OVERCOMING INEQUALITY IN REGIONAL INNOVATION ECOSYSTEMS: THE BASQUE COUNTRY AND THE ADVANCE OF ECONOMIC DEMOCRACY

by

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Professional Degree in Urban Management and Development
Universidad del Rosario, 2013

Submitted to the Department of Urban Studies and Planning in partial fulfillment of the requirements for the degree of

Master in City Planning
at the

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Abstract

Cities and regions across the world have embarked on designing and implementing place-based economic development strategies for clustering innovation and entrepreneurship. This rising trend can be seen in the proliferation of Innovation Districts and Regional Innovation Ecosystems across many metropolitan regions in the US, Europe, and cities in the Global South. While many of these strategies rely heavily on urban physical transformation, most of them are the manifestation of a well-defined economic development policy that has been proven conducive to rising inequality.

Moreover, the policies designed for territorializing innovation through regional ecosystems have prioritized wealth creation in ways that ladders of opportunity are only accessible to specific sectors of society. In turn, this has contributed to increasing inequality and disproportionately affected minorities and disenfranchised communities. Together with the negative consequences of skill-biased technological change and its profound impact on labor, the proliferation of strategies for clustering innovation have also created challenges in spatial and socioeconomic segregation in regions.

Using the case of the Basque Country in Spain, this thesis examines the conditions that have enabled the establishment of a successful regional innovation ecosystem while advancing economic democracy at the same time. By examining the political economy of Basque economic development planning, the emergence of cooperative networks of firms such as Mondragon, and the local social and cultural enabling factors, this thesis will produce a set of recommendations to policymakers and practitioners engaged in developing regional innovation ecosystems.

Thesis advisor: J. Phillip Thompson
Title: Associate Professor of Political Science and Urban Planning
Reader: Nicholas Iuviene.
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To Juli for being my source of happiness, love and continuous encouragement. For all the happiness that comes from building our dreams together.

Finally, I would like to dedicate this thesis to the memory of Felipe Ramos. Thank you for all the joy and love you brought to my life.
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<th>Definition</th>
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<tr>
<td>BBF</td>
<td>Bilbao Innovation Factory</td>
</tr>
<tr>
<td>BRIE</td>
<td>Basque Regional Innovation Ecosystem</td>
</tr>
<tr>
<td>CAPV</td>
<td>Autonomous Community of the Basque Country</td>
</tr>
<tr>
<td>EUSTAT</td>
<td>Basque Institute of Statistics</td>
</tr>
<tr>
<td>ID</td>
<td>Industrial District</td>
</tr>
<tr>
<td>INNOBASQUE</td>
<td>Basque Innovation Agency</td>
</tr>
<tr>
<td>LDA</td>
<td>Local Development Associations</td>
</tr>
<tr>
<td>MCC</td>
<td>Mondragon Cooperative Corporation</td>
</tr>
<tr>
<td>MID</td>
<td>Marshallian Industrial District</td>
</tr>
<tr>
<td>OECD</td>
<td>Organization for Economic Cooperation and Development</td>
</tr>
<tr>
<td>RIS</td>
<td>Regional Innovation System</td>
</tr>
<tr>
<td>RIS3</td>
<td>European Union Smart Specialization Platform</td>
</tr>
<tr>
<td>RVCTI</td>
<td>Basque Science, Technology and Innovation Network</td>
</tr>
<tr>
<td>SBTC</td>
<td>Skill-biased technological change</td>
</tr>
<tr>
<td>SME</td>
<td>Small and medium enterprises</td>
</tr>
<tr>
<td>SPRI</td>
<td>Society for Industrial Promotion and Reconversion</td>
</tr>
<tr>
<td>TIF</td>
<td>Tax Increment Financing</td>
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Chapter 1. Introduction

1.1. Purpose

As cities and regions around the world turn to promoting innovation and the clustering of knowledge-based economies as the driver for economic development and growth, inequality is rising at an unprecedented pace. These two processes are not just contemporary, but they are also intrinsically related. The rising trend of place-based approaches to developing innovation ecosystems can be seen in the proliferation of Innovation Districts and Regional Innovation Ecosystems across many metropolitan regions in the US, Europe, and the Global South. While many of these economic development strategies rely heavily on urban physical transformation, most of them are the manifestation of a well-defined economic development policy that has been proven conducive to rising inequality.

Moreover, the policies designed for territorializing innovation through regional ecosystems have prioritized wealth creation in ways that ladders of opportunity are only accessible to specific sectors of society. In turn, this has contributed to increasing inequality and disproportionately affected minorities and disenfranchised communities. In the United States, the increase in inequality has also been associated with the increase of distrust in government institutions and deepened interracial divides (Benner & Pastor, 2015). Together with the negative consequences of skill-biased technological change and its profound impact on labor, the proliferation of strategies for clustering innovation have also created challenges in spatial and socioeconomic segregation in cities. In the United States alone, innovation intensity was responsible for 20% of the aggregate trend in income segregation between 1990 and 2010. (Berkes & Gaetani, 2018).

Whereas the relationship between innovation and inequality has been widely documented and researched, and regional innovation ecosystems have been subject to benchmarks and case studies, the analyses of how the model can advance more equitable economic development, and build economic democracy, are scarce. By studying the case of the Basque Regional Innovation Ecosystem (BRIE), this thesis attempts to understand the conditions that have allowed for more equitable economic outcomes while promoting place-based strategies for clustering innovation.

1.2. Research Question and Methods

In that line, this thesis addresses the following question: What are the conditions that have allowed the Basque Country to establish a thriving regional innovation ecosystem while advancing economic democracy at the same time? To do so, I employ a case study methodology in which I investigate the
historical, cultural, economic and policy factors that have contributed to the establishment of the Basque Regional Innovation Ecosystem (BRIE) while highlighting its less unequal outcomes.

The theoretical frameworks I use for this analysis are twofold: on one hand, the concept of regional innovation ecosystems and the factors contributing to the agglomeration of firms in specific geographies are used to understand the predominant model for territorializing innovation. On the other hand, the concept of economic democracy is used as a way of investigating the levels of ownership and shared-decision making in the economy that create more egalitarian economies, where wealth is more democratically distributed amongst economic actors. The economic democracy framework is also used as a way of explaining the limitations that capitalist market-based economies have imposed on innovation and as a platform that allows to respond to inequality in a significantly distinct way, departing from current economic development planning which is limited to mostly redistributive solutions.

Overall, this thesis leverages methodologies and approaches from political economy to better understand outcomes of a regional innovation ecosystem and identify possible recommendations for policymakers and stakeholders in other ecosystems.

The Case Study methodology is supported by primary sources, mostly data from the European Union, and EUSTAT, the Basque Statistics Office, and secondary research on regional innovation ecosystems, Basque history, culture, and regional political economy analyses. A complementary research on recent alternatives for economic development that expand the possibilities of innovation-based economies that build shared wealth.

In addition, a series of interviews with relevant stakeholders from the BRIE were held in January 2018. These interviews constitute a valuable resource for this research and include policy-makers, government officials, researchers, advocates, worker-owners from industrial cooperatives, and civic activists. The interviews were recorded with prior informed consent and their content was transcribed for the use of quotes. No qualitative data analysis was performed on this data, considering the small sample of interviewees (Table 1).

The structure of the following Chapters is as follows: Chapter 2 provides an overview of the theoretical underpinnings of regional innovation ecosystems and literature reviews of the correlation between innovation and inequality and the economic democracy framework. A series of examples of unequal regional innovation ecosystems is also provided as a means to understand the predominant approaches. Chapter 3 provides an in-depth analysis of the Basque Country as a case study, emphasizing the trajectory of the Basque economy, its transition from an industrial economy to an innovation ecosystem and the defining
cultural traits that have influenced this process. It also analyzes Basque cooperativism through an exploration of the Mondragon Cooperatives and its influence on Basque Industrial Policy. Finally, chapter 4 takes the form of conclusion and recommendations based on my analysis.

**Table 1. Interviews**

<table>
<thead>
<tr>
<th>Name</th>
<th>Title – Organization</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ander Etxeberria</td>
<td><strong>Cooperative Dissemination</strong> – Mondragón Cooperative Corporation</td>
<td>Mondragón Cooperative Corporation (MCC) is a network of worker cooperatives, most of them industrial, based in the Basque Country with over 268 businesses and cooperatives, 73,635 employees and 15 technology centers.</td>
</tr>
<tr>
<td>Fernando Fernáñdez de Landa</td>
<td><strong>Americas Director</strong> – Mondragón Cooperative Corporation</td>
<td>Leading public higher education and research institution in the Basque Country with campuses in Vizcaya (3), Gipuzkoa (2) and Álava (1).</td>
</tr>
<tr>
<td>Jesus Valdaliso</td>
<td><strong>Professor, Head of Economics Department</strong> – University of the Basque Country</td>
<td>Basque Innovation Agency, public-private alliance, coordinating body for the Basque Science, Technology and Innovation Network.</td>
</tr>
<tr>
<td>Jose María Villate</td>
<td><strong>Adjunct Director</strong> – InnoBasque</td>
<td>Center for Research and Innovation focused on gastronomic sciences. Collaboration between Mondragón University and local innovation agencies.</td>
</tr>
<tr>
<td>Joxe Mari Aizaga</td>
<td><strong>General Manager</strong> – Basque Culinary Center</td>
<td>Bilbao Berrikuntza Factoría (BBF) is a collaboration between Mondragón University, Grupo INIT and the Municipality of Bilbao focused on developing the first urban ecosystem for innovation and entrepreneurship.</td>
</tr>
<tr>
<td>Luis Berasategi</td>
<td><strong>Coordinator</strong> – BBF (Bilbao Innovation Factory)</td>
<td>LKS consists of several cooperatives and more than 20 investee companies in professional services sector. Part of Mondragon Consulting &amp; Engineering Division.</td>
</tr>
<tr>
<td>Mikel Cepeda</td>
<td><strong>Town Planner, Sustainable cities</strong> – LKS</td>
<td>Technology Corporation set up in 2001 with the purpose of contributing to social and economic development by promoting technological innovation through development and dissemination of research in an international context.</td>
</tr>
<tr>
<td>Patricia Molina Costa</td>
<td><strong>Lead Researcher</strong> – Tecnalia</td>
<td>Collaboration between the Basque Country, Columbia, Seton Hall and George Mason Universities designed to undertake research, innovation and knowledge dissemination around sustainable human development.</td>
</tr>
<tr>
<td>Paul Rios</td>
<td><strong>Dissemination</strong> – Agirre Lehendakari Center for Social and Political Studies</td>
<td>IK4-Ikerlan is a knowledge transfer technology center and a cooperative member of the Mondragón Corporation. They are connected to the IK4 research alliance.</td>
</tr>
<tr>
<td>Juan Mari Goenaga</td>
<td><strong>Operations and Maintenance Technologies</strong> – IKERLAN</td>
<td>Basque business group with 8 cooperatives in architecture, greenhouses, construction, handling systems, and other. It is part of Mondragon’s Industrial Division.</td>
</tr>
<tr>
<td>Raul García</td>
<td><strong>President</strong> – ULMA Group</td>
<td>ZAWP stands for Zorrotzaurre Art Work in Progress, a project of Haceria Arteak, a non-profit association. This movement was created in 2008 to address the meanwhile state that is created while the urban development plan for the neighborhoods of Ribera de Deusto and Zorrotzaurre is finished.</td>
</tr>
</tbody>
</table>
Chapter 2. Background

Literature about the relationship between innovation and inequality, the geographical outcomes of these economic processes, and the evolution of governance and local power are described as useful frameworks to understand the emergence of regional innovation ecosystems. This chapter provides an overview of the existing frameworks and research that supports the premise that in mainstream economic development planning, there is a strong correlation between innovation and inequality which extends beyond mere income distributions or pay differentials that are defining features of skilled labor and knowledge-based economies. Moreover, this chapter presents economic democracy as an alternative for further advancing the innovation economy, given that the structures of traditional neoliberal economics have created barriers that impede future innovations.

2.1. Correlation between innovation and inequality.

Innovation has become a central argument in economic development planning around the world. In looking to create the appropriate conditions for innovative economies to thrive, local, regional, and national governments have turned to incentivizing the clustering of innovative activities to promote economic growth. However, at the same time inequality is growing at an unprecedented pace.

Significant research has been done on the inverse relationship between innovation and inequality. The works of Lazonick and Mazzucato (2013), Breau et al (2014), Tselios (2011) and Lee (2011) portray a correlation between standard metrics for innovation and entrepreneurship and increasing income and wage inequality. Their research provides evidence for a correlation between innovation-driven economic development planning and growing inequality.

Using a risk-reward analysis, Lazonick and Mazzucato explore the impact that technological change has on inequality. Their research points to the so-called “value extractors” – stakeholders who reap the benefits of innovation intensity based on them assuming the risk of investment – as the prime drivers behind the increase in inequality over the past 30 years (2013, p. 1117). Their approach differs from other analyses which point to skill-biased technological change (SBTC) as the driver behind the unequal innovation economy by claiming that inequality is also the result of organizational failures and the lack of government regulation in the industry. Their analysis of the differences between SBTC and the risk-reward nexus is useful in understanding the multiple interpretations behind the irrefutable relationship between innovation and inequality. First, they argue that markets are not the only link between technological change and income distribution, as the SBTC approach states. Furthermore, Lazonick and Mazzucato claim that the "collective,
cumulative, and uncertain character of the innovation process” (2013, p. 1119) demand for a more comprehensive analysis of how disproportionate the collection of benefits from risk taking in the innovation economy is.

By focusing their analysis on the organizational arrangements that produce inequality in the innovation economy, they allow for other factors to be considered, which constitutes a more comprehensive understanding of the political economy of innovation economies. Their invitation to analyze “who exercises strategic control” in the major organizations and what is the underlying logic of their investments is also consistent with the economic democracy framework that is used to study the case of the Basque Country.

Conversely, Breau et al (2014) investigate the link between innovation and earnings inequality in Canadian cities. Their research points to a positive relationship where higher levels of innovation are consistent with higher inequality in the distribution of earnings. The experience of Canadian cities is relevant given that according to the OECD, the country “experienced the second largest surge in inequality of all OECD Countries since the mid-1990’s” (Breau et al., 2014, p. 353). Their research also finds that cities with a higher share of employees working in manufacturing industries have less inequality than cities where patent-driven industrial activity is located. The positive relationship also stands for the two most common measurements for inequality, the Gini Coefficient and the Theil Index.

Similar to the widely documented correlation between innovation and inequality, there are also studies that show patterns of causation between the two processes. Using data from 102 European Regions between 1995 and 2000, Vassilis Tselios finds that the causal relationship varies according to place given that the “cumulativeness [of innovation] has also a spatial nature” (Tselios, 2011, p. 77). The increase in regional inequality, Tselios finds, favors innovation. This is partially explained due to a higher willingness to pay for new goods, which in turn provide incentives for introducing new products and services into the market. This model assumes also that a “wealthy class is a necessary condition to foster innovation activities” (2011, p. 96). These results are not problematic per se. Rather, their interpretation and the adoption of this narrative to incentivize growth through investing in innovation that will only create wealth for a small elite, is problematic.

Central to the argument behind the correlation between innovation and inequality is the issue of how wealth is created and what relationship do this process has with innovation, which is considered a fundamental element of capitalism (Lazonick & Mazzucato, 2013). This is supported by empirical research that shows that places with thriving innovation economies, measured by the number of patents, have higher unequal income distribution. (Breau et al., 2014). In a recent paper, Berkes and Gaetani (2018) conclude
that innovation intensity is responsible for 20% of the aggregate trend in income segregation in the United States between 1990 and 2010. According to Lee (2011), even though reasons behind the relationship between innovation and inequality vary according to place, they can be grouped in four mechanisms. First, the productivity effect derived from the insertion of technology into the workplace. The benefits of increased productivity have a direct impact in wage gains, which ultimately create disparities with lower wage employees. Second, there is evidence of greater dispersion of incomes due to innovation. Third, the diffusion of innovation leads to skill-based technological base. Fourth, there is a sorting effect where high-skilled labor will concentrate around specific areas that tend to their economic opportunities.

As to the relationship between innovation and income inequality, Aghion et al (2015) argue that there is a causal effect of innovation-led growth on the top 1% incomes, which is also consistent with the causality that Tselios finds. By looking into the income shares in U.S states and the correlation with the degree of innovativeness measured by number of patents per capita, they conclude that “innovativeness accounts on average for around 17% of the total increase in the top 1% income share between 1975 and 2010”. (Aghion et al., 2015, p. 3). Their research provides support to the argument of the unequal forms of wealth creation and extends to understanding the politics behind these trends. The positive effects of innovation on the top 1% income share are “dampened” in states with higher lobbying intensity, which indicates that institutional factors are critical in determining the outcome of innovation-driven economic growth.

There are also significant limitations in the empirical research that correlate innovation with inequality. On one hand, they rely mostly on specific proxies for innovation that are not able to capture innovation intensity in a comprehensive way, such as the number of patents applications. By using this metric as the indicator for innovation, the results are skewed towards measurements of market-driven technological innovations. Lee acknowledges this by stating that the results are "highly sensitive to the definition of innovation" (2011, p. 19). The emergence of phenomena such as the open source software and hardware development, new forms of intellectual property and the heterogeneity of the innovation, generate serious methodological doubts on these measurements. However, given that innovation intensity is itself a function of the market economy, and patenting is currently the mainstream indicator use in regional innovation ecosystem benchmarks, their research is practical. The concentration of patents in cities, and the extensive research documenting the effects of agglomeration and propinquity in the patenting process also support the use of it as a metric for innovation intensity.

On the other hand, the spatial forms of inequality, such as segregation, have also been linked to the concentration of innovation activities in the city. The spatial patterns of the “creative class,” a term coined by
Richard Florida in his book The Rise of the Creative Class (2002) and which refers to a new social class comprised by professionals mostly in science, technology, arts, media and culture, but which applies to any work where creativity is a key factor, are useful in understanding the impact that innovation-driven economies have in urban communities.

According to Florida and Mellander (2015) the creative class tends to be more segregated than either the working class or service class. Their analysis of US metropolitan regions indicates that economic segregation is more intensive in “high-tech, knowledge based metros” and that “there are reasons to believe that the clustering of innovation and skills are bound up with the growth in urban inequality and economic segregation” (2015, p. 9). Donegan and Lowe (2008) find that a 1% increase in a region’s creative class is consistent with an inequality index increase of 0.29. The economic segregation, according to Florida, is also larger in denser cities and metropolitan regions with a higher share of high-tech industries, college graduates and members of the creative class. (R. Florida, 2017). The location patterns of the most advantaged classes also drive such segregation.

Florida, Donegan and Lowe’s contribution is significant given that it expands beyond the traditional proxies for segregation which tend to rely on income data. They analyze income, education, and occupation to produce an Overall Economic Segregation Index. The positive association the authors find between economic segregation and race is consistent with the explicit structures of market economies that are built on racial and class differences, both defining features of modern capitalism in the United States. It is important to note that all top five cities in Florida and Mellander’s Overall Economic Segregation Index have launched place-based initiatives for clustering innovation intensity over the past 10 years.¹ In the face of deindustrialization and carrying the disproportionate burden of skill-biased technological change, cities located in the Rustbelt, including Milwaukee, Detroit, and Cleveland, have turned to strategies for promoting innovation intensity. However, the risk of widening economic segregation through these approaches is high.

The structures of class, race and gender are also highlighted by research on the innovation economy and its unequal outcomes. Leslie and Catungal (2012) study the implications of the creative class theory in terms of social justice and the reinforcement of gender and race inequalities, which are often overlooked by policymakers actively engaged in attracting mobile talent and capital. The assumption of mobility that underlies Florida’s creative class theory, according to Leslie and Catungal, belies research on gender and class inequalities in the cultural industries. The structural barriers for women and people of color to access

¹ According to the author’s research on Innovation Districts and other place-based and infrastructure driven projects for clustering innovation intensity. Examples include the Innovation District in Milwaukee’s Walker’s Point, CTNext in Hartford, CT, Philadelphia’s University-Center City Innovation District, Detroit’s Innovation District and Cleveland’s University Circle.
the ladders of opportunity that new sectors of the economy present not just persist but are also reinforced by the creative class theory. In analyzing the patterns of discrimination that have emerged in places transformed under the premise of luring the creative class, Leslie and Catungal find that there seems to be an increase in criminalization of racial difference in spaces that “are geared towards particular ethno-racial groups and not others” (2012, p. 119).

The competitive paradigm that emerged from economic geography analysis of firms’ agglomeration patterns has led to overtly accepting competition and incentives as a driver of economic growth. McCann (2007) refers to the scale of the city-region as the primary “sites for exchange, innovation, development and competition” (p.89) and discusses the political implications of the emergence of a new regionalism, fueled by the competition for clustering innovation intensity. By overlooking cities and regions as places where interactions other types of interactions beyond economic ones occur, McCann claims, the pursuit of “livability” becomes an endeavor with highly unequal results. Her critique of the concept of the creative class — which places livability and a specific set of values around the amenities and services that innovation intensity requires — is of significance to this research given that it introduces the importance of the new political agendas that emerge because of Florida’s highly disseminated ideas. Bolstered by the premises of economic competition, McCann assesses Florida’s concepts as narrowly-focused and superficial when dealing with the “questions of inequality” (McCann, 2007, p.190). Jamie Peck’s critique of Florida’s concept of the creative class goes further by saying that the “pervasive urban-development script” that Florida preaches is at the “dawn of a new kind of capitalism based on human creativity” (Peck, 2005, p. 740). After analyzing the relationship between innovation and inequality in Canadian cities, Breau et al. also coincide with the recurrent critique to Florida’s arguments by saying that “amenities-based theories unabashedly promoting creativity and innovation are ill-advised as a guiding principle for urban growth policy” (2014, p. 369).

Regarding the logic of competition between cities, which is a defining feature of market economies, Schragger (2016) asserts that treating cities and regions as “products that can be improved within the location services market” (p. 3) overestimates the social, cultural and political factors that are determinant in understanding the success of place-based approaches for innovation economies. Surprisingly, the competitive paradigm is also challenged by Florida in his latest book, The New Urban Crisis. What he calls the “winner-take-all urbanism” (2017, p. 14) has played a crucial role in reinforcing and reproducing inequality and socioeconomic advantages for an exclusive elite. The section on unequal regional innovation ecosystems below analyzes some of the findings in Florida’s work as well as the failure in generating economies where wealth is democratically created.
There is consensus that the geography of innovation is fundamental in understanding the economic outcomes of systems that incentivize the concentration of high-skill labor, new businesses creation and the creative class. The spatial dimension of this economic model is both a cause and a consequence of inequality, as the research from multiple regions across the world indicates. In order to identify enabling factors that have allowed the Basque Country to advance in positioning the region as a leading ecosystem for innovation, it is important to first analyze the models that focus on spatializing or territorializing innovation intensity and the political economy of their implementation.

2.2. Regional Innovation Ecosystems as the model that territorializes innovation

The concept of regional innovation systems (RIS) and, more recently, regional innovation ecosystem, is the result of converging core principles of systems theory and economic geography theories to explain location patterns and the benefits of agglomeration economies. The origins of this concept can be traced to systems theory, the influence of regional policy and practice in innovation systems and the industrial district theory (Cooke, 2008).

The notion of RIS, according to Cooke (2008) is also built upon the concept of networked regions and the industrial districts theory explored by Alfred Marshall – which led to the emergence of the so called Marshallian Districts. In his recollection of how the term originated in the early 80’s, Cooke highlights that the first studies to be conducted were from European regions such as Baden-Wurttenberg, Nord-Pas de Calais, and the Basque Country in Spain. His conclusions of the analysis of the Basque Country are of particular importance for this research:

"Here three key things were visible: first, how a deindustrialising region depended upon possessing intermediary agencies with innovation and industry expertise, independent of government (though part-funded by so-called generic project-funding disbursed by the Basque government) and of the then new and not significantly research active university sector. These would project Basque industry into a new future different from the disappeared heritage of steel-making and ship-building. Second, how systemic in terms of networking connectivity the whole and particularly some parts of the regional economy were, notably the Mondragon organization, amongst the most innovative networks observable anywhere at the time. Third, how networks could sometimes take the form of ‘industrial districts’ or innovative clusters which, although composed of micro-firms and small-to-medium ones, could nevertheless exert global reach." (Cooke, 2008, p. 397)
Some of the features identified by Cooke are analyzed with more depth in Chapter 3, including the levels of networking connectivity and the role of cooperative networks in decision-making and governance of the system.

The influence of regional economic development planning is more than salient in the emergence of the concept of RIS. The levels of fragmentation in European policy making, as well as the political and economic decentralization that is referenced by economic geographers such as Cooke, Becattini (2009) and Morgan (1998) are crucial in understanding the emergence of RIS as a concept and the territorialization of innovation through place-based approaches across Europe and the United States.

Industrial Districts (IDs) in Italy and the United Kingdom are constantly referenced as predecessors of RIS. According to Becattini, Bellandi and De Propis the concept of IDs became useful in understanding the "unusual regional paths of industrial takeoff in some Italian regions" (2009, xvii) and focused on understanding the proliferation of specialized SMEs in central and north-east Italy. This body of literature, as well as the empirical analysis of the economies of scale that where considered "unusual", led to the emergence of the term Marshallian Industrial Districts (MID). The most basic definition of the model is provided by Becattini et al:

An ideal-typical model of a local productive system, where a localized industry is embedded in a community of people. A local productive system has an economic and social identity shaped by an 'industrial atmosphere' [...] coinciding with a set of shared cognitive, moral and behavioral attitudes drawing on locally-dense cultural interactions, and which orientate technical, human and relational investments towards forms consistent with local accumulation" (Becattini et al., 2009. p. xviii)

The contribution of MIDs to the economic geography literature, and its praxis, is twofold. On one hand, it reinforces the set of values, identities and intangible assets that contribute to the proliferation of specialized economic activities in defined geography. On the other, it introduces the idea of local and regional specialization as a differentiating factor from previous approaches to regional economic development. The levels of dominance in specific industries, then, become a defining element of MIDs. This characteristic not only has survived the evolution of the term and its applications, but it continues to drive many of the policies that foster economic growth in regions such as the Basque Country. The RIS3 strategy for smart specialization that is currently being pushed by the European Union, and which will be discussed in Chapter 3, is proof of this.

The relationship between IDs and the economic model that they anchor is also part of Becattini et al's analysis. They show that the introduction of technology and the phenomena of globalization, two constitutive elements of capitalism today "have influenced relations within IDs" (2009, p. xxvii). Using
entrepreneurship as a proxy, the authors claim that capitalist entrepreneurs vary from “project entrepreneurs” in that they pursue different objectives. On one hand, capitalist entrepreneurs benefit from the agglomeration of firms in terms of increasing their return on investment and improving their productivity. On the other side, “project entrepreneurs” refers to members of the community that own human and relational capital which they leverage for higher economic and social returns. Whereas the types of capital used by the latter is less transferable, the capitalist entrepreneur is not anchored to territory and therefore is much more mobile. This is consistent with the notion of attracting capital and talent, two of the defining features behind innovation ecosystems today. Moreover, the type of environments that host project entrepreneurs, Becattini et al argue, tend to me “more sustainable over time thanks to adjustments against crises which would instead bring sudden delocalization and deindustrialization in contexts characterized by particles” (2009, p. xxviii). Finally, the authors claim that “lively Industrial Districts” are ideal contexts for project entrepreneurs.

Many of the embedded values of Industrial Districts didn’t translate into the RIS approach, particularly, its recognition of local intangible assets and the privileged place small and medium sized enterprises have in their analysis, as well as the confrontation with the limitations of capitalism to advance equitable growth. A strand of economic geographers such as AnnaLee Saxenian, Michael Storper, Enrico Moretti, contributed to the evolution of the term by exploring the economic analyses of firm agglomeration and the geography of jobs.

In her seminal analysis of the decline of Massachusetts’ Route 128 and the rise of Silicon Valley, Saxenian (2000) describes the main characteristics of local industrial systems and highlights the importance of networked firms in generating regional advantages. Her account of the drivers behind the agglomeration of networked independent firms alongside the Route 128 corridor in Metropolitan Boston is useful in understanding the level of influence that policy, government, and forms of entrepreneurial regional planning have in generating innovation ecosystems. The institutions that according to Saxenian capitalized on governmental investment in R+D, such as MIT in the case of Route 128 and Stanford in the case of Silicon Valley, were fundamental in anchoring innovation systems in metropolitan areas, particularly in postwar scenarios. Even though the government’s investment in research and development in sectors such as aeronautics, defense and manufacturing followed geopolitical objectives, the economic input of such incentives created networks of organizations that leveraged public and private resources to build capacities for competitiveness. From Saxenian’s research it can be inferred that the role that research institutions, and particularly the role of knowledge creation and dissemination, is fundamental in the new economic geography. This contribution is significant because it led to deepening the analysis on the role that knowledge creation in consolidating modern innovation ecosystems.
Nevertheless, Saxenian’s account of the rise of Silicon Valley and the decline in Massachusetts’ Route 128 does not include the level to which economic growth was equally distributed amongst different demographics of the impacts on labor markets. Her explanation of the drivers behind competitive advantage, however, do point towards characteristics of innovation ecosystems that can be leveraged to create shared wealth. First, the levels of openness that Silicon Valley promoted contrasted directly with the secrecy and tight corporate competition regulations in Massachusetts. The lesson that can be drawn from her analysis is that leading regions in particular industries must continue to adapt to the changing conditions in industry and in demographics as well. Promoting learning through existing social networks is, according to Saxenian, a fundamental driver for gaining competitive advantage.

Networks constitute another fundamental feature of a regional innovation ecosystem. Giuliani (2011) explores the influence of networks as governance structures and the advancement of the study of innovation networks at the regional scale. In her analysis, she affirms that networks provide fundamental advantages for innovation processes given that they promote interaction and foster trust and reciprocity. As a collective process, innovation tends to happen across multiple networks, which is not accounted for in traditional economic theory, according to Giuliani. The positioning of networks of innovation as a theoretical underpinning of modern regional systems also allows to understand different roles and the formal and informal interactions that produce innovation. Moreover, the concept of networks of innovation also allows to disaggregate the types of actors that interact in the network. As it has been shown, depending on the context and the different commitments that actors such as the public sector, industry and research institutions have, their roles are not static. The rise of entrepreneurial states and the influence that industry leaders have in policymaking are just two examples of how roles are less divided as in traditional economic development planning.

In addition, networks have a higher significance at the regional scale, according to Giuliani, given that this scale comes as a better proxy for understanding market relationships, social ties, and policymaking. On one hand, economic interdependencies are much more salient at the regional scale and proximity between actors becomes more complex when elevated to a regional scale. In turn, this allows for better understanding of the social factors that are affected by the clustering of innovation in specific geographies. Finally, the role of path-dependency and continuity in policy has been widely referenced as an enabler for economic growth in the innovation economy. This is more likely to happen at the regional scale, when multiple stakeholders are engaged in a collective project which trespasses traditional administrative boundaries.
The concept of agglomeration, which is central in understanding the formation of industrial districts, clusters, and innovation ecosystems, perceives most of its value from the increased density of jobs and the economic impact (i.e. spillovers) that they create. As engines for economic growth, jobs have been at the center of economic geography for decades. They are used as a proxy to understand the impact of emerging technology (skill-biased technological change), as a factor for measuring productivity, and as the predominant argument for developing capacities through education and training.

However, the way in which jobs are used to analyze and promote innovation-driven approaches to regional economic development is problematic. On one hand, and drawing from the works of economic geographers such as Moretti (2012), a positivist approach that focuses on quantifying the economic impact of high-skilled jobs and its impact on regional economies has become the prime argument for economic development practitioners. The unprecedented rise in income inequality that is augmented and reinforced by innovation, is partially explained by the divergence in job growth that Moretti summarizes as follows:

A handful of cities with the “right” industries and a solid base of human capital keep attracting good employers and offering high wages, while those at the other extreme, cities with the “wrong” industries and limited human capital base, are stuck with dead-end jobs, and low average wages. (Moretti, 2012, p. 3-4)

This divide, which is explained also by the multiplier effect that attracting talent has, is supported by Moretti’s most controversial argument: “My research shows that for each new high-tech job in a city, five additional jobs are ultimately created outside of the high-tech sector in that city, both in skilled occupations [...] and in unskilled ones. (2012, p. 13). Despite the fact that these impacts are real and quantifiable, they portray a correlation that spurious. Placing job creation as the cause, not the effect of, economic growth also diverts the analysis from doing more analyses on how wealth is created and who is reaping the benefits of the emergent innovation economy. The divergence that Moretti portrays is also in line with significant research on the causes of increasing inequality that have been recently popularized by Thomas Piketty and Emmanuel Saez’ research on income distribution and inequality.

The role of innovation in creating inequality is also addressed by Moretti. He claims that innovation has “the power to reshape the economic fates of entire communities, as well as their cultures, urban form, local amenities, and political attitudes” (2012, p. 77) and that in this process “winners tend to become stronger and stronger, as innovative firms and innovative workers keep clustering there, while losers tend to lose further ground” (p. 79). Nevertheless, there is no reference to how wealth is created through this innovation processes or how are decision-making processes exclusive or inclusive in the new economy.
On the other hand, the transition from RIS to regional innovation ecosystems is also subject to critique. According to Oh, Phillips, Park & Lee (2016), "[the transition] implies a faulty analogy to natural ecosystems, and is therefore a poor basis for the needed multi-disciplinary research and policies addressing emerging concepts of innovation" (p. 2). After critically reviewing the theoretical underpinning of the term and recent literature referencing the ecosystem approach, they conclude that there are six distinguishing features that can be accounted for: First, adding the eco prefix is a way of reinforcing the systemic nature of the concept, which positions the connections amongst actors as the defining systemic feature. Second, the increasing levels of digitalization and technology-driven economic growth seem to be more explicit in the ecosystem literature. Third, the emergence of open innovation marks a departure from traditional systems which emphasize on more formal and structured collaboration between stakeholders. The authors then refer to the "mimetic quality" of the ecosystem term, which constitutes a communicative advantage as it is appealing for news and media. The emphasis on specialization, differentiating roles or "niches" is also salient in contrast to previous approaches. Finally, a greater importance of market forces, particularly the role of government in determining, regulating and acting on them, is highlighted across innovation ecosystem trends. The following chart summarizes Oh et al.’s assessment of the term, its benefits and limitations.

<table>
<thead>
<tr>
<th>Benefits</th>
<th>Limitations</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Motivated successful projects</td>
<td>- The analogy to natural ecosystems is flawed</td>
</tr>
<tr>
<td>- Encouraged helpful 'systems thinking'</td>
<td>- Business-only ecosystem contradicts open innovation philosophy</td>
</tr>
<tr>
<td>- Provided a forum for sharpening some ideas of technopolis and innovation</td>
<td>- It offers no ready metrics</td>
</tr>
<tr>
<td>- Resulted in good press coverage of high-tech regional economic development</td>
<td>- Suggestions that innovation ecosystems exhibit special kinds of complex system behavior have yet to be substantiated</td>
</tr>
<tr>
<td>- May help explain geographical shifts in activity, e.g. from London to Munich; from Silicon Valley to Shanghai.</td>
<td>- The term is used in so many ways that no clear definition seems possible</td>
</tr>
<tr>
<td>- Shows willingness to learn from biological systems</td>
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</tbody>
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2.3. The Entrepreneurial State

Throughout the evolution of the concept of Industrial Districts to Innovation Ecosystems, the role of governments in both incentivizing the agglomeration of firms, entrepreneurs and the concentration of skilled labor, and facilitating the legal frameworks that do so, is consistent. The concept of the "entrepreneurial state" (Eisinger, 1988) stands out as a way of understanding the positive narrative and framework from which planning is done around these topics. Eisinger claims that "subnational economic development policy
has undergone a recent shift from an almost exclusive reliance on supply-side location incentives to stimulate investment to an approach that increasingly emphasizes demand factors in the market as a guide to the design or invention of policy” (1988). Encouraging the clustering of entrepreneurs through the design of fiscal and public policy incentives for agglomerating innovation, all critical components of the innovation ecosystems narrative, fall within this categorization of demand factors in the market that Eisinger points out. His schematization of supply and demand incentives is useful for understanding both the potential and the risks of increased entrepreneurship in the public sector:

Table 3. Contrasts between Traditional Supply-Side Policy and Demand-Side Entrepreneurial Policy. From Eisinger (1988).

<table>
<thead>
<tr>
<th>Supply Side</th>
<th>Demand Side</th>
</tr>
</thead>
<tbody>
<tr>
<td>Growth is promoted by lowering production-factor costs through government subsidies of capital and land and through low taxes</td>
<td>Growth is promoted by discovering, expanding, developing, or creating new markets for local goods and services</td>
</tr>
<tr>
<td>Main focus is on established, potentially mobile capital</td>
<td>Main focus is on new capital</td>
</tr>
<tr>
<td>Strategies focus on stimulating capital relocation or capital retention</td>
<td>Strategies focus on new business formation and small business expansion</td>
</tr>
<tr>
<td>Development involves competition with other jurisdictions for the same investment.</td>
<td>Development proceeds by nurturing indigenous resources</td>
</tr>
<tr>
<td>Government supports low-risk undertakings.</td>
<td>Government becomes involved in high-risk enterprises and activities</td>
</tr>
<tr>
<td>Any employer is a suitable target for development assistance</td>
<td>Development assistance is offered selectively according to strategic criteria.</td>
</tr>
<tr>
<td>Government’s role is to follow and support private-sector decisions about where to invest, what businesses will be profitable, and what products will sell.</td>
<td>Government’s role is to identify investment opportunities that the private sector may either have overlooked or be reluctant to pursue, including opportunities in new markets, new products, and new industries.</td>
</tr>
</tbody>
</table>

The shift from supply to demand side is also contingent on breaking neoclassical economic paradigms of government’s involvements in market beyond regulation. By incentivizing the location of firms in particular geographies, cities and regions have entered the competitive paradigm that is mentioned above.

Although many of the forces behind the clustering of firms and entrepreneurs are within the domain of the private sector, Mazzucatto’s analysis of the role of government and it’s positioning as an Entrepreneurial State regarding innovation economies provides evidence for an increased responsibility for the public sector. Her argument revolves around the idea that government has in fact, played a crucial role in
innovation and that its role in the process of creating wealth creates an imperative for it to continue being a protagonist rather than a passive regulator.

Contrary to orthodox economic analysis that sees innovation as solely driven by “exogeneous technological opportunities,” Mazzucato advocates for recognizing the involvement of government in the whole innovation process. Starting from the support of basic research through grants and other forms of financial support, Mazzucato claims, government has actively shaped the direction of technology development and innovation. As an example, she references the emergence of computing, information technologies and breakthroughs in communications is rooted at governmental programs, mostly driven by national security concerns in the Cold War (Mazzucato, 2016). Using the iPhone as a proxy, Mazzucato claims that the technologies that enabled this device were all funded by the public sector, “including the internet, GPS, touchscreen display and the voice-activated Siri personal assistant” (2016, p.124).

The traditional narrative of public involvement in funding basic and applied research turns to the provision of public goods as the motivation behind government’s involvement. However, examples from other sectors such as biotechnology and renewable energy prove that the reach of the government’s involvement is more salient than orthodox approaches would admit. According to Marcia Angell, quoted by Mazzucato, three quarters of “the most innovative drugs on the market owe their funding to the publicly funded National Institutes of Health (NIH)” (Mazzucato, 2016, p. 124).

The fact that local production systems have evolved to innovation systems, implies that the relationships and interactions between actors, public and private, is fundamental in driving innovation performance. The complexity of innovation itself is another argument that Mazzucato presents to support the claim for a new conceptual framework behind the drivers of innovation and economic growth by saying that “Grasping the collective, uncertain, tacit and persistent nature of innovation is crucial to asking the right policy questions on how to achieve smart, innovation-led growth” (2016, p. 122).

By departing from orthodox analyses that limit governmental response to ‘fixing’ markets, Mazzucato advocates for understanding markets as “the outcomes of the interactions between economic actors” (2016, p. 121). This is fundamental as a more malleable definition of market economies constitutes a first step towards building economic democracy through innovation ecosystems, which is one of the motivations behind this thesis.

Understanding markets as products of intentional design is a requirement for building economic democracy. Following a logic of design, markets are the result of structures that are put in place by those with enough power to decide (Marshall, 2012). These structures vary and are both tangible and intangible.
On one hand, the most visible structures that determine the shape of markets have to do with the physical manifestation of cities. The political and legal arrangements that rule markets are also artifacts of design. Culture and identity play a more subversive role, yet they inform the structures that sustain designed economies. According to Marshall (2012), however, property is the most fundamental feature of market economies. This is fundamental for building economic democracy as this framework shifts from generating income to creating shared wealth, where property and decision making in the economy is more distributed amongst stakeholders. In redifining the roles of government, civic society and the private sector in the process of designing regional market economies, the shift towards a more active, entrepreneurial government is seen both as a threat and as an opportunity to advance economic democracy. The emergence of the concept of the municipal corporation is a proof of how government has reoriented the way it participates in designing market economies.

However, the consequences of this particular type of governmental entrepreneurialism and the emergence of a new attitude of urban governance (Harvey, 1989) are threefold. On one hand, it has revived the concept of boosterism which characterized urban and regional planning in the U.S at the end of the 20th century. This form of speculative planning, which is also tied to the ability to design market economies through public interventions, reinforced the structural features of capitalism that have widened inequality. For David Harvey, the “shift from urban managerialism to some kind of entrepreneurialism remains a persistent and recurrent theme since the 1970s (1989, p. 5).

On the other hand, it has created a strong narrative about the potential for public-private partnerships to advance economic growth, transferring some of the responsibility that the public sector has to stakeholders that are not held accountable in ways the public sector is. This has also affected the risk-reward nexus that Lazonick and Mazzucato explore. In Harvey’s words: “This has meant that the public sector assumes the risk and the private sector takes the benefits” (1989, p. 7).

Finally, Harvey expresses his concern around the fact that entrepreneurialism has focused on the political economy of place and not territory, which according to him encompasses the “economic projects (housing, education, etc.) that are designed to improve conditions of living or working within a particular jurisdiction” (1989, p. 7). In other words, the scope of government entrepreneurialism has favored place-specific projects that overshadow additional problems in other scales and focused on “investment and economic development with the speculative construction of place rather than amelioration of conditions within a particular territory [...]” (p. 8). As will be shown later, Harvey’s analysis of entrepreneurialism is proven right by projects such as the Boston Seaport District.
Nevertheless, entrepreneurialism in the public sector is enabled by a process of decentralization which follows logics of political and economic self-determination that are both enablers for economic democracy. Whereas the consequences of increased decentralization have mostly widened inequality gaps and generate unequal patterns of development, the capacity to self-determine policies by itself is more than desirable. As the government has become increasingly active in innovation ecosystems, there has been a parallel process of decentralization and building of local power that has enabled cities and regions with tools for economic development that were unseen before.

In his most recent book, *City Power*, Richard Schragger delves into the sources of power that cities have and their “actual capacity to govern,” in contradiction to “conventional economic wisdom” which asserts that their capacity is limited today. (2016, p.5). His research is fundamental in understanding the political economy behind the policies that focus on territorializing innovation through innovation ecosystems. Given that political and economic institutions that exist today have led cities to compete for mobile capital and talent, Schragger argues that decentralization and fiscal autonomy, are the key drivers of economic growth. The capacity to self-determine fiscal policy at a subnational scale is an enabler for economic democracy to the extent that it allows for a broader decision-making process in economic development planning and it enables the experimentation of more progressive planning at smaller scales.

The increased levels of decentralization not just coincide with the emergence of an entrepreneurial approach that cities and regional governments have adopted recently, it also complements these efforts in a way creates additional agency for cities and regions. This is relevant in contexts where national governments have proven to be ineffective in dealing with local and regional challenges, and even more in contexts of economic crises, which despite affecting nations, the immediate effects are seen, experienced and dealt with in the local and regional scale. The importance of the regional scale, as expressed by Benner and Pastor, resides in the fact that “is a relevant unit for an internationalized economy- the scale at which economies of scale can be achieved to lower production costs while business networks can be maximized to facilitate innovation” (2016, p. 9).

However, there is also a relationship between increased decentralization and the emergence of patterns and trajectories of unequal development. Whereas in the 19th century economies where characterized by a convergent trend, after 1980 sub-regional differences, and particularly at the city level, drove an unprecedented divergence that is widely documented. The patterns of this divergence, however are place-specific and have a strong relationship to the consolidation of high-skilled jobs and innovation economies in particular geographies (Storper, Kemeny, Makarem, & Osman, 2015). The case of the divergent patterns in Los Angeles and San Francisco in California, is used by Storper et al to assess the
conditions that allowed otherwise wealthy city-regions to enter the “New Economy” (2015, p. 2) in very different manners.

Their argument begins by contradicting the traditional narrative of divergent economic growth, which is a significant contribution to the body of knowledge about unequal innovation economies by itself.

In typical lore about these two cities, Los Angeles is said to have fallen on hard times because of the loss of much of its aerospace sector after the end of the Cold War, a flood of low-skilled immigrants from Latin America, and governmental failure. San Francisco won the information age lottery, becoming the world center of that technological revolution and hosting highly skilled immigrants. But none of these factors explain why these two cities diverged from similar starting points, and we will demonstrate in this book that the divergent process of change was principally due to the different ways the two economies reshaped their social and economic networks, the practices of their firms, and the overall ecology of organizations in their economies. (Storper et al. 2015, p. 3)

The reasons behind San Francisco's surge and Los Angeles' fall, according to Storper et al, are more complex than the 'usual suspects' of immigration, housing costs, and cost of living differences (2015, p. 194). The role of education, for example, is often overestimated. Their research found that differences in average levels of education and skills only account for half the average wage and income difference. Factors affecting the location of firms, often referred to as causes of divergent economic development, is also overestimated, according to Storper et al. Their analysis finds that organizational change was fundamental in generating and consolidating specialization, which supported by high-jobs sorting effects and snowball effects in specialized regions, managed to position San Francisco and the Bay Area as a "thriving" innovation ecosystem. Finally, and consistent with Saxenian and Giuliani, the value of relational networks that "potentiate entrepreneurship and new organizational practices" (Storper et al. 2015, p. 201) is often underestimated in economic geography analysis.

Decentralization is analyzed here as a form of institutionalized political and economic self-determination, which is an enabler for advancing economic democracy. The mechanisms by which local and regional governments achieve decentralization, as well as the institutions that are designed and implemented due to larger this process, are also fundamental pieces of this case study.

The following section analyses briefly the emergence of three different regional innovation ecosystems, which vary in scale and in their current state, but that are illustrative of the ways in which entrepreneurial governments have stimulated innovation ecosystems and the different outcomes they've generated.
2.4. Examples of unequal regional innovation ecosystems

This section analyzes the cases of the Seaport District in Boston, the Research Triangle in North Carolina, and the Seattle Innovation Ecosystem, all in the United States, with a particular focus on the levels of inequality that the development of regional clusters of technology and innovation have generated. Acknowledging that these are particular examples and do not constitute a unique model for regional economic development, they provide insights into how the political economy and the factors influencing regional policymaking and decision-making, shape the more unequal or less unequal outcomes.

2.4.1. The Boston Seaport District

The example of the Seaport District in Boston is not just illustrative about how the structures of capitalism exclude based on gender, race, and class, but it indicates how embedded these are in the deployment of place-based economic development strategies to anchor the innovation economy. Initially labeled as Boston’s Innovation District, the Seaport District was considered by many as the last underutilized extension of land suitable for development in the Greater Boston area. The project, conceived as an Innovation District that would connect to the larger innovation ecosystem anchored by research institutions such as MIT and Harvard and thriving biotechnology and pharmaceutical industries, developed itself as a real estate endeavor focused on maximizing returns on investment. The objective of creating a “hub for knowledge and creative jobs” became former Mayor Thomas Menino’s flagship urban renewal and economic development project which was initially commissioned to the Boston Redevelopment Authority.

The strategy to lure knowledge-based companies to the area consisted of a combination of fiscal incentives and programming to support entrepreneurs and technology workers. With the support of local real estate developers, the program was launched in 2010. Early adopters such as MassChallenge, a local successful accelerator, became ambassadors for the project, responding to incentives such as free leases and privileged access to programs and networks within the larger innovation ecosystem. The development model followed traditional renewal schemes, where 15% of the units would be affordable according to local legislation. In this case, the percentage allocated for micro-units - i.e small apartments designed to attract young entrepreneurs and technology workers - was the same than for permanently affordable units. A combination of restoration of former industrial buildings - a consistent trend amongst place-based initiatives for the

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agglomeration of innovation intensity – and the development of luxury apartment buildings and office spaces in vacant parking lots soon led to a boom in real estate prices. Over ten years, the number of square feet for office and housing multiplied, dramatically changing the landscape in the South End Waterfront (See Figure 1).

![Figure 1. Seaport Boulevard in 2007 (Above) and 2017 (Below). From Google Maps. Retrieved on 4/3/2018.](image_url)

The proliferation of amenities in the Seaport District (Figure 2) is consistent with the narrative of luring the creative class by creating *milieus* that attract specific types of businesses, workers and entrepreneurs. The success of this initiative, when measured by the economic activity generated by construction and the clustering of firms is uncontested.

![Figure 2. Amenities in the Seaport District.](image_url)

The City of Boston, using Tax Increment Financing (TIF), jumpstarted the transformation by incentivizing real estate developers, particularly Joseph Fallon (Davis, 2015) (The Intersector Project, 2015) to develop masterplans that required approval from the Boston Redevelopment Agency. The use of TIF as financing tools for urban renewal was not an institutional innovation by any means. According to Schragger, the relationship between TIF and urban resurgence is problematic given that “the entire rationale […] is that future economic growth can be harnessed to pay for infrastructure improvements today” (2016, p. 212). In the case of the Boston Seaport District, the assumptions behind the mobility of capital and talent, as well as the forces of attraction that a thriving ecosystem of knowledge-based firms and elite research institutions have, were enough to validate the investment of large amounts of public funds to jumpstart a real estate project that given the scarcity of land in the city, had excellent financial prospects regardless of the public support. The other metrics used to describe the success of the Boston Seaport District include the share of tech jobs in overall job growth (30%) and the emergence of new companies in education and nonprofits (11%). Consistent with Florida’s approach, more than one fifth of the newly created jobs are in creative industries (Davis, 2015).

The systematic offering of incentives and designing market interventions that would favor the location of specific industries in Boston is consistent with the concept of the entrepreneurial state. In 2016, General Electric announced that it would relocate its corporate headquarters to Boston. Behind this move, a sophisticated combination of incentives, tax breaks and grants were set in motion to lure the multinational firm towards the Innovation District. The following chart compiles the set of incentives that were fundamental in convincing GE to relocate.
Incentives Offered to General Electric

$25 million street, transit, bikeway, and water transportation service.

$1 million custom workforce training grants.

$120 million infrastructure improvements.

Logan Airport parking for jet and helicopter.

Hanscom Field parking for six jets.

Local transportation improvements.

$5 million innovation center.

$5 million innovation and energy efficiency incentives.

Renewable energy and energy efficiency incentives.

Boston Redevelopment Authority signage.

Streamlined permitting and ombudsman.

Executive staff attention.

Boston Home Centers concierge relocation services.

Temporary office space.

$100 million Northern Avenue Bridge.

$25 million local property tax relief.


Notes: Dashed lines indicate financing/coordinating agency; solid lines indicate administrative agency. The helipad promised by the city and state proved controversial, and GE has indicated it is not necessary.


Four different government agencies coordinated the offer to GE, confirming the competitive paradigm that creates a marketplace for cities in terms of luring anchors for economic development. This controversial offering contrasts with research that subsidies "do not ultimately alter the location decisions of firms and that cities do not get back what they put in, either in the short or long term" (Schragger, 2016, p. 207).

On the other hand, there is strong evidence that confirms that the growth and development brought upon by the Boston Seaport District has in fact, widened the racial and class divides in the city. According to an investigation conducted by the Spotlight Team at the Boston Globe, only three residential mortgages had been issued to black buyers by lenders in the Seaport District by the end of 2017 and only 3% of the neighborhood residents are black, in a city where almost 25% of the population is African American. (The
Boston Globe & Spotlight Team, 2017). In addition, recent analyses have found that investments of over $18 billion dollars from the local and state governments in the Seaport District (including grants, tax exemptions and credits, direct investments, transit) have worsened the affordability crisis in Boston. Over the past decade, the Globe’s research found, only 9% of the new housing stock in Seaport were "designated for people with moderate incomes". This is of vital importance in a city where African American households have an average median net worth of only $8 compared to $247,500 in white families’ households. (Federal Reserve Bank of Boston, 2015).

The Seaport District is just an expression of the economic model that leverages propinquity and clustering to create wealth for a specific sector of society. Whereas in this case real estate developers, in close conjunction with permissive local governments, decided the implementation of an economic development strategy, there are other cases where inequality is not as blatant which provide significant insights into how place-based strategies for innovation are drivers of inequality. The protagonist role of speculative real estate development in this case exemplifies the power imbalances that are consistent with decentralization. Despite broad criticism from local advocacy groups, the model continued to prioritize incentives and investments for luring specific companies, as well as a flexibility with affordability covenants.

2.4.2. North Carolina’s Research Triangle

For decades, North Carolina’s Research Triangle, anchored by institutions and firms in Raleigh and Durham, has been referenced as a successful regional innovation ecosystem. At the core of its success, many claim, is the consolidation of a model for collaboration between public sector, private firms and academia, which has been labeled the Triple Helix Model. (Benner and Pastor, 2016).

As a high-tech cluster, the region experienced rapid growth starting in the 1980s, tripling the number of jobs and increasing average income by 50% (Benner and Pastor, 2016, p. 170). The presence of prestigious research institutions such as Duke University, North Carolina State University and the University of North Carolina at Chapel Hill, has significantly contributed to sustained economic growth, particularly in middle-class jobs.

The Triple Helix Model, which is also characterized as a "strategic information sharing and collaboration model" (Benner and Pastor, 2016, p. 172) is used to describe the interactions between stakeholders within the Research Triangle Park (RTP), a defined area of 6,900 acres between the Durham and Wake counties in North Carolina. According to the Research Triangle Regional Partnership, the area is home to more than 250 businesses to which 3,500 patents have been awarded. As the "largest research
park in North America" more than 50% of the regional population holds a college degree and more than 8,500 students from Tier 1 Research Universities graduate every year.  

Beyond the positive spillovers that research institutions have, the value of this regional innovation ecosystem resides in its capacity to advance more equitable economies while strengthening their competitive advantage in high-tech. According to Benner and Pastor, “a commitment to racial equity, which is rooted in the region’s effort to overcome the legacy of slavery and to combat racial segregation in the 1960s and 1970s.” (2016, p. 171-172) is one of the main drivers behind this particular condition. Their analysis concludes that the processes of constructing a regional identity, based on norms of collaboration across sectors, as well as a consistency in narratives across different spectrums of the ecosystem, have created less unequal outcomes.

The connection to the structures of race and class in this region of the United States is recognized as a distinguishing feature of this innovation ecosystem (Benner and Pastor, 2016). The preexistence of strong networks of community organizations, advocates and historic connections to abolitionist movements have also influenced the outcome in terms of equity. Moreover, the power harnessed by local advocates was historically leveraged to desegregate schools, which became an enabler for the nascent innovation ecosystem.

Following logics consistent with the entrepreneurial state, the region was conceived as a prototype for cross-sector collaboration in the late 1950s. The role of former North Carolina Governor Luther Hodges stands out as crucial in establishing the stepping stones of a high-tech cluster (Benner and Pastor, 2016). Since then, the dynamic relationship between academia, the public sector and private firms has consolidated a model that has been documented and exported to countries such as Colombia (Herrera-Marquez, 2015) Brazil (Aranha, 2014) Spain (Merchan-Hernández & Leal-Rodríguez, 2016) India (D’Costa & World Bank, 2006) South Korea and Taiwan (Shapiro, 2011), amongst others.

According to the Triple Helix Research Group (2010) the model is anchored by universities’ capacity to innovate and their entrepreneurial approach to partnership building with the government. In turn, this is enabled by increased collaboration between the sectors which creates virtuous circles that shape policy in a favorable way to all actors involved. Finally, the expansion of traditional roles for all actors involved has led to new institutional arrangements and broader decision-making scenarios.

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The institutionalization of collaboration that regional actors have advanced in North Carolina has also strengthened third-parties, which usually take the form of non-governmental organization such as the Research Triangle Regional Partnership – RTRP (Benner and Pastor, 2016). This organization, which oversees the institutional alignment between partners in the region, has been instrumental in expanding the impacts beyond the spillovers from research institutions and high-tech firms.

The levels of association that the Research Triangle has leveraged have also created mechanisms for sharing knowledge in ways that position them as an “open source society” (Benner and Pastor, 2016, p. 176). This can be seen in the multiple initiatives that collect and publicly disseminate data on the economic wellbeing of the region, including collaborations between local governments, chambers of commerce and non-profit organizations.

Regardless of many documented benefits however, the region is still embedded in a highly unequal national economy, where innovation correlates with inequality by many metrics. Yet, the construction of a regional identity that uplifts communities of color and is committed to equity remains a valuable lesson from North Carolina. The process of designing institutional arrangements that leverage a collective identity of collaboration is something that contributed significantly to more equitable economies.

2.4.3. Seattle

Seattle is home to some of the largest companies in technology, aerospace, and advanced manufacturing. The density of firms has also led to a concentration of a talented and skilled workforce. According to Benner and Pastor (2016), one out of four jobs in the region is in STEM (science, technology, engineering, and mathematics) occupations. Moreover, the region has a history of strong worker cooperative movements that go back to the early 20th century. The role of Industrial Workers of the World, amongst others, have “instilled a deep sense of collaboration for the common good” (Schwantes, as cited by Benner and Pastor, 2016). In the case of Seattle’s metropolitan region, the preexistence of strong networks of cooperation and alternative ownership models was fundamental in producing less unequal outcomes that other innovation ecosystems in the US.

Embedded in a historically progressive political environment, the Innovation Ecosystem in the Seattle region is also rooted in a tradition of collaborative decision making that has been coined as the “Seattle Process” (Benner and Pastor, 2016). This distinct approach to decision making places consensus, deliberation, and inclusion at the core of the strategy for convening otherwise separate actors. While some suggest that this is due in part to the cultural heritage from Scancinavian immigrants to the region, others
think that collaboration between multiracial coalitions in the civil rights decades placed the foundations for the Seattle Process (Benner and Pastor, 2016). The role of religious institutions and individual leadership in the mid 20th century was crucial for creating a strong social fabric that translated some of those values to firms and businesses in the region. The advocacy for institutionalizing principles of equity and social justice in government institutions, is according to Benner and Pastor, a legacy that provides solid ground for dealing with complex challenges that demographic shifts have created in the United States.

Over the past 30 years, Seattle has seen an increase in jobs at a higher rate than the US West and has been able to have more income equality (Benner and Pastor, 2016, during broad macroeconomic inequality. The magnitude and speed of growing inequality has been dampened by the confluence of more distributed ownership in the economy, progressive politics, and a strong network of civic advocates. Even though the challenges for Seattle as a thriving innovation ecosystem remain, the lessons about leveraging strong civic values to create less unequal innovation economies are salient.

2.5. Economic democracy and shared-wealth creation

Analyzing the relationship between regional innovation ecosystems and the conditions under which they could advance economic democracy requires defining the theoretical and practical underpinnings of this concept and the evolution of the term in political economy literature.

Even though there is a renewed interest in economic democracy recently amongst planner and economic development practitioners, this concept has evolved over the years and has influenced economic thinking since the 1950s with references that can be traced back to the works of C.H Douglas in the early 20th century (Menser, 2018). The literature on economic democracy ranges from socialist/libertarian approaches, to cooperative economic development and political economy analyses of capitalism and the formulation of viable alternatives. There is a strong consensus around the need for advancing workplace democracy as a central piece of an economic democracy. This traditional approach, which highlights the importance of democratic control of firms and economic institutions, seems to be a crosscutting theme in the economic democracy literature through the years. It can be seen in the works of Archer (1995), Ellerman (1992), Dahl (1985), Schumpeter (2006), D’Art (1992), and Iuviene (2010). Many of the authors who reflect on the opportunities and challenges of cooperative development focus on studying and documenting the experience of the Mondragon Cooperative Corporation (MCC), a vast network of worker-owned cooperatives in the Basque Country of Spain which is explained in detail in Chapter 3. One could say that this topic, workplace democracy, has been at the core of the studies regarding economic democracy and is, by far, the field further developed by literature.
Recently, a more encompassing definition and approach to Economic Democracy can be seen in the works of Malleson (2013 and 2014), Johasinava and Wolf (2012), Jonsson and Lounsbury (2017), Schweikart (2012) Panayotakis (2010) and Menser (2018). Their work extrapolates many of the principles of cooperative development contained in traditional economic democracy literature to a more systemic approach that expands to the institutional and political shifts needed to advance progressive economic agendas.

On one hand, Malleson (2013) and Johasinava and Wolf (2012) present economic democracy as a model that critiques the accountability of current economic powers and introduces it as an alternative for transferring such power to the people and democratically-controlled firms. Under this approach, economic decision making is more democratic and increases accountability.

As to the necessary political shifts that could support a more democratic economy, Archer (1995), Schweickart (2012), and Panayotakis (2010) advocate for political structures and power dynamics deeply tied to socialism. While Archer situates economic democracy as a goal pursued by the socialist movement to challenge advanced capitalism and claims this is a form of “feasible socialism” (1995), Schweikart claims that his model of ED “embodies the great ethical ideas of the democratic socialist tradition” (2002). Panayotakis goes one step beyond claiming that economic democracy is socialism redefined (2010).

On the other hand, Menser presents a more comprehensive approach to democratizing the economy by constructing an alternative that is moral, just and profitable (2018, p. 106). His proposal of extrapolating values of participatory democracy into the economy is the result of studying cooperatives model such as the one of the Mondragón Corporation. His definition of economic democracy is as follows.

"Economic democracy is the idea that the principles of popular sovereignty and the values of freedom, solidarity, and equality should be applied to the economic system in a way that empowers all stakeholders from workers and owners to residents and customers. EconD [sic] practices this by promoting inclusive and meaningful participation in terms of financing, ownership, management, regulation, waste disposal, and/or consumption. Pluralistic in its origins and history econD [sic] projects vary in their relationships to states, markets, communities and individuals” (Menser, 2018, p. 107)

As it can be observed, Menser’s approach extends to understanding levels of individual and collective agency in the economy. As a category that includes “all economic projects or business forms that promote collective determination”, his approach to economic democracy also hinges on self-determination, a value that as will be analyzed later is fundamental in achieving equity in innovation economies.
One of the cornerstones of the economic democracy framework is to leverage the social and political nature of markets to redefine and advance democratic decision-making within this economy. Malleson (2014), Schweickart (2012, 2002) and Johasinava and Wolf (2012) highlight the importance of the market as an arena for advancing economic democracy. This approach on market economies and the social and economic arrangements made by people and institutions within it provides an opportunity to connect place-based economic development strategies for innovation and economic democracy.

As to the decision-making power in the economy, the work of Hahnel and Wright (2016) is instrumental in understanding the potential of broadening decision making. They consider that the basic principle of ED is to “have decision making power in proportion to the degree one is affected by a decision.” (p. 12) Malleson expands this definition and claims that ED starts with “having equal formal decision-making power in their core economic associations: workplaces, finance and investment institutions” (2014). Maheshvarananda and Friedman (2012) write from a different approach, one that builds on a spiritual tradition of empowerment to say that economic democracy “stands for empowerment of people to make economic decisions that directly shape their lives and communities.” Carnoy and Shearer (1980) consider economic democracy to be the essence of a transformation in production and governance in the economy where decision making is transferred “from the few to the many.”

Finally, while most of these authors place western capitalist economies, with a particular interest in the United States, as the target of their critique, many draw from European experiences such as Mondragon and Scandinavian countries to develop their thinking about economic democracy. Both regions have similar inequality indicators (OECD, 2011). Tilton (1979) quotes Ernst Wilgooss’ – who he considers to be among the ideological founders of Swedish social democracy – take on economic democracy, which is built around the idea of a “more egalitarian distribution of power and influence within the economic realm.” Overall, the democratization of decision making power seems to be crosscutting across different traditions of economic democracy. While some analyze how this extends to firms and cooperatives, others focus on equating economic democracy to political democracy using the one person/one vote analogy to say either one worker/one vote or one dollar/one vote.

On the other hand, the works of political economists such as Roberto Mangabeira Unger (2009) are fundamental in understanding the limitations and contradictions that neoliberalism and traditional capitalist market economies pose in regards to innovation and technological advancement. His call for democratizing markets by “innovating in the arrangements that define it, rather than merely to regulate it in its present form or to compensate for its inequalities through after-the-fact transfers” (p. 20) is directly related to the core objective of this thesis. Whereas redistribution has positioned itself as the most
convenient alternative for appeasing the outcomes of unequal economic development, the alternative proposed by Unger and others is in fact, focused on rearranging the economic relationships to create shared wealth. In turn, this is usually conceived as a driver for innovation and collaboration, a “progressive alternative resulting from the diffusion of a new set of innovation-friendly cooperative practices” (p. 52).

The advent of information technology and the fast-paced development of the industry over the past two decades have radically transformed capitalism. At the same time, the more productive parts of an innovation economy rely on intense collaboration and degrees of openness that are not consistent with the economic model. Paul Mason’s Postcapitalism (2017) explores this contradictions and analyses alternatives moving forward. Even though the most vital elements of neoliberalism, according to Mason and Unger, i.e. the global financial market and the individualized worker and consumer, are enabled by technology and innovation, there are severe incompatibilities between an information or innovation-driven economy and a market economy. The market economy, they argue, relies on strict property ownership rules and structures that limit collaboration and cooperation. Furthermore, Unger adds that these two elements that are limited by market economies are necessary to the practice of innovation (2009, p. 53) and are key in unlocking the transformative potential of technology and science (2009, p. 58).

Unger’s call for democratizing markets is supported in four conditions that will advance innovation-friendly cooperation in society. First, the avoidance of inequality without committing to rigid equalities of circumstance, which is consistent with addressing the inequality that innovation and technological progress has created. Second, the empowerment of people through reforming education and the economy in a way that they open to “experimental reshaping.” Third, the promotion of a culture of experimentation in society, which coincides with the narrative of entrepreneurship which is at the core of the place-based economic development strategies for innovation that are subject to this analysis. Finally, Unger pushes us to “loosen the dependence of change upon calamity” (p.18) so we can focus on iteratively redesigning institutions and discourses.

Altogether, these approaches for economic democracy are built around the concept that markets are in fact, a result of intentional design, such as Marshall (2012) claims. The main takeaway from both the literature and practice of economic democracy is that as such malleable artifacts, they can be used as platforms for building more equitable economies, particularly when it comes to innovation and inequality, which have proven the shortfalls of previous market designs.

In their call for enabling ethical economies, Julie Graham and Katherine Gibson propose an approach that values economic diversity, deconstructs the hegemony of capitalism and the capitalocentric analysis of
markets and alternatives such as cooperatives and seeks to emancipate and re-politicize the economy (Gibson-Graham, 2003). Their invitation to broadening the scope used to assess, critique and value alternatives to neoliberalism, is useful to the extent that it allows for reinstating the importance of “making and managing the economy” by placing intentional decision making that make our economy at the center of the analysis (2003, p. 126-7). Their vision of the economy is aligned to the economic democracy framework:

A vision of the economy as diverse, multiply identified and complexly overdetermined and economic power as diffuse, segmented, and in motion opens up the possibility for local non-capitalist practices to be the focus for an invigorated economic politics. (Gibson-Graham, 2003, p. 127)

Finally, the value of using economic democracy as a framework for building shared wealth through innovation ecosystem resides in that it allows for both critiquing the structures that drive inequality while it promotes a more active approach on building alternatives. These alternatives are based on values such as collaboration, cooperation and self-determination. Such values are not averse to the innovation economy given that technological advancement and innovation itself have been fundamentally the result of collaborative endeavors and self-determination in traditional industries. The growth of innovation economies has also pushed traditional capitalism to its limits. It has exposed its contradictions in terms of ownership and highlighted the undemocratic values that it reinforces. Therefore, by increasing the levels of participation and ownership of and within economic institutions, not only innovation will continue to drive economic growth, but the results will be far less undemocratic and unequal as they have been before.
Chapter 3. Case Study: The Basque Country

3.1. The New Basque Paradox

The Basque Country is one of 19 autonomous regions in Spain. Comprised by the provinces of Álava, Bizkaia and Gipuzkoa, it is home to over 2 million people, making it the 7th largest in Spain. Despite accounting for only 4.7% of the national population in 2011, the region was responsible for between 6.1-6.3% of the national gross domestic product. (OECD, 2011). According to the Spanish National Institute of Statistics and the Basque Institute of Statistics, the GDP per capita is 36% higher than the European Union 27 and 32% higher than Spain’s average. (Del Castillo, Paton, & Barroeta, 2017).

In addition, the OECD Regional Well-being indicator places the Basque country 1st in income across 19 regions in Spain, achieves a nearly perfect score in healthcare access, 9.8 (out of 10) in safety and 9.8 in community, which considers the perceived social support network at 96.4%. Finally, according to the European Anti-Poverty Network, only 9% of Basques are at risk of poverty, while the national statistic is 2.5 times that. Severe poverty remains below 3% in the region and the median income for the Basque Country is 34% larger than the national average. Moreover, according to EUSTAT, the Basque Country ranks in the top fifteen countries with highest Human Development Index, with a score of 0.916. Spain occupies the 27th place with a score of 0.884 (Eustat, 2017).

In recent years, the Basque Country has been referenced as one of the European Union’s most thriving regional innovation ecosystems and is referenced as a successful regional transformation (Morgan, 2016) with growing wealth levels (GDP per capita) and a strongly networked society with regional identity. (OECD, 2011). This situates the region above OECD’s regional averages for GDP per capita and more in PPP than in Europe. Being able to position itself as a regional success story while improving overall quality of life, the overall distribution of wealth, comes as a new paradox, which directly confronts the proven correlation between innovation and inequality.

In addition, the Basque Country is home to a vast network of cooperative firms, many of them part of the Mondragon Cooperative Corporation (MCC). Rooted in a traditional concepts of cooperation, “neighborhood” work such as auzolan, and nationalist politics, the Basque cooperative ecosystem has scaled to become a global reference point (Bakaikoa & Albizu, 2011).

The story of this economic miracle in the region is one of resiliency, self-determination and cross-sector coordination and collaboration. By considering the historic determinants of the Basque regional economy, I find that some of the defining traits of Basque identity and culture have translated into their
territorial governance models and their decision-making spaces. In turn, this has acted as an accelerator for innovation processes within firms with a strong commitment to the region. This chapter explores the drivers behind the more equitable outcomes of a regional economy that has been characterized as a thriving regional innovation ecosystem by looking into multiple facets of their stakeholders including firms, government, and civic actors.

Understanding the enabling conditions that help to explain the hopeful contradictions in the Basque Country serves as a means to identify ways to achieve growth while maximizing the social impact beyond income generation and positive spillovers, which is the predominant approach in Regional Innovation Ecosystems. Integrating culture, identity and the levels of social capital created by the interaction across sectors in the analysis hopefully broadens the scope of how regional innovation ecosystems are assessed and how they are replicated.

Over the past 30 years, the Basque Country has experienced significant transformations in its regional economy, as well as determinant demographic shifts that have influenced the region’s capacity to innovate and withstand large scale economic crises. The following sections provide an overview of the historical processes that determined the outcome of the regional economy and the foundational cultural traits and conditions that enabled the advancement of economic democracy in the region.

### 3.2. Historical overview

To understand the current state of the Basque economy and the conditions that have allowed for innovation to become a key driver for economic development, it is imperative to analyze the main historic underpinnings and milestones in the formation of the country. The history of the Basque Country precedes that of modern Spain and crosses transnational boundaries. Euskal Herria, the term for Basque Country in its native Euskara language, is comprised of seven provinces, three of which are within the limits of today’s France. The remaining four provinces, namely Álava, Gipuzkoa, Bizkaia and Navarra, constitute the Spanish Basque Country. Within this region, only Álava, Gipuzkoa and Bizkaia are currently under the Basque Autonomous Community in Spain, which has significant implications in terms of economic development and governance. The remaining province of Navarra is currently a standalone Autonomous Community in Spain (See Figure 4).
The transnational nature of the Basque Country is one of its defining features, which can be traced back to the 10th century. According to Watson (2003), the seven provinces mentioned above “enjoyed a loose form of unity within the Kingdom of Navarra”. The geographical location of the Basque Country, which was characterized by natural boundaries to the northeast (Pyrenees) and to the northwest (Bay of Biscay), also highlighted significant sub-regional divisions.

The unity that medieval kingdoms provided came to an end as the predominant Kingdom of Castile took over the consolidation of modern Spain (Watson, 2003). In turn, this led to further differentiation within Basque provinces, and ultimately to the subdivision of the Country into two different regions, at first: the formation of modern nations divided formalized the natural border between the French Basques and the Spanish ones. As the Spanish nation defined its territories, the Basque Country was divided into two different autonomous regions in the late 19th and early 20th century.

The outcomes of the French Revolution impacted the establishment of the Foral Regime in Spain. The changes in private and public rights, as well as the conception of property, deeply transformed the Basque social and economic landscape. The major transformations in the political regimes and institutions for territorial control in the Basque Country had major repercussions in the regional economy. The following section outlines the evolution of Basque Economy over time, emphasizing the political and social changes that accompanied regional economic shifts. The regional economy is therefore used as a proxy to understand the construction of the Basque Country overall.
3.3. The Basque Economy over time.

Up until the late 18th century, Basque economy was mostly an agriculture-based one. Under the figure of “extended-family farmsteads” (Watson, 2003), most of the rural communities focused on self-sufficient farming and were vulnerable to any alteration that could undermine subsistence and production (Gómez Uranga, 2003). The Ancient Regime also allowed for exploitation of natural resources from the abundant forests and mountains in the country. This led to an increase in the mining of charcoal and iron, which continued to be a defining feature of the Basque Economy for over two centuries.

The steel industry, anchored by forges in Bizkaia, became the driver for economic growth in the region well into the 20th century. Despite crises related to the inability of competing technologically in foreign industrialization in the Basque country leveraged the capacities of steelworks and shipbuilding, creating a dynamic commercial bourgeoisie markets (Gómez Uranga, 2003, p. 11).

The following subsections analyze the trajectory of Basque economy across time and assesses the critical social and cultural values that influenced decision making during economic transitions in the region. Starting with an analysis of the Basque industrial tradition, this section then moves to understanding the importance of autarky and self-sufficiency in the Basque economy. The so-called Golden Age of Basque Industry is then analyzed to understand the process of institutional design and political self-determination that characterized the last decades of the 20th century and the past twenty years.

3.3.1. Industrial tradition

The late 19th century saw the establishment of an industrial-based economy in the Basque Country. The evolution of traditional forges in Bizkaia towards largescale skilled steelworks coincided with the emergence of a thriving shipbuilding sector, which in turn demanded the emergence of complementary industries such as specialized finance, rail, and infrastructure development. During the last half of the 19th century, three large regional banks [Banco de Bilbao in 1856, Banco de San Sebastián in 1862 and Banco de Comercio in 1891] were established to support the nascent industrial revolution (Gómez Uranga, 2003). The province of Bizkaia concentrated most of the industrial activities and banking, while Gipuzkoa had a more diversified economy and decentralized industry. In Navarra and Álava, agriculture continued to be the main driver of their sub regional economies. The early positioning of Bizkaia, and Bilbao in particular, as the epicenter of industrialization and finance, and the industrial diversity in Gipuzkoa, set a trend that continues today. As it will be addressed later, these sub regional differences in industrialization are key in understanding both the economic outcomes in terms of inequality and the concentration of innovation activities in specific geographical regions.
The period of industrial modernization that started in the late 19th century in the southern region of the Basque Country heavily relied on exploitation of mines at a large scale (Gómez Uranga, 2003). This industry, despite being affected by conflict in Europe, was crucial in the reconstruction that followed. This industrial vocation of the Basque Country is also highlighted by interviewees in the region both as a driver for economic growth and as a characteristic that helps produce less unequal outcomes.

The Basque Country has had a special feature and is that we are an industrial community. Since the late 1800s and early 1900s, we leveraged the influence of the British industrial revolution and used our mining resources. That’s why our business fabric is mostly industrial. [...] We then developed a new form of making industry, with our first cooperatives.

Fernando Fernández de Landa – Mondragón Corporation

There is an industrial fabric where most of the firms are SMEs. This has an impact in salaries and social mobility. In Gipuzkoa, where most cooperatives are, and SMEs have a larger share, is where this industrial fabric has created a dynamic business environment.

Jesus Valdaliso – University of the Basque Country

By 2010, and compared to other European countries, the Basque Country is only surpassed by the Czech Republic and Slovakia in terms of Gross Value Added by Industry (this is calculated by the GDP minus the indirect taxes). Whereas in countries such as Germany industry is responsible for 26% of the GVA, the Basque Country reaches 29.4% (Zubiri, 2010).

With the emergence of heavy industry, a new social class emerged in the Basque Country. The Basque bourgeoisie, who “expanded and consolidated its areas of influence through a network of mines, steels, ships and finance” (Gómez Uranga, 2003, p. 23), was fundamental in negotiating the first economic agreement between the three provinces and the Spanish Government in the late 19th century. This first agreement, which abolished the Foral regime, represented fiscal autonomy and lasted until the establishment of Franco’s dictatorship in 1936 (Zubiri, 2010).

The Basque fiscal autonomy, which was ruled by the Economic Agreements before Franco’s dictatorship and consisted in the payment of a fix quota for the expenditures made in favor of the residents of the Basque Country. The economic agreement, a negotiated pact between the regional government and the national Spanish government, allows the Autonomous Community of the Basque Country (CAPV) to collect taxes and compensate the Spanish state by paying a quota, which includes a solidarity contribution to other regions in Spain (Zubiri, 2010).
Interruption of the agreement during the dictatorship (1939-1975) meant Basques' fiscal autonomy was undermined and were left to the centralized economic planning. This was worsened by public statements of provinces in the Basque Country being ‘traitor provinces’ and therefore where not allocated funding beyond the essential transfers demanded by law. In order to understand the significance of the agreements in the overall economic development outcomes in the region, it is imperative to understand the Basque political organization. The following structure is depicted by Ignacio Zubiri Ora, a leading scholar in Basque fiscal policy in the University of the Basque Country:

*Figure 5. Political Organization of the Basque Country. From Zubiri (2010)*

The levels of political and fiscal autonomy and decentralization are the result of historical processes of regional self-determination and sub regional identities that predate the configuration of modern Spain. The influence of a strong regional identity in the political negotiations between the Basque and the Spanish state is undeniable. Stronger levels of decentralization also allow for sub regional differences and unequal development patterns. With a high concentration of industry in the province of Gipuzkoa, and Bilbao positioning itself as the financial and higher education cluster for the region, Alava concentrates political power as the center for Basque Government. There is however, a strong sense of solidarity amongst regions. The Basque Fiscal policy established that at moments where Territorial Governments are not able to meet their fiscal responsibilities or face economic hardship, the other two Territorial Governments will increase their contributions to the Basque national government for redistribution. It is important to note that despite
having three different levels of government for expenditures, only Foral Deputations are in charge of collecting taxes (Zubiri, 2010).

The end of the Economic Agreement in the Basque Country in 1939 resulted in the adoption of autarkic economic development strategies. Without the agreement, and with political and institutional neglect from the Dictatorship, the region faced significant crises that dampened the region’s capacity to sustain the levels of wellbeing that were notable before. However, at the same time, this allowed for the reinforcement of nationalist politics and strengthened social cohesion in the region, which ultimately instilled values of self-determination and economic democracy in the region’s political and economic structures.

3.3.2. Self-sufficiency, autarky, and growth

Autarky has been a defining feature of Basque economy since the Ancient Regime. Isolated by geographic features that limited interaction with the rest of Spain and Europe, Basque production was initially oriented towards internal consumption. This trend, which was reversed due to the emergence of the shipbuilding and skilled ironworks, led to the configuration of dynamic internal markets which in turn prevented highly unequal distributions of wealth.

However, even before the industrial revolution, the advancement of trade in the 16th century consolidated industries that catered to foreign markets. The Basque Country became one of Europe’s leading iron producing regions (Porter, Ketels, & Valdaliso, 2013), which led to an expansion of the Basque economy. The Industrial Revolution augmented this condition and, enabled by significant investments in “transportation and communications infrastructure” (Porter et al., 2013, p. 3) led to the emergence of industrial hubs in provinces such as Gipuzkoa and Bizkaia. During this time, maintaining policy and fiscal autonomy enabled the consolidation of a strong regional economy.

The Spanish Civil War (1936-1939) and the Second World War severely impacted the Basque Regional economy. During the dictatorship that followed the Civil War, the shortage of goods and services and the lack of adaptability of the Basque industrial sector led to a widespread stagnation. In addition, the region had been labeled by the dictatorship as a traitor region, which meant fewer investments from the central government. The fascist regime also intervened in the labor market by controlling prices and wages, which ultimately affected worker’s standard of living. In turn, this affected productivity and led to a “greater exploitation of the workforce” (Gómez Uranga, 2003).

However, the combination of post-civil war government neglect, a strong nationalistic identity and politics, and the emergence of anchor cooperative firms in the Basque Country provided a suitable platform
for developing endogenous growth in the region. Beginning in the 1960’s, the Basque Country constructed an inward-development strategy focused on strengthening its regional capacities to meet demands at the same scale. By strengthening key industries such as household appliances and, in general manufacture, the region achieved levels of specialization and gained competitive advantage in these sectors. The efforts from the private sector, and those from cooperative firms, were matched by a political commitment to endogenous development which in turn was driven by the combination of regional cultural values and economic necessity (Morgan, 2016). National economic downturns in the post-dictatorship period also weakened the region’s capacity to establish consistent and profitable trade systems with the European Union. This forced the Basque government to “rely on its own indigenous efforts”. (Cooke & Morgan, 1998)

During this period, the Basque economy grew significantly and saw the emergence of cooperative networks in industry. Between 1955 and 1975, incomes in Spain and the Basque Country saw an annual increase of 5.4% and productivity in the Basque Country grew at an annual rate of 3.6% during those same twenty years (Alberdi Larizgoitia, 2010). With a dynamic and expanding internal market, Basque industry became stronger as it supplied the Spanish market with goods that were mostly produced in Basque cooperative industrial firms.

This process of consolidation for Basque industry was supported by a new type of government that prototyped industrial policies. In addition, by the late 1970’s Spain was entering a novel phase of democratization, following Franco’s death in 1975. During this transition period, Basque industrialists were fundamental in reshaping economic policies and Basque politics focused on renegotiating the Economic Agreements that were suspended during the dictatorship.

The reinstatement of the Agreements was a crucial win for Basque politics in the process of redesigning the constitution in 1978. Due to a strong posture from Basque Nationalist politicians, and with the support of industrial guilds and cooperative networks, Basques were able to restore the “traditional tax and expenditures autonomy of the Historical Territories” (Zubiri, 2010, p. 38). By restoring the political model of Fueros, the Constitution established a precedent about the fiscal and political autonomy of autonomous community in Spain. Only the Basque Country was granted full fiscal autonomy during this negotiation process, which speaks to the tradition of self-determination and power that Basques had. The adjusted model of territorial governance and taxation, according to Zubiri, follows two main principles:

“Fiscal Autonomy. The main taxes belong to the CAPV which levies, manages, administers, settles, inspects, collects and, subject to some harmonization principles, regulates those taxes. The taxes that belong to the CAPV are called agreed taxes. Following the historical tradition, the tax power was transferred, not to the Government of the Basque Country (the Basque Government) but to the Governments of the three HTs (the Foral Deputations).
This means that in the Basque Country there are three fiscal systems and three independent tax authorities. In principle, each Territory can have different taxes". (Zubiri, 2010, p. 38)

“Payment of a Quota. The CAPV pays the Central Government (also called the State) a certain amount of money (the Quota) as compensation for the expenditures made by the State on behalf of the residents in the Basque Country, and as a contribution to the solidarity among regions. Even though taxes are assigned to the Territories, the Quota is determined globally for the Basque Country. Each territory pays a share of the Quota which depends on its relative GDP and tax collection efficiency”. (Zubiri, 2010, p. 39)

These two principles are the institutionalization of a historical trajectory that is rooted in cultural values and a well-developed capacity to self-determine and govern. The Constitution, which acknowledged this by granting the Basque Country autonomy through the Statute of Autonomy, also stipulated the fiscal responsibilities of the Basque Country and defined the parameters that regulate interactions with the Spanish state. (Zubiri, 2010). The fact that decentralization and autonomy are intrinsically related to the capacity to determine economic policy-making, proves that in the Basque Country the economy is the result of intentional design rooted in cultural values and is in fact, a collective project.

The initial duration of the renewed Economic Agreement was set to twenty years and it was signed in 1981, in a moment where the Spanish economy was facing one of the most complex economic crises in its history. This is significant given that the crisis had not affected the Basque Country in the same way that it affected other provinces and regions of Spain and the new constitutional monarchy system which was starting to be implemented, did not have enough power and capacity to enforce an alternative system. The Basque government saw this as an opportunity to translate the collective sense of self-determination into institutional arrangements that provided political stability to the region.

The 1980 Crisis had a profound effect on the Basque economy. Unemployment grew from 3% in 1975 to more than 13% by 1980 and GDP per capia fell from 99% of Western European levels in 1975 to 75% in 1979 (Porter et al., 2013, p. 5). In addition, some estimate that the intensified violence in these years from ETA, the largest separatist and nationalist guerrilla, might have depressed the regional GDP by up to 10% during the 1980s. (Abadie and Gardeazabal,2003, as quoted by Porter et al., 2013). With industry responsible for more than 50% of the GDP, the loss of nearly 50,000 led to a record-high unemployment rate in industry of 17% by 1981. (Alberdi Larizgoitia, 2010).
3.3.3. Industrial reconversion

However, despite the economic hardship, 1979 is the year in which the Spanish regional decentralization came into force. This undoubtedly augmented the regional governments’ capacity to take on economic challenges by designing and implementing revitalization plans (Del Castillo et al., 2017). Decentralization acted as a fundamental enabler for the Basque country as it empowered the region by allowing them to establish their own taxation system, which is built on a tradition of fiscal autonomy that predates the configuration of modern Spain. In the post-dictatorship transition, regions in Spain negotiated the overall conditions for decentralization. In the case of the Basque Country, the negotiation process favored the Basques as “the combination of the demands based on a strong sense of Basque national identity and the historical legacy of formalism forced the state to acknowledge the distinctiveness of the Southern Basque Country” (Gómez Uranga, 2003, p. 63). While wealthier regions such as Navarra and Cataluña have limited fiscal autonomy, the Basque Country has leveraged its autonomy to consolidate a strong regional economy.

By the late 1970s, Spain was facing a massive economic crisis that affected all regions and had repercussions in Basque industry. This crisis, which almost led to the collapse of Basque industry (Royo, 2009) also coincided with the need for new institutional arrangements.

The following era (1981-1990) is characterized as one of recovery (Alberdi Larizgoitia, 2010) or reindustrialization (Del Castillo et al., 2017). Even when the Basque crisis seemed to have more depth than the national one, it became an opportunity to rethink industrial policies and the institutional frameworks that could help the regional economy recover. The newly formed Basque government focused its priorities around regaining people’s trust, preparing the country for integration with the European Union and conducting a restructuring of its industrial sector (Ibarretxe Markuartu, 2012).

The reconversion and restructuring of Basque Industry was contingent on the development of strong public-private collaborations. According to Juan José Ibarretxe, former Basque Lehendakari (President) from 1999 – 2009, this consisted in a series of new “micro economic orientations to rejuvenate existing capacities through the introduction of new knowledge and new technology” (Ibarretxe Markuartu, 2012, p. 12). Amongst the series of arrangements and tools that were designed by the Basque government, the establishment: the creation of the Society for Industrial Promotion and Reconversion (SPRI) stands out as a crucial enabler for cross-sector collaboration and coordination. This institution provided support to Basque industrialists in “promoting and assessing takeovers, mergers and the acquisition of new technology” (Ibarretxe Markuartu, 2012, p. 12)
The industrial competitiveness paradigm shaped the reconversion process. In turn, this allowed for industrial firms, including cooperatives, to be able to compete with other European firms as Spain and the Basque Country transitioned from an autarkic model to integrating to the commercial structures of the European Union. According to Ibarretxe, “this phase laid the foundations for developing a competitive and highly educated society” (2012, p. 12). The following page provides a schematic of the evolution of economic development planning in the Basque Country according to Del Castillo et al (2017).
**STAGE**

<table>
<thead>
<tr>
<th><strong>Smart specialization on sustainable innovations (since 2010)</strong></th>
<th><strong>CONTENTS</strong></th>
<th><strong>FOSTERING CONDITIONS</strong></th>
<th><strong>How did it contribute to sustainable innovations emergence?</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>- Sustainability</td>
<td>- Quadruple helix</td>
<td>Specific support from policy to sustainable emerging business models arising from entrepreneurial discovery processes</td>
</tr>
<tr>
<td></td>
<td>- Globalization</td>
<td>- Entrepreneurial discovery process</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Specialized diversity</td>
<td>- Technological hybridization</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- New business niches (social and environmental)</td>
<td>- Sustainability included in competitiveness</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Broad policy support</td>
<td></td>
</tr>
<tr>
<td><strong>Knowledge and innovation society (2000-2010)</strong></td>
<td>- Knowledge society</td>
<td>- Triple helix</td>
<td>Specific support to innovation culture from an open innovation model and considering other forms of innovation such as social</td>
</tr>
<tr>
<td></td>
<td>- Broad innovation and sensibilization</td>
<td>- Social dimension included in competitiveness</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Innovation culture and sensibilization</td>
<td></td>
</tr>
<tr>
<td><strong>Competitiveness approach (1990-2000)</strong></td>
<td>- Networks and cooperation</td>
<td>- Clusters and intermediate agents</td>
<td>Specific support to cooperation (clusters) and the strengthening of regional innovation system (technology suppliers)</td>
</tr>
<tr>
<td></td>
<td>- Technology-driven innovation</td>
<td>- Basque Innovation System (RVCTI)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Technology support</td>
<td></td>
</tr>
<tr>
<td><strong>Reindustrialization and modernization approach (1980-1990)</strong></td>
<td>- Facing crisis</td>
<td>- Reindustrialization policy</td>
<td>Specific support to reindustrialization and modernization of the obsolete industrial fabric (technology bases needed)</td>
</tr>
<tr>
<td></td>
<td>- Facing industrial obsolescence</td>
<td>- Modernization policy</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Modernization</td>
<td>- SPRI Agency</td>
<td></td>
</tr>
</tbody>
</table>

**1980**

**MODERNIZATION FROM OBsolescence**

**1990**

**TECHNOLOGY BASE ACQUISITION AND COOPERATION**

**2000**

**OPEN INNOVATION BASE TO COMBINE DIFFERENT TECHNOLOGIES**

**2010**

**SUSTAINABLE INNOVATION EMERGENCE AND COMMERICALIZATION**
During the industrial reconversion process, the fostering conditions identified by Del Castillo et al. refer to the Reindustrialization and modernization policies and the emergence of the SPRI agency. These are all the result of deep collaboration between the Basque Government and the associations of industrial firms. Supporting firms' capacity to compete by investing in their technologies is evidence of a "push" type of approach, which focuses on improving the offer, rather than stimulating increased demands. This push, which is acknowledged in the Basque 2020 Science, Technology and Innovation Plan (See figure 7) was materialized through the establishment of Technology Centers. Their functions revolved around build the capacities need for Basque industry to compete.


The fact that the Industrial Reconversion process is referenced as the first stage of the Basque Science, Technology and Innovation policy indicates that these two are not just parallel processes, but mutually dependent and intertwined ones. Science, technology, and innovation have been thought as critical...
elements for the advancement of industry, which has contributed to producing less unequal outcomes in the economy.

The involvement of the Basque government in the early stages of the industrial reconversion process also generated what some refer to as a “private sector dependence on the government with regard to strategic decision-making” (Ibarretxe Markuartu, 2012, p. 13). However, the levels of intervention in Basque industrial policy were also the result of leaders from industry going into politics. The first Lehendakari of the Basque Government, after the Statute of Autonomy, Carlos Garaikoetxea had previously presided the Navarra Chamber of Commerce and Industry, and many of his Consejeros, were experienced industrialists. The second Lehendakari who was reelected once, Jose Antonio Ardanza, had previously been mayor in Mondragón, the home of the largest cooperative ecosystem in the Basque Country and a leading reference for shared wealth creation. His Vice-Lehendakari, Javier García Egotxeaga, had previously led initiatives in the iron and steel industry. The Third Legislature (1987-1991) was characterized by a novel form of bipartisan coalitions. Up to this year, the Basque Nationalist Party (PNV) had led the industrial reconversion process and there were no representatives of the Basque Socialist Party (PSE). Even with this transition to bipartisanship, the Basque Government continued to be led by industrialists. During this period, “Basque officials became actively involved in the day-to-day management of failing companies” (Porter et al., 2013, p. 6) and many politicians and officials were “directly recruited from the traditional industries” (Morgan, 2016, p. 1545).

Despite following patterns consistent with the Entrepreneurial State framework, national and regional governments faced the reconversion process with tools that augmented their capacity to restructure the main sectors in their economy. The Economic Agreement, which enabled them to design a more equitable tax structure, also required them to compensate the Spanish state for the expenses incurred by them for services such as national security and transportation, amongst others. In this way, the Agreement allowed them to prototype innovative strategies to support industries, but it also required them to have a solid tax base that could contribute to the regional finances. The new faculties that came with political and fiscal autonomy also required a vibrant economy whose output was enough for their new taxation system to work.

The Basque Industrial Reconversion also coincided with the consolidation of neoliberalism, spearheaded by the policies that Ronald Reagan and Margaret Thatcher disseminated. According to Morgan (2016), the Basque industrial development strategy “flew in the face of all of its ideological fads” which were centered around the decline of manufacture, the substitution of industry by the service economy and the non-interference of governments through privatization and deregulation. In this sense, the Basque
reconversion was also a political statement, consistent with a tradition of political self-determination that was consistently translated into economic decision making.

Following the initial phases of institutional redesign and policymaking in the early 1980s, the Basque Government moved to adopting place-based strategies for fostering collaborative research and development centers. Referenced in the previous figure as Capacity Building TTCC, these technology centers were created as a network that would convene industry, academia, and government around joint-research projects. The Basque Network of Technology Centers was initially comprised by five centers, distributed amongst the Historical Territories, or Provinces. In 1985, the Zamudio Technology Park, became the first in its kind in Spain to operate (Porter et al., 2013).

Moreover, the Basque Technology Centers also operated as the nodes of a knowledge transfer system, which according to Morgan “rapidly developed a technology transfer capacity that aimed to cater to the needs of regional firms in the throes of incremental innovation and industrial upgrading” (2016, p. 1546). By focusing on the technological upgrading of existing industries, R+D and innovation activities were mostly sponsored by public-private partnerships (Etxabe & Valdaliso, 2016). Despite sub-regional variations and differences, the Basque Government decided to implement Technology Centers across all three historical territories.

The heavy-handed approach that the Basque Government took was fundamental in achieving sustained growth in the 80s. The process of reconversion also bolstered the Basque education system, focusing on building the capacities that industry needed for it to be able to compete with other leading European regions. Entry to the European Union in 1986 marked a critical milestone for the reconversion process. On one hand, economic integration demanded for further specialization and capacity to compete against other leading industrial regions in Europe. Responding to these challenges, SPRI launched a series of programs including Centers for Enterprise and Innovation, a government-owned venture capital firm (SGECR) and designed sectoral plans for integration with European markets. (Porter et al., 2013).

Industrialization patterns in the Basque Country had created pockets of excellence and advanced specialization in areas such as machine tools, domestic appliances and automotive (Morgan, 2016). Responding to these emerging patterns, the government saw the creation of cluster associations in the early 1990s as a logical step to continue the knowledge transfer and cooperation between firms, government, and academia. Del Castillo et al.'s conceptualization of the evolution of policies in the Basque Country (See figure 6) considers that this face reinforced the competitive paradigm and had as enabling conditions the emergence of cluster associations and the consolidation of intermediary agents in the RVCTI.
Moving towards an intermediary and facilitator role was also the result of a shift in economic development policies for the Basque Government. Reforms to the Economic Agreement in 1990 led to a reorganization towards advancing social wellbeing through investing in healthcare, social services, infrastructure and public works (Ibarretxe Markuartu, 2012). This intentional linkage between industrial and social policies was also seen as the consolidation of a “comprehensive welfare network that was to become essential in order to achieve a supportive and prosperous society; the bedrock of the Basque’s competitive advantage” (Ibarretxe Markuartu, 2012, p.13). By positioning itself as an intermediary, the Basque Government also strengthened the levels of self-governance within the RVCTI. The network, which was anchored by institutions such as SPRI and the Technology Parks, had already convened a set of agents from government, academia, and industry to establish a robust coordination mechanism.

Morgan characterizes this shift in the economic development strategy as one that moved from focusing on knowledge transfer, “doing things better” to generate new science-based knowledge, or “doing better things” (Morgan, 2016, p. 1546). Through the creation of specialized clusters, the strategy continued to rely on applied R+D that was anchored in the five Technology Centers. However, a push towards industrial diversification and new industries such as aeronautics and telecommunications (Etxabe & Valdaliso, 2016). The adoption of the cluster policy, of which the Basque Country was a pioneer region in Europe to do so (Elola, Valdaliso, Franco, & López, 2017) resulted in the establishment of the following associations:

<table>
<thead>
<tr>
<th>Cluster/Association</th>
<th>Year Founded</th>
</tr>
</thead>
<tbody>
<tr>
<td>Machine Tool (AFM)</td>
<td>1992</td>
</tr>
<tr>
<td>Home Appliances (ACEDE)</td>
<td>1992</td>
</tr>
<tr>
<td>Automotive (ACICAE)</td>
<td>1993</td>
</tr>
<tr>
<td>Port of Bilbao</td>
<td>1994</td>
</tr>
<tr>
<td>Environment (ACLIMA)</td>
<td>1995</td>
</tr>
<tr>
<td>Energy Cluster</td>
<td>1996</td>
</tr>
<tr>
<td>Telecommunications (GAIA)</td>
<td>1996</td>
</tr>
<tr>
<td>Basque Maritime Forum</td>
<td>1997</td>
</tr>
<tr>
<td>Aeronautics (HEGAN)</td>
<td>1997</td>
</tr>
<tr>
<td>Paper Cluster</td>
<td>1998</td>
</tr>
<tr>
<td>Audiovisual (EIKEN)</td>
<td>2004</td>
</tr>
<tr>
<td>Transport and Logistics (MLC ITS)</td>
<td>2005</td>
</tr>
</tbody>
</table>

Consistent with the approach of leveraging existing assets and endogenous growth, many of these clusters were formed based on existing associations, with the exceptions of the aeronautics and aerospace cluster which was the result of a direct government incentive to jumpstart this industry in the region. The role
of government in establishing the other clusters is referenced as secondary or indirect, yet the influence of broad-based general policies – instead of cluster policies – had a significant influence in the creation of the cluster associations. (Elola et al. 2017).

The Basque competitiveness program, launched in 1991 focused on initiating cluster mapping studies, developing support programs, raising awareness and generating buy-in and financially supporting the working clusters (Konstantynova, 2017). The emergence of the cluster associations, together with the preexisting agents of the Basque Science, Technology and Innovation Network, constituted what some call a "regional policy network" which is led by the government, but sustained and implemented by the private and non-profit organizations that make up most of the membership base (Etxabe & Valdaliso, 2016).

The levels of participation in the construction of the Basque Competitive program were also high, considering a tradition of collaboration and inclusion in policymaking. The sum of the sectoral plans that were developed in the 1990s, consolidated an Industrial and Technological Plan and the Science and Technology Plan, which are "global directive plans setting out guidelines for the implementation and later administration of policy" (Escorsa & Camacho, 2000, p. 218). The Government’s role in conducting research prior to the establishment of the associations was crucial as industrialists and academia had high levels of trust in them. Michael Porter was commissioned to conduct a study over three main components: specification of competitive potential, drawing up an action plan and identifying strategic sectors, (Escorsa & Camacho, 2000). Whereas traditional cluster strategies that focus on the competitive paradigm are not generally conducive to increased levels of equality in the economy, the preexisting conditions of equality in the Basque Country acted as determinants that supported inclusive growth in the following decade.

The economic impact of the cluster associations has been significant. Using data from SPRI, Elola et al (2017) find that by 2012, the Aeronautics, Electronics and ICT, Maritime, Paper making, Energy and Machine tool clusters had the following indicators:

<table>
<thead>
<tr>
<th>Cluster/Association</th>
<th>Firms (number)</th>
<th>Employment (number)</th>
<th>Turnover (million €)</th>
<th>R+D Expenses</th>
<th>Exports/Turnover (%)</th>
<th>R+D/Turnover (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aeronautics</td>
<td>60</td>
<td>4142</td>
<td>770</td>
<td>195</td>
<td>90.0</td>
<td>25.3</td>
</tr>
<tr>
<td>Electronics and ICT</td>
<td>289</td>
<td>11,900</td>
<td>2950</td>
<td>122</td>
<td>41.0</td>
<td>4.1</td>
</tr>
<tr>
<td>Maritime industries</td>
<td>350</td>
<td>6,430</td>
<td>985</td>
<td>n.a.</td>
<td>85.0</td>
<td>n.a.</td>
</tr>
<tr>
<td>Paper making</td>
<td>20</td>
<td>1650</td>
<td>614</td>
<td>n.a.</td>
<td>49.2</td>
<td>n.a.</td>
</tr>
<tr>
<td>Energy Cluster</td>
<td>350</td>
<td>23,336</td>
<td>15,943</td>
<td>253</td>
<td>c.36</td>
<td>1.6</td>
</tr>
<tr>
<td>Machine tool</td>
<td>108</td>
<td>5762</td>
<td>1107</td>
<td>n.a.</td>
<td>76.4</td>
<td>5.0</td>
</tr>
<tr>
<td>TOTAL</td>
<td>1177</td>
<td>79,678</td>
<td>22,369</td>
<td></td>
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</tbody>
</table>

The variations in the number of firms, employment and turnover is consistent with the levels of fragmentation which are represented by a large number of SMEs in these sectors. The economic impact is more than relevant and the impact that exports have in the firms is also noticeable. This is consistent with the economic aperture that came with Spain’s integration to the European Union and the processes of internationalization that large groups such as Mondragon started in the 1990s.

On the other hand, higher degrees of association are also found to be correlated with an increased resiliency and capacity to withstand economic crises (Valdaliso, Elola, & Franco, 2016). The following quotes from an interview with Professor Jesus Valdaliso, from the Basque Country University, attests to this condition:

“What we know is that there is a contrasted correlation between belonging to cluster associations and greater resiliency. Cooperating through institutionalized mechanisms favors resistance, adaptability, and businesses resiliency. In other words, firms that belong to a cluster association resist further and are more resilient”.

We are a society that is prone to association and collaboration in one way or another. There is a very high degree of associability. Many business associations are created here before anywhere else”.

Jesus Valdaliso – University of the Basque Country

The Basque economy’s response to the 2008 Great Recession is a proof of this capacity. A commitment to innovation, a higher degree of internationalization, stronger association levels, and a more intentional incorporation of ethics into economic development planning are amongst the reasons that Muñoz and Sotomayor (2013) find that contribute to increased resiliency in the Basque Country, measured by the behavior of job losses during the great recession. The role of industrial cooperatives is also significant in understanding this outcome. Mondragon’s policy of relocation and internal readjustment instead of massive lay-offs contributed greatly to the sustainability of industrial jobs in the region.

The Basque’s capacity to associate has also led to increased levels of social capital being created and distributed amongst their business networks and association. Using Social Network Analysis, Etxabe and Valdaliso (2016) found that there is a high density of organizations in cluster associations that builds social capital. Their data indicates that out of more than 1000 actors and stakeholders, 26 firms, 2 Technology Centers and 3 government organizations stand out as “the most significant actors in the Basque Cluster Policy Network” (Etxabe & Valdaliso, 2016, p. 895). These include SPRI, the Technology Centers, high-technology firms with a strong base of knowledge such as Ingeteam, ZIV, Guascor, Arteche, Ormazabal, Sener, large companies such as Iberdrola, General Electric, Euskatel, Ibermatica, and the Mondragon.
cooperatives. The cluster policy network is found to be optimal for creating and disseminating knowledge, as well as instruments for social capital promotion.

The consolidation of a support infrastructure for firms, through cluster associations, brought along increases in expenditures for R+D. In turn, the emergence of collaborative research and innovation projects through Cooperative Research Centers and Technology Centers, increased both the magnitude and the frequency of knowledge and technology transfer. By continuing to place innovation and technological advancement at the core of the business model, the tri-partite effort of Government, Academia and Industry further consolidated the BRIE.

3.3.4. Innovation ecosystems

As the complexity of the BRIE grew, the need for new coordination mechanisms and bodies for deliberation and responsive policy-making became evident. The next section analyses the emergence of the BRIE, conceived here as the consolidation of existing networks and initiatives such as the Basque Science, Technology and Innovation Network (RVCTI), SPRI, The Basque Competitive Program, amongst others. This transition is referenced before in Figure 6 as “Knowledge and Information Society” and is enabled by the incorporation of concepts such as social and open innovation to the already well developed framework of technology-driven and competitiveness-oriented innovation processes that industry has developed over 30 years.

The process of reshaping the Basque industrial policy, first, and the science, technology, and innovation approach, later, was a collaborative effort between government, academia, and the private sector, with a prominent role played by the Mondragon Cooperatives. The strategy for coordination, which started early in the 80’s and consolidated in the 90’s and 2000’, focused on responding to new economic and competitive challenges and sought to develop coordination capacities across multiple scales. (Royo, 2009)

This section provides an overview of the institutional architecture that the Basque Country constructed to advance innovation in its industrially-based economy. A particular focus is placed on the levels of cooperation and collaboration amongst agents in the Basque Science, Technology and Innovation Network (RVCTI) and the extrapolation of the principles of self-governance to the infrastructure that supports the innovation ecosystem.
3.3.4.1. From Cluster Strategies to Institutionalizing innovation

The creation of the Agency for Industry Promotion and Reconversion (SPRI) in 1981 was the first step towards creating a more coordinated response to the economic crisis of the previous years. By focusing on globalization, industrial development, and the information society, SPRI was designed to converge regional leaders in industry and local governments to withstand the crisis and identify pathways for economic growth. The development of cluster theories in the 1980s and subsequent application of it in the Basque Country led to the establishment of new coordination bodies, this time around specific industries, all of them comprised of a triad of private sector, government, and research/education institutions. Established as knowledge clusters (Luis Arbonies & Moso, 2002), they promoted technological and knowledge transfer through collaborative R+D centers and technology development centers. The Marshallian systems that were developed followed a logic of specialization and spurred inter-firms relationships, which ultimately developed a strong local development agency. (M. L. Aranguren, 2003).

On the policy front, after consolidating the multi-cluster model in the 90’s, the Basque Government established the Science, Technology, and Innovation Council (STIC) as the “supreme body for providing coordination and strategic direction” (Morgan, 2016). This platform, created in 2007, is chaired by the Lehendakari and pursues the following missions:

To define the strategic orientations and objectives of the STI policy; define the technological or scientific areas that should be considered as a priority given their strategic interest for the Basque Country; the promotion of S&T infrastructure; the setting of financing and budgetary frameworks. (OECD, 2011, p. 201)

In addition to the Lehendakari, twelve high-level members of government and other officials make up STIC. These include: Consejeros (Ministers) of Finance; Industry; Innovation, Trade and Tourism; Education, Universities and Research; and Health; the presidents of the three Provincial Governments; rectors of the three Universities in the Basque University System (University of the Basque Country, Deusto University, Mondragon University) and the presidents of Ikerbasque and Innobasque.

To operationalize the ecosystem, a set of Cooperative Research Centers were created for identifying strategies for new sector development. Anchored at the powerful Department of Industry, these bodies had representatives from the three sectors. The Department of Education, in turn, developed “Basic Excellence Research Centers” to focus on developing the research capacity that would support industry growth. The Basque Foundation for Science – Ikerbasque – was founded to recruit scientific talent and broaden the region’s research base. Innobasque, the Basque Innovation Agency, was created as a public-private partnership that included representatives from firms, research institutions, government and civic actors.
These bodies are proof of a solid infrastructure that support economic growth and innovation by building on collaborative relationships (See Figure 8). The levels of decentralization that the ecosystem holds, are consistent with the sophistication of its networks. Aranguren, Larrea and Wilson (2010) studied the governance model of these networks and identified valuable lessons in the establishment of local development agencies (LDAs). Looking into the different scales at which governing bodies such as Innobasque operate, the authors conclude that, when coordinated, these networks could act as a neuronal system that facilitates multi-level learning processes. Through an analysis of Ezagutza Gunica, a “forum for the management of knowledge and training” promoted by the local development agency in Urola Medio – multiple municipalities –, they conclude that the local scale provides opportunities to incorporate all interested and relevant agents directly in working groups, which produces better outcomes. The level of openness of these spaces is also highlighted by the authors, which is an enabling condition for bottom-up development processes. While Innobasque is a top-down solution designed to facilitate interaction amongst actors in the ecosystem, LDAs are seen as local entities with the capacity to create more horizontal knowledge that can inform larger scales. The emergence of LDAs was concurrent with the application of the Basque Cluster Policy in the late 80s and early 90s. These two approaches, while different in their conceptual and practical implications, resulted in the combination of top-down (clusters) and bottom-up (LDAs) strategies. While the cluster policy was mostly designed and implemented by SPRI, a Basque Government entity, LDAs where supported by municipalities and Territorial Governments (M. L. Aranguren, 2003).

Whereas traditional literature claims that fragmented production and the emergence of Small to Medium Enterprises (SMEs) poses critical challenges for governance, the experience of the Basque Country shows that it can become an asset leverageable for fostering innovation. The levels of fragmentation in the Basque Country, apart from the large-scale industrial Mondragon cooperatives, imply the need for cooperation for developing competitive advantages. Iturrioz et al (2014) study the role of two drivers for innovation, the presence of relational, structural, and cognitive capital, and the presence of intermediaries that foster cooperation between SMEs in the Basque Country. The concept of shared innovation, that the authors explore and understand through a case study of Mondragon, is fundamental in understanding the sophisticated Basque networks. The role of intermediaries, which they define as “long-term innovation defenders” is to activate innovation at the firm level and generate “virtuous spiral dynamics where individual innovation nurtures networks innovation” (Iturrioz et al., 2014).

The following figure is a representation of the RVCTI, along four different categories: knowledge creation, technology development, application and support and intermediation. The RVCTI is a product of cross sector collaboration and coordination, coordinated by SPRI and STIC, both organizations at the Basque Government level.
Figure 8 Members of the Basque Science, Technology and Innovation Network (RVCT). Source: Prioridades estratégicas de Especialización Inteligente (RIS3) de Euskadi – Gobierno Vasco. Available in: https://bit.ly/2qk5Qf
On the other hand, the geography of where these agents interact, provides an overview of the subregional differences in the Basque economy. The following table breaks down the registered agents into 11 different categories and shows the province they are located on.

**Table 6. Composition of registered agents of the Basque Science, Technology, and Innovation Network (RVCTI)**

<table>
<thead>
<tr>
<th>Agents</th>
<th>Alava</th>
<th>Bizkaia</th>
<th>Gipuzkoa</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Science, Technology, and Innovation Dissemination Agents</td>
<td>0</td>
<td>1</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>Offer and Demand Intermediation Agents</td>
<td>0</td>
<td>4</td>
<td>8</td>
<td>12</td>
</tr>
<tr>
<td>Singular Agents</td>
<td>0</td>
<td>3</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>Basic and Excellence Research Centers</td>
<td>0</td>
<td>5</td>
<td>4</td>
<td>9</td>
</tr>
<tr>
<td>Cooperative Research Centers (CIC)</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Multifocused Technological Centers</td>
<td>0</td>
<td>3</td>
<td>7</td>
<td>10</td>
</tr>
<tr>
<td>Sectorial Technological Centers</td>
<td>1</td>
<td>3</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>University Research Structures</td>
<td>0</td>
<td>3</td>
<td>6</td>
<td>9</td>
</tr>
<tr>
<td>Sanitary Research Institutes (IIS)</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Sanitary R+D Organizations</td>
<td>0</td>
<td>2</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Business R+D Units</td>
<td>8</td>
<td>22</td>
<td>28</td>
<td>58</td>
</tr>
<tr>
<td>TOTAL</td>
<td>10</td>
<td>48</td>
<td>66</td>
<td>124</td>
</tr>
</tbody>
</table>

As it can be observed, Gipuzkoa concentrates the majority (53%) of the registered Agents, which is consistent with the economic geography of industry in the country. Most firms in industry are located in this province, including Mondragon. Research is clustered around Bilbao, in the province of Bizkaia, following patterns of agglomeration given that is the largest city in the region. Overall, this distribution shows that the RVCTI is rooted in industry and continues to serve this sector, despite increasing investments in diversification. These spatial patterns also indicate that despite increased levels of self-governance in policy-making, the Basque government continues to strive for equal distribution of investments and allocation of funding for the network across the three provinces.

### 3.3.5. Benchmarks

According to the European Union’s Regional Innovation Scorecards, the Basque Country is considered as a “pocket of excellence” within a Moderate Innovator Country (European Commission, 2017). Defined as a “Strong Innovator,” the Basque Country is used to explain regional performance differences in Spain, mentioning that the Basque Country performs “almost twice as well as the lowest performing region in Spain: Canarias.”
When considering Tertiary Education, the Basque Country is considered amongst the regions with the highest scores, ranking 13\textsuperscript{th}, the first in Spain. In addition, when looking into R+D expenditure in the business sector as percentage of the GDP, the Basque Country stands out as one of the few strong performers in Southern European countries, along with Navarra (Spain) and the highly industrialized regions of Emilia Romagna and Piemonte in Northern Italy. As far as “Sales of new-to-market and new-to-firm innovations in SMEs as percentage of turnover”, the Basque Country ranks as a high performer as well.

OECD’s analysis of strengths, weaknesses, opportunities and threats (See Table 7) provides an overview of the emerging trends that position the Basque Regional Innovation Ecosystem (BRIE) and the shifts that could affect its capacity to continue to thrive. This analysis, which is limited in its scope, responds to the variables and indicators that are standardized as part of the regional benchmark. However, it highlights some features of the BRIE that are conducive to higher equality in their regional economy.


<table>
<thead>
<tr>
<th>Strengths</th>
<th>Weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Growing wealth levels (GDP per capita), albeit more in PPP than in EUR</td>
<td>- Total factor productivity as a driver of growth declined 2000-2004, albeit a more positive trend observed since 2004 and pre-crisis</td>
</tr>
<tr>
<td>- Strong industrial capacity (notably medium-low and medium-high tech industry)</td>
<td>- Few firms conduct R&amp;D; innovation more for cost cutting rather than new products and services</td>
</tr>
<tr>
<td>- Strongly networked society with regional identity (clusters, business associations, social sphere)</td>
<td>- Limited scientific capacity (basic research, scientific publications, public research system, high-tech firms)</td>
</tr>
<tr>
<td>- Resilient industrial base that survived transformation, including co-operatives</td>
<td>- Inward looking innovation system</td>
</tr>
<tr>
<td>- Infrastructure of technology centers and parks</td>
<td>- Universities poorly connected</td>
</tr>
<tr>
<td>- Highly positive trend in R&amp;D intensity</td>
<td>- Adapted monitoring and evaluation (but many assessments)</td>
</tr>
<tr>
<td>- Educated labor force, especially in engineering</td>
<td>- Some fragmentation of innovation support programmes with focus on supply to key innovation system actors</td>
</tr>
<tr>
<td>- Network of technical colleges, some business schools</td>
<td>- Risk of windfall profits to firms (high share of public financing of BERD – direct support and via tax incentives)</td>
</tr>
<tr>
<td>- Active regional and provincial (sub-regional) governments, due in part to uniquely strong fiscal decentralization</td>
<td>- Technology transfer and diffusion to many SMEs</td>
</tr>
<tr>
<td>- Sustained political commitment to industrial-based competitiveness</td>
<td>- Financing and management of scientific/research infrastructure</td>
</tr>
<tr>
<td>- Effective government-private stakeholder interaction in policy development process</td>
<td>- Mechanisms for inter-departmental planning and co-ordination of STI policy</td>
</tr>
<tr>
<td>- Committed business people and entrepreneurs</td>
<td></td>
</tr>
<tr>
<td>Opportunities</td>
<td>Threats</td>
</tr>
<tr>
<td>--------------</td>
<td>---------</td>
</tr>
<tr>
<td>- Strengthening public &amp; quasi-public research system</td>
<td>- Aging of the population (with limited inward immigration)</td>
</tr>
<tr>
<td>- Capitalise on new CIC and BERC innovation actors (talent attraction, new knowledge generation)</td>
<td>- Path dependency of public policy in STI</td>
</tr>
<tr>
<td>- Innovation beyond technological focus and for social needs (non-technological forms of innovation, innovation in public services, etc.)</td>
<td>- Increasing production sophistication and competition of emerging markets</td>
</tr>
<tr>
<td>- International business and knowledge networks (including Basque Diaspora)</td>
<td>- Growing competition to attract Spanish and EU funding sources for research and innovation</td>
</tr>
<tr>
<td>- Building a culture of creativity, risk and innovation</td>
<td></td>
</tr>
<tr>
<td>- Better positioned to exit crisis than other Spanish regions (keeping jobs instead of shedding)</td>
<td></td>
</tr>
<tr>
<td>- Public procurement and other tools to spur demand for innovation</td>
<td></td>
</tr>
<tr>
<td>- Greater involvement of actors less well represented in innovation policies (including those not in the RVCTI)</td>
<td></td>
</tr>
</tbody>
</table>

On one hand, the resilient nature of Basque industry and the accumulation of social capital has allowed the Basque Country to better resist economic crises. This feature, presented as an opportunity by OECD, is rooted in distinct cultural traits, practices of cooperation and the strength of a social economy, which will be discussed in section 3.4. In addition, the emergence of novel forms of public-private partnerships such as the CIC (Cooperative Research Centers) and BERC (Basic Excellence Research Centers) are highlighted as opportunities to further consolidate the Regional Ecosystem. However, despite presenting sustained political commitment and the levels of political and fiscal autonomy as strengths, the OECD identifies path dependency of public policy in STI as a threat. Whereas political shifts have interrupted the trajectory of innovation systems elsewhere, in the Basque Country it has been proven that changes in political leadership have not altered the path that public policies in STI continue to have. Despite the dominance of the Basque Nationalist Party (PNV) in national and provincial politics since the Statute of Autonomy in 1981, the policy-making process regarding industry has maintained its trajectory without significant alterations.

Political changes, according to Jose Maria Villate, Innobasque's Adjunct Director\(^4\), did not influence the Basque Science Technology and Innovation policy. In 2009, when the Socialist Party of the Basque Country (PSE) won the elections for the first time since the Statute of Autonomy, the rising concerns about

\(^{4}\) Interview conducted on January, 2018 in Bizkaia Technological Park by the author.
the continuity of Innobasque and other coordination agencies such as Ikerbasque, were put to rest by a process of dialogue and recognition. According to Mr. Villate, the new government was hesitant to continue investing public resources in the coordination of the Basque Science, Technology and Innovation Network. The newly appointed Minister for Industry, Bernabe Unda, initially sought to restructure the institutions that supported the RVCTI. However, after consulting with agents, members and affiliated firms, the government decided to continue its support to the ecosystem in a time of global economic collapse. According to Villate’s recollection, it was the affirmative support and defense from the agents and members of the network that ultimately reversed the mandate of reforming the institutions and prioritizing other investments over the RVCTI. The fact that “continued public commitment by the Basque Country to invest in STI policy is a necessity for the region to compete” (OECD, 2011, p. 161) is seen as a weakness and a strength at the same time speaks to the same paradox about public entrepreneurialism that was analyzed before.

When compared to other highly innovative European regions, the Basque Country also stands out in terms of income equality. According to Lee and Rodriguez-Pose, “when controlling for wealth, unemployment, population density, education, wage coordination and migration in Europe, it appears that innovation is leading to inequality” (2013, p. 12). The high proportion of shared ownership through cooperatives, as well as the share of SMEs in the innovation ecosystem, also create favorable conditions for less inequality in the region.

The OECD Benchmark also highlights the importance of having a strong network of industrial cooperatives in the Basque Country. Quoting Mondragon’s account of 3.6% of the regional GDP and 6.6% of the industrial GDP in 2011, the OECD states that “the group also plays a significant role in the innovation system in terms of investments in the region and linkages around the world” (OECD, 2011, p. 55). In addition, when analyzing the different typologies of innovation profiles in Basque Counties, the OECD categorizes Mondragon’s operation as one of “advanced industrial agglomeration” which is composed of “manufacturing industries of high and medium-high technology, larger firm size and industrial R&D” (2011, p. 78).

3.4. Defining cultural traits – The construction of Basque Identity

3.4.1. Self-determination

The notion of self-determination is rooted in Basque culture and tradition. Even before the consolidation of kingdoms in the 15th century that led to the establishment of modern Spain, the Basque
historical territories (provinces) have managed to retain autonomy in fiscal regimes, internal political organization, and the governance models in the region. The Foral regime, which lasted for more than 600 years, gave Basque historical territories levels of self-government that are the origins of a political and economic autonomy that continues today. As the only territories with remaining *fueros* (local charters) after the consolidation of Spain, the Basque maintained political autonomy which in turn allowed them to have veto power over royal mandates that would contrary local mandates (Zubiri, 2010).

Exercising political and economic autonomy became a defining feature of Basque self-governance, which differed from other provinces and regions in Spain significantly (Zubiri, 2010). Changes in Spanish monarchy and the expansion of liberalism led to the abrogation of local charters’ autonomy by 1876. However, due to the popular support for fiscal autonomy, the Abrogation Law “included a clause that allowed the establishment of special fiscal regimes between the government and each of the three Basque Provinces” (Zubiri, 2010, p. 35).

Moreover, not only is self-determination present in the arrangements between local policy-makers and the Spanish state. A generalized sense of self-sufficiency and the possibility of collectively determining the future for the region is also rooted in industry and workers in general. The following quotes from interviewees exemplify the consistency in referencing the Basque capacity to self-determine and be decisive in pursuing specific development models:

> We are a society that’s prone to self-management. On one hand, we are entrepreneurial. We do not wait for the state or the government, public sector, to solve our lives. We are going to self-manage ourselves. This is how we embrace life, and the fact that you need to set your own path is coherent with the cooperative model.

*Raul Garcia – President, ULMA.*

> Mondragon was not conceived as a model against the state. Nor it was a model in favor of it. Arizmendiarieta used to say that we are in charge of solving our own issues. He used to ask, do you think someone from San Sebastian, Bilbao, or Madrid is going to worry about solving our issues? We cannot sit and wait, we need to do things. This is the key for self-management.

*Iñigo Iñurrategi – Mondragon Cooperative Corporation*

The confluence of identity politics, an autarkic economic model and a history of economic neglect allowed Basques to leverage the deeply rooted notion of self-determination to extrapolate its values to territorial governance and business models. This approach, which is also referenced in the case of the Basque Country as a “selective and self-reliant development” (Stöhr, 1984). This concept, which is based on
the endogenous development potential that communities have, explains how the Basques were able to leverage existing assets to design and build economies with higher levels of democratization. As a precondition for self-reliant development, Stöhr highlights the need to have an "internal ability and an external possibility of territorial communities to mobilize fully their internal resources and endogenous development potential in economic, socio-cultural, environmental and political terms" (1984, p. 5). Other preconditions such as the "linkage to trans-regional cooperative networks", the "promotion of potential societal innovation capacity of structurally weak peripheral areas" are elements of this concept that are salient in the historical trajectory of the Basque Country. The following figure explains the "endogenous territorial feedback mechanism" that enables territorial self-determination, and is useful to understand the ways in which actors in the Basque economy have been able to advance economic democracy.

In the case of the Basque Country, increased territorial self-determination can be observed across the multiple agreements that institutionalize political and fiscal autonomy. Including the Economic Agreements and its predecessors. The distinctiveness of Basque Culture, that extends beyond language, has effectively increased territorial identity and provided a "glue" that allows for collective decision-making. Moreover, this has been augmented by what Stöhr calls increased innovative capacity, which has materialized in a thriving regional innovation ecosystem with genuine cross-sector collaboration. As a result, economy is the Basque Country is far more democratic and economic and social living levels are higher in comparison to other regional innovation ecosystems. The way in which these elements interact, constitute what Stöhr calls a good case of endogenous feedback mechanisms increasing the regional learning capacity, mostly led by the "endogenous research-training-production-innovation-financing complex of the Mondragon cooperative federation" (1984, p.13).
The tradition of Basque self-determination also enabled the emergence of the Basque nationalist and separatist movement, which resorted to the right for self-determination, in many cases with violence as the means for achieving it. In many cases, this nationalism resulted in an embodied form of the right of self-determination, instead of full sovereignty or independence (Douglass & Zulaika, 2007).

Furthermore, Rodriguez-Pose and Sandall find that “while arguments about democracy and good governance have been at the heart of the reasoning for decentralization, identity has progressively been relegated in favor of the economy and the promise of an economic dividend as the other motivating factor” (2008, p. 54). Their analysis of the evolution of the decentralization discourse identifies that there are three main forms of discourse related to decentralization: identity, good governance, and economic efficiency. In the case of the Basque Country, while decentralization was inspired by a rooted sense of self-determination, it was its shift towards an economic discourse that “justified their claims for more autonomy and even self-determination” (Rodriguez-Pose & Sandall, 2008, p. 60). However, as it will be shown in following sections, economic self-determination did not only emerge as a transition from nationalist politics, it was also constructed through the establishment of networks of cooperative firms in industry, particularly in Mondragon.

### 3.4.2. Culture, Nationalism and Language

In the process of consolidating the Spanish nation, Basque identity was crucial in the emergence and consolidation of a strong nationalist movement that continues to be the defining feature of regional politics. Given that the process of nation-building started late in the 19th century, this allowed for non-Spanish identities to be crystallized in the Basque region (Lecours, 2016, p. 2). Such identities where deeply tied to territorial organization forms, such as the *fueros* which “provided a common political status” (Lecours, 2016, p. 37) and maintained a strong linkage between nationalism, politics and territorial governance. Autonomy, therefore, has not only been informed by cultural differences and nationalism claims. It has been supported by historic forms of territorial control and governance that predate the configuration of the modern Spanish nation. Moreover, the form in which culture and identity have influenced government, economic development planning and the levels of association that it has enabled, support the hypothesis of self-determination being a contributing factor to economic democracy in the region.

The emergence of Basque Nationalism and the politics of identity that it generated are useful in understanding the complexity in the juxtaposition of culture, governance, and the economy in the region. The early nationalism was influenced by Sabino Arana, the founder of the Basque Nationalist Party (Partido Nacionalista Vasco – PNV). According to Lecours, race determined his vision of the Basque nation, (2016, p. 53) as well as a close relationship to “purest forms” of Catholicism, contrary to the rise of secularization.
liberalism, and capitalism in modern Spain. This form of religious fundamentalism emerged as a response to capitalism and Basque industrialization, which according to Arana was “immoral” and created alterations in social order (Lecours, 2016, p. 54). The sense of moral superiority in radical nationalism, was, however, not predominant amongst the broader nationalist movement. Liberal and secular strands emerged amongst business leaders such as Ramon de la Sota, who promoted a more moderated nationalism which favored autonomy rather than independence and highlighted the uniqueness of Basque language instead of the “Basque race” that Arana promoted. Whereas Arana’s strand gathered support in the province of Bizkaia, De La Sota’s support came from industrialists and the bourgeoisie across multiple provinces.

The Civil War and posterior installation of an authoritarian state provided Basque nationalists with increased legitimacy as well as it created strong divisions within the movement. During this period, Basque Nationalism was divided into moderates and radicals, two factions which developed distinct ideological frameworks and patterns of action (Lecours, 2016, p. 63). The moderates, represented by the PNV, became the most active and consistent political force with widespread support from regional industrialists, business leaders, and even foreign governments in what Lecours calls “Basque Paradiplomacy”, which was mostly focused on economic issues and the right for self-determination. (Lecours, 2016, p. 114) The radicals, epitomized by the separatist guerrilla group ETA (Euskadi Ta Askatasuna or Basque Homeland and Liberty) focused on guerrilla warfare to resist Franco’s regime, while many of the moderate’s leadership remained in exile.

Concurrent with the strengthening of nationalist claims which were considered a legitimate response to the authoritarian regime, a process of safeguarding Basque culture was put in motion by nationalists, both moderate and radicals. Following Franco’s declaration of the provinces of Gipuzkoa and Bizkaia as traitors in 1937, protecting Basque language and their traditions became a symbol of resistance and hope. The figure of /kastosia/ or traditional Basque schools, became the main platform for ensuring the survival of language and traditions. Interviewees confirmed the importance of the survival of Basque language and its traditions by stating:

During Franco’s regime, it was prohibited to speak Basque. A series of parent’s associations decided to start underground, non-official schools, where instruction was in Basque. There was no formal recognition of attending these schools, yet it not only kept Euskara (Basque) alive, it started a network of Basque schools which then became the base for the official Basque Education System.

Paul Rios – Agirre Lehendakari Center.
As informal institutions for educating Basque youth, *ikastolas* became the foundation for a robust 
education system that prioritized culture, values and the connection between training and employment in its 
design and implementation. Rescuing language and cultural traditions through the education system also 
reinforced the territorial identity that Stöhr refers to.

3.4.3. Culture of cooperation and collaboration – *Auzolán*

The construction of a collective identity and its reaffirmation through repression during the 
Dictatorship also strengthened the concept of *auzolan*, a traditional Basque word that translates as 
“neighborly” work or collaboration amongst neighbors. This concept is now used by the Basque government 
to promote unity and is part of the new official governmental slogan “Euskadi, bien común (collective 
wellbeing), auzolana”, replacing the old “Compromiso por las Personas – Pertsona helbrutu” or a *Committed 
to people*. The roots of this culture of collaboration trace back to the early settlers of the region, which 
collaborated in farmsteads and operated under a self-sufficiency model. As the region’s economy evolved, 
this concept translated into a renewed valuation of labor. The following quotes from interviewees evidences 
how a culture of hard work, collaboration and cooperation is rooted in Basque identity:

Labor is very important. I would say labor here is sacred. We are a laborious society, from a 
laborious culture. Its more than a simple obligation to work, this is a cultural aspect. It’s not 
about making money, we embrace work as a topic of the upmost importance. This is 
cultural.

*Raúl García – Grupo ULMA.*

The Basque stereotype is that of a working person, trustworthy. When a Basque says 
he/she is going to do so, he/she does it. They deliver, are honest and their efforts are so.

*Fernando Fernández de Landa – Mondragón Corporation.*

At the end, there is eventually a culture of labor. It’s mainly driven by our geography, us 
being a small town. Driven by what we’ve had to resist culturally, keeping our fueros, our 
territorial rights. Resisting the kingdoms, maintaining our historic rights. I think there is a 
cultural awareness that no one is going to solve things for us, that it all depends on our 
work. This is also related to austerity, seriousness and commitment. […] There is rigor and 
seriousness amongst Basque workers. This has translated into politics, very few acts of 
corruption, few scandals of such type, almost none. People are hard workers and they 
follow through. Keeping your word is important. […] All of these features have been there, 
and the Basque people has realized that in order to keep advancing and maintaining our 
identity and our liberty as Basque people, we needed to work and commit ourselves. And 
this has remained. Despite the fact that in a global time this is blurred, the essence of 
values remains. The essence of our way of being.

*Joxe Mari Aizaga – Basque Culinary Center.*
Despite the challenges of establishing causality between a soft-variable such as the rooted sense of cooperation – i.e. *auzolán* – and the processes of economic development, it cannot be dismissed as a powerful enabler for collaboration. The concept of *auzolán* has also been defined as a traditional feature of Basque society (Bakaikoa & Albizu, 2011, p. 8), and as a “traditional form of obligatory cooperation on a communal basis between families” (Thomas & Logan, 1982, p. 40). Moreover, it has been used as a proxy to study the accumulation of social capital in Basque society and the newest forms of community social capital (CSC) (Calzada, 2011).

The following section explores the emergence of Basque cooperativism as a way of showing how territorial identities and values have permeated the establishment of business models and radically change the way wealth is created and distributed in the region.

### 3.5. Basque Cooperativism

The confluence of a strong Basque identity, a culture of collaboration rooted in traditions such as *auzolán*, a history of political and economic self-determination and self-governance, and an education system based on regional identity and values, enabled the rise of cooperativism in the Basque Country. On one hand, interviewees across multiple sectors referred to the “natural” sense of cooperation and collaboration that is embedded in Basque society as the main enabler for cooperativism in industry to emerge. As a value that was embedded in their way-of-being, this was intentionally extrapolated to business, specially industry. In turn, the political, institutional, and economic neglect from the Spanish state during the Dictatorship, acted as an accelerator for cooperativism. The crisis of the welfare state in Spain led to Basque cooperatives to assume the provision of services that were not provided by the state or by the market, including senior citizen care, preschool services, and social inclusion initiatives (Bakaikoa & Albizu, 2011).

On the other hand, the development of values-based education systems through the establishment of *ikastolas* provided a solid foundation for developing the capacities and leadership to advance more equitable economic development. Many of the leaders today in large cooperatives were trained in *ikastolas* during their youth and attended cooperative universities. Their training, embedded with values and inserted in a context of economic self-determination and endogenous growth, contributed to the consolidation of a successful cooperative network.

The emergence of a “socially equitable and culturally distinctive community economy” (Gibson-Graham, 2003, p. 128) in the Basque Country is also tied to support from progressive local and regional
Politics. Even during the exile of Basque leadership during the Dictatorship, the levels of decentralization and self-governance that remained after the Economic Agreement was suspended, allowed for supporting the emergence of cooperatives, particularly in the province of Gipuzkoa. An interviewee recalls that the enabling factors for the emergence of cooperatives are intertwined, by stating:

Las zonas donde las cooperativas son más fuertes, donde se habla más euskera, y donde había habido más violencia, por ejemplo, el Valle donde nació Mondragón, era donde mayor índice de igualdad había en el país.

Paul Rios – Agirre Lehendakari Center.

In addition to cooperatives, other types of socially-driven businesses and worker-owned firms constitute what Basques call the “social economy”. Gomez Uranga (2003) does a characterization of the composition of this sector in the regional economy which is useful for the purpose of this thesis:

Table 8. Agents of the Social Economy. From Gomez Uranga (2003, p. 173)

<table>
<thead>
<tr>
<th>Agent</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Institutional sector</td>
<td>Social economy organizations</td>
</tr>
<tr>
<td>Nonfinance companies (Production of goods and services for sale)</td>
<td>Cooperatives (consumers, associated work, housing, education, health care, sea, transportation, farming, and so on)</td>
</tr>
<tr>
<td></td>
<td>Labor stock companies</td>
</tr>
<tr>
<td></td>
<td>Farming transportation guilds</td>
</tr>
<tr>
<td></td>
<td>Nonfinance mercantile companies controlled by social economy agents</td>
</tr>
<tr>
<td>Credit institutions</td>
<td>Credit cooperatives (rural savings banks and popular and professional credit cooperatives)</td>
</tr>
<tr>
<td></td>
<td>Credit departments of cooperatives</td>
</tr>
<tr>
<td></td>
<td>Savings banks</td>
</tr>
<tr>
<td>Insurance providers</td>
<td>Insurance companies</td>
</tr>
<tr>
<td></td>
<td>Insurance cooperatives</td>
</tr>
<tr>
<td></td>
<td>Social provision associations</td>
</tr>
<tr>
<td>Private, non profit organizations</td>
<td>Associations, foundations, livestock and farming fraternities, fishing associations, mutual help organizations, Red Cross, etc.</td>
</tr>
</tbody>
</table>

According to the Confederation of Cooperatives of Euskadi (KONFECOOP), Basque cooperativism emerged in the late 19th and early 20th century as consumption cooperatives, responding to market failures and the lack of trade. Initially, they emerged at the local scale, and gradually expanded to housing and agriculture, moving on to industry, healthcare, finance, and education⁶. The consolidation of cooperatives during the second half of the century led to the establishment of the Basque Law of Cooperatives in 1982.

the Higher Council of Cooperatives of Euskadi (CSCE) in 1983 and multiple Cooperative Federations between 1988 and 1992. Since 1996 the Basque Cooperative Movement has been consolidated around KONFECOOP. This process of building the political and social infrastructure to support cooperative growth coincides with the transition period after the end of the Dictatorship where many of the Basque economic institutions were redesigned.

The current outlook for the cooperative ecosystem in the Basque Country shows a significant participation of worker-owned firms in multiple sectors of the Basque economy. The table below shows the number of federated coops and the sectors they belong to.

<table>
<thead>
<tr>
<th>Type</th>
<th>Total coops</th>
<th>Coops</th>
<th>Total members</th>
<th>Total workers</th>
<th>Worker members</th>
<th>Non-worker members</th>
</tr>
</thead>
<tbody>
<tr>
<td>Worker-coop</td>
<td>2,141</td>
<td>949</td>
<td>21,262</td>
<td>32,332</td>
<td>21,262</td>
<td>11,070</td>
</tr>
<tr>
<td>Education</td>
<td>97</td>
<td>82</td>
<td>51,389</td>
<td>6,267</td>
<td>2,216</td>
<td>4,060</td>
</tr>
<tr>
<td>Credit</td>
<td>1</td>
<td>1</td>
<td>12,409</td>
<td>2,108</td>
<td>1,925</td>
<td>183</td>
</tr>
<tr>
<td>Agricultural</td>
<td>118</td>
<td>64</td>
<td>10,000</td>
<td>604</td>
<td>45</td>
<td>559</td>
</tr>
<tr>
<td>Consumer</td>
<td>36</td>
<td>8</td>
<td>1,078,349</td>
<td>11,698</td>
<td>7,936</td>
<td>3,762</td>
</tr>
<tr>
<td>Haulier</td>
<td>43</td>
<td>6</td>
<td>428</td>
<td>478</td>
<td>428</td>
<td>50</td>
</tr>
<tr>
<td>Housing</td>
<td>396</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Others</td>
<td>94</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>2,926</td>
<td>1,110</td>
<td>1,173,837</td>
<td>53,496</td>
<td>33,812</td>
<td>19,684</td>
</tr>
</tbody>
</table>

The high levels of association that are referenced before as a distinctive feature of Basque culture and identity have contributed significantly to the establishment of a thriving social economy, anchored by large cooperatives in the industry sector, most of them part of the Mondragon Cooperative Corporation (MCC). By looking into the historical, political and economic factors that enabled the emergence of MCC in the 1950s, its growth and consolidation, and its contribution to the establishment of the Basque Regional Innovation Ecosystem, the next section analyzes Mondragon’s role in advancing economic democracy through innovation ecosystems.

3.5.1. Mondragon

The Mondragon Cooperative Corporation (MCC) has become a worldwide reference for successful cooperative networks. It has been presented as “perhaps the most successful complex of employee-owned industrial, retail, service and support cooperatives in the world” (Gibson-Graham, 2003, p. 124); a “unique
model of its kind of industrially and financially oriented Catholic cooperativism” (Molina, 2011, p. 15); the “most important industrial group in the Basque Country”, an “undeniable protagonist in both the Spanish and Basque social economies” (Gómez Uranga, 2003, p. 182), and as “the most impressive refutation of the widely held belief that worker cooperatives have little capacity for economic growth and long-term survival” (Whyte & Whyte, 1991, p.3).

Today, MCC is a vast network of cooperative firms anchored in the Basque Country but with operations in over 97 countries and commercial activities in over 150. MCC is composed by 268 companies of which 102 are cooperatives, 140 subsidiaries and 26 other affiliate entities which include Universities and Research Centers. It has developed 15 research and development centers and employs 73,635 people worldwide, of which 77.8% are members in Industrial Area cooperatives workforce (Mondragon Cooperative Corporation, 2016).

Mondragon’s cooperative experience can be divided into three phases: From 1955-1975, referred to as “Needs-based cooperativism”, a second phase from 1975-2000, or “Wellness-based cooperativism” and a third phase from 2000 onwards that is coined a “self-demanding and co-responsible cooperativism” (Ortega Sunsundegi & Uriarte Zabala, 2015, p. 4-5). Each one of these phases is embedded in a larger context of regional political and economic shifts, as it has been shown before.

The reasons for Mondragon’s emergence and success have been widely documented. Some refer to defining traits in Basque culture and the genius of Father Jose Maria Arizmendiarrieta (A. G. Johnson & Whyte, 1977), the level of democratization in corporate decision making and the extent of solidarity within the network (Flecha & Santa, 2016) and the construction of support infrastructure in finance, social wellbeing and research institutions. In addition, this research points out to support from entrepreneurial governments and fiscal and political autonomy as factors that contributed to the consolidation and growth of industry in general, and Mondragon in particular. Interviewees also point out to a context of political punishment, where democracy was undermined by Franco’s regime, as an enabler for the emergence of Mondragon. Facing dictatorship and without the possibility to practice democracy, industry became a suitable scenario for practicing democracy, at a smaller scale.

To understand the role of Mondragon in establishing a thriving regional innovation ecosystem while advancing economic democracy at the same time, it is imperative to understand MCC’s evolution over the past 50 years as the result of intertwined processes of entrepreneurialism, asset-based development, political and economic self-determination and social cohesion. There is no doubt that MCC has played a

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fundamental role in advancing economic democracy in the Basque Country. However, this protagonism cannot overshadow the role that genuine cross-sector collaboration has also played.

Mondragon’s history begins with the establishment of its founder, Father Jose Maria Arizmendiarieta in Arrasate, a small town in the province of Gipuzkoa in 1941. At a time of conflict in Europe, and in post-civil war Spain, the economic conditions in the Basque Country were worsening. Arizmendiarieta, a priest trained around the ideal of “social priesthood”, was also very active in the regional nationalist politics (Bakaikoa & Albizu, 2011). The post-civil war economic crisis had deeply affected Arrasate’s industry, mostly locksmiths’ unions and transformed iron products and had polarized local communities around the civil war. The catholic church “came to perform the tasks of group formation and social control” (Bakaikoa & Albizu, 2011) positioning priests such as Arizmendiarieta as leaders of the reconstruction. Thomas and Logan (1982) note that leadership in Arrasate was mostly exiled or had passed away during the Civil War, which affected Arizmendiarieta’s capacity to build his leadership.

However, Arizmendiarieta didn’t follow the same steps as other similarly-trained priests. His first action was to establish a labor apostolate to mobilize youth around community issues. For his social work, he focused on getting support from local businesses and unions which led to having his first venture, a youth sports league being entirely founded by businesses and residents through subscriptions. By 1943, the formation of a trade school became his next project, and from there on made professional training “the axis of his social project” (Molina, 2011, p. 20). The emergence of the Arrasate-Mondragon Professional School was the first stepping stone towards building MCC. Upholding democratic values that were severely repressed in Spain during this period, was also a central feature of Arizmendiarieta’s leadership. To elect the directors of the new school, he held elections open to all community members, which in turn caught the attention of the dictatorship as they were wary of socially-oriented priests harnessing power through democratic deliberation.

Some of Arizmendiarieta’s disciples and recent graduates from the Trade School arrived at leadership positions at some of the largest industrial firms in Arrasate. When given the opportunity to explore a more democratic control of the firm by having workers subscribe some of the capital for an expansion through shares, they were shut down by management. Facing this refusal, they came together to buy a local firm in Vitoria-Gasteiz that manufactured domestic stoves. They renamed this firm Ulgor – with a commercial brand called Fagor, which became the first Mondragon Cooperative firm.

Focusing on a local industry that needed alternative production schemes was a strategic choice for the founders of Mondragon given that the poor management of the economy from the National government
had made it harder to import and the peseta, the local currency, was steadily depreciating. This is consistent with the frameworks of asset-based development and endogenous growth that the Basque economy is built upon. The democratic control of the new firms, as well as the trust that Arizmendiarietia had built over the years with the local community, attracted many of the workers in traditional manufacturing firms in the region.

Initially formed as a limited liability company, Ulgor started its operations in Vitoria-Gasteiz two years prior to establishing themselves in Mondragon in 1956. Facing the structural and political barriers of accessing finance or leveraging public funds due to political differences with Franco’s government, the founders of Ulgor turned to the community of Mondragon to raise funds for their newly established industrial firm. Eleven million pesetas were crowdfunded from 96 initial investors (who advanced loans to the 6 founders of Ulgor). Operations then started with a total of 24 employees (Thomas & Logan, 1982). In a town that has been historically industrial, there was a significant amount of trust in educated industrialists such as Luis Usatorre, Jesús Larraña, Alfonso Gorroñoigoitia, Jose Maria Ormaechea and Javier Oturbay.


<table>
<thead>
<tr>
<th>Year</th>
<th>Milestone</th>
</tr>
</thead>
<tbody>
<tr>
<td>1943</td>
<td>Father Jose Maria Arizmendiarietia establishes the Escuela Profesional</td>
</tr>
<tr>
<td>1956</td>
<td>ULGOR is founded</td>
</tr>
<tr>
<td>1957</td>
<td>Escuela Profesional became a Vocational Training School</td>
</tr>
<tr>
<td>1958</td>
<td>An order from the Ministry of Labor excluded members of Cooperatives from the General Social Security system</td>
</tr>
<tr>
<td>1959</td>
<td>Caja Laboral Popular and Lagun Aro are founded in response to the exclusion from the General Social Security System</td>
</tr>
<tr>
<td>1960</td>
<td>Escuela Profesional reaches 300 students.</td>
</tr>
<tr>
<td>1961</td>
<td>Caja Laboral Popular starts to expand beyond Arrasate-Mondragon</td>
</tr>
<tr>
<td>1964</td>
<td>First cooperative group is founded (Ularco-Fagor). Irizar and Miba cooperatives join MCC.</td>
</tr>
<tr>
<td>1965</td>
<td>Fagor Electronica (former division of Ulgor) is established as the fifth coop in MCC</td>
</tr>
<tr>
<td>1966</td>
<td>Alecop is founded</td>
</tr>
<tr>
<td></td>
<td>Caja Laboral Popular reaches 24 branches</td>
</tr>
<tr>
<td></td>
<td>Number of associated coops reaches 36</td>
</tr>
<tr>
<td>1968</td>
<td>Auzo-lagun is founded</td>
</tr>
<tr>
<td>1969</td>
<td>Comerco (now Eroski) is founded</td>
</tr>
<tr>
<td>1971</td>
<td>Caja Laboral Popular reaches 100,000 member/savers</td>
</tr>
<tr>
<td>1972</td>
<td>Sales of cooperatives associated to Caja Laboral Popular reach 72.1 m euros. Workforce is at 11,600 members.</td>
</tr>
<tr>
<td>1974</td>
<td>Ikerlan is founded</td>
</tr>
<tr>
<td>1976</td>
<td>Father Jose Maria Arizmendiarietia dies.</td>
</tr>
</tbody>
</table>
1980  Basque Parliament and new Basque Government are created
1982  In the midst of large scale economic crises, MCC continues to create jobs
1986  Spain becomes a member of the European Economic Community
1987  1st Congress. Creation of the Mondragón Cooperative Group
1988  Total sales for MCC surpass 1 billion euros for first time
1991  3rd Congress. Creation of the Mondragón Cooperative Corporation
1993  4th Congress. Internationalization strategy for MCC is discussed
1994  Strategic Corporate Plan for Internationalization is launched
1997  MCC Desarrollo, a corporate platform aimed at funding and developing industrial cooperative projects was created between the Basque government and MCC.
1998  Mondragon University starts operations after three educational coops merge. 2,400 students.
2002  The euro comes into force.
2003  Social Expansion Strategy approved by the 8th Congress.
2008  Global Economic depression affects MCC significantly
2013  Fagor Electrodomesticos (originally Ulgor) declares bankruptcy. It had 5,500 employees, 2,000 in the Basque Country

3.5.2. Consolidation – Growth

Dozens of new firms, all part of the Mondragón Cooperatives were launched during the 1960s. They all relied on support from the Caja Popular, Mondragón’s cooperatively-owned bank which opened in 1959. This support infrastructure was essential for the steady growth over the next decades as new firms within the cooperative ecosystem had financial and managerial support from a specialized cooperative bank.

In a similar fashion to how the first cooperative was created, the Caja Popular was the result of not finding support in traditional banks for their alternative firms that were worker-owned and had higher levels of democratic governance than any other in Spain. This speaks to the entrepreneurial nature of both Arizmendiarríeta and other founders of Mondragón. When faced with the impossibility of finding products and services in the market to fulfill their needs, they created new businesses to support their advance and established support infrastructure that could allow for ecosystemic growth.

The rapid growth in Mondragón coincided with the “technocratic phase” of the dictatorship. (Bakaikoa & Albizu, 2011). Supported by aid from governments – including the U.S – the Spanish government began to implement a liberal economic model which included openness to international markets and modernizing industrial production. This brought increase in income for all Spanish which in turn boosted the demand for goods that were produced by Mondragon’s industrial cooperative. The first phase of internationalization began for the cooperative group as they introduced new products and services into the rest of Europe. With the fear of losing their core values due to unseen growth, leadership at Mondragon focused on establishing innovative bylaws and ownership structures that would maintain their democratic
ownership and shared wealth creation ethos. José Maria Ormaechea’s one of the founders of the Mondragón view of the firm, exemplifies this ethos:

“We believed that the firm should be a human community of activities and interests, based on private property and initiative . . . in order to provide society with a necessary or useful production service, in exchange for which it receives economic compensation . . . that is distributed among its members in a just way” (Ormaechea 1998, 67), quoted by (Bakaikoa & Albizu, 2011)

The values of solidarity were central to Mondragon’s operation. In turn, this solidarity was rooted in the spiritual and socially-oriented Catholicism that Arizmendiarieta praised. This set of values, which were enhanced by the traits of self-determination of the Basque people, are now seen as enabling factors for Mondragon’s success and the more equitable outcomes that the regional economy in the Basque Country produces.

The 1970’s was a decade of steady growth for Mondragon. With the opening of new markets for consumption within Spain and the specialization in household appliances that became the engine for national economic growth, the worker-owned industrial cooperatives thrived. The levels of profitability and competitiveness of Mondragón during this decade where higher than traditional capitalist firms. (Thomas & Logan, 1982).

Menser’s analysis of the Mondragón Corporation is valuable as it analyzes the elements within the worker cooperative model that make MCC an excellent proxy for understanding economic democracy in practice. Mondragon’s commitment to the advance of regional wellbeing in the Basque Country, is, according to Menser, based on the fact that it was intentionally designed as a “project to benefit the Basque People” and were part of a “larger struggle for the survival and benefit of the Basque Community.” (Menser, 2018, p.141)

Consistent with the values of self-determination and self-governance that are foundational for Basque culture and identity, Mondragón cooperatives developed a support ecosystem for their firms as they faced the limitations of the existing economic institutions. When faced with institutional neglect and exclusionary policies from the Ministry of Labor during the Dictatorship in 1958, the group decided to create Lagun Aro, a welfare protection scheme for cooperative members. This organization, which now has 27,986 members, 71,999 health care beneficiaries, over 13,000 pensioners, manages a pension fund of over 6 billion euros and is considered one of Mondragon’s critical supporting institutions.

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Alongside with Lagun Aro, the establishment of Caja Laboral Popular marked an important milestone for MCC. Constituted as a “second degree cooperative”, Caja Laboral Popular has served as MCCs main financial vehicle supporting the expansion of the cooperative network and providing significant competitive advantage to its firms (Gómez Uranga, 2003). The creation of Caja Laboral Popular also allowed for reinvesting the resources that were captured, which ultimately has enabled cooperatives to overcome one of the most significant barriers for its business model: financing. Father Arizmendiarieta’s involvement in the creation of Caja Laboral Popular attests to the character of MCCs founder and leader. When Ulgor, the pioneer cooperative in MCC, was not able to secure funding for expanding its operations, Arizmendiarieta proposed the creation of a bank, modeled after several credit unions and cooperatives banks. By exploring a loophole in existing legislation, Arizmendiarieta proposed to use a covenant in financial regulation that allowed for banks to pay 0.5 % above the interest rates on savings accounts for a blue-collar saving fund (Whyte & Whyte, 1991). Ulgor’s cofounders where hesitant to pursue this as none of them had sufficient knowledge in finance. After all, they were all trained in a professional school for industry. However, Arizmendiarieta wrote the constitution and bylaws and got partial support from the other members of Ulgor’s leadership. Since 1959 Caja Laboral Popular has collected members personal capital accounts, which are only available to reinvest within the cooperative group (Kasmir, 2016). According to Flecha and Santa, this approach on creating and designing institutions as needed responds to a well-known Spanish slogan: “necessity makes virtue” (2016, p. 168).

As the groups main financial institution, Caja Laboral Popular also “establishes a set of meso-rules for the emerging group of cooperative businesses in the form of an association contract that all cooperatives must sign upon entry” (Gallego-Bono & Chaves-Avila, 2016, p. 4909). During MCCs rapid expansion in the 60s and 70s, Caja Laboral Popular played a critical role in planning and coordination. Today, it continues to be a fundamental part of MCCs success. Its governance structure also follows the same patterns of democratic decision-making that are a fundamental principle of cooperative firms. The bank is owned and operated by the member cooperatives. “linking together all the cooperatives into a web of mutual financial support” (Stikkers, Calcatera, Frega, & Maddalena, 2011, p. 194).

At the core of Mondragon’s success is also a well-documented trajectory of managerial innovations that allowed the cooperatives to compete against, and in many cases to outperform, traditional firms. In fact, most of the literature about MCC’s success focuses on understanding the management and performance of their ecosystem, with few focusing on the social, cultural, and political determinants of their emergence. A study conducted by Rodriguez, Gallartegi and Abando found that “the quality level of cooperative company management is higher than that shown in the noncooperative sector, the principal differences in quality of management being related to aspects where the social commitment of a company is reflected” (Rodriguez,
Similarly, Zubiaurre, Andicoechea and Saitua find that MCC worker cooperatives “offer similar or superior indicators to investor owned firms” and that their lower levels of debt enable levels of solvency that is used to further develop their innovation capacity (2016, p. 157). In terms of productivity, Zubiaurre et al add, that MCC show a “greater capacity to generate value over investment in personnel in cooperatives” and that the operating profit per employee is higher (2016, p. 157). MCC’s cooperatives have also been found to have a higher survival rate than traditional firms (Errasti, Bretos, & Nunez, 2017).

In addition, MCC’s commitment to proving a stable job for its workers/members has translated into avoiding massive layoffs and prioritizing relocation and other specific types of compensations in the face of economic hardship. This form of resiliency, is proven to be higher in cooperatives (Zubiaurre et al., 2016) and in the case of MCC, it was tested by Fagor’s bankruptcy in 2013. Fagor, which by many metrics was considered MCCs flagship cooperative and one of its largest. By the time the cooperative decided to close its operations it had 18 production plants in six different countries (Errasti et al., 2017). For almost two decades, Fagor’s expansion and internationalization was portrayed as an exemplary firm that was able to balance international growth without compromising the values that MCC cooperatives are built upon. However, as it will be shown later, it is that same process of internationalization, or multi-localization as it was coined by MCC, that has confronted the model with profound contradictions and paradoxes which question its sustainability.

A significant contribution that is often overlooked when assessing Mondragon’s impact in Basque economy overall is its commitment to equitable compensation and pay solidarity. This is relevant as it has been shown here that inequalities in salaries and the great divergence that Moretti, Storper, Florida and others account for is a visible characteristic of regional innovation ecosystems. According to Kasmir – who is one of the fiercest critics and skeptic of the success of Mondragon – by “limiting managerial salaries to nine times that of the lowest paid member” Mondragon has been able to sustain an equitable differential which contrasts to a stark 127:1 CEO-to-worker ratio in Spain and 331:1 in the United States (2016, p. 54). Mondragon’s highest CEO-to-worker ratio, which has increased from the original 3:1, exists only in Caja Laboral Popular, the group’s financial institution. (Davidson, 2012)

Education and training have also played a crucial role in Mondragon’s capacity to grow and consolidate as a viable alternative to business-as-usual firms. Since the establishment of the Escuela Profesional in 1948 by Father Arizmendiarieta, a philosophy of positioning education as the single most powerful enabler for cooperation, economic growth and wellbeing has dominated MCCs operation. The following quotes from Arizmendiarieta, collected by Azurmendi (1999), exemplify this guiding philosophy
which constitutes an important contribution from Mondragon to the Basque Regional Innovation Ecosystem today.

“Man becomes human through education. Civilization progresses always accelerated by the formative or educational action in the line of search for human and social values”.

“Education is economy. Given that without education, you cannot produce nor distribute scarce goods”.

“Tools and machines need to be revised, but above all, the mentality of men who are destined to master them needs to be renewed”.

“The only patrimony and value that does not tend to devalue is that of men’s capacity: formation”.

“To democratize power, knowledge needs to be socialized”.

“After socializing culture, an inevitable socialization of fortune and power follows: one could say that this is an indispensable and prior condition for democratization and the social and economic advancement of people”.

“Above economic inequalities, we must consider the lack of education and training as the saddest inheritance of the world that has preceded us”.

“It has been said that cooperativism is an economic movement that actively employs education, but this definition can be altered by affirming that it is an educational movement that have actively used the economy”.

“Labor and education must go hand by hand. One can never disregard the possibilities of those who work nor underestimate the options for work of those that are stuck or tired in education. Equality of opportunity must continue to be applied through life if we, indeed, want our communities to be fluid”.

“Democracy conjugates evil with hereditary privileges”.

“Education and training are much more profitable than balances of advances and returns”.

The importance of education and training for Arizmendiarieta was reflected in the protagonism that the group’s training institutions have had since the 1950’s. MCC’s education sector includes primary, secondary and tertiary education in addition to 12 technical schools (Etxagibel, Cheney, & Udaondo, 2012). In alignment with the values of self-determination and self-governance, MCC has focused training of its members in the “functions of the governing bodies” (Etxagibel et al., 2012, p. 91). The rapid expansion of the group demanded for skilled managers that were akin to the values of cooperativism. In order to meet this, a series of corporate training centers where established to build capacities that would allow the group to further expand. These centers were built upon a tradition of launching education institutions to meet the needs of cooperative development, which started with Escuela Profesional in 1948. Later, in 1964, the
Mondragon Polytechnic School was founded and focused on responding “directly to the manpower needs reported to the school by the cooperatives” (Thomas & Logan, 1982, p. 56).

The School, organized also as a cooperative, had strong linkage to the community in Arrasate-Mondragon and prototyped innovative approaches to combining work/study in a cooperative environment. Alecoop (Cooperative Work/Study Activity) was founded as a cooperative ran by students of the Polytechnic School, allowing them to work in industrial cooperatives half-time while they pursued studies in technical careers. Despite challenges in its early stages, by 1970 Alecoop became an independent cooperative outside of the Polytechnic School and by 1982 it had successful financial indicators (Thomas & Logan, 1982). As a pipeline for skilled labor in Mondragon, the Professional School and the Polytechnic school provided many of the workers needed for the expansion of cooperatives during the 70’s and 80’s and the leadership for the first years of MCC’s operation.

Today, Mondragon’s knowledge division, which groups all institutions and cooperatives focused on knowledge creation and dissemination, includes Technological Centers, traditional Basque ikastolas. Mondragon University, Technical Education Colleges, Polytechnic Superior Schools, Technical Education Centers, Business Schools for cooperativism and Cooperative Business training centers and entrepreneurship and innovation centers.

Following Arizmendiarrrieta’s philosophy of using education and training to shift worker’s mentality, when facing the shortage in leadership positions at MCC, a series of corporate and executive education centers were created. Today, the Management and Cooperative Development Center of Otalora provides training in five areas: Cooperative Education, Management Development, Cultural Development, Leadership and Teamwork, and Dissemination of the Cooperative Experience. This strand of Mondragon’s education and training ecosystem continues to act as a pipeline towards managerial positions at the MCC cooperatives.

Mondragon University, created in 1997 by the merger of three previous MCC cooperatives, stands out as the most important asset in workforce training and development today. It is composed by four schools, offers 15 different undergraduate/technical degrees and 13 master’s degrees. According to the 2016 MCC Annual Report, 4,226 students are enrolled and engaged in 427 research projects and transfer activities in 2016. This capacity, in addition to that of applied R+D, has contributed significantly to the advancement of innovation and increased Mondragon’s ability to thrive in highly competitive industries. In 2016, R+D expenses totaled 160 million euros and the sales in new products or services that were non-existent 5 years ago amounted to 327 million euros. (Mondragon Cooperative Corporation, 2016). This contribution to the BRIE will be addressed in a subsequent section.
Overall, Mondragon’s commitment to education has been one of the most important levers for economic growth and advancing economic democracy in the region. By privileging applied research and providing the talent needed for cooperative firms to continue its operation, the group has created virtuous cycles which reinforce the cooperative ecosystem. Mondragon’s trajectory therefore, confirms the value of education in innovation ecosystems, which has been highlighted in Chapter 2 of this thesis. The role of education institutions as anchors of a strong regional innovation ecosystem is supported by the history of Mondragón and allows to trace parallels with cases such as the Research Triangle in North Carolina.

Building from this trajectory and understanding the uniqueness of the Mondragon model, the following section provides an overview of MCC’s influence on Basque Industrial Policy and the contributions to the Basque Regional Innovation Ecosystem.

3.5.3. Mondragon influence on Basque Industrial Policy and contributions to innovation ecosystem

Mondragon’s contributions to the Basque industrial policy and its innovation ecosystem can be grouped in five main categories: on one hand, the establishment of a robust network of industrial cooperatives has added significant competitive capacity to Basque industry in general. Second, a set of highly sophisticated research, training, and capacity building platforms such as Mondragon University, Technical Schools and Cooperative Research Centers have augmented the region’s knowledge base. This has also contributed significantly to positioning the Basque Country as a leading region in Europe in workforce development. Third, MCC has introduced a set of managerial innovations that have changed paradigms in cooperative firms as well as in public-private partnership models. Finally, the cooperative group has contributed with significant leadership in decision-making scenarios as well as in coordinating bodies of the Basque Science, Technology and Innovation Network.

In economic terms, MCC has contributed significantly over the past 50 years to Basque Industry. Today, out of the 73,635 employees in MCC, of which more than 40% are in the Basque Country. 34,329 people work in its industrial division. With a significantly higher survival rate than regular industrial firms, Mondragon has also supported the Basque industry overall in times of economic hardship. Additionally, the commitment to relocation and readjustment policies instead of massive layoffs has contributed to the sustainability of industrial jobs in the region. MCC’s cooperatives have had a 3% failure rate over the past 50 years (R. D. Johnson, 2017) which contrasts to the higher rate than standalone industrial firms have. This, in conjunction with the increased resiliency that cluster associations provide, have positively impacted the region’s capacity to withstand economic downturns.

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As it was referenced before, studies have shown that cooperative firms have in some cases, outperformed traditional capitalist firms in the Basque Country. The innovations in management that Mondragon has introduced to industrial cooperative have a significant influence in this outcome. Effective employee participation, as well as reinvestment policies through funds such as FEPI (Inter-Cooperative Promotion and Education Fund), FCI (Inter-Cooperation Central Fund) or FSC (Corporate Solidarity Fund) have yielded better economic results for the group.

Mondragon has also played a crucial role in consolidating the Basque knowledge base in industry and other areas. Since the establishment of the Escuela Profesional in 1948, MCC’s education sector has grown to a dozen Technical Schools, a University with more than 4,000 enrolled students and corporate training centers for members and industry leaders. This has contributed to establishing a stable school-to-business pipeline that has ensured that benefits from the regional economy are democratically spread amongst communities in the Historical Territories. In terms of building the leadership necessary to manage cooperative firms and traditional industrial companies, MCC has established platforms such as Corporate Training Centers such as Otalora.

Given that the growth and expansion of Basque Industry was partially driven by the success of Mondragon’s cooperatives, policy-making during the early years of the new Spanish state has also significant contributions from MCC. The design of government and economic institutions in the early 80s, which had a high participation of industrialists, privileged the survival and reconversion of Basque Industry, including Mondragon. Even though interviewees in the Basque Country couldn’t attest to the influence of the group in policy-making during that time, given the group’s reputation and its share of the industrial workforce, its more than fair to assume that they played a crucial role. Similarly, the contemporary processes of internationalization in Mondragon and the launch of cluster associations in the face of economic aperture in the 1990s also created scenarios for dialogue and mutual learning between government and industry.

As the Basque economic development strategy shifted to building innovation ecosystems, Mondragon contributed its experience in applied R&D, knowledge creation and dissemination, and cross-sector collaboration in the design of new coordination bodies for the Basque Science, Technology and Innovation Network. As a result, MCC is present across all different levels of the network (See Figure 8 in Section 3.3.4) and has representatives in the leadership of the Science, Technology and Innovation Council, Innobasque, and Ikerbasque. These three constitute the governing bodies of the whole Basque Science, Technology and Innovation Network. However, considering MCC’s influence only based in its presence in this coordination mechanisms is a misleading and reductionist argument. A more profound analysis of
Mondragon's capacity to influence policy-making, its relationship to local, provincial, and national politics and the political economy of the group in general, is suggested here as a line for future research.

The way in which innovation is perceived and practiced by actors in the BRIE is also influenced by Mondragon's evolution over time. Besides the introduction of managerial innovations, MCC has maintained product-driven innovation at the core of its business model. The incorporation of innovation as a “tool that supports and operationalizes its basic cooperative principles based on social responsibility and transformation” (Lopez et al. 2009, p. 40-41) has also broadened the understanding of what innovation is and how it can be leveraged to advanced economic democracy.

Albeit the demonstrated limitations in advancing innovation in a cooperative environment (Lopez, Lopez, & Larrañaga, 2009), MCC has positioned itself as an innovative network of cooperatives in industry, retail, distribution, finance and education. However, the tensions that “long, complex processes of decision-making, where all members must be consulted” (Lopez et al. 2009, p. 41-42) has dampened Mondragon industrial cooperatives’ capacity to react to market shifts and emerging technologies, the benefits that come from the deliberative process seem to offset the opportunity cost of missing out.

The phasing of MCC technological development is also useful for understanding its contribution to the BRIE. According to Lopez et al. these can be divided in four distinct periods: from 1960 to 1985 the group focused on process optimization and diversification. This period coincided with the technocratic phase of the Dictatorship as well. The second period, which includes the recovery from the crisis in the 1980s and goes until 1990, focused on production flexibility and the design of smaller scale production systems, knowledge-based product value and lean production. This coincided with the Basque policy for modernization and industry reconversion. From 1990 to 2000, a period marked by internationalization and technological advancement produced product and process innovations. The emphasis on quality and corporate efficiency during this phase was a result of capacities that were added through the establishment of cooperative research centers and the launch of Mondragon University in 1997. The next phase, that started in 2001 focused on the globalization of economic activities. The incursion of Information Technologies and Communications (ICT) in MCC’s overall innovation strategy created an opening for collaboration with other institutions in the BRIE. During this period Mondragon launched the Promotion and Innovation Center.

Finally, and in alignment with the foundational values of MCC, the group has influenced the way entrepreneurship is conceived and practiced in the Basque Country. On one hand, it has proven that despite the difficulties for industrial entrepreneurship, the creation of support infrastructure through finance, training
and inter-cooperation is an alternative to traditional entrepreneurship approaches. Through a “socialization of entrepreneurship” (Ellerman, 1984, p. 273) MCC institutionalized entrepreneurship, initially, through a division within Caja Laboral Popular. The Empresarial Division of the cooperative bank has provided technical support for members to launch their own businesses, most of them industrial cooperatives. According to Ellerman, Empresarial Division has acted as the “prototype of a new kind of economic development organization which institutionalizes the function of the small business entrepreneur” (1984, p. 274). The scope of entrepreneurship was also broader since the establishment of the Empresarial Division. Besides assisting in incubation, the implementation of “major, non-routine changes in existing cooperatives” was also part of its practice.

The culture of spin-offs has also been present throughout Mondragon’s trajectory. In many cases, when confronted with limitations such as inadequate financing, the lack of skilled workers, the absence of critical suppliers or challenges in logistics and distribution, MCC has responded with creating new companies, most of them cooperatives, to consolidate its ecosystem. Caja Laboral Popular, Mondragon University and Corporate Training Centers are evidence of this entrepreneurialism. The following quote from Fernando Fernández de Landa, a top executive in Mondragon’s Central Division, exemplifies the approach on entrepreneurship and innovation that MCC has contributed to the BRIE.

There is a value of common well-being. We elevate wellbeing to a collective level. This is rooted in the principle of equity. We need to keep moving, striving to not leave anyone behind. Regarding entrepreneurship and innovation, we’ve been able to corroborate that the Silicon Valley entrepreneurship model is highly individualistic. I have an idea, I’m able to develop it, I become a millionaire. Here, on the other hand, those innovative processes have happened in a different fashion. There has been a social permit for innovation, for failure. Trying things out, even if they don’t work, is seen favorably.

Fernando Fernández de Landa – Mondragon Corporation.

Finally, by promoting a more equitable economic development through shared wealth creation, Mondragón has contributed significantly to the advancement of economic democracy in the region. The construction of a network of worker-owned industrial cooperatives, banks, and retailers has been matched by a commitment to avoid divergences and inequalities in salaries. As it was shown before, the stark difference between payment differentials in traditional capitalist firms in finance or technology and in MCC, is evidence of a strong commitment to building economic democracy.
3.5.4. Internationalization and coopitalism

As a strategy for overcoming the crises in the 1980s, and enabled by Spain’s entrance to the European Union in 1986, MCC entered an internationalization phase in the early 1990s. This period of internationalization of worker cooperatives in the Basque Country has been widely studied and critiqued. In an analysis of the challenges and opportunities for the regeneration of multinational worker cooperatives, Bretos & Errasti (2017) highlight the obstacles that the Mondragon group faced in expanding their operations overseas while maintaining their commitment to place-based shared wealth creation in the Basque Country.

As stakeholders in a globalized economy, alternative organizations such as Mondragon have faced tremendous market pressures, mostly driven by the proliferation of cheap labor and lower production costs in the developing world. According to Heras-Salzarbitoria and Basterretxea, the proportion of non-working members in the workforce of MCC has gone from 14% in 1991 to 70.5% in 2007. (2016, p. 8).

This condition of globalization created “internal contradictions” and “paradoxical practices” (Bretos & Errasti, 2017, p. 155) for Mondragon, which understood their international expansion as a prerequisite for competitiveness. This process also had significant transformations in Mondragon’s labor force. According to Kasmir (2016), the internationalization process created a “three-tiered labor force: members in the Basque Country, temporary workers throughout the Basque Country, and wage laborers in foreign subsidiaries”. The contradictions of this model, as well as the practical implications of it, configure what Kasmir calls a “permutation of a familiar state of affairs whereby the privilege of one strata of workers depends upon the exploitation of another”. (2016, p. 55).

The thesis that internationalization has degenerated the cooperative movement in the Basque Country is widely supported in literature. For Heras-Salzarbitoria and Basterretxea this trend suggests that “cooperatives fail in the long run as democratic organizations due to external or internal pressures” (2016, p. 2). By analyzing the language that Mondragon cooperatives use in their operations, the authors conclude that they “speak the lingua franca of conventional managerialism” (2016, p. 7).

In the case of MCC, it has been said that this has “dramatically transformed the Mondragon experience” (Errasti, Bretos, & Etxezarreta, 2016, p. 436). Although expansion to emerging markets and decentralizing production has not meant a decrease in employment or production locally, it has created doubts about the sustainability of the model and the adoption of traditional capitalism in foreign subsidiaries. Some of the challenges in exporting the model to other geographies have to do with the “lack of substantive
democratic participation, lack of self-management and participation and the rise of dominant or prevailing managerialism.

MCC has framed its expansion and internationalization process as a “multi-location production” and as “a case of cooperative innovation towards a people-centered globalization” (Luzarraga & Irizar, 2012, p. 114). As a response to the degenerative trend, MCC has launched a regeneration strategy that includes efforts for cooperativization of foreign subsidiaries and enforcing favorable labor conditions and salaries. However, local regulations and other economic and cultural barriers have prevented this. In addition, research by Bretos and Errasti (2017), Cheney et al (2014) and Henderson et al (2007) has found that “the discourse regarding encouraging worker participation in ownership, management and profits at foreign subsidiaries is clearly detached from actions and intentions” (Bretos and Errasti, 2017, p. 168).

The implications of these contradictions are significant as MCC continues to be a worldwide reference for shared-wealth creation and economic democracy. On one hand, it exemplifies the uniqueness of Mondragon in terms of its social, political and cultural enablers that are not just sui generis of the Basque Country, but that are the result of intentional design and self-determination. On the other hand, it highlights the importance of differentiating what’s replicable and what needs further investigation before replicating or adopting to other contexts.
Chapter 4. Lessons from advancing economic democracy through innovation ecosystems

4.1. Shared governance models and institutional design

The decade between 1975 and 1985 constitutes a pivotal moment for the Basque Country’s economic development trajectory. As Franco’s dictatorship ended, the emerging Spanish state was immersed in a profound economic crisis, hindering its capacities to support the transition to democracy with a sustainable economic development model. During this period, an intense process of institutional redesign and policy-making took place in all of Spain, and in the Basque Country, these processes were significantly different. Centuries of political and economic self-determination had positioned the Basques to negotiate with the Spanish government the reinstatement of the Economic Agreement and devising the mechanism for political and fiscal autonomy, which culminated with the Statute of Autonomy in 1981.

Consistent with a rooted history of collaboration, Basque leadership in this transition period, many of them industrialists, were adamant in continuing support policies for industrial growth. The linkage between industry leaders and government, together with the influence of a higher education system built around the needs of both sectors, was robust. As many interviewees point out, achieving institutionalized self-determination and being able to design their own economic institutions was considered a “collective project”, an endeavor that was kept above political differences. Few processes had generated such levels of unity and consensus like the industrial reconversion and the design of the Basque economic development policies in this time. Rescuing Basque culture and language during the dictatorship and condemning nationalistic violence can be interpreted as other “collective projects” that Basques have focused on for decades.

The period between 1975 and 1985 also saw the emergence of a new approach to policy-making and produced innovations in governance through the leverage of territorial identities. By extrapolating the rooted values of cooperation and collaboration into policy-making and institutional design, the Basques where able to establish democratic and shared governance models that continue to be the base for the region’s economic development agenda.

These models, in turn, rely on political decentralization which allows for more democratic deliberation and is aligned with the historic notion of self-determination. The structure for the Basque Government followed this logic and granted local and provincial governments with power over fiscal policy and designed mechanisms that ensured solidarity amongst provinces. Therefore, recognizing sub-regional
differences and allowing for self-governance constitutes another form of institutionalized economic and political self-determination.

With many of the emerging leaders in this transition coming from industry, the Basques focused on protecting their industrial tradition and designing policies to further develop their capacities. Decades of endogenous growth and autarky had produced regional capacities in industry. However, as Spain entered the European Economic Community, the Basque Industry was confronted with the issues of competitiveness and specialization. The emergence of institutions such as SPRI and the collaboration between experienced industry groups such as Mondragon and policy-makers, allowed the Basque industry not just to compete but to ensure that the benefits were democratically spread in their region. The logic of strengthening production and investing in technology development to support industry in a moment where neoliberalism was promoting the expansion of manufacture to countries with lower production costs, not only yielded better economic results in the long run, but it also protected the Basque economy in the face of global economic crises.

With increased globalization in the early 1990s, the Basque’s decision to focus on specialization and place-based strategies for agglomerating firms through cluster associations also reinforced the levels of shared governance in the region. The governing bodies for the nascent innovation ecosystem were designed as platforms for practicing collaboration and cooperation. Moreover, the transition to an entrepreneurial state during the second half of the 1980s, confirmed the Basque capacity to design market economies with higher levels of shared ownership and democratic decision-making.

In ways that are consistent with the theories of path-dependency in economic development, the Basque Country has been able to maintain the core principles that support industry and innovation ecosystems. This has been enabled by broadening participation and transferring decision-making power to entities such as Innobasque, Ikerbasque and the Science, Technology and Innovation Council – all public-private entities with participation from government, academia and industry. Since 1991, the hegemonic Basque Nationalist Party (PNV) began to build coalitions with the Basque Socialist Party (PSE), mainly driven by electoral wins that PSE had achieved in Foral deputations and municipalities. The fact that even with large scale political shifts such as the PSE coming to power in 2009, policies and support to the innovation ecosystem have continued, speak to the levels of association and the embeddedness of collaboration and cooperation in Basque politics. Nevertheless, the role that conflict and terrorism associated to ETA has played in the political economy of Basque industry stands out as a line for further research.
Certainly, the Mondragon cooperatives have played a role in imbuing shared-governance in Basque economic institutions. The demonstration effect that its large industrial cooperatives show, has served as an accelerator and enabler for shared governance in the region overall. As a live example of alternatives to traditional economic development, the group has provided Basques also with a platform to test alternative approaches to innovation and entrepreneurship as well. Its presence on decision-making and coordinating bodies not only increases the likelihood of cooperation but it strengthens Mondragon’s commitment to the region.

Whereas the OECD recognizes the complexity of the BRIE and the levels of fragmentation in its coordination mechanisms, as a weakness, this is considered by many as a defining feature of the innovation ecosystem. Here, the role of an active government with high levels of trust has been fundamental in achieving coordination, to the extent that many critiques focus on the level of government dependency.

4.2. The roots of cooperation and collaboration

As it was mentioned before, Basque cooperativism is rooted in values and behaviors that are the result of cultural, political, and economic enablers. As soft variables, it is technically challenging to establish causality or correlation between them and specific types of economic growth. However, the ways in which culture has influenced policy making, the design of economic institutions and the establishment of territorial governance systems indicates that there is a strong relationship there. It is that translation process or the extrapolation of those values to industry, government and academia that has also conduced to the construction of economic democracy in the Basque Country.

Interviewees confirm these levels of cooperation and collaboration amongst different sectors of the economy. The consolidation of the Basque Social economy, as well as the progressiveness of policies such as minimum income schemes, also attest to the deep roots of collaboration, cooperation and solidarity in Basque society.

4.2.1. Cultural enablers

Arguments about the influence of culture in economic outcomes are usually deterministic. The uniqueness of culture and the behaviors it triggers are not by any means determinants of economic outcomes by themselves. In addition, except for Euskera, the Basque Language, there is nothing exclusive to this region that is not present in one way or another in other regions around the world. Cooperation and collaboration take multiple forms and are also context-specific and change over time. However, there are foundational aspects of human behavior that are conducive to more collaboration and cooperation. On one
hand, being excluded from decision-making in politics and the economy for decades led to an emergence of a self-determination narrative that resonated amongst industrialists and civic leaders. In addition, the lack of democratic deliberation during the dictatorship influenced the emergence of democracy in the workplace, which scaled into an ecosystem of cooperatives that is now the largest industrial group in the region and the 7th largest in Spain.

The lesson from the Basque Country is one of effective extrapolation and identifying and using culture as leverage and as an asset. In this case, Basque leadership during the critical moments of change, i.e. transition to Democracy in the late 80s, launching a strategy for specialization and clustering of innovation intensity, was able to interpret the strengths of Basque culture and design mechanisms for leveraging it. An example of this can be seen in the establishment of the Basque Culinary Center. This collaboration between Mondragon University, the top chefs from the region, leading firms in the food industry and Tecnalia (a public-private technology corporation) is considered one of the most significant actors in the Basque Science, Technology and Innovation Network and is a world-class center for research and development in gastronomy. In addition, the transformation of Bilbao into a cultural hub through the implementation of place-based approaches such as the recovery of the river and the construction of the Guggenheim Bilbao, prove that culture is in fact a driver for economic growth.

Furthermore, the emergence and growth of the social economy in the Basque Country is one of the most salient processes of culture in practice. The incorporation of a set of cultural values such as selective self-reliance and the capacity for self-determination into management of industrial firms constitutes a valuable lesson. Supported by Mondragon's demonstration effect and by a virtuous cycle that creates spin-offs and new ventures with shared ownership models, the Basque Social economy continues to grow. Practicing what some call collective entrepreneurship (Morgan, 2016) actors in the BRIE have been able to continue a tradition of incubating businesses that strengthen regional networks and are anchored in the Basque territory. Bilbao Innovation Factory (BBF) is an example of this. This program, which is a collaboration between the Municipality of Bilbao and Mondragon University, aims to bring together entrepreneurs, students, innovators and mentors in a space that provides support and coordination for incubation and acceleration of businesses aligned with Mondragon's social values. BBF's model consists of layering learning, entrepreneurship and innovation, and it includes training programs such as LEINN. This bachelor's degree in Entrepreneurial Leadership and Innovation represents Mondragon's objective of developing the leadership base needed to continue advancing economic democracy through innovation ecosystems.

Moreover, leveraging cultural assets is also a process of constructing regional identities. The deterministic nature of culture constantly overshadows the intentional processes of constructing these
identities and the ability to build collective projects. In the case of the Basque Country, the role of leaders such as Father Jose Maria Arizmendiarrieta, founder of Mondragon, stands out as an example of the intentionality behind Basque Cooperativism. The leadership of Basque politicians in structuring and negotiating the Economic Agreement, is also a notable feature of an intentional process of institutionalizing self-determination. Values-based leadership has also played a role in the complex negotiation processes between the Basque Government and the Spanish state. The relationship between Spain and autonomous regions such as Cataluña and the Basque Country has been dominated by strong separatist and nationalistic politics. However, in the case of the Basque Country even though economic crises have led to scaling back political and economic decentralization, the cohesion amongst sectors in defending political and economic autonomy show

4.3. Economic enablers

The processes mentioned above, however, were also embedded in contexts of institutional and political neglect, repression, violence, and undemocratic regimes. While autarky generated poverty and dependence on social welfare systems from the Spanish state, in the Basque Country this served as an enabler for economic growth. Through the application of endogenous growth theories, economic development in the region contrasted with the stagnation of economic growth in Spain. The interpretation of these openings, in addition to having successful cases that provided demonstration effects, contributed to the advance of economic democracy as well.

During the decades of intense growth for Basque Industry cooperation and collaboration between actors in the region was not a feature that added value to the economy. Due to the autarkic model and the levels of self-sufficiency in the regional economy, it was a necessity. This condition, which served as a driver for developing support institutions within the Mondragon ecosystem, also incentivized the accumulation of social capital and the strengthening of networks in the region. All of these are foundational aspects for innovation ecosystems today. This form of entrepreneurialism was essential in developing the capacities that would allow for the Basques to enter a globalized market and compete with high levels of specialization in the 1980s and 90s.

Political and institutional neglect forced actors in the Basque economy to turn to each other to cooperate and collaborate. With a rooted tradition of collaboration and cooperation originated in the concept of auzolán, this became an opportunity for consolidating a strong regional economy with higher independence from the national government.
The positioning of education and training in Basque culture, and in its economy, is also a valuable lesson from this case. When facing institutional neglect and opposition towards the use of Euskera, the recovery of the traditional ikastolas became a priority for Basque society. In a similar way, Mondragón placed education and training at the core of their business model. Developing the capacities needed for industry led to the establishment of a successful school-to-business pipeline that reinforces the cooperative ecosystem. Overall, understanding the value of a skilled workforce allowed the Basque to continue the same economic development trajectory and not depending on immigration as a driver of the innovation economy. Today, the Basque workforce is one of the most educated in Europe in terms of tertiary education attainment.

4.4. Wealth Creation vs. Wealth Redistribution

Research on the relationship between innovation and inequality has focused on understanding the divergent patterns of income distribution, the influence of skill-biased technological change and its spatial manifestations. However, the absence of comprehensive studies on how innovation has deepened divides in how wealth is created, presents an opportunity for learning from the Basque Country.

The proliferation of economic development strategies for clustering innovation activity also creates a sense of urgency in rethinking the way these strategies create wealth and who reaps the benefits of these type of entrepreneurial urban and regional planning. Chapter 2 of this thesis explored the relationship between innovation and inequality and proved that the types of industries that are clustered in innovation ecosystems generate significant divergences in salaries, which has implications of all sorts. On one hand, it displaces communities through gentrification. On the other, considering the sorting effect of high-skilled labor in innovation ecosystems, gender and racial segregation is exacerbated. Facing this deep divide and the divergence in salaries, governments have turned to redistributive schemes and have designed fiscal policies to ensure spillovers from knowledge-intensive activities can create a “rising tide lifts all boats” effect.

However, there are significant limitations with this type of redistributive strategies. When economic crises hit and taxable industries face economic hardship, the consequences are disproportionate for those who are not part of the innovation economy. The history of the Basque Regional Innovation Ecosystem shows that an increased number of SMEs, alternative ownership structures in industry and a high skilled workforce add more resiliency to the innovation ecosystem. The adoption of policies such as limiting the wage differentials in industrial cooperatives to 9:1 in Mondragón have also contributed to a more equitable outcome. Avoiding the extreme wage inequalities that are a defining feature of innovation economies has also allowed the Basque region to have one of the largest purchasing power parity in the European Union.
Given the share that firms in the social economy have, including the number of cooperatives and its worker/members, the regional innovation ecosystem creates wealth in a far more democratic way than traditional ecosystems do. With wealth being created in a more democratic way, there is no need for large scale redistributive schemes. The introduction of a minimum income scheme in the Basque Country in 1989 reflected policymakers’ (including industrialists in government) acknowledgement of the divides that could come by focusing on innovation economies. Until today, the Basque Country remains the only region in Spain to have “a simple and comprehensive minimum income scheme” (de la Rica & Gorjón, 2017, p. 3).

Overall, this case has shown the ways in which regional innovation ecosystems are built, and how the economic institutions are designed, is what ultimately contributes to the unequal outcomes. Innovation economies can, in fact, advance economic democracy and create shared wealth. While the Basque Country has become a reference for innovation ecosystems coordination and the adoption of science, technology and innovation policies, there is still significant research to be done on several matters.

On one hand, there is a need for better understanding the opportunities and limitations for cooperatives and shared-ownership business models in innovation economies. The Mondragon experience provides lessons on how to integrate technological advance and innovation with a values-based economic proposition. However, the challenges that internationalization has brought to the model persist and continue to affect the power of its demonstration effect.

On the other hand, the role of education in the Basque Regional Education Ecosystem together with the challenges of demographic patterns such as population aging and immigration, constitute another line for further research. According to interviewees, newer generations in the Basque Country are not committed to place in a way that their predecessors. Assessing the experience of programs such as Mondragon’s LEINN degree and performing an in-depth analysis of the school-to-business pipeline in industrial cooperatives, are suggested also as future research.
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