

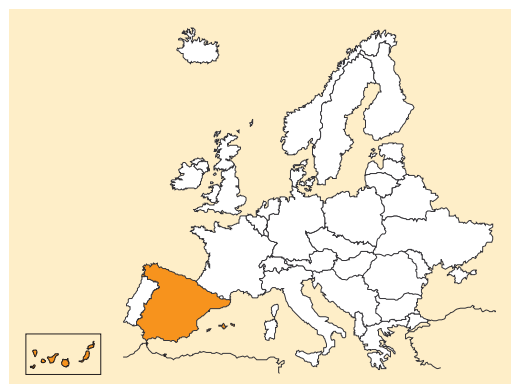




1. Background

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Territory and climate



The majority of Spain's territory lies on the Iberian Peninsula, at the south-western tip of Europe. Its territory also includes the Canary and Balearic Islands, several other smaller islands, and the cities of Ceuta and Melilla. The country's mainland territory amounts to

493,514 km² and its island territories comprise an additional 12,484 km². Spain's total land area of 506,030 km² makes it one of the world's 50 largest countries and places it second in terms of size in the EU-27 after France.

Spain is positioned between the Atlantic Ocean and the Mediterranean Sea, the two of which are joined by the Strait of Gibraltar. The country's coastline (if tidal river estuaries are included in the calculation) totals 10,099 km, and 900,000–1,000,000 km² of sea are under Spanish sovereignty and jurisdiction. As regards topography, Spain has a high average altitude and 57.7% of its territory stands at over 600 m above sea level, giving it the second-highest average height in Europe.

The position of its mountain systems, which generally run from west to east (except the Iberian and Coastal Catalanian ranges), have a great influence on its climate, as they act as natural barriers to the moisture-laden air arriving from the Atlantic. River flows depend principally on rainfall, which is abundant in spring and autumn and scarce or non-existent in summer. Spain's river network has been widely modified by large-scale infrastructure designed to regulate river flows to provide water for agricultural use and, to a lesser extent, for human supply.

Spain has a variety of climates, including the ocean, continental and



Mediterranean types, which in turn comprise Mediterranean mountain, steppe and subtropical climate regions, among others. As regards temperature, there are major differences between inland areas and the periphery. In the former, which have a continental climate, winters are cold (the average temperature in January is 0–3 °C) while

summers are hot (the average temperature in July and August is 24 °C). In contrast, on the periphery, especially on the Mediterranean coast, winters are mild and the average annual temperature is 16–18 °C.

Marked contrasts also exist in terms of rainfall — the Atlantic's influence means that the north and north-west of the country are remarkably rainy and lack a clearly defined dry season (rainfall in this part of Spain exceeds 600 mm and may even reach 2,000 mm). Meanwhile, the rest of the country is predominantly dry and annual rainfall is below 600 mm (although some areas may receive exceptionally high amounts). South-eastern Spain is semi-arid and annual rainfall there is below 300 mm, creating a semi-desert landscape.

Administrative structure

The Kingdom of Spain is a constitutional monarchy with a Parliament comprising two houses — the Congress of Deputies and the Senate. The country's primary piece of legislation is the 1978 Constitution, which establishes the right to autonomy of the nationalities and regions that comprise the Spanish nation. Thus, Spain consists of 17 distinct regions, known as autonomous communities, and 2 autonomous cities (Ceuta and Melilla, in North Africa). The system currently in place is the result of profound territorial, political and administrative reorganisation of the State, which has made Spain one of the most decentralised countries in



Europe. In accordance with the Constitution, Spain’s political parties express the country’s pluralism and play a key role in consolidating civil rights and democracy.

In administrative terms, government comprises three tiers — the General State Administration, which is responsible for Spain’s entire territory; regional government, which is responsible for each respective autonomous community; and, finally, local government, which comprises municipal councils, provincial councils and the island councils of the Canary and Balearic Islands.

Current and projected population

According to the Municipal Register as at 1 January 2009, Spain had 46.7 million inhabitants, 15.4% more than in 2000, representing an average annual increase of 1.7%. Of the resident population, 5.7 million are non-Spanish and, of this number, 2.6 million originate from European countries. In this group, the biggest sources of immigrants are Romania (798,892 residents) and the United Kingdom (375,703). Morocco (718,055) and Ecuador (421,426) provide the largest groups of non-European immigrants.

The population is distributed very unevenly, with the most densely populated

areas (with the exception of the Autonomous Community of Madrid) lying on the periphery. The four most densely populated autonomous communities are Andalusia (8.3 million people), Catalonia (7.5 million), Madrid (6.4 million) and Valencia (5.0 million) which, between them, account for over half (58.3%) of the population despite only occupying barely 30% of the country's territory. The Register of Spanish Nationals Resident Overseas (2009) records 1.7 million Spaniards spread throughout all 5 continents — 868,564 live in the Americas and 560,408 live in Europe. Argentina, Venezuela and France have the highest populations of Spanish nationals.

Despite the spectacular population growth witnessed in the new century's first decade, the latest demographic projections made by the INE (press release, 28 January 2010) predict a slowdown in the growth rate. The Spanish population's current demographic structure and the dominant trends affecting it suggest the future rate of population growth will be low (projections indicate it will increase by 2.1 million inhabitants over the next 40 years). Thus, as the table below shows, the population is expected to remain stable until 2049.

PROJECTED POPULATION GROWTH IN SPAIN 2009–2049

Year	Resident population (number of inhabitants)	Growth (%)
2009	45,828,172[*]	
2019	46,955,030	2.46
2029	47,517,722	1.20
2039	47,903,099	0.81
2049	47,966,653	0.13

Source: INE, 2010 [*]. The figure from the Municipal Register as at 01/01/2009 exceeds this number by 917,635 inhabitants

However, these projections are only statistical simulations and all current demographic forecasts contain a high degree of uncertainty. As can be seen, there is already a discrepancy of almost 1 million inhabitants between the 2009 figure above and the number recorded in the Municipal Register as at 1 January 2009, which is likely to modify the projected scenario. With regard to immigration over the next 10 years, the projection is based on the hypothesis that this will fall to 3.8 million, 1 million less than in the period 2002–2008. From 2019 onwards, the number of immigrants is forecast to stabilise at 400,000 per year.

As regards life expectancy among Spain's population, this is expected to continue to rise until at least 2030, a trend that will contribute to the ageing of the population. The birth rate is predicted to increase slightly, from 1.2 children per woman today to 1.5 children per woman in 2030 and 1.71 in 2048. However, this will not prevent the envisaged decline in the absolute number of births.

Economic development

Spain's production structure has changed substantially in recent decades and has shifted towards services and manufacturing at the expense of primary industry. In following this path, Spain has repeated a pattern common to developed countries. This process has accelerated since Spain joined the European Union, as the country's accession to the EU increased its access to foreign markets; drove greater industrial development, specialisation and efficiency; raised exports; and strengthened its position as a tourist destination. In parallel, the construction and related industries developed substantially. EU funds made a decisive contribution to this economic development and helped create the country's transport network (ports, airports, roads, and high-speed railways).

Gross domestic product (GDP) grew rapidly over the last decade and brought Spain closer to convergence with other EU countries. According to the INE, in 2008 GDP (provisional figure) stood at €1,088,502 million (at current prices) and, in 2009, average nominal GDP per capita reached €22,886 (the EU-27 average was €23,600). In parallel to the increase in GDP, there was a redistribution of income and an increase in the social services provided by government, especially as regards health and education.

Another process worth highlighting was implementation of the Common Agricultural Policy (CAP) and its successive reforms, which had a strong impact on agriculture and livestock farming and provided the agri-food industry with a major boost. Another key factor was introduction of the euro as a single currency, which has facilitated trade relations with Spain's EU partners.

The combination of these factors created a large number of jobs and helped reduce Spain's traditionally high rate of unemployment (which fell from 13.9% in 2000 to 8.3% in 2007). This attracted immigrants from other countries to fill jobs in agriculture, construction and the service sector, particularly catering, and meant that the country switched from being a source of emigration to being a destination for immigrants.

Cyclical fluctuations in the economy (expansion and recession) have been less marked in Spain since joining the EU. However, the current economic crisis, which began at the end of 2007, has had a significant impact, particularly in the construction and automobile industries and, as a result, unemployment has risen and in 2009 stood at almost 19% of the working population.

In addition, the Spanish economy still suffers from its long-standing energy deficit

and, furthermore, the other structural weaknesses that experts have pointed out repeatedly in the past have become increasingly evident, particularly since 2006. These include high levels of household debt, an excessive shift of investment to the construction sector, an increase in foreign debt, and the education system's inability to meet the needs of an increasingly technologically advanced society, among others.

In the current economic context, it is not easy to find a single overarching diagnosis of the situation, as each commentator adopts a differing point of view. For example, studies by the International Monetary Fund (IMF) vary with the economic forecasts made by the OECD, which in turn are different to those produced by individual countries.

In light of these circumstances, and looking towards the next few decades, Spain has decided to change its model to achieve a better balance between its various productive sectors. In this regard, it plans to restrict excessive development of the construction industry and to continue to apply environmental criteria to every sphere of economic activity. This new productive model needs to be based on three main themes — increasing energy saving and efficiency; reducing consumption of fossil fuels in favour of low-carbon energy sources; and consolidating and promoting implementation of new technologies in production processes.

The press release issued by the INE on 26 August 2009 updated the estimates made in the 2005–2008 accounting series and presented the balances for 2005, 2006, 2007 and 2008. The update calculated year-on-year GDP growth in real terms in 2008 to be 0.9% (chain-linked volume, base year 2000). When corrected to remove seasonal and calendar effects and expressed at current prices, this figure becomes 3.4%, the value used on several occasions in this Environmental Profile of Spain when calculating the various indicators.

Productive sectors

Trends in Spain's various productive sectors since the beginning of the global economic crisis have been marked by weakening domestic and foreign demand and the impact of increases in raw material and oil prices, the credit crunch (which affected both companies, particularly SMEs, and individuals) and the slowdown in the construction industry.

GROSS DOMESTIC PRODUCT (AT MARKET PRICES) AND ITS COMPONENTS.
CURRENT PRICES 2000–2008
 (Unit: million €)

	2000	2002	2004	2006	2007(P)	2008(A)
Agriculture, livestock farming and fishing	24,984	26,586	27,365	24,471	25,840	25,654
Energy	15,802	17,193	20,330	23,219	24,880	26,449
Industry	103,415	111,846	119,555	132,633	138,845	142,859
Construction	47,584	62,452	80,480	105,823	111,726	113,638
Services	378,775	443,440	508,939	590,680	642,543	687,554
Total gross value added	570,560	661,517	756,669	876,826	943,834	996,154
Net tax on products	59,703	67,689	84,373	107,458	108,896	92,348
GDP (at market prices)	630,263	729,206	841,042	984,284	1,052,730	1,088,502

Source: INE. Spanish National Accounts. (P): Provisional (A) Advance

In recent years, primary industry's influence on the overall economy has progressively decreased. In 2008, the causes of this lay in the price imbalance between the main outputs and fertiliser and energy costs.

Spain's industry is very unevenly distributed and five autonomous communities (Catalonia, Madrid, Valencia, Andalusia and the Basque Country) host the lion's share. It should be noted that until 2008 the construction industry was the Spanish economy's most dynamic sector and exerted an enormous influence on the other sectors that contributed to its development. In 2008, its GVA accounted for 11.6% of the total and growth between 2000 and 2008 stood at 143.6%. In 2007, the sector employed 12.6% of the working population and between 2000 and 2007 it recorded the greatest increase in employment (45.4%) among the economy's various sectors.

In Spain, road transport remains the most widely used mode and is well ahead of the others (rail, air and sea). The total volume of inter-city passenger transport grew between 1990 and 2008 by 94.4% (p-km), while freight transport increased by 86.5% (t-km). Transport remains Spain's biggest source of final energy consumption.

The service sector's contribution to the economy has grown steadily and in 2008 it represented 68.3% of total GVA. The number of jobs generated by the sector has increased significantly and in 2007 it provided 67.9% of total employment. By business sector, retail accounted for most output and employment, followed by business-to-business services, tourism and transport. Within the context of the recent recession, the service sector was the only one to grow in the last quarter of 2008, when it expanded by 1.7%.

Within the service sector, tourism and its related activities stand out particularly. In 2007, Spain received the world's second-highest number of tourists (59.2 million),

although the subsequent economic downturn meant that tourist numbers dropped to 57.3 million in 2008.

According to the latest available data, this trend became more acute in 2009, when 52.2 million tourists travelled to Spain, 8.7% fewer than the previous year.

Towards the knowledge and innovation society

In recent times, Spain has devoted major resources to scientific and technological development in a drive to lay the foundations on which to build a more sustainable economy in the medium and long term.

Scientific research and technological innovation have advanced considerably in Spain in the last 25 years, shifting from a situation in which these activities occurred in isolation to one in which tangible results that make the country a significant player on the international stage are produced. The key to this progress was enactment of Law 13/1986, of 14 April, on the promotion and co-ordination of scientific and technological research, which laid the groundwork for development of consistent policies through implementation of the National Scientific and Technological Research Plans.

INTERNAL EXPENDITURE ON R&D BY SECTOR (2008)
(thousand € and %)

Year	Public administration	%	Higher education	%	Enterprise	%	PNPI	%	TOTAL
2004	1,427,503.6	16.0	2,641,653.2	29.5	4,864,930.2	54.4	11,673.7	0.1	8,945,760.7
2005	1,738,052.9	17.0	2,959,927.7	29.0	5,485,033.5	53.8	13,856.9	0.1	10,196,871.0
2006	1,970,823.5	16.7	3,265,738.5	27.6	6,557,529.0	55.5	21,127.0	0.2	11,815,217.9
2007	2,348,843.4	17.6	3,518,594.7	26.4	7,435,901.8	55.9	21,030.8	0.2	13,342,370.6
2008*	2,672,288.1	18.2	3,932,431.1	26.7	8,073,521.2	54.9	23,170.5	0.2	14,701,392.9

Source: INE. 2008 R&D statistics. PNPI: Private Non-Profit Institutions. (*) Provisional results.

The Ministry of Science and Innovation is currently responsible for developing and monitoring Spain's National R&D and Innovation Plan. The 6th National Plan (2008–2011) was approved by the Council of Ministers on 14 September 2007 and addresses three basic principles already included in the National Strategy for Science and Technology (ENCYT):

- Ensure R&D and Innovation serve the public and foment social welfare and sustainable development, with full and equal participation for women.
- Make R&D and Innovation a factor in improving corporate competitiveness.
- Acknowledge and promote R&D and Innovation as an essential element in the generation of new knowledge.

The goals of the 2008–2011 National R&D and Innovation Plan can be summarised as follows:

- Position Spain at the forefront of the knowledge society, strengthening training and incorporating new researchers, technologists and managers.
- Develop an integrated science, technology and innovation policy, improving co-ordination and co-operation between the General State Administration and regional government.
- Promote a culture of science and technology throughout Society, making use of new means of communication to transfer advances in scientific and technological knowledge.
- Promote a highly competitive business fabric, ensuring that R&D meet the demands of the productive sectors.
- Encourage international relations as a means of developing the system, contributing to research groups' participation in international programmes and organisations.

In the last five years, overall investment in R&D and Innovation totalled €59 billion, a figure well above the total amount spent over the previous decade (1994–2003), which stood at €52 billion. This progress is mainly due to the increase in public funding, which rose by a factor of 1.8.

With regard to private investment, despite the fact that Spain continues to suffer from a significant deficit, expenditure nonetheless grew between 2004 and 2008. The average rate of increase was 12.8%, one of the highest among the OECD countries. In the same period, the number of companies investing in R&D and Innovation doubled.

The autonomous communities with the highest levels of spending on R&D were Madrid (2% of GDP), the Basque Country (1.96%), Navarre (1.92%) and Catalonia (1.61%). It should also be noted that the sector employed the equivalent of 215,676 full-time staff, which represents 10.65‰ of the working population. The number of researchers stood at 130,966, of which 49,900 were women.

