle-class European retirees to Maghrebi labourers in search of work in export-oriented, highly intensive agricultural enclaves.

19.5 Education

As our two indicators in Table 19.5 show, the educational level of Iberian populations increased greatly during the nineteenth and twentieth centuries. The first indicator is the literacy rate. The second is the number of schooling years, which allows us to track educational progress beyond the basics. In both cases there is steady and clear progress. Yet, similarly to other areas reviewed in this chapter (and in Iberia's socioeconomic history more generally), there is a contrast between the slow progress of the nineteenth century and the faster progress of the twentieth century.

During the nineteenth century, educational progress was slow basically as a consequence of weak public policies. In the absence of strong compensatory policies, educational outcomes depended on family and community dynamics. But, as Iberia's poor educational record during the pre-1800 period had already shown, these dynamics were not as conducive to literacy as in north-western Europe. During the nineteenth century, this negative inertia remained

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Table 19.5 *Education.*

	1860	1900	1930	1950	1981	2010
Net literacy rate (%) [a]						
Total						
Portugal		27	40	58	79	95
Spain	26	43	71	88	94	98
Iberia		39	64	81	91	97
Male						
Portugal		36	50	67	85	96
Spain	40	55	80	93	96	99
Iberia		51	73	87	94	98
Female						
Portugal		18	31	51	75	93
Spain	12	32	63	83	91	97
Iberia		29	56	76	88	96
Average years of education						
Portugal	0.5 [b]	1.4	2.0	2.5	5.7 [c]	7.8
Spain	1.5 [b]	3.1	3.8	4.9	7.3 [c]	10.3
Iberia	1.3 [b]	2.7	3.4	4.3	7.0 [c]	9.8

Notes: [a] literate population / population of 10 or more years (15 or more years for 2010); [b] 1870; [c] 1980.
Sources: Candeias (2004: 519); Núñez (2005: 250), www.clio-infra.eu (*Human capital*, 'Average years of education'); UNESCO (www.uis.unesco.org).

influential especially in southern Spain and most of Portugal. Many families were not very interested in education and literacy. Economic growth was slow and only in the central part of the century a market society emerged that would reward the acquisition of basic skills for the purpose of conducting transactions and seizing economic opportunities. To this we must add a longer-term cultural inertia that devalued education and made it difficult for illiterate populations to perceive the potential benefits of education (Ramos, 1988; Núñez 1992; Reis, 1993a).

Overcoming these problems called for an active educational policy, but nineteenth-century governments in Portugal and Spain did not achieve consistent results in this area. In both countries, in the 1840s and 1850s laws were promulgated in order to make schooling compulsory, but there was a long distance between the legal and the real (Candeias, 2004; Núñez, 1992). For different reasons, ranging from financial difficulties to lack of political will, central governments did not enforce compulsory schooling effectively.

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This made the transition to literacy highly dependent on the characteristics of different types of rural societies. In southern Iberia, the consolidation of latifundia-type rural societies and the consequent increase in social inequality may well have damaged the lower classes' incentives to invest in education. The concentration of local political power in a landowning elite oriented local government spending away from the pursuit of mass literacy. In many of these rural societies, additionally, the settlement structure was dominated by large municipalities, which implied that much of the rural population was physically remote from the rural towns in which the formal educational system was developing. In northern Iberia, in contrast, there were less unequal rural societies (with a greater role for family farms) and smaller municipalities, which contributed to a better provision of schools and teachers by local communities and parishes (Ramos, 1988; Pérez Moreda, 1997a; Beltrán & Martínez-Galarraga, 2018).

In the absence of stronger public policies, there was also a remarkable gender gap in the literacy transition. The cultural values prevailing in most households privileged the education of boys. In addition, the characteristics of the business environment and the labour market made many families perceive as economically rational the decision to allocate more resources to the education of boys than to the education of girls (Sarasúa, 2002).

Educational progress gained momentum in the twentieth century because it was then when more ambitious and effective educational policies were implemented. This happened earlier in Spain than in Portugal, where the gap between the legal and the real remained substantial until well into the century, as did the role of informal sources of access to literacy such as the family. In both countries, however, there eventually was a move towards the mass provision of education, which eradicated illiteracy almost completely and secured an increasing number of compulsory schooling years for both boys and girls. In Spain, in 1903 the State shifted to a more active policy, reducing the relevance that local characteristics had had until then on the trajectory of literacy. Some of the governments of the short-lived Spanish Second Republic regime (1931–1936) also envisioned education as a key policy area within a broader pro-equality, pro-democracy programme. Although the pro-democracy element was dropped by the Franco dictatorship, educational opportunities went on increasing in Spain, especially from the 1950s onwards. In Portugal, the Salazar dictatorship implemented a more effective educational policy than its predecessor Republican regime (Gomes & Machado, 2020; Palma & Reis, 2021). Later on, the transition to democratic governments in both countries brought about a restructuring of educational systems and a leap forward in budgetary terms.

Educational progress was also favoured by the economic context. It is true that the role of economic returns to education must not be overstressed. The turning

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point in both countries seems to have followed a chronology more closely related to the aforementioned educational policies than to the evolution of the skill premium. In Spain, the skill premium does not seem to have increased significantly during the early decades of the twentieth century; in key sectors such as the textile industry, it even seems to have been substantially lower than it was in the late nineteenth century (Betrán & Pons, 2004). In Portugal, the connection between the evolution of the skill premium and attitudes towards schooling may have been stronger (Amaral, 2002; Palma & Reis, 2021), but even so families seem to have increased their interest in literacy well before economic change provided abundant opportunities for skilled populations. All in all, an expanding economy in which progress opportunities were made available to a large majority of the population was a more propitious environment for education than that of the nineteenth century. Another of the changes reviewed previously in this chapter, the decline of fertility, made it easier for households to bear the opportunity cost involved in their children spending more time in the educational system. There were also major cultural changes, so that education came to be widely seen as a key element in personal development.

As the twentieth century progressed (and especially from the 1950s onwards), the educational attainment of Iberian populations expanded beyond literacy and basic capabilities (Núñez, 2005). There was a marked increase in the number of schooling years. More and more children (eventually all of them) finished successfully their time at primary school, while an increasing proportion of teenagers enrolled in non-compulsory secondary school. Secondary education actually became a building block in the making of a new, distinct middle-class identity in Iberia. In the final decades of the twentieth century, the middle class even became increasingly involved in university-level studies, which until then had shown an indisputably elitist profile. Similarly to the nineteenth century, Iberia was lagging behind the rest of Western Europe in educational terms, but from the standpoint of 2000 the degree up to which two societies that were mostly illiterate by 1900 had managed to progress in educational terms was remarkable.

19.6 Conclusion

The modern history of Iberian populations can be read in terms of the notion of 'structural periods'. Each structural period is a long-term period during which structures remain stable or structural change proceeds along a stable path. Transitions between structural periods result from the destabilization of previously stable structures or of the path that had until then characterized structural change. According to the evidence presented in this chapter, in the population history of Iberia we can find three of these periods, which are

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broadly coincidental with the structural periods of economic history (see Collantes, 2017, for Spain).

The first of them covers most of the nineteenth century and features relatively stable structures. Population grew at a moderate rate, in large measure because a high-mortality, high-fertility demographic regime prevailed in most regions. Most people lived in rural areas, were employed in agriculture and did not know how to read or write. Migration, both internal and external, had a limited relevance as a source of population change. None of this changed much through the nineteenth century. In demographic terms, there certainly was much more continuity in relation to the 1500–1800 period than, say, in economic or political terms. In the area of demography, there was not a historical break comparable to industrialization, the railways or the making of a liberal state.

We can identify a second structural period between around 1890 and 1980. Population grew faster as a result of the unfolding of the demographic transition. Most population came to be employed in occupations other than agriculture and, following massive internal migrations, came to be concentrated in cities and in a small number of regions (all of them coastal with the only exception of Madrid). Literacy became almost completely widespread. In other words, the demographic structures of the nineteenth century were blown away.

During the last two decades of the twentieth century, demographic change shifted to a different path. A low-mortality, low-fertility regime set in, and the population came to grow less than ever before in the modern era. The inflow of foreign immigrants actually became the main driver of population growth. Most of the population was employed in service activities and, contrary to what had been happening previously during the twentieth century, industrial employment declined. The degree of regional concentration of the population remained high, but did not grow fast anymore. Classic urbanization, based on a few large, compact cities, gave way to diffuse urbanization, with a large presence of middle-sized cities and newly created residential peripheries. Educational progress, finally, moved to the area of secondary and university-level studies.

Throughout all these three structural periods, Iberia lagged behind the rest of the developed countries (Table 19.6). The demographic transition, de-agrarianization and urbanization started later, and full literacy was achieved later as well. By the start of the twenty-first century, Iberia had converged in these traditional indicators, but was lagging behind in others that were defining the new path of demographic change; for instance, employment in those activities with a greater technological content was low, and educational attainment remained (in spite of remarkable progress) comparatively modest. Yet, a comparison with the Global South undoubtedly positions Iberia within the North. In contrast to the Global South, in Iberia by the mid twentieth century the demographic transition was close to coming to an end and was not

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Table 19.6 *Iberian demographic and economic change in a comparative perspective.*

	Crude fertility rate (‰)[a]	Crude mortality rate (‰)[a]	Agricultural employment (%)[b]	Urban population (%)	Average years of education[c]	GDP per capita (1990 dollars)[c]
1900						
Global North	24.7	15.8	40	30	4.1	2,520
Iberia	32.4	22.1	65	28	2.7	1,677
Global South	38.6	32.2	78	9	0.6	643
1950						
Global North	17.9	11.9	23	46	6.8	4,987
Iberia	21.0	11.1	49	47[d]	4.3	2,165
Global South	45.0	23.1	76	16	1.7	911
2000						
Global North	11.4	10.3	5	68	11.5	16,744
Iberia	9.5	9.1	10	66	9.1	15,365
Global South	32.0	9.8	55	37	6.2	3,583

Notes: [a] Global North: Western Europe (1911/1913, 1949/1951 and 1995); Global South, 1900: Egypt (1917), India (1911) and Mexico (1910); Global South, 1950 and 2000: China not included (1951/1955 and 1990/1995); [b] Global North: Japan and planned economies not included (1913, 1950 and 1995); Global South: China not included (1900, 1950 and 1990); [c] Global North: Western Europe, Eastern Europe and Western offshoots; Global South: rest of the world; [d] 1960.

Sources: Bairoch (1997, vol. II: 157, 188, 196–197; vol. III: 724–725, 740, 759); Mitchell (2007a: 6, 10, 74, 77; 2007b: 5, 72); van Leeuwen and van Leeuwen-Li (2014: 95); Maddison Project Database version 2018 (www.rug.nl/ggdc). For Iberia, see the sources in Figure 19.2 and Tables 19.3, 19.4 and 19.5.

explosive, the twin processes of de-agrarianization and urbanization were at an advanced stage, and a massification of educational attainment was clearly under way. In spite of all the important progress made by the Global South during the second half of the twentieth century, by 2000 there were still remarkable differences between Iberia and the Global South. This is in line with the historical position of Iberian economies: backward in the context of the North, but clearly differentiated from Southern trends.

The main reason why we find these correspondences between different dimensions of demographic change, and between them and economic change, is that there were many interactions involved. These interactions favoured both the stability of the nineteenth century and the profound transformations of the twentieth century. In this respect, a crucial nexus between demographic and economic change was probably urbanization. Yet, this should not be taken to imply that demographic change was just a mere collateral effect of economic change, though. The history of Iberian populations rather suggests that demography is a semi-autonomous sphere, that is, one governed by a combination of mechanisms shared with the economic sphere and mechanisms that are autonomous from it. This chapter has presented some of these autonomous forces, such as scientific and technological advances in health and cultural changes in secularization, the value given to education and the spread of new ideas about the role of women in society and in the economy. We would like to conclude by reflecting on one of those autonomous elements: public policy.

The demographic transformations of the period 1890–1980, which put an end to premature mortality and mass illiteracy and created an urban society, were not just the outcome of Iberia's economic transformation. They resulted from consciously active public policies. The reduction of mortality was not just a consequence of technological innovations in health and the kind of diet change made possible by economic growth and the strengthening of the food chain. It also resulted from public policies implemented at different scales (from local to central) in order to improve the water supply and the waste disposal systems, secure consistent urban planning, construct a modern hospital network and spread new ideas about hygiene and diets among the population. The role of public policy is also clear in the area of education, where, in spite of economic growth, progress would not have been so remarkable under the weak, inconsistent policy stances of the nineteenth century. In general terms, the contrast between the nineteenth and the twentieth centuries is not just an economic contrast, but also a political one. With all its shortcomings and deficiencies, demography-related public policies were more active and effective in the twentieth than in the nineteenth century.

Maybe one of the challenges ahead for Iberia in the current structural period, which started around 1980, is not to repeat the mistakes made in the nineteenth century. Similarly to the nineteenth century, an important trend since the late twentieth century is the rise of a pro-market, anti-intervention

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policy stance. While this may be reasonable in some areas, it is dubious that we can face our new demographic challenges without active public policies. It is dubious that the fertility decline can be mitigated unless public social spending is reoriented towards pro-family policies. It is dubious that occupational change will be led by knowledge-intensive activities unless we implement policies that strengthen our regional systems of innovation. It is dubious that genuine educational progress can continue unless educational policies are reoriented from quantity and massification to quality. It is dubious, finally, that the serious imbalances currently affecting the spatial distribution of the population will correct themselves spontaneously. Our demographic challenges today are different from those of the past, but we should keep in mind that our successes of the past resulted not only from economic change, scientific progress or cultural change. They also resulted from public policies that consciously sacrificed some short-term allocational efficiency in favour of other, more relevant social objectives.

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