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8 Bilbao Case Study

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Introduction

In just a few decades, Bilbao has come from being the city of iron, symbolized by large, polluting steel furnaces, to a city of titanium, with a new gleaming and iconic Guggenheim Museum Bilbao. It has been a remarkable and recognized transformation, which has put the city at the international forefront of urban transformation. This has not been just a physical change; it has also meant a significant transformation of the socio-economic fabric.

Bilbao is located in the Basque Country, one of the Spanish Autonomous Regions, on the northern edge of the Iberian Peninsula border with France. The municipality of Bilbao has a population of 350,000 and is the capital of the province of Bizkaia.¹ The metropolitan area, also known as "Gran Bilbao," comprises the City of Bilbao as well as twenty-five municipalities. It has a population of 900,000, which is 40 percent of the total population of the Basque Country.² The metropolitan area has no overall administrative authority but forms a nearly continuous urban footprint along 14 kilometers in the Nervion River valley that constitutes the most important economic concentration in the region.

An important characteristic of the Basque Country is that, as a result of the 1979 Statute of Autonomy negotiated at the time of the transition from Franco's dictatorship to democracy, it enjoys the highest degree of economic autonomy in Spain.³ It has the power to collect taxes locally (VAT, corporate income tax, and personal income tax) and to keep 94 percent of the taxes in the territory, giving the Basque Parliament a high degree of self-governance.

The "Bilbao effect," also referred to as the "Guggenheim Museum effect," has been the subject of considerable analysis from a variety of perspectives, particularly its cultural, urban, and social transformations, as well as its social and economic impacts. It has been the subject of many internationally recognized case studies and has been featured in numerous publications.

Brief History of the City

Bilbao was founded in 1300 as a Villa, or a chartered town, because of its strategic location as an inland port site leading north along the Nervion River to the Bay of Biscay and the Atlantic Ocean. Other advantages include the flat topography of the river valley, nearby coal mining activity, its location along the St. James Pilgrimage Way, and a communication link to the central Spanish plateau and city of Madrid. These attributes consolidated Bilbao's commercial position as the most important economic center in the Seignory of

Biscay throughout the fifteenth and sixteenth centuries. In 1511, the Consulate of Bilbao (Consulado de Bilbao) was created to regulate trade and shipping activity. It was the most influential institution in the city for the next three centuries.

A sharp increase in population accompanied the area's commercial growth, despite the deep economic crisis affecting most of Europe in the seventeenth century. Bilbao and the region maintained their growth because of the large English and Dutch commercial shipping companies that had established major port operations along the river valley.

Demographic growth required the extension of the boundaries of the city during the eighteenth century. Many city regeneration plans were developed through public competitions by some of the most important and well-known architects of the time. These plans ensured that growth took place in an orderly fashion, providing Bilbao with a high-quality urban grid. Large mansions and major civic buildings with notable architecture were constructed at this time.

Wars set the tone for the first decades of the nineteenth century. Economically powerful and liberal Bilbao was a key target during the Carlist Wars in the Basque Country. Despite the upheaval from 1846 to 1849, Bilbao continued to develop. In 1862, the railway reached the city. By the end of the nineteenth century, Bilbao was the most important industrial city in the Iberian Peninsula.

Through two world wars and the Great Depression in the twentieth century, Bilbao continued to grow due to its strengths in heavy manufacturing and port activities. The corresponding demand for labor doubled Bilbao's population. By the 1980s, however, Bilbao's industry-based economy began to decline precipitously as part of the worldwide shift in the steel and shipbuilding industries, particularly affecting traditional industrial cities in Europe and North America. Unemployment in Bilbao reached 23 percent.⁴

Severe floods in August 1983 combined with the most active period of the Basque terrorist group ETA (Euskadi Ta Askatasuna) and the economic collapse to plunge Bilbao and the entire region into a deep crisis. Fortunately the end of the Franco dictatorship in 1975 and the subsequent arrival of democracy in Spain in 1978 brought about new governance structures along with new enthusiastic and pragmatic leaders in the Basque Country, many of who came from the business world. They recognized the need for change and initiated the Strategic Plan for the Revitalization of Bilbao, placing emphasis on economic diversification, the modernization of industry, the redevelopment of industrial properties, and the improvement of human resources. This was the beginning of the transformation of Bilbao. One crucial initiative that was central to the effort was the creation of the Basque Business Development Agency (SPRI Group) in 1981, an agency of the Basque Government set up to restructure and promote the Basque economy.⁵ As a result of those efforts, Bilbao has evolved over the last thirty years from a city with severe environmental problems and a run-down industrial economy to one of the most attractive cities in Europe to live in, invest in, and visit.

The City in 1985

Physical Form and Conditions

The Bilbao Metropolitan Area (BMA) is situated on both banks of the Nervion River and occupies an area of 375 square kilometers (Figure 8.1). The physical form and environmental state of Bilbao in 1985 reflected the following negative factors:

- More than one hundred years of industrialization paired with little or no environmental standards and controls.

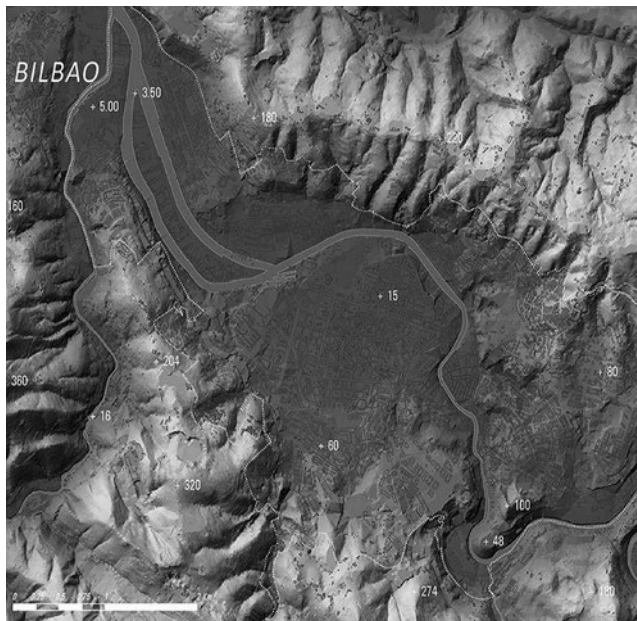


Figure 8.1 Map of Bilbao with elevation scale

Source: Map provided by Bilbao Ekintza

- Population growth and immigration in the twentieth century that dramatically expanded existing urban areas at a rate that local planning authorities struggled to accommodate.
- The effects of the deep socio-economic crisis that followed the industrial decline of the late 1970s and early 1980s, when a significant proportion of Bilbao's industry collapsed.

Bilbao's industrial complexes (steel factories, shipyards, chemical companies, and port facilities) were located predominantly on the flat land along the river to take advantage of the navigable character of the Nervion River. Port activities stretched 14 kilometers south from the river mouth at the Bay of Biscay to the heart of Bilbao. Because of the relatively narrow river valley, there was significant competition for the most desirable property. The result was that much of the residential and commercial growth that took place during the twentieth century was adjacent to noisy, polluting shipyards and factories. Now that these industrial uses were disappearing, contaminated and vacant properties were left behind.

The continuous footprint of industrial and port activities along the river resulted in a disconnected urban structure. This fragmentation was compounded by a lack of investment in transit and road infrastructure that could have improved connections between municipalities in the metropolitan area. For instance, a number of railway lines radiated out of central Bilbao serving separate corridors, but there was no connection between them. The rail stations in Bilbao were in different, disconnected locations. As a result, there were no railway links across the river or to areas where the majority of the population was located.

In environmental terms, air and water quality had badly deteriorated. The widespread use of coal for energy meant that air pollution was omnipresent and that the city was literally dirty. Being in a wet region, Bilbao became "a gray city," with even the finest buildings obscured by a layer of grime from polluted air and dirty rainfall. In addition, the Nervion River was the recipient of uncontrolled domestic and industrial wastewater. Over the decades, and in spite of being affected by cleansing tides from the Atlantic Ocean, enormous unregulated waste discharges into the river generated a toxic and foul-smelling fluvial environment with very little oxygen in the water, and, therefore, no aquatic life. Devastating floods in 1983, which caused significant loss of life and property, punctuated the lowest point in Bilbao's recent history. It was also the turning point for a remarkable urban regeneration effort.

Demographics

The City of Bilbao, the Bilbao Metropolitan Area (BMA), and the Basque Country experienced exponential population growth from 1900 to the early 1980s. During the 1980s, emigration exceeded immigration and the natural growth of the population was negative as deaths outnumbered births. It was the beginning of population decline for the Bilbao region. The losses can be attributed primarily to the return of workers and their families to their home regions in other parts of Spain when jobs disappeared in Bilbao. In 1985, the population of the BMA was 43 percent of the Basque Country and 78 percent of Bizkaia Province, with a population density of 2,469 inhabitants per square kilometer (Figure 8.2).⁶

According to the 1986 census, the BMA had 926,949 inhabitants, 49 percent of whom were male and 51 percent of whom were female as shown in the population pyramid in Figure 8.3.

In 1985, the main demographics indicators in the BMA showed the population starting to decline after continuous growth since the beginning of the century. The average age was 35 years (34 for men and 37 for women). Children (0–19 years) comprised 28 percent of the total population, and the elderly (65 and older) comprised 11 percent. The region's Dependency Index in 1985 was 44, meaning that one hundred people of working age economically supported forty-four people under 15 years old and over 64 years old. The foreign population in 1985 was only 1 percent of the total population of the region.⁷

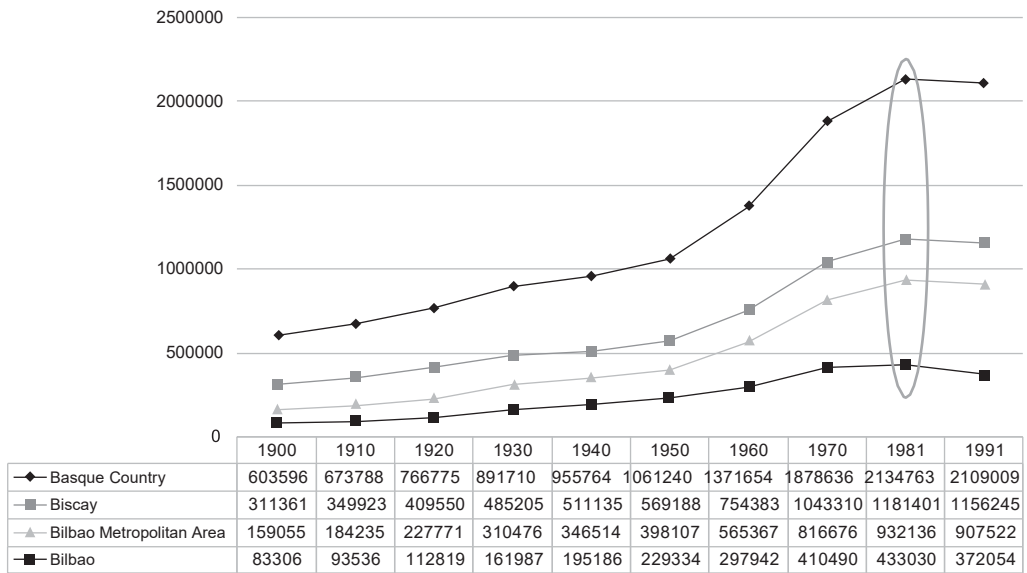


Figure 8.2 Evolution of the population of Bilbao, Bilbao Metropolitan Area, Bizkaia and Basque Country between 1900 and 1991

Source: Data adapted from INE. Prepared by the authors on the basis of INE.

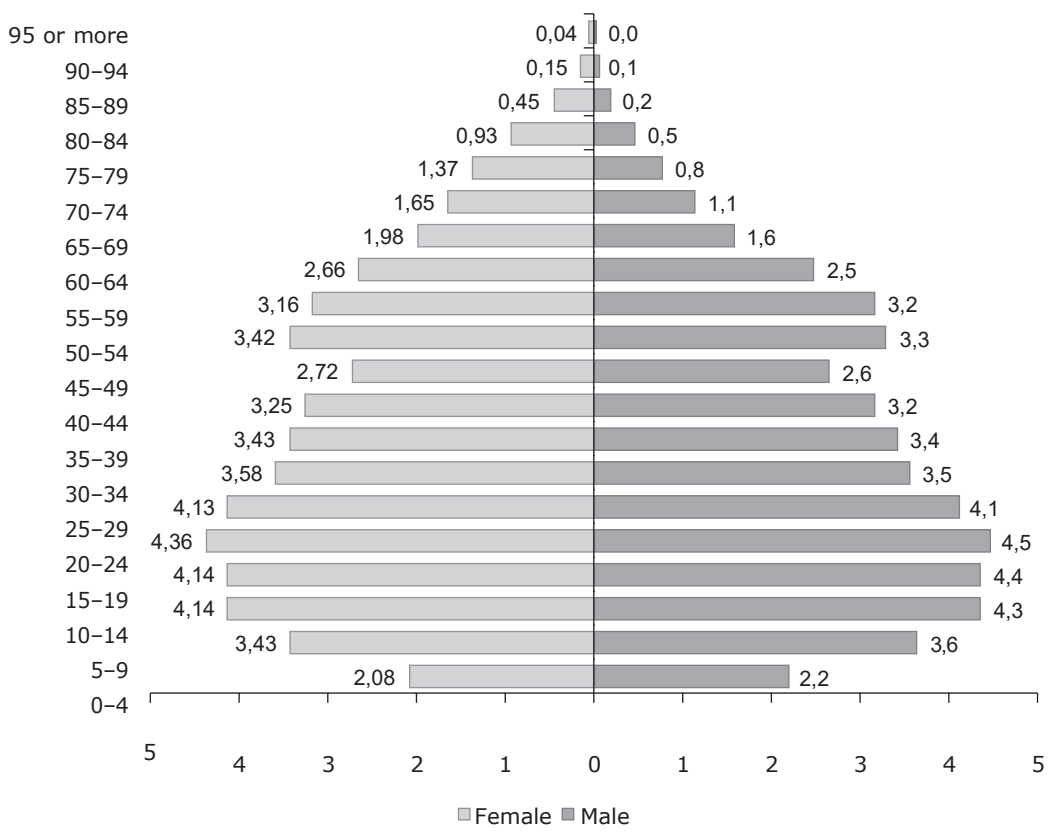


Figure 8.3 Pyramid of population of BMA in 1985 and demographics indicators and rates

Source: Prepared by the authors on the basis of EUSTAT.

Economy

The Atlantic Ocean seaport and ready access to raw materials formed the basis for Bilbao's wealth as an international commercial center throughout the sixteenth and seventeenth centuries. Bilbao developed into an early industrial city, based upon the exploitation of nearby iron ore deposits and coal. During the industrial revolution of the nineteenth century, the Basque economy grew rapidly. Industrial activities centered on steel and shipbuilding. In the 1950s and 1960s, massive industrialization processes continued to focus on heavy industries. Significant in-migration of workers from other parts of Spain and the construction of new housing complexes in the limited space of the Nervion River valley led to higher population densities.

During the 1970s and 1980s, Bilbao, like many European industrial cities, was in rapid economic decline with high unemployment and undergoing a massive urban restructuring process. Traditional industries had become obsolete, but the city center was still home to a river port plagued with severe traffic congestion. Other troubles included violence from extremist Basque separatists, urban deterioration, pollution, and a poor public transportation system.

These problems were tackled by implementing public policies targeted at productivity and economic diversity, coupled with a strong cultural component. Regional public authorities developed policies aimed at creating a competitive environment with strong innovation, technology, and entrepreneurship components.⁸

The City in 2015

Physical Form and Conditions

In the last thirty years, starting after the floods in 1983, Bilbao has undergone one of the most impressive urban transformations in the world. With the new powers and resources that the Basque administration gained during Spain's transition to a democratic government, the leaders of the region embarked on a series of initiatives to change Bilbao physically and to improve its quality of life and economic competitiveness. Many of the projects were identified in the 1992 *Strategic Plan for the Revitalization of Metropolitan Bilbao*, a study commissioned by the city and regional authorities. A new public-private agency, Bilbao Metr poli 30, was established to produce a regeneration framework with maximum public consensus. Below is a summary of the key initiatives and interventions in the remaking of Bilbao after the economic collapse in the 1970s and 1980s.

Cleaning up the River and the Air

In 1979, the Water Authority developed a plan to intercept all domestic and industrial wastewater polluting the Nervion River. Thirty years later, after an investment of nearly

 1 billion, the river has been transformed from an open sewer to a public amenity where watersports can be practiced and where marine life has returned. The most significant factor in cleaning up the air was the creation of a comprehensive natural gas network, serving domestic and industrial customers, which has supplanted coal and oil as the main source of energy,

contributing to significantly better air quality in the region.

Bilbao Metro

After several false starts and numerous proposals, in 1987, the Basque Government approved a transit plan that incorporated parts of an existing suburban railway.⁹ Construction began in 1988 with the inaugural service in November 1995. The system's design, with stations designed by British architect Norman Foster, included two lines threading through municipalities on either side of the river. It is one of the most widely used metro systems in Spain with 90 million passengers per year.¹⁰ Internal connectivity within the metropolitan area was thus achieved with the development of a single Metro system of 43 kilometers, with connections on both sides of the river. Travel times from one end of the system to the other in the core area are now no more than 30 minutes. The network continues to grow with extensions at the ends and three other lines that are in the planning stages.

The Port, Highways, and the Airport

Central and regional government investments contributed to a major overhaul and upgrading of these transportation infrastructures. The Port Authority developed an "external port" closer to the Bay of Biscay with land reclamation, freeing up the banks of the Nervion River in the city for other, more appropriate urban uses. Over three decades, the Bizkaia Provincial government has developed a rebuilt and extended highway network, tackling one of the most critical shortcomings identified in the 1992 revitalization plan. Aena S.A., the national agency overseeing airports, financed a new airport terminal building designed by Spanish architect Santiago Calatrava, which opened in 2000.

Urban Regeneration

In 1992, in a joint effort by central, provincial, regional, and local governments, BILBAO Ría 2000 was set up as a limited liability company. It is entirely publicly owned, with the goal of dealing in a holistic manner with remaining sites in need of urban regeneration. In just over twenty years, the company has transformed more than 100 hectares of mainly industrial land, creating new neighborhoods and new open space, some of it next to the Nervion River. BILBAO Ría 2000 finances its investments in infrastructure through the sale of land to developers. Over €1.3 billion have been spent to create a new rail infrastructure and open space, to remediate contaminated sites, and to construct civil works for new neighborhoods (Figure 8.4).¹¹

The Guggenheim Museum Bilbao

This iconic building, designed by American architect Frank Gehry, opened in 1997. It immediately put Bilbao on the international map (Figure 8.5). Although the investment in the building amounted only to a small fraction of the total public investment in the metropolitan area over the last three decades, its impact has been much greater than the expenditure. Less known, but perhaps more interesting than the visual impact, is the economic impact of the Guggenheim. The idea for the new museum was actually conceived as a business case, counting on the number of new tourists attracted and the additional



Figure 8.4 Abandoibarra waterfront, before and after the transformation
Source: Provided by Bilbao Ekintza E.p.e.l.



Figure 8.5 Guggenheim Museum Bilbao
Source: Courtesy of FMGB, Guggenheim Bilbao Museoa, 2015.

economic activity generated by them to produce increased tax revenue for the provincial government. With nearly one million visitors per year on average, the additional taxes collected have paid off the original investment.¹² Bilbao now has another sector of economic activity, tourism, accounting for 5 percent of the city's gross domestic product, unthinkable in 1985.¹³

Demographics

The Bilbao Metropolitan Area population dropped by 74,000 between 1981 and 2014, declining from 936,848 in 1981 to 862,813 in 2014, a loss of 8 percent.¹⁴ However, Bilbao has managed to stabilize its population in recent decades, unlike most second-tier post-industrial cities (Figure 8.6).

The population structure by gender has not changed in thirty years although the population is aging, as can be seen in the population pyramid in Figure 8.7. This is a clear trend not only in Bilbao, but also across Europe.

In Bilbao, there was a decrease in the number of younger people and an increase in older people from 1985 to 2015. Bilbao's population of children (0–19 years old) fell from 28 to 17 percent, while the elderly population (65 and older) doubled from 11 to 22 percent.¹⁵ The average age of the population has increased ten years, going from 35 in 1985 to 45 years in 2015.¹⁶ The Dependency Index has increased from 44 in 1985 to 53 in 2015.¹⁷ In spite of this regressive demography, there is a bright spot. The loss of endogenous population (deaths exceeding births) is being offset by an increase in international immigration to the region. The foreign population in the BMA increased from 1 percent in 1985 to 8 percent in 2015.¹⁸

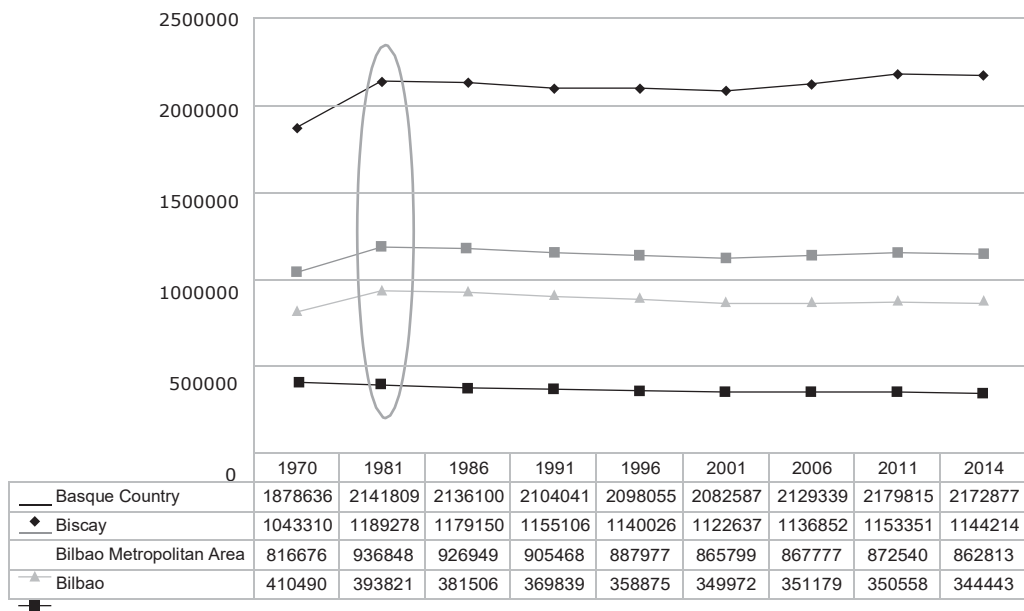


Figure 8.6 Evolution of the population of Bilbao, Bilbao Metropolitan Area, Bizkaia and Basque Country between 1970 and 2014

Source: Prepared by the authors on the basis of INE.

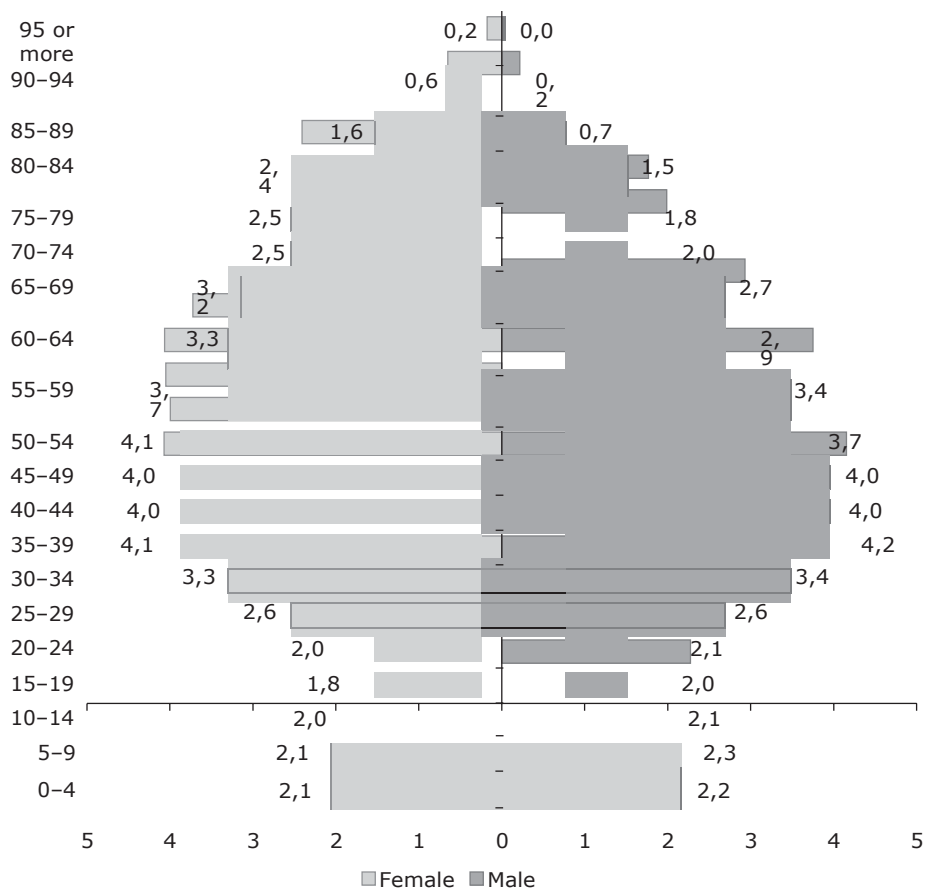


Figure 8.7 Pyramid of population of BMA in 2015, demographics indicators and rates

Source: Prepared by the authors on the basis of Eustat.

Economy

The Basque Country, together with Madrid and Navarre, is ranked highest in Spain in per capita income, with the gross domestic product (GDP) per capita for the Basque at €29,959 compared to €22,279 for Spain in 2014.¹⁹

Traditional industries have given way to auxiliary industrial goods, such as machinery, machine tooling, chemicals, aeronautics, as well as high value consumer goods. In recent years, as in other Western economies, services have become the main economic activity. The Service sector generated 62.6 percent of the Basque GDP, while the Manufacturing sector generated 21.3 percent, the Construction sector generated 6.5 percent, and the Agriculture and Fisheries sector accounted for only 0.8 percent in 2013.²⁰

In Spain, innovation and entrepreneurship are mainly concentrated in Madrid, Barcelona, and Bilbao, which together account for 34 percent of the innovation economy.²¹ Although first-tier cities such as Madrid and Barcelona generate a significant portion of these new business services, the vibrant second-tier city of Bilbao also has an important role.

Figure 8.8 illustrates the main business sectors, reflecting the change in the employment structure in Metropolitan Bilbao, where business services (NACE 72-74) ranked first in 2009.²²

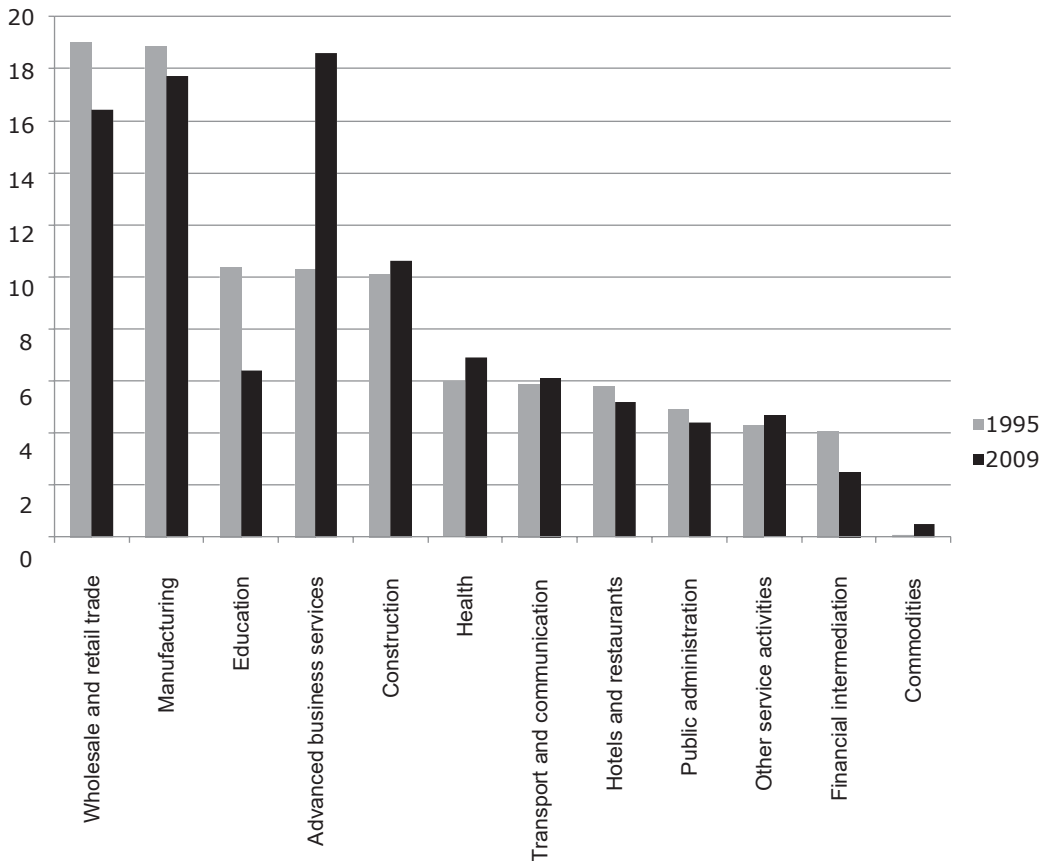


Figure 8.8 Diversification of Metropolitan Bilbao's economy in terms of employment percentage Source: Prepared by Plaza (2008) and Authors based on EUSTAT (2014):

The increased number of jobs in knowledge-intensive business services is 38 percent of the overall employment growth from 2000 to 2009 in metropolitan Bilbao. The knowledge-intensive business services sector is one of the fastest growing areas of the European economy, and Bilbao is no exception (Figure 8.9).²³ The rapid growth of the ICT sector (Information and Communication Technologies), the process of internationalization and globalization, and the changes in regulatory structures by the European Union (e.g., health and safety standards, environmental regulations), are the driving forces of growth in this sector.²⁴ Architecture and engineering companies constitute an important subset in Bilbao as a well-established sector in the economy of the city, particularly during the last thirty years of physical transformation in the region. In addition to the general trend, the multiplier effects of the ambitious urban regeneration strategy for the region should not be underestimated. Public policy changes have driven aggregate demand for private investment. Bilbao and its region have also seen an expansion of higher-end manufacturing and knowledge-intensive activities over recent years. The higher rates of innovation are mainly related to manufacturing specialization and business services.²⁵

NACE	Activities	1994		2009	
		Number of Establishments	Employment	Number of Establishments	Employment
63	Computer and related activities	277	NA	1,869	15,605
72	Research and development	41	NA	309	2,040
69-82	Other business activities	5,572	20,757	16,238	76,138
69-70	Legal and management activities	2,702	6,040	5,685	12,795
71	Architectural, engineering and technical activities	1,419	4,282	3,440	12,311
73	Advertising and market research	20	327	927	4,217
80-82	Other business support activities	320	746	3,102	38,026
	Total	5,890	NA	18,416	93,783

Figure 8.9 Business services in Metropolitan Bilbao: number of establishments and employment *Source:* Prepared by Plaza et al. (2013) based on EUSTAT (2010): Directorio de actividades económicas [Directory of companies and establishments]. Vitoria.

Note: Data for the province of Biscay. Metropolitan Bilbao has over 900,000 inhabitants, which is the majority of the 1,100,000 inhabitants of the Biscay province (the city of Bilbao has over 353,000).

Transformation of the City (1985–2015)

What Went Right?

Economic Diversification and the Unique Fiscal and Political Basque Model

Several factors explain the positive results; among them, a policy to drive the economic recovery strategy that favored investment in large-scale urban infrastructure projects; a complementary policy to diversify the Basque productive model; and a regeneration model partially enabled by the fiscal and political autonomy of the Basque Provinces. Public institutions led the regeneration of Bilbao, but there was no money for public infrastructure investments. The only asset available was the free land arising from the closure of the obsolete and uncompetitive steel and shipbuilding factories. The Basque Government quickly understood that there was no better opportunity. A change in the governance structure brought fresh initiative in the creation of the SPRI Group to promote the Basque economy. It was critical to focus the whole society on a shared vision. Nevertheless, at first, there was strong distrust of any projects proposed by the public authorities that had to be overcome, based on many years of failed efforts.

Revitalization Plan: Public-Private and Public-Public Collaboration

One of the keys to Bilbao's success was the 1992 Revitalization Plan, initiated by the Basque government in collaboration with the business community, and implemented by Bilbao Metr poli 30, a public-private entity. The plan clearly established priorities and selected key projects that developed physical infrastructure and addressed socio-economic issues in the region. The collaboration between the public and private sectors worked well, and there was a shared focus on implementation. However, achieving political consensus of more than two-thirds of the elected representatives, and being able to maintain it during multiple legislative and budgetary cycles, were significant challenges.

Local Strategic Focus on Balancing Neighborhoods

Territorial connectivity was a challenge that was overcome for all the neighborhoods, not just the city center, through the construction of bridges, tunnels, as well as new public transportation modes such as the Metro and Tramway. This brought greater social cohesion to Bilbao, mitigating the isolation of poorer areas. Neighborhood redevelopment strategies, led by local government, included programs and initiatives fostering economic, social, and cultural balance, continuous improvement for districts through civic participation, and continuous rehabilitation in all city areas.²⁶

Social Decline Halted and Economic Crisis Averted

One of the main achievements of the transformation of Bilbao is that public policies and revitalization plans managed to halt social decline at a time when it seemed impossible. At the same time, Bilbao's leaders were working to strengthen the economy, which was also in crisis. While the region has been lauded for successfully managing both the social decline and economic crises,

it is not well known that they were occurring concurrently.

Masterpiece of Twentieth-Century Architecture

The Guggenheim Museum Bilbao put the city on the world stage and enabled the city to attract new people and new development after the financial crisis. Fortunately for the city of Bilbao, the museum is a masterpiece of twentieth-century architecture, but it was not a sure thing. Being famous is not a sufficient condition to ensure the uniqueness of an architect's design. Even notable artists produce inconsistent pieces of art. Creativity is a highly elusive reality, for architects, as for other artists.²⁷ The Guggenheim Museum Bilbao opened in 1997 at the same time as the Internet boom began to have an impact on global communication and news transfer.²⁸ The exposure of the museum in English-speaking news outlets, especially in the US, accelerated the branding of the Guggenheim Museum Bilbao. As a result, the museum boosted the international connectivity of Bilbao, putting a second-tier city on the global map of highly specialized international art-related circuits.²⁹ Striking images of Gehry's masterpiece drove long-term regional branding efforts forward.

Studies have shown that the accumulation of positive images fuels increasing demand for place, which reinforces the region's brand, and ultimately attracts cultural visitors, creating new cultural tourism and related economic activity in Bilbao.³⁰ Major cultural infrastructure projects are expensive, have a very high operative risk, and often are unpopular among the citizens.³¹ Fortunately for Bilbao, the Guggenheim Museum Bilbao is a masterpiece and is a continuing powerful global branding engine. The so-called "Bilbao effect" or "Guggenheim effect" has generated "urban policy tourism"—short trips to Bilbao by policy-makers from other cities to learn from Bilbao.³² The project has given legitimacy to other culture-focused strategies in the Bilbao political arena, where many were quite skeptical before the opening of the Guggenheim.

Innovative Formula for Urban Regeneration

One of the main agents responsible for the physical transformation of Bilbao was BILBAO Ría 2000 (BR2000). This publicly-owned, limited liability company was set up by a collection of public institutions ranging from the central government to local authorities. It also included the railway and port authorities, which owned a significant amount of centrally located industrial lands now sitting vacant or underused. The company operates by consensus. Shareholders and board members are split evenly between the central government and the Basque authorities, striking a political balance of power. The concept was for BR2000 shareholders to transfer the vacant lands to BR2000. The company would then commission a master plan to turn the vacant lands into new urban districts, generate the planning documents, follow through with all municipal approvals, commission all projects, and manage construction of all infrastructure and civil works. The plots of land resulting from the master plan for housing, retail, office, and public uses would then be sold, and the proceeds would pay for the infrastructure. The remaining public spaces and infrastructure would then be turned over to the appropriate local authorities. In this way, brand new districts were built, like Abandoibarra where the Guggenheim Museum is located, without requiring funding from the operating and capital budgets of local and regional

governments.

What Went Wrong?

Living with Terrorism

Terrorism in the Basque Region is a daily fact of life that has had a significant impact on the local economy. Apart from its painful social consequences and tragic loss of life, it has been estimated that the ETA has caused economic losses of 20 percent across the board. According to a 2003 study by Abadie and Gardeazabal, there appears to be an average 10 percent difference between the actual Basque Country's per capita GDP and the per capita GDP of a hypothetical Basque Country without terrorism. In their study, changes in the per capita GDP correlated with periods of intense terrorism.³³ Terrorism disproportionately impacted the Basque Country's entrepreneurial community, as Basque entrepreneurs were the specific targets of violence and extortion, including kidnapping for ransom, robberies and assassinations. In the early 1970s, the Basque Country was one of the richest regions of Spain, and by the late 1990s it had dropped to sixth in per capita income among Spanish regions.

Investment Effectiveness Facing Such a Broad Range of Interventions

The regeneration of Bilbao did not escape its share of poor or ineffective investments. It is unavoidable that with such a broad range of interventions, occurring over such a long timeframe, some projects would not meet expectations. Several recent additions to the highway infrastructure (e.g., Super Sur) and large civic buildings (e.g., the Bilbao Exhibition Center) are performing well below forecasts. The 2008–2009 financial crisis can be blamed in part, but probably more important is that the cost benefit analysis of these projects was less rigorous than required. This is an area where Bilbao's public sector needs to improve as municipal resources become more scarce, particularly in the context of an aging and declining population.

Private Investment Lagged

Despite facing the widespread need for public-private partnership, the urban regeneration process has mainly been the result of public intervention and investment. Private investment has been more symbolic than substantial and has not matched the public commitments.

Lessons Learned

Bilbao has been a laboratory for testing new economic development ideas and new regeneration strategies. The successful transformation of Bilbao did not consist of just several high profile architectural projects by Gehry, Foster, and Calatrava. Rather it was an integrated transformation process with many and varied inputs.

The confidence in the capacity of public institutions to perform was very important at the beginning and only got stronger as projects were executed. People could see the efficiency of public institutions. The public innovation of the leaders in local, provincial, and regional bodies of the Basque Country, supported by the central government, made this successful transformation

possible, despite some harsh political controversy at the outset.

The Guggenheim Museum Bilbao's success led to the implementation of other adventurous and risky proposals that would have been impossible without the proven success of the museum. There was a sea change in valuing the arts and culture of Bilbao. It became clear that cultural infrastructure could lead the transformation process and that planning proposals had to include both local and global dimensions.

Prospects for the Future

Bilbao has not only cleaned up its image, it has also renovated its physical framework, efficiently managed its public assets, and developed a transparent and cooperative governance structure that ensures continuance of the transformation. Balanced investment in neighborhoods is essential for the prosperity of any metropolis. Bilbao has been working on this goal for the last thirty years and will continue to do so on the basis of distributing investment and diversifying sectors of activity to help the economies and living conditions in all neighborhoods.

One of the main threats to Bilbao's success continues to be demographic decline. Bilbao is one of the oldest regions in Europe with a population that continues to shrink and age. To survive, Bilbao will have to attract more and younger people (for which a beautiful and renovated city is always a plus) and improve the efficiency, productivity, and diversity of its economy. Despite having a highly qualified workforce in the past, Bilbao is now challenged to maintain and attract talent. Talent is highly mobile and moves fluidly from city to city, from country to country. The Basque Country must deal with its population decline by offering high value job opportunities not only to keep local talent in place, but also to appeal to residents of other regions in Spain and to foreigners by providing an attractive and creative city in which to live, work, and play.

It is essential to learn from and value the lessons of the last thirty years by maintaining a strategic vision for the city, integrating both short-term and long-term planning, having a transparent planning process, and fostering networking between public organizations, private stakeholders, and academic partners, such as universities and research centers.

The key factor when redesigning the economic and business climate of a city and region, as Bilbao-Bizkaia has been doing since 1983, is the successful engagement and support of both the leaders and the people themselves. The ultimate success of any urban transformation depends on value creation for all. Connectivity and relational networks are important. Living in the global economy, where ideas are accessible and shared, opens up interconnections between people, companies, and institutions, providing opportunities for both renewal of existing assets and sustained new growth.

Notes

- 1 EUSTAT, 2014.
- 2 Ibid.
- 3 Organic Law 3/1979.
- 4 Data from EPA (Labour Force Survey), for the Basque Country in 1985: 22, figure is 69 percent.
- 5 State Law 27/1984, declaring Urgent Reindustrialization Areas.
- 6 EUSTAT 1986, Population Density.
- 7 Ibid.
- 8 Plaza, B., "On Some Challenges and Conditions for the Guggenheim Museum

- Bilbao to Be an Effective Economic Re-Activator." *International Journal of Urban and Regional Research* 32(2), (2008): 506–17.
- 9 Decree 19/1987.
 - 10 Metro Bilbao, adapted from passenger figures.
 - 11 *Bilbao Ría 2000*, adapted from a range of publications and press notes.
 - 12 Guggenheim Museum Bilbao, *Annual Report*. Available at: www.guggenheim-bilbao.es
 - 13 EUSTAT, 2014.
 - 14 INE (Spanish Statistical Office) figures.
 - 15 EUSTAT, 2014.
 - 16 EUSTAT/INE.
 - 17 Ibid.
 - 18 Ibid.
 - 19 Ibid.
 - 20 EUSTAT, 2014.
 - 21 Boix, R. and Trullén, J., "Industrial Districts, Innovation and I-District Effect: Territory or Industrial Specialization?" *European Planning Studies* 18(10), (2010): 1707–29.
 - 22 NACE, Classification of Economic Activities in the European Community.
 - 23 The effectiveness of transferring innovation to Small and Medium Enterprises (SMEs) depends critically on the knowledge-intensive business services (KIBs), which are mainly concentrated geographically in first-tier cities (Muller and Zenker, 2001). The KIBs sector includes many R&D intensive firms that provide services to firms, such as ICTs, software development, R&D, and non-technological innovations, which contribute to the upgrading of the firms (Plaza et al., 2011). KIBS are seen to function as facilitators of innovation, and through their almost symbiotic relationship with client firms, some KIBS act as co-producers of innovation (Den Hertog et al., 2003). The high scientific and technological profile of the KIBS can help increase the economic competitiveness of a region (metropolitan). The weight of this industry related to the GPD is one of the indicators used by the European Commission to compare the national research and innovation carried out by EU member states (European Commission, 2009).
 - 24 Plaza, "On Some Challenges and Conditions for the Guggenheim Museum," 506–17.
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 - 27 Plaza, B., "The Return on Investment of the Guggenheim Museum Bilbao." *International Journal of Urban and Regional Research*, 30(2), (2006): 452–67.
 - 28 Plaza, B. and Haarich, S.N. "The Guggenheim Museum Bilbao: Between Regional Embeddedness and Global Networking." *European Planning Studies* 23(8), (2015): 1456–75.
 - 29 Ibid.
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 - 31 Plaza, "The Return on Investment of the Guggenheim Museum Bilbao."
 - 32 Plaza and Haarich (2015) "The Guggenheim Museum Bilbao."
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