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Investigating Social Capital and its Relationship with the Cohesion Policy: Evidence from the Italian Case

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Abstract

The term social capital has become a new rising star in academia. Due to its multidimensional nature, it has drawn the attention of many researchers from different fields. Yet, its origin lies in the social sciences where it is assessed as the active networks of trust, ties, and relations that are constructed among individuals or informal and formal groups. Certain forms of social capital have the capability to generate, through coordinated policy demands, sustainable territorial development. Promoting economic development has also been the goal of the European Union's (EU) Cohesion Policy (CP) yet, social capital was never taken into account as a leverage effect. Therefore, the twofold purpose of this thesis is to (a) provide a qualitative analysis of the concept of social capital and (b) explore the relation between social capital and the Cohesion Policy through a quantitative case study of Italy. For this second part social capital has been decomposed in five dimensions: strong family ties, informal networks of weak ties, voluntary organisations, active political participation, and civic awareness. The results of the empirical examination considering the five dimensions plus the total social capital index determined that strong family ties, informal networks of weak ties, active political participation and civic awareness are negatively related to the ability of Italian regions to spend European funds. Informal networks of weak ties and the social capital index are positively related. These findings do in part confirm previous research, while in other cases, they pave the way for future research on the subject.

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Chapter 1 - Introduction

The advent of the Covid-19 pandemic has resulted in an unprecedented health and economic crisis. In the early months of the pandemic projections of the International Monetary Fund (IMF) highlighted how the global gross domestic product (GDP) growth rate would decline by 4.4 per cent in 2020. In comparison, in 2009 when the fiscal and economic crisis spread from the USA to the European Union (EU) and the rest of the world for several years, GDP growth declined by 1.73 per cent. However, the crises of the second decade of the 21st century cannot be compared to the one which started in 1929 and produced the Great Depression, when estimates suggest that GDP fell worldwide by 15 per cent between 1929 and 1932.

At first, in early 2020, the EU countries tried to tackle the crisis on their own, disregarding any form of cooperation. Nevertheless, the global evolution of the pandemic taught them that dealing with a quickly spreading virus beyond countries' boundaries was not a task national governments could confront alone. Through the constant dialogue pursued by the European Commission, Member States (MS) eventually realised that the key to overcoming the crisis was the coordination of policies and the delegating of decisions and competences to the EU even though health is an exclusive competence of the MS.

After playing a facilitator role by issuing European tenders for the purchase of medical and sanitary materials, on the 28th of May 2020, nearly at the end of the first wave of infections, the European Commission published a ground-breaking document, the COM (2020) 408 final, establishing the Resilience and Recovery Facility (RRF). In contrast to previous European policy instruments, the revolutionary characteristic is certainly not the temporary nature of the instrument. Rather, it is the way RRF is financed. For the first time in the history of the EU, the MS agreed to issue European bonds to sustain European policy initiatives. Furthermore, the RRF is designed to guarantee a path of recovery that will make Europe greener, more digital, and more resilient. The RRF poses itself together with a wider array of measures inside the Next Generation EU (NGEU). Altogether, the NGEU will dispose of 750 bn Euros partitioned between loans and grants.

Once again, in times of crisis, it is to be underscored that the MS stood shoulder to shoulder in the common fight against the pandemic and the economic downturn it had produced, the second the EU was experiencing in the last twelve years. Nevertheless, the road to consensus was not found immediately. Not all the countries embraced at the outset the RRF, and resistance was especially

strong from the so called 'frugal' countries[1] neither intending to pay for other countries' recovery nor to issue European debt perceived to be in support of MS not financially trustworthy. In the end, a compromise was found with the RRF disposing ultimately of 360 bn Euros of loans and 312.5 bn Euros of grants.

The main goal of these new policy instruments is to promote the EU's economic, social and territorial cohesion, strengthened by its upgrade in terms of pursuing also a transition to a greener, more digital, and more resilient EU. Yet, this ambitious goal is not a revolutionary action per se, rather that it has been the pursuit of the EU since the launching of the Cohesion Policy which followed the adoption of the Single European Act (SEA) by the MS in 1986 in order to insure the participation of all EU Regions in the completion and operation of the Single Market. Moreover, while it may be thought that the additional effort put in place by the EU to foster cohesion does have significant effects on the total amount of resources allocated to this policy area, a degree of disappointment is justified. In fact, the financial resources destined for the economic, social, and territorial cohesion by the Multiannual Financial Framework (MFF) of 2021-2027 are 30.4 per cent of the overall budget. While this percentage has increased since the introduction of the Cohesion Policy over the last programming cycles it has stalled around one-third of the total budget.

But addressing the issue of the amount of European resources devoted to the Cohesion Policy is not sufficient without investigating its employment. As a matter of fact, what seems to be paramount is to acquire as comprehensive an understanding as possible of the effects produced in the lives of EU citizens by the Cohesion Policy, as well as the implications of the Cohesion Policy and its various funding instruments for the work of the regional governments which have the main institutional responsibility to carry it out.

In this regard, while the relationship between the Cohesion Policy and economic indicators such as GDP growth has been closely scrutinized by researchers, the debate on the impacts and effects of the Cohesion Policy on socio-cultural variables and how the latter influence the Cohesion Policy characterising territorial communities has until now been at the margin.

This thesis has a dual purpose. On the one hand it aims to contribute to the literature on the factors which foster or impede social and economic territorial development, thus working to fill this gap and especially investigate empirically the adoption of a case study and the experimental methods

[1] Also called the 'Frugal Four': Austria, Denmark, the Netherlands and Sweden

the relationship between the Cohesion Policy and the territorial asset known as social capital. Social capital has in precedence been thoroughly studied also in the field of development economics is therefore considered a precious but yet underrated factor. Therefore, on the other hand, a careful review of the concept of social capital is presented in the first place. The main objective of the author is to shed light by carefully reviewing the essence of the Cohesion Policy and then move on to explore the impact of social capital in the implementation of European regional operative programmes and the related spending of European resources.

In order to grasp the extent and the complexities of this relationship, as mentioned a case study research is useful and it will be included. The targeted geographical area are going to be Italian Regions, that is to say the intermediate level government that started operating in 1970. The choice fell on Italy due to two main reasons of particular interest: Italy not only is the second MS for European contributions in terms of Structural Funds (SF) in the programming cycle MFF 2014-2020, but it is also one of the European countries with the longest persisting development divide across its territory (especially between the North and the South). Therefore, four research questions (RQ) have been developed to better target the aim of the work:

- What is social capital and its expected policy outcomes?
- What are the goals and means of the Cohesion Policy?
- How is social capital relevant to the pursuit of the goals of the Cohesion Policy?
- To what extent does social capital affect the Cohesion Policy in Italian Regions?

Also as mentioned, the methodology applied in my thesis will be both of qualitative and experimental nature. The second and third chapters will be dedicated to the literature review of two key concepts. A thorough analysis of the concept of social capital as it has emerged and gained importance in the development literature will be followed by the examination of a relevant selection of the abundant literature that has been produced since the launching of the Cohesion Policy, including the model of multi-level governance through which the Policy is formulated and implemented. The discussion of social capital will include the adoption of a definition and the focus of the review will be on social capital in Europe and then in Italy. The investigation of the Cohesion Policy will cover its historical evolution in terms of goals and contents through the programming cycles it has been in place, and it will also dedicate a specific section to the Cohesion Policy in the upcoming multi financial framework of 2021-2027.

The second part of my work is the empirical one. Chapter four focuses on the examination of case studies of how Cohesion Policy fosters human and social capital. In chapter five through the creation of a database, an empirical model will be derived with a regression analysis. A range of socio-economic variables, including one for SF employed, will be adopted to investigate how they are influenced by proxies of social capital.

The concluding chapter will sum up the work, going back to the four RQs and replying to them in light of the findings, and highlighting the essential results of the empirical analysis. In this regard, the conclusions offer a careful answer to the four research questions outlined above as well as underscoring their repercussion on the current status of the academic literature, including the impact on the research on social capital in Italy.

Chapter 2 - Social Capital

2.1 The emergence of the concept of social capital in development theory and policy

In the last decades, the term "social capital" has witnessed a growth of popularity in the field of social sciences. For a long time, researchers tried to find the most suitable way to measure the causes and ramifications of economic growth. Of particular interest was the confirmation that with the same level playing field, some countries or regions were growing faster than others, something not easily explainable through neo-classical growth theories. The objective of the concept of social capital is to provide an alternative narrative or a complementary one to the classical economic theories in the explanation of disparities among territories, being they Nations or Regions.

This theoretical and operational search has led to a notion stemming from the social sciences challenging already crumbling standard economic theories such as the Solow growth model. In general, these theories assumed that economic variables could explain all variations in economic outcomes, even when empirical results were not convincing. Therefore, no space was left for the investigation of social or cultural factors affecting economic development and social wellbeing.

In their review of the concept of social capital, Bhandari and Yasunobu have summarised three reasons why and how economic theories lost ground in explaining successful economic development (Bhandari and Yasunobu, 2009). First, such exclusive theories do not offer a comprehensive analysis of contributing factors, since there are others besides the one of "production" defining growth. Examples of others are norms, values, beliefs, and institutions usually associated with social and cultural factors and reasonably impacting on results. Second, they do not account for or explain the adverse consequences originated from economic growth, such as income inequality, social injustice, social conflicts, and negative impacts on the environment. Finally, they are unable to include social value systems in economic development. Humans are not fully rational, utility-maximising beings with perfect information which are key assumptions in neo-classical economics. Instead, social ties and bonds, influence, and personal traits are factors defining an individual's actions. There is the necessity to move from a one-dimensional perspective, the economic one, to a multi-dimensional perspective guaranteeing a comprehensive understanding of economic development.

In order to fully grasp the reason why social capital became so popular, it is paramount to further inquire about the relation between the social and economic theories as they are two intellectual

streams in the assessment of social action. Furthermore, this analysis will be preparatory to the section of the criticisms and downsides illustrated below.

Social capital emerges from a discipline that emphasizes methodological collectivism and structure, as opposed to the individualism and agency of the economic theory (Gannon and Roberts, 2018). The two embrace different views on defining human behaviour. While embracing the former sociologists see an individual's, action governed by social norms, rules, and obligations and therefore shaped by the social context, economists embracing the latter view actors as independently choosing their goals and self-interest. Yet, as Coleman argues, the two streams have serious defects. The sociological theory limits individual action since it is shaped by the environment. Action is seen entirely as a product of the environment. Economic theory faces empirical reality demonstrating that a person's actions are framed, redirected, and influenced by the social context relevant not only for the functioning of the society but also of the economy.

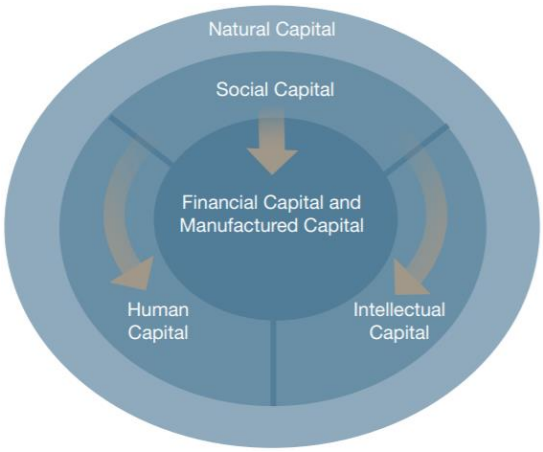
As economic variables started to lose explanatory power, social scientists realised that development is a multi-dimensional process involving economic, social, cultural, political, and environmental factors. Development cannot be narrowed down to solely an increase in per capita income or Gross Domestic Product (GDP), that is growth; instead, it involves an improvement in the quality of life requiring an awareness of fundamental social and cultural systems. When analysing an improvement in the quality of life, cultural values can be treated both as the 'means' and 'ends' of development (Sen, 1999). This thinking led to a re-orientation of the research focusing more on norms, values, beliefs, and institutions.

Since the 1960s, the importance of socio-cultural values as essential parameters of development has grown, and apart from standard factors of production also human capital formed by knowledge and skills has been included as a factor of production. Thereafter, it was acknowledged that not only human capital, but also cultural factors are relevant for economic outcomes, leading to the birth of social capital in the 1990s.

Social capital distinguishes itself from the other forms of capital, in that social capital is not the asset of an individual but of a community; but it shares at the same time also certain features with the other forms of capital. It is, for example, linked to natural capital that relies on the natural environment setting the base for the relationships between people and groups. Furthermore, social capital promotes the development of intellectual capital, described as the knowledge-based capabilities (including e.g., intellectual property). And it facilitates through educational experiences

and social interactions the growth of human capital that refers to the competencies, skills, capabilities, experiences, and expertise of individuals. Finally, in the business world, social capital also affects financial and manufactured capital. In Figure 1 below an illustration is shown of the relationships among the different types of capitals, based on Acquaah's et al. work (Acquaah et al., 2014).

Figure 1: Relationships among forms of capital



Source: Acquaah et al., 2014

Hand in hand with this mode of thinking is the evolution and establishment of new sub-disciplines in economics such as 'development economics' and 'institutional economics.' Mainstream neo-classical growth models began with physical capital and labour, then inserted human capital with institutions and finally they recognised culture. In this sense, social capital embodies the cultural traits of society and is regarded as a source of wealth (Putnam et al., 1993, Fukuyama, 1995). Research has shown that social capital is crucial in providing access to more information, augmenting social cohesion, better civic engagement, decreasing opportunistic behaviour, boosting political participation, government responsiveness and efficiency, reducing transaction costs, dispensing insurance against risk and uncertainties, and settling collective action problems (Coleman, 1990; Putnam et al., 1993; Fukuyama 1995; Woolcock and Narayan, 2000; Lin, 2001; Paxton, 2002; Welzel et al., 2005).

Cultural diversity was recognised as a driver of development by international institutions like the United Nations and the World Bank. Even the Organisation for Economic Co-operation and Development (OECD), which until 2011 had as their motto 'For a better world economy,' moved towards a more contemporary and progressive 'Better policies for better lives,' distancing themselves from the marker of neo-liberalism. It was realised that the pursuit of infinite growth accrued

unsustainable with dangerous repercussions on the environment and the social order. Those negative spillovers could not have been predicted when economic theory focused merely on economic indicators not able to picture a truer and, thus more complex, reality.

2.2 Literature Review

2.2.1 The concept of social capital

The current literature on social capital arose in the 1980s and derives mainly from the works of Pierre Bourdieu, James Coleman and Robert Putnam (Bourdieu, 1986; Coleman, 1988; Putnam et al, 1993) They analysed social capital at different levels: Bourdieu focused on individual and class faction, Coleman on family and community, and Putnam on community and region. Their views are summarised in the Table 1 below:

Table 1: Level of study of social capital

Table 1. Contemporary authors level of study of social capital

Levels of analysis	Bourdieu	Coleman	Putnam
Individual / class faction	• Titles / names • Friendships / associations • Memberships • Citizenship		
Family / community		• Family size • Parents' presence in the home • Mother's expectation of child's education • Family mobility • Church affiliation	
Community / region			• Memberships in voluntary organizations • Voting participation • Newspaper readership

Source: Alridge, 2004

Bourdieu was a French sociologist whose work from the mid-80s was based on theories of social reproduction and symbolic power as capital is for him not only economic and as social exchanges do not have to be always self-interested. His theory highlights structural constraints and the unequal access to institutional resources based on class, gender, and race.

Bourdieu recognised social capital as a characteristic of the individual that is derived from the person's social position and status. Social capital allows a person to exert power on the group or individual who mobilises the resources. It is strictly connected to class and creates, therefore, a form

of stratification since it is not available to all members of society but rather to those who achieve positions of power and status.

For Bourdieu, social capital consisted of actual or virtual resources obtained by people through the possession of institutionalised relationships of mutual acquaintance and recognition (Bourdieu, 1986). Social capital is shaped by the benefits derived from social networks. Yet, its source of power can be traced to social, economic, and cultural structures that generate differential power and status for certain individuals rather than others. The effect of power and status lies in the ability to create accepted assumptions like social norms that advantage an individual. In a nutshell, social capital does not depend so much on your personal social network but on the social position a person has that constitutes the possibility for advantage from one's social network.

James Coleman was a sociologist who drew together notions from economic theory such as the principle of rational action and social theory. As already mentioned above, his theoretical contribution positions itself between two theoretical traditions. The first being the functionalist view of social action conditioned by social structure. The second is the rational theory that foresees that individuals are always utility-maximising. Social capital is defined by the fact that it is composed of different entities that consist of some aspect of social structures and facilitate actions of actors within the structure (Coleman, 1988).

Coleman, together with Bourdieu, defined social capital as residing in the social structure of relationships among people. Nevertheless, Coleman was concerned with social capital as a public good where the actions of individuals benefit the whole society. Social capital was so conceptualised as a collective asset of the group and did not regard inequality caused by differential power and status. The neglection of power and conflict is one of the main differences between Coleman's and Bourdieu's theories.

Following the logic of rational choice, according to Coleman, individuals engage in social interactions, relationships, and networks until the benefits persist. Furthermore, social capital is seen as both a private and a public good, benefiting everyone in the group. With the example of the neighbourhood watch to help lower the local crime rate, even those people who did not participate personally did, in the end, benefit from this action (Coleman, 1988). Therefore, direct contributions by actors will benefit the whole.

While Bourdieu described social capital as reproducing social inequality due to classification, Coleman saw it as universally productive, since in its absence, the ends would not be attainable. Coleman's most famous example to describe his concept of social capital is one of the wholesale diamond merchants in New York. The lender leaves his bag of diamonds for examination without any formal contract, insurance, or arrangement, risking receiving counterfeits or lower quality diamonds when they are returned. Albeit there are opportunities for dishonesty, the actual cases are rare. Considering that the given merchant community is very close, the solid ties through the family, community, and religious affiliation contribute to the endurance of the insurance necessary to facilitate the transactions in the market. Any deflection would lead to a loosening of the ties and expulsion from the community. In the absence of these ties, however, sophisticated and costly bonding and insurance mechanisms would be necessary.

Robert Putnam is the third main modern author on social capital. As a political scientist he became known for popularising the concept of social capital in the development field via his empirical study on civic engagement and the institutional actions of Regions in Italy, from which the concept was extracted of social capital as the "lubricant" of institutional performance (Putnam et al, 1993). In his subsequent publication focusing on the United States (US), *Bowling Alone*, he argued that the US had undergone an unprecedented decline in civic, social, associational, and political life since the 1960s with a serious negative impact (Putnam, 2000). The study used the example of bowling as an activity which used to be highly associational, representing not only recreational channels but also a source of social interaction. He observes that bowling increased in popularity by 10 per cent between 1980 and 1993, but league bowling, a social activity bringing together people from all classes of the community decreased by 40 per cent afterwards. Earlier on, he explained how television was guilty of the erosion of social capital (Putnam, 1995).

In contrast to Bourdieu's individual conceptualisation of social capital, he elevated the term to a feature of a large population becoming a collective trait functioning at the aggregate level. Social capital is thus treated as a public good and entailing the civic orientation, amount of participatory potential, and trust in others available to cities, states, or other territorial communities.

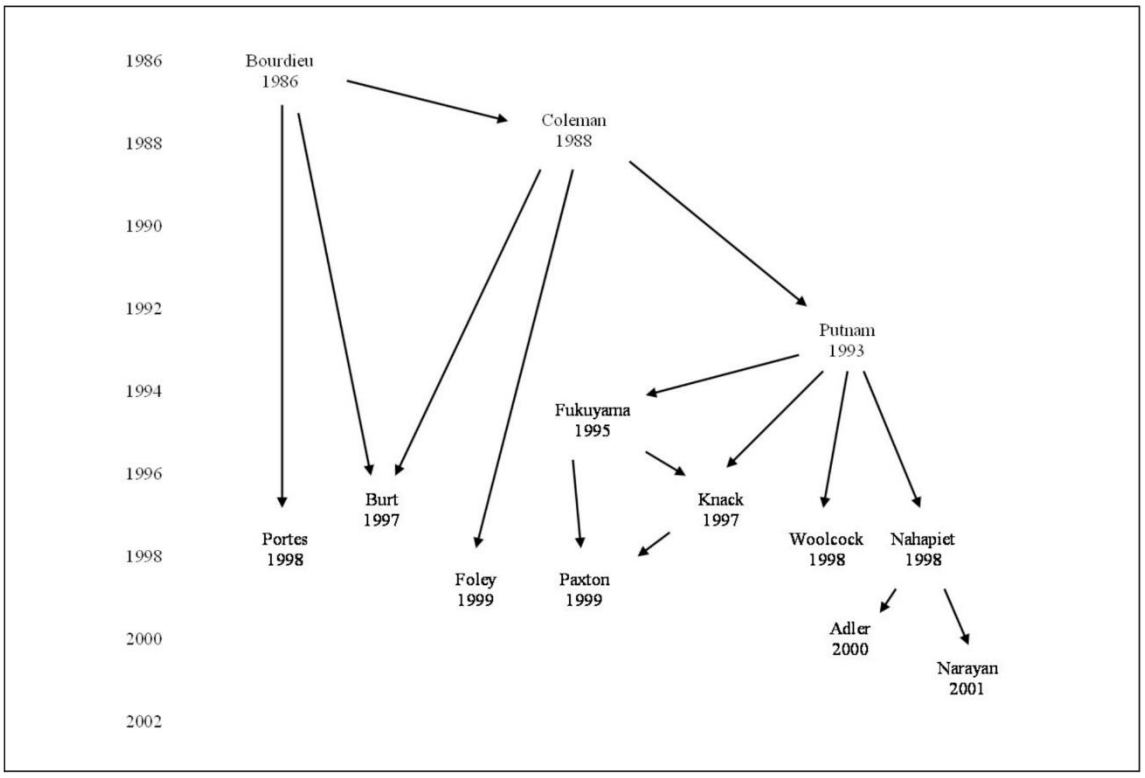
Putnam considers social capital as the amount of trust available, and it is the main stock characterizing the political culture of modern societies. For Putnam social capital refers to 'features of social organisations, such as networks, norms and trust that facilitate action and cooperation for mutual

benefit' (Putnam et al., 1993, p.35). This view of social capital also allows straightforward comparisons across cities, regions and even countries.

However, Putnam has also been heavily criticised for fundamental conceptual and methodological flaws such as oversimplifying complex and interrelated processes to a single or small set of factors – trust as an aggregate indicator of social capital. Furthermore, as a property of communities rather than individuals, social capital is concurrently a cause and an effect. Putnam has become renown for the introduction of the 'Putnam instrument': a simplified version of his elaborated index of civicness including four indicators: trust in people and institutions, norms of reciprocity, networks, and membership in voluntary associations.

The works of these three authors have sparked a debate and inspired researchers to further inquire how to define and conceptualise social capital. A figurative representation (Figure 2) below shows the development of the academic literature on social capital and its division in streams according to the interpretation adopted.

Figure 2: Tree of authors on social capital



Source: Alridge, 2004

As it is not the objective of this thesis to be narrowed down to a merely comprehensive literature review on social capital, only the works of the most important authors such as Portes,

Fukuyama, and Woolcock will be presented, particularly in terms of the contribution of their thinking to the field of territorial policies and development which is the thrust of this thesis.

Building on the conceptualisation of Bourdieu, Portes defines social capital as 'the ability of actors to secure benefits through membership in networks and other social structures' (Portes 1998, p.6). He mainly focused on the downsides of social capital as the exclusion of outsiders, restriction on individual freedom, and a downward levelling of norms. By the latter, he understands situations in which group solidarity is based on a common experience of adversity and opposition to mainstream social norms. The deriving downward levelling of norms acts to keep numbers of an oppressed group in place, forcing the more ambitious to escape from it. He also places the notion in relation to development.

In his paper 'The Two Meanings of Social Capital' Portes presents two different interpretations of the concept of social capital (Portes, 2000). The first one is adapted at the individual level, and the second at the community level. 'Individual' social capital in cases where the right connections allow certain persons to gain access to public positions or contracts consists of the ability to undermine 'collective' social capital – defined as the civic spirit based on the impartial application of the laws. Also, he describes the 'collective' social capital as the more inclined towards flaws since causes and effects of social capital as a collective trait were never separated, giving rise to circular reasoning.

Francis Fukuyama as Putnam focused primarily on behavioural variables and attitudes such as trust, norms, and values as measured in various surveys. Fukuyama tried to integrate social capital and trust as working within an economic framework, rather than a sociological one like Coleman's or a political science perspective like Putnam's (Fukuyama, 1995). In his book 'Trust: the social virtues and the creation of prosperity', Fukuyama argues that many human and societal behaviour issues cannot be satisfactorily explained merely by the assumption of rational and maximizing individuals. Yet, culture plays an important role and is studied as an explanatory variable of varying prosperity around the world. His main claim is that the level of Trust in a country can impact its economic development by decreasing transaction costs, which leads to a more prosperous economy by developing market efficiency. Whereas lower levels of Trust or 'social capital' lead to higher transaction costs in society, limiting market activity and restricting commerce.

Furthermore, referring to a 'radius of trust', understood as a circle of people among whom co-operative norms operate, Fukuyama, explains many Latin American societies (Fukuyama 1999). This

radius of Trust creates a two-tier moral system, with good behaviour reserved for family and personal friends and a lower standard of conduct in the public sphere. In his eyes, this serves as a cultural foundation for corruption. Additionally, according to him, the radius of Trust is not the same among groups that are based on shared ideas and values and groups that are based only on financial returns.

Woolcock gained notoriety by developing a comprehensive, multilevel model of social capital bearing in mind the distinction between bridging and bonding social capital. In his work with the World Bank, he argued that communities would not be able to prosper without bridging social capital. He was also one of the researchers who considered Trust as an outcome of social capital (Woolcock 2001).

In his paper 'The place of Social Capital in Understanding Social and Economic Outcomes' of 2001, he lays down four necessary conditions in the debate on social capital (Woolcock, 2001). First, he outlines the definition of social capital as referring to the norms and networks that facilitate collective action. Second, in order to avoid tautological reasoning, he claims that any definition should concentrate on its sources rather than its consequences. Third, for him, social capital falls more within the realm of sociology translated into a relational rather than psychological or political variable. Fourth, it is crucial to understand the multidimensional nature of social capital. He makes the distinction between 'bonding' and 'bridging'. The former term concerns the relations between family members, close friends, and neighbours; the latter to more distant friends, associates, and colleagues. Furthermore, social capital can have a vertical and horizontal dimension: vertical as for example, in the field of development analysing poverty and horizontal when examining bridging that implies connections between people who share largely similar demographic characteristics.

In addition to bonding (ties with family) and bridging (weak and strong ties with friends and colleagues) in the literature appeared also the term of linking social capital explicitly referring to the ties between members of associations of civil society (Sabatini, 2009). When analysing the effects of social capital the range of outcomes is highly dependent on which kind of dimension of social capital the researcher is adopting. Antonietti and Boschma analysed the effects of social capital for the entry of new industries and the exist of already existing industries in Italy (Antonietti and Boschma, 2018). Their findings show that bridging social capital positively supports the entry of new industries, diversification relies on bridging, and bridging has a negative effect on the exit in times of prosperity, but a positive one during the crisis period. Bonding, however, makes regions resilient in times of crisis by reducing the probability of exit.

By the late 1990s the number of contributing authors increased significantly based on the work of the contemporary authors discussed above. However, much of this work lacked the required rigor not taking into account the multi-dimensional nature of social capital. Many authors simply applied the approach to a discipline or area of interest using a single proxy analysis. As a result, the literature is flooded with a plethora of definitions and operationalisation of the concept. Since then, many recent authors have synthesized a more rigorous framework for the conceptualisation and operationalisation of the concept, yet much work is left to be done to provide a meaningful contribution in all its aspects.

2.2.2 Definitions of social capital

In this brief section, a closer look will be given at the differences and similarities between the definitions of social capital provided by the main authors. Most definitions have in common the focus on social relations with consequent productive benefits at an individual or community level. The variety of definitions derives from the highly context-specific nature of social capital and the complexity of its conceptualisation and operationalisation.

Since social capital does not have a clear meaning, there is no set and commonly agreed-upon definition of social capital. Considering the diverging frameworks, there is considerable disagreement and even contradiction in the definitions of social capital (Adler and Kwon, 2002).

There are, therefore, plenty of definitions of social capital found in the literature. A considerable number of definitions have been listed in the table below adapted from Adler and Kwon. The two authors classified definitions on (a) relations an actor maintains with other actors, (b) the structure of relations among actors within a community, or (c) both types of linkages. As already defined above, a focus on external relations has also been termed 'bridging' and a focus on internal relations 'bonding' by Woolcock.

Table 2: Definitions of Social Capital

External vs. Internal	**Authors**	**Definitions of Social Capital**
External/Bridging	Bourdieu	'the aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalised relationships of mutual acquaintance or

		recognition' (Bourdieu 1986, p.248)
	Portes	'the ability of actors to secure benefits by virtues of membership in social networks or other social structures' (Portes 1998, p.6)
Internal/Bonding	Coleman	'Social capital is defined by its function. It is not a single entity, but a variety of different entities having two characteristics in common: they all consist of some aspect of social structure, and they facilitate certain actions of individuals who are within the structure (Coleman 1990, p.302)
	Fukuyama	'the ability of people to work together for common purposes in groups and organisations' (Fukuyama 1995, p.10); 'social capital can be defined simply as the existence of a certain set of informal values or norms shared among members of a group that permit cooperation among them' (Fukuyama 1997)
	Putnam	'feature of social organisation such as networks, norms, and

		social trust that facilitate coordination and cooperation for mutual benefit' (Putnam 1995, p.67)
Both types	Woolcock	'the information, trust, and norms of reciprocity inhering in one's social networks' (Woolcock 1998, p.153)

Source: Elaboration of Alridge, 2004

A relevant contribution was made by three Italian authors, who introduced a different and narrower definition of social capital labelled civic capital. Civic capital is defined as 'those persistent and shared beliefs and values that help a group overcome the free rider problem in the pursuit of socially valuable activities' (Guiso et al., 2011). The advantages of this definition are three-fold: first, it sets the cultural norms and beliefs that actually matter: those that help to solve collective action problems having so a positive economic payoff, second, it adopts the word capital as it is durable, and third, it satisfies Solow's critique[2].

2.2.3 Social capital theory

As already determined, social capital theory suffers from much criticism for being poorly defined and conceptualised. This problem springs from the fact that social capital is multi-dimensional, with each dimension contributing to the meaning of social capital. The most relevant dimensions are trust, rules, and norms governing social action, types of social interaction, network resources, and other network characteristics. Woolcock was one of the first to attempt a thorough analysis of the concept of social capital within a unified conceptual framework (Woolcock and Narayan, 2000).

[2] Solow argues that in order for social capital to retain being useful in economic theory it needs to abandon the ambiguity of its definition and devise one that differentiates social capital from human capital and clarifies the mechanisms through which social capital can be accumulated and depreciated.

Table 3: Views of social capital

Table 3. Four views of social capital (Source: Woolcock and Narayan 2000)		
Perspective	**Actors**	**Policy prescriptions**
Communitarian view		
Local associations	Community groups Voluntary organizations	Small is beautiful Recognize social assets of the poor
Network view		
Bonding and bridging community ties	Entrepreneurs Business groups Information brokers	Decentralize Create enterprise zones Bridging social divides
Institutional view		
Political and legal institutions	Private and public sectors	Grant civil and political liberties Institute transparency, accountability
Synergy view		
Community networks and state-society relations	Community groups, civil society, firms, states	Coproduction, complementarily Participation, linkages Enhance capacity and scale of local organizations

Source: Woolcock and Narayan, 2000

While the potential benefits of social capital, such as offering new insights in the explanation of economic growth, were clear from the beginning, with time also arose the disadvantages of this approach. Aldridge et al. identified them as being the fostering behaviour that worsens rather than improves economic performance, acting as an obstacle to social inclusion and social mobility, dividing rather than uniting communities or societies, and facilitating rather than reducing education underachievement, crime, and health-damaging behaviour (Aldridge et al., 2002).

The resulting paradox described by Erickson states that each feature of a social structure can be regarded as social capital producing desired outcomes but at the same time can become a liability causing unwanted results (Erickson, 2002). Gannon and Roberts argued on the presence of a fundamental mismatch in the economics literature between the theoretical coverage of the concept of social capital and the vast majority of empirical work that has investigated various proxies for social capital (Gannon and Roberts, 2018).

Therefore, social capital is simultaneously productive and contradictory. Further research is thus required to understand the causal relationships that determine the realisation of productive or unproductive social capital.

For the purpose of this thesis, of utmost relevance is the debate within social capital theory the relation between social capital and development. One of the most notorious authors in the field was the first woman to receive the Nobel Prize in Economic Sciences, Elinor Ostrom. Renowned for

her theories on trust, community, and public goods she also participated in the early phase of the debate on social capital.

For her social capital was an indispensable complement to the other concepts of capital namely natural, physical, and human (Ostrom, 1999). Social capital enables at the same time new opportunities to people, while it may restrict the ones of others. Furthermore, it is formed over time and embedded in common understanding and not in physical structures. Hence, due to the embeddedness in common understanding, it is hard to articulate, and it can easily deteriorate if many people are concerned or if a majority of participants change quickly.

In contrast to physical capital, social capital wears out with disuse, it is not easy to measure, it is hard to construct through external interventions, and national and regional governmental institutions strongly affect the level of social capital available to individuals to pursue long-term development efforts. This last peculiarity is extremely important as it is one of the main assumptions of the empirical part of the analysis of the thesis. The belief is that social capital can be incentivised through specific policies and the creation of the right environment.

By presenting a game-theoretic analysis, Ostrom lays out the incentive model that farmers have to cooperate and overcome free-riding problems by deciding on how to divide the benefits and costs of constructing and maintaining and irrigation system. The key to the case is to align the interests of the officials with the incentives of the farmers in order to avoid cases of maladministration and squandering of money. This action is fulfilled when farmers select and reward their own officials. What seems to be more relevant in determining performance are the incentives of farmers, villagers, and officials rather than the engineering of physical systems. Additionally, as on one side sustaining long-term collective action problems is difficult, on the other side these costs can be offset by creating local organisations and selecting locals as leaders rewarded for their performance.

Ostrom also argues against the current model of donor agencies. She claims that they should shift their focus from trying to replace primitive infrastructures with modern investments to enhancing the capabilities of a large proportion of citizens. Very often the past donations framework only bolstered political careers of the privileged with little actual investment at the ground level. Interestingly, a parallel can be drawn from this argument with the mechanisms of the distribution of resources under the Cohesion Policy designed by the European Union. Especially in the first programming cycles, the resources were used as substitutes of national means in order to finance big infrastructure projects that were believed to have the highest multiplicator and would therefore be the

most suitable way to foster economic growth. A more detailed discussion of this will be presented in the next chapter.

The formula for the right creation of social capital is to change the incentive structure of national and government officials by enhancing the efforts made by local officials and citizens. Institutions create the stimulus for private entrepreneurs to invest in the different types of capital and these investments, when matched to the local needs result in economic growth attributable to increased productivity. Therefore, a public sector invests on the one hand in infrastructure projects and on the other it generates public goods that increase the productivity of the private sector, which can then sustain and build more infrastructures and public goods. The product of this mutually reinforcing relationship is economic development. Concrete examples of case studies will be examined in the following sections.

Focusing on social development, Nieman identifies three elements on the grounds of their relevance to social capital: participation, groups and organisations, and training (Nieman, 2006). Participation is often considered the foundation of social development since it promotes inclusiveness, empowerment, and decisions of consequence. Murphy and Cunningham listed concrete actions to encourage participation in community development programmes as being: giving recognition to volunteers, building pride by educating people, having regular meetings as learning opportunities, and having regular neighbourhood celebratory events with music, dance, and poetry (Murphy and Cunningham, 2003). Groups and organisations are linked by the bonding feature of social capital. Traditionally, church groups and religious movements were valuable resources for the support and strength in community and social development work. More recently, this role has been adopted by Non-Governmental Organisations (NGOs). Finally, training constituted by the processes of learning and acquiring knowledge and skills are fundamental to social development programmes and projects. Here, learning opportunities include formal training, educational group work, workshops, the use of visual material, special events, and programmes.

The link between social capital and development is also thoroughly studied by Nanetti and Holguin in their book ‘Social capital in development planning: linking the actors’ (Nanetti and Holguin, 2016). The authors depict the positive role played by coordinated action in the pursuit of policies that generate common goods, highlighting how social capital is a resource contributing to the economic growth of the community. Therefore, their work adds to the literature of the application of social capital on development planning, promoting the perspective of a process for the long-term

improvement of the quality of life in communities drawing together the participation of stakeholders and the advancement of trust in social relations.

While social capital's bonding form caught the most attention of scientists, it is actually the linking form the most determinant for development. Linking is the ability of the interconnected networks to mobilise and connect with the institutions taking decisions. Further, due to the greater weight carried by their requests, the policy responses become faster and more integrated. Therefore, linking social capital leads to a sustainable development impact at larger scale since it is induced by complex networks of interrelated and supportive interests. The table 4 illustrates the various means, outputs, and outcomes for each of the three forms of social capital.

Table 4: Results produced by social capital: means, outputs, and outcomes

Table 2.2 Results produced by social capital: Means, outputs, and outcomes

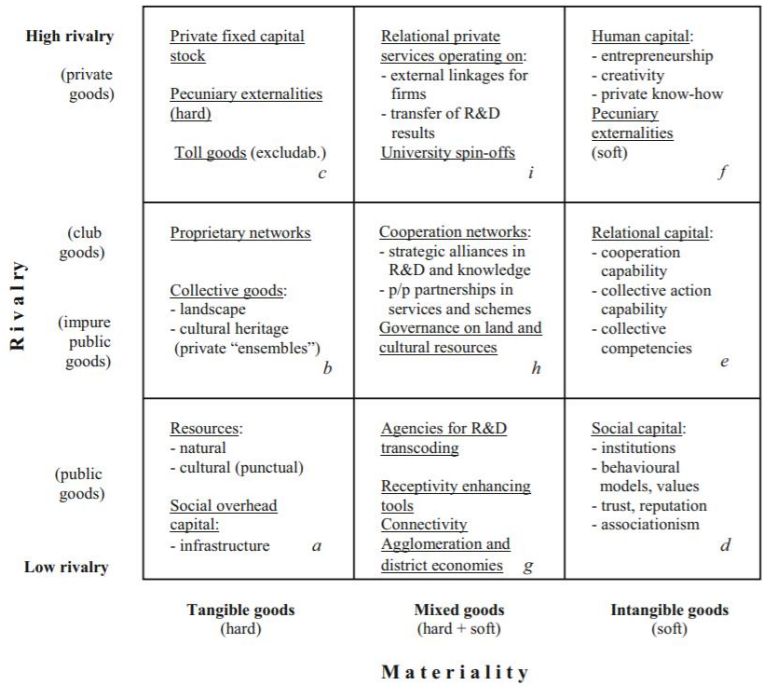
Results / Forms	Means	Output	Outcome
Bonding	self-help	ad hoc services/ assistance to group	increased wellbeing of group
Bridging	formal associational networks	sectoral programs and actions	sectorial development
Linking	coordinated policy demands	integrated development policies	sustainable territorial development

Source: Leonardi and Nanetti 2008

Other authors have theorised a different link between social capital and development, and that is via territorial capital. The term arose after realising that economic growth was determined by territorial qualities. The concept was first introduced by the OECD in 2001 and was defined as the stock of assets that form the basis for endogenous development in each territory (OECD, 2001). A scientist that spent the most time studying the term was Camagni, who referred to it as the system of a variety of territorial assets of economic, cultural, social, and environmental nature (Camagni, 2009). In order to foster development, regions, therefore, have to exploit these locally-based factors. Figure 3 depicts a graphical illustration of the term. Territorial capital is aligned according to two dimensions: rivalry (public goods, impure public goods, club goods, and private goods) and

materiality (tangible goods, mixed goods, and intangible goods). Public goods are natural and cultural resources, social capital and infrastructures, and environmental resources. There are mainly two factors limiting the full exploitation of these resources: unsustainable exploitations and increasing land rents.

Figure 3: Taxonomy of Territorial Capital



Source: Camagni, 2009

Social capital is classified by Camagni along two relevant dichotomies: the micro-macro dichotomy (the distinction between elements involving individuals versus the system) and the formal vs. informal dimension (the distinction between observable objects as networks and norms, and abstract elements as values and attitudes). The different features aligned along the two dichotomies are then the main channels through which social capital affects local development. Institutions, norms, and rules reduce transaction costs, associations and social networks diminish the costs of information, common values and conventions permit collective action, and trust and reputation facilitate cooperation. For all these elements, the relation between social capital and economic development is evident.

In the study performed with Capello, four elements of territorial capital are analysed on a European level and their relation to regional growth (Camagni and Capello, 2013). The elements are entrepreneurship (share of self-employment on total employment), creativity (share of science and technology employment on total employment), social overhead capital (density of transport

infrastructure), and receptivity (part of regional growth dependent on the other regions' dynamics). The highest regional growth for social capital overhead is registered in peripheral areas in Northern Europe (Scandinavian countries and Scotland) and in Eastern countries due to the importance of overcoming remoteness. Yet, also regions in Northern Italy and agglomerated areas such as Barcelona, Madrid, Porto, and Lisbon perform well due to infrastructure increase. The reason might be in light of the beneficial effects in terms of congestion reduction. Receptivity is particularly high in central Europe of major capitals and 'mega' regions such as London, Paris, Milan, Munich, and Brussels. In Italy, this element contributes especially much in the Triveneto and, interestingly, in the regions Umbria and Marche. An increase in entrepreneurship has substantial effects on local growth in peripheral countries like Italy, Spain, and Greece and a limited one in Eastern regions. In Italy, the effects are especially strong in the regions Trentino-Alto Adige, Molise, Basilicata, Valle d'Aosta, and Sardegna, with the exception of the latter these are all the smallest regions in the country. Ultimately, creativity is a significant variable for economic growth in Eastern regions and in certain central European regions, whereas, in Italy, there are no particularly strong relationships. If all the effects are measured together, the elements explain local growth in peripheral areas like Greece, parts of Spain, and France. In Italy, again the effects are the strongest in the smaller regions like Valle d'Aosta, Trentino-Alto Adige, Umbria, Molise, Basilicata and Sardegna. The evidence is lacking in Eastern countries, and capital regions and important agglomerated regions only benefit little from territorial capital. However, this is in line with the literature, as territorial capital, like all forms of capital, has decreasing marginal productivity.

De Rubertis et al. break down territorial capital into two elements: generative factors consisting of human and social capital and sedimented factors composed of actions with tangible and intangible effects (De Rubertis et al., 2019). Running a statistical analysis, they found that for the generative factors, the most important variables are those relating to human capital such as education and knowledge but as well for social capital, the propensity to civil cohabitation and the attitudes of collaboration. While for sedimented factors, the most significant result to be the availability and accessibility of health services and production facilities of goods and services.

2.2.4 Conceptualisations for research

Woolcock and Narayan have identified four distinct perspectives the research has taken in explaining social capital: communitarian, networks, institutional, and synergy. The latter approach, with its emphasis on including different levels and dimensions of social capital and its acceptance of

the positive and negative outcomes that social capital can produce, has been considered as the one with the greatest empirical support.

The communitarian perspective relates social capital with local organisations like clubs, associations, and civic groups. This approach was pioneered by Putnam and then Fukuyama. These authors look at the number and density of these groups in a given community and hold that social capital is inherently good and that its presence always has a positive effect on a community's welfare. Communitarians assume that communities are homogenous entities that naturally include and benefit all members and, as such, do not make the distinction between productive and unproductive social capital.

The institutional viewpoint identifies the importance of community networks and civil society is largely due to the product of the political, legal, and institutional environment. This approach views social capital as a dependent variable while the communitarian and networks perspectives treat it as an independent variable resulting in different outcomes. One possible critique here is that the strength of addressing macroeconomic policy concerns reflects a weakness due to the lack of a microeconomic component.

The third conceptualisation method is through networks. It stresses the importance of vertical as well as horizontal associations between people and of relations within and among such organisational entities as community groups and firms. This approach stresses the importance of bonding and bridging described by Portes (Portes 1998). Two further relevant concepts are structural holes and network closure. According to Adler and Kwon, the closure argument states that a network of strongly interconnected individuals creates social capital, and the structural hole argument is that social capital is generated by a network in which people can facilitate connections between otherwise disconnected segments (Adler and Kwon, 2002).

The synergy approach attempts to integrate the work from the networks and institutional approaches. There are three central tasks for synergy view theorists: (1) 'identify the nature and extent of a community's social relationship and formal institutions, and the interaction between them, (2) develop institutional strategies based on these social relations, particularly the extent of bonding and bridging social capital, (3) and to determine how the positive manifestations of social capital cooperation, trust, and institutional efficiency can offset sectarianism, isolationism and corruption' (Woolcock and Narayan 2000, p.236).

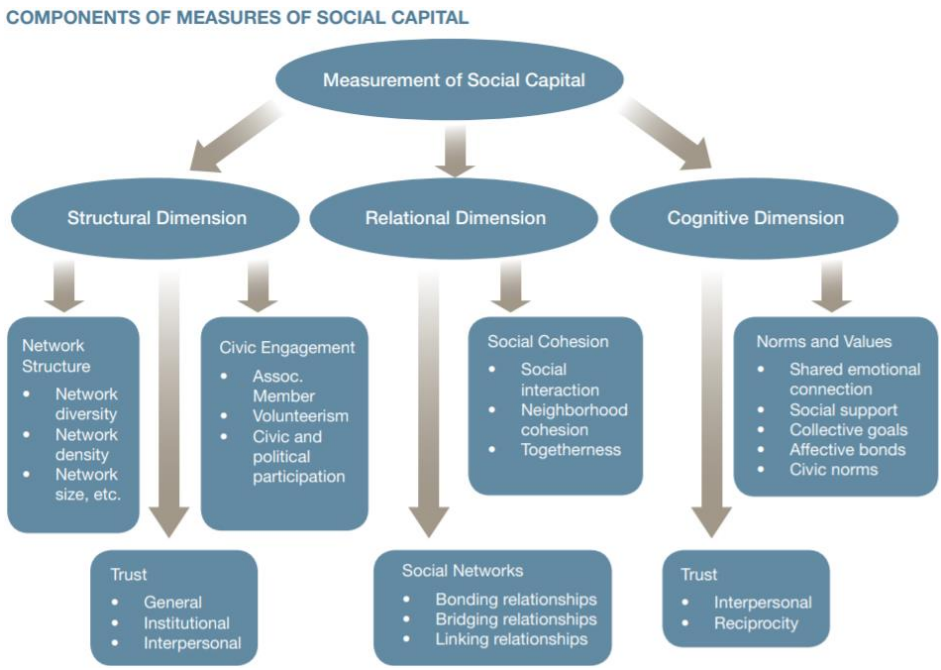
2.2.5 Operationalisation

Due to the poor conceptualisation of social capital, putting the concept into operation and measure it has demonstrated to be problematic. Furthermore, since it exists between people and within social interactions it cannot be exactly determined. Therefore, many authors have used proxies or indicators and measured determinants or manifestations of social capital.

There is an ongoing debate on the methods of operationalising social capital as measurement efforts may be biased and as causation does not necessarily lead to correlation with problems separating form, source and consequences. A common example is trust, since its role and relation with social capital is contested: Fukuyama equates it with social capital, Putnam sees it as a source of social capital, Coleman as a form of social capital, and others again consider it a collective asset like Lin (Fukuyama, 1995; Putnam et al., 1993; Coleman, 1988; Lin 1999).

In empirical studies, quantitative measures of social capital have predominantly applied. Researchers usually rely on surveys and resulting social capital indexes developed by the World Bank or the Organisation for Economic Co-operation and Development (OECD). There are mainly three levels of analysis of the way in which social capital was measured: at the community and national level, at the group and organisation level and at the individual level. According to Acquaah et al., until 2014 out of 314 studies on social capital 160 adopted the second approach, 83 the individual one, and 71 the first one (Acquaah et al., 2014). The following information are taken from their work of 2014. Furthermore, important information is at the disposal regarding the various components of social capital that can be measured: Out of 562 studies (several studies have used more than one indicator) 274 adopted network, relationships and connections indicators, 136 used trust, 79 civic engagement and voluntary activities, and 59 civic norms, shared norms and values. Figure 4 provides a comprehensive illustration of the possible components of measure that can be examined when studying social capital.

Figure 4: Components of measures of social capital



Source: Acquaah et al., 2014

At the individual level, social capital has been measured by using questionnaire surveys. These analyses help to shed a light in the structural, relational, and cognitive dimensions. Within the structural dimension the answers received help to define the degree of trust and solidarity, the network structure (number of links or network size), the network ties (bonding or bridging), and association membership and volunteer activities (social participation, civic engagement, political participation etc.). The relational dimension assessed the aspects of trust in relationship, the social interaction, the social relationship, the social networks and interactions, the social support, the social cohesion and associability. Finally, the cognitive dimension outlines the level of trust, reciprocity, feeling of safety, shared goals, shared culture, and views on multiculturalism. Furthermore, a less popular way is to assess social capital via statistical indicators or archival data mainly derived from the level of trust. The measurement of social capital is less tricky at the individual level due to the greater specificity of the indicators.

At the group and organisational level, questionnaire surveys are the predominant method of measurement of social capital. Studies have primarily focused at the structural and relational dimension of social capital. The structural dimensions include the association membership and institutional links (trade group memberships or network links), network characteristics (number of

links or density), and network ties (bridging ties or bonding ties). The relational dimension relates to the social relationships (relationship quality, closeness, communication frequency, etc.), social connections and ties (networking relationships, interpersonal relationships, network ties, etc.), relational trust, trust, and integrity. Social networking relationships include social connections and ties with family members, and colleagues at work, and various external stakeholders such as board members, political and community leaders, and executives from other businesses. Cognitive social capital is mostly measured on an attitudinal basis covering attitudes and beliefs, emotional intensity and reciprocity, shared cognition, shared norms, values and obligations, shared goals, shared knowledge, shared vision, shared purpose, and collective goals and mission.

At the community or nation level indicators are developed based on statistics and archival data. Here, authors stating the multi-dimensional nature of social capital, merged various measurements into a single index. The items were mostly obtained from the structural dimension including trust (general, specialised, social, institutional), trustworthiness, network characteristics (bridging, bonding, intra-community ties or strong ties, etc.), association membership, and community engagement and voluntary activities (community volunteerism, community organisational life, engagement in public affairs, safety, neighbourhood connections, family, friend, and work connections, etc.). Measures for the relational dimension take into account of trust, association membership, and togetherness. Indicators in the cognitive dimension include civic norms and reciprocity, perceptions of inter-personal trust, trust, views on multiculturalism, perceptions of safety after dark, share emotional connection, social support, affective bonds, and collective goals. One of the most important indexes common in social capital theory at the community of national level is Putnam's Social Capital Instrument (Putnam, 2000). It was used to measure social capital in the US using social surveys and administrative data and was based on Putnam's five principal components of social capital: (a) community, personal, voluntary and state networks, and density, (b) civic engagement, participation, and use of civic networks; (c) local civic identity – sense of belonging, solidarity, and equality with other members; (d) norms of cooperation and reciprocity - a sense of obligation to help others and confidence for assistance in return; and (e) trust in the community.

Another very important contribution is the meta-analysis performed by Westlund and Adam in 2010 investigating social capital and economic performance (Westlund and Adam, 2010). Due to their work that covers 15 years of empirical research for a total of 65 studies, they are also able to draw the main conclusions on the definition, conceptualisation, and operationalisation of the term

social capital. Out of the 65 studies, 23 analysed nations, 14 regions in one country, and only 7 provided a comparative study of regions among different countries. The authors also determined that the most used measure of social capital is trust and the second the number of, or membership in, associations. Economic growth has not been measured in a uniform way, and the variables adopted vary from Gross Domestic Product (GDP) to incomes, investments, employment, and unemployment. Interestingly, trust is mostly correlated in all three levels, while associations results to be negatively related to economic performance at the national level, but positively at the regional level in one country and in several countries.

The authors also try to explain why, although most studies are based on secondary data analysis from the same datasets, findings and conclusions are different. Their explanation is that the outcomes depend on the sample and the composition of the sample, the selection of databases for cross-national surveys, different indicators, different methods of statistical processing and analysis, and the level of analysis. They conclude by describing the major challenges of future research being a reconsideration of the determinants of social capital such as trust and networks.

2.3 Social capital in Europe

In this section, an overview will be provided on studies of social capital in Europe. A closer look will be dedicated to the conceptualisation and operationalisation of the concept adopted and its results in terms of the quantitative analysis.

Knacks and Keefer performed in their study in the late 1990s a cross-country investigation on the relation between social capital and economic performance (Knacks and Keefer, 1997). For their analysis, the authors use data from the World Values Surveys using indicators of trust and civic norms for a sample of 29 countries (European and non-European). The authors investigate three hypotheses: (1) the relationship between norms of civic cooperation, interpersonal trust, and economic performance, (2) the conflicting hypotheses of Putnam and Olson on the relation between associational activity and growth, and (3) the determinants of trust and norms of civic cooperation. Their main findings are that trust and civic cooperation do have an important impact on economic activity. On the contrary to Putnam's hypothesis that horizontal networks reinforce trust and civic norms, they did not find any statistical relation. According to their findings, promoting horizontal associations may actually be counterproductive since they are not directly related to economic performance and unrelated to trust. Furthermore, two variables, low social polarisation and formal institutional rules, are associated with the development of cooperative norms and trust. Interestingly,

trust's relationship with growth is especially large in poorer countries which may be identifiable in the less developed financial sector and unreliable enforceability of contracts. Therefore, trust is more important in facilitating economic activity where formal institutions are unavailable.

The paper by Parente explores the relationship between social capital and the production structure, contributing to the debate on regional disparities (Parente, 2019). For the empirical analyses, she adopted different data from the European Social Survey for social capital endowments, the European Cluster Observatory for regional production specialisation, and OECD and Statistical Office of the European Communities for the regional inequalities. Afterwards, she tested four hypotheses: (1) the inverse relation between income inequality and social capital can be extended to the case of a multidimensional measure of inequality, (2) the relation tested by H1 may be boosted by higher levels of both diversification into industrial clusters and specialisation of clusters' business environment, (3) the institutional environment is relevant and good local governance can help reduce inequalities, and (4) the degree of urbanisation, land use and infrastructures' assets can change the patterns, lowering or increasing inequalities depending on the level of inclusiveness and relatedness they can facilitate. The results tend to confirm major findings from the literature. The relation between inequality and social capital variables is an inverse one also for the loss in human development and the human inequality coefficient. Hypothesis 1 is therefore significant. For what concerns the higher diversification into product specialisation of hypothesis 2, findings are significant again, demonstrating that when production specialisation occurs, inequality is reduced. Moreover, the outcomes support the third hypothesis, that an increase in the quality of local government translates into a decrease in the level of inequality. For what concerns the last hypothesis, it is not significant, meaning that the regional scale does not influence the level of inequality.

In their study 'Social capital, innovation, and growth: evidence from Europe', Akcomak and Weel investigate the twofold relation between social capital and innovation and growth (Akcomak and Weel, 2009). They advance two assumptions: first, that the levels of social capital developed from historical institutions and investments, and second, that innovation may bring some clarity in the academic literature on the disputed link between social capital and economic performance. They argue that innovation might be the channel for social capital fostering income growth as it is a risky activity that requires higher levels of interpersonal trust. They apply their analysis on 102 European regions using data from the European social surveys and the European values study surveys in the period from 1990 to 2002. Their findings establish that a higher stock of social capital yields higher levels of innovation. And, while they do not find a direct relation between social capital and income

growth, the evidence suggests a significant effect of innovation on income, explaining 15 per cent of the change in income.

2.4 Social capital in Italy

In this section, a closer look will be given to studies on social capital in Italy. These papers analyse mostly the effects on well-being, civic engagement, economic growth, health, and innovation. Regarding the Italian literature on social capital, it witnessed a huge increase since the publication of 'Making democracy work: civic traditions in modern Italy' written by Putnam et al. in 1993 (Putnam et al., 1993). The book triggered a lively discussion involving not only sociologists and economists but also historians and statisticians. Since then, researchers have investigated further the two main hypotheses advanced. First, that social capital was the reason for a minor economic development in the South. Second, some researchers emphasizing the findings on differences in the institutional performance of the Italian regions, hypothesized that social capital is strictly path-dependent, namely an inherited process from the past, time-consuming, and with obligatory paths.

A part of the literature immediately after the publication of the work of Putnam et al. focused on confirming or confuting the findings. Furthermore, already in 1995, Putnam published together with Helliwell a piece revisiting and reclaiming what has been explored and discovered previously (Helliwell and Putnam, 1995). Building on Putnam's previous work, they adopt three determinants for social capital: civic community composed of the indicators newspaper readership, availability of sports and cultural associations, turnout in referenda, and the incidence of preference voting, institutional performance measured by twelve separate elements, and citizen satisfaction based on a number of surveys. They find that a new divergence is taking place in the regional per capita incomes starting from 1983. This phenomenon coincides approximately with the regional government reforms dislocating more power towards local administrations. Yet, due to the embeddedness of social capital in the North, the powers conferred were used more effectively in regions with more social capital.

De Blasio and Nuzzo re-examine Putnam's work by providing an empirical investigation of the underdevelopment of the South (De Blasio and Nuzzo, 2004). Hence, they test five variables particularly relevant to the South of Italy: worker productivity, entrepreneurship, female labour market participation, job referrals, and higher education. Their results establish that there is no correlation between social capital and the five key issues introduced, but two contemporary alternative measures as blood donation and volunteering, are highly correlated with referenda turnout.

In 2013 Ferragina, by reassessing *Making Democracy Work*, proposed an alternative explanation for the lack of social capital in Southern Italy (Ferragina, 2013). Challenging Putnam's thesis that the lack of social capital in Southern Italy was the product of a historical anomaly, he tests first the determinants of social capital in a wider European context. Then, by looking at distribution of income, participation in the labour market, and national cohesion, his findings shed a new light since the South of Italy yields a low social capital score with a positive residual. According to the methodology adopted, this indicates that social capital levels are higher than presently detected. His article, therefore, refutes the historical explanation of medieval towns between the North and the South adopted by Putnam, asserting that the historical legacy of the South constituted a positive factor mitigating the negative effects of the variables analysed. Furthermore, his research results demonstrate how multifold the issue is in analysing correctly and in a comprehensive manner the question of social capital. Furthermore, it also opens the door to the acceptance of analysing social capital not only by focusing on one country but in order to fully grasp its notion, and a comparative approach might also be included.

Micucci and Nuzzo enriched the literature by investigating three aspects: the best proxy of social capital at the local level, define the current geography of social capital endowment, and study the association between social capital and the distribution of industrial districts (Micucci and Nuzzo, 2003). They conclude by acknowledging measurement difficulties of available data at regional and provincial level (they started off with 50 variables for social capital but ended up using only 14). Furthermore, regions in the North-East exhibit the largest stock of social capital and that area of the country together with Tuscany have the highest incidence of industrial districts, highly endowed with social capital.

Andini and Andini following the contribution by Putnam look at the link between social capital and economic growth (Andini and Andini, 2019). In contrast to most studies, they use municipality-level data from the period 1951-2001. They confirm the positive relationship between social capital and economic growth which is particularly strong in the Centre-North of Italy. Interestingly, the link is stronger in the decade of the 1950s, which might suggest that after the Second World War when formal institutions did not entrench themselves, yet the resort of informal ties, relations, and networks might have been prevailing.

Nevertheless, the literature on social capital was not only restricted to examining the relationship between economic growth and social capital but also investigated its application in other fields. First Stanzani and then Calcagnini and Perugini, put under the focus of their lens well-being

and the quality of life (Stanzani, 2015; Calcagnini and Perugini, 2019). The former first classifies social capital in three levels: macro (as a collective resource), meso (as a resource available amongst members of specific groups), and micro (as an individual resource). And then, via statistical analysis, he demonstrates how only macro social capital can be associated with well-being and that merely the symbolic and cognitive qualities of social capital do influence the result. The latter, using trust, networks, and social norms as proxies for social capital, do find an interdependence between social capital and well-being. However, this relation is not uniformly distributed across the country, not only between North and South but also between adjacent provinces.

Furthermore, in their analysis on social capital and health, Fiorillo and Sabatini show that people with frequent social contacts are more likely to report good health (Fiorillo and Sabatini, 2015). Crescenzi et al. establish a link between the bridging form of social capital – networking between heterogeneous groups – as a key driver for the innovation process (Crescenzi et al., 2012). Additionally, cooperation and communication are explored by Mamei et al. (Mamei et al., 2018). They introduce two different categorizations of the synchronization process: within synchronization (cooperation within a close proximity-based community at municipality level) and between synchronization (cooperation among different communities in a larger geographical area at the provincial level). By testing these two concepts using mobile phone data with social capital, they discovered that between synchronisation is negatively correlated with referendum turnouts, blood donations, and association density, while within synchronisation is positively correlated with the proxies of social capital. These results are in line with the literature that confirms how the degree of heterogeneity in a community has an influence on the behaviour and the actions of the members.

Blasio and Nuzzo, on the other side, review the theory on the negative relationship between social capital and inequality (Blasio and Nuzzo, 2004). Using data from Italian regions, their analysis confirms the theory. Yet, the inequality is stronger when taking into account the inequality of income rather than wealth. Moreover, splitting social capital into the bridging, bonding, and linking types, the findings offer a negative correlation with bridging and linking, although weaker, but a positive for bonding. They conclude that the negative correlation can be explained on the one hand, through the effect of local endowments of social capital on the opportunities of individuals; on the other hand, it may derive from local distributive unequal assets on the social behaviour of the citizens.

A very important contribution to the literature is done by Sabatini who examines the effects of the three dimensions of social capital, bonding, bridging, and linking in the context of the Italian regions (Sabatini, 2009). Bonding social capital as abovementioned refers to the role of the family.

Generally, bonding social capital hinders the spread of knowledge and the socialisation of trust. When also taking into account the quality of the family relations, Centre and Northern regions rank on top while Southern regions are at the bottom. While, when looking merely at the intensity the situation is flipped over with the Southern regions on top and the Centre-Northern ones at the bottom.

For what concerns bridging, often defined as the informal networks of weak ties between friends, the strong polarisation is again confirmed. Southern regions are at the end of the rankings distant from the other parts of the country. Linking social capital also describes the vertical relations that connect individuals or their networks to people or groups in position of economic or political power. Here, once more Northern regions yield a higher score than Southern regions.

2.5 Conclusions

This first section introduced the term of social capital, embedding it into the historical process of the failure of traditional economic theory to explain growth fully. From the 1990s onwards, it caught the attention of many authors creating a bandwagon effect that led to the explosion of contributions on the topic. Due to its multi-faceted nature, social capital was therefore applied in various fields of the academic literature, also on one of the development studies.

Furthermore, while there has not been agreement on a comprehensive and accepted definition of social capital, many authors acknowledge the three-fold nature of social capital (bonding, bridging, and linking). Especially the latter has been described as the one going beyond merely looking after and preserving family ties (bonding) and relations reaching outside the household such as with friends, associates, or colleagues (bridging). Linking social capital refers, therefore, to the ability to create connections between different associations or groups, touching on the ability to ‘network’ and has been pinpointed as the form of social capital needed to pursue sustainable territorial development. Moreover, in recent years the term territorial capital encompassing various forms of capital and of which social capital is part has been introduced in the literature as well.

For what concerns the empirical evidence, there are a plethora of studies at the European and Italian levels. There are no unanimous findings as the results tend to vary across the government level chosen, the statistical method, and the type of proxy used for social capital. In the following chapter, the European Cohesion Policy will be discussed and related to social capital in the fourth chapter.

Chapter 3 - Cohesion Policy

After having discussed the term social capital, this chapter will focus on delineating the evolution of the European Cohesion Policy aiming a closer look at the different programming cycles with its different investment and policy priorities. This analysis will be paramount in first understanding the nature of the Cohesion Policy, second the development of its main goals, and third how and to what extent the Cohesion Policy is effective in delivering its promises.

3.1 Historical analysis

When the founding Members gathered to establish the first common European institutions, there were initially no intentions to integrate policies on regional development as was the case with the coal and steel sector. Since the end of the Second World War, the leitmotiv of almost every country was to secure enough jobs and a decent level of consumption for the average citizen. People were therefore employed by the thousands in the heavy industry sectors such as coal mining, steel manufacturing, atomic energy plants, or ship-building and later on in state-owned corporations. The imbalances among European regions but also within States started to appear and interest politicians and policymakers only after the economic boom post Second World War.

The first mentioning of any European action to tackle the differences between regions was present in the preamble of the Treaty of Rome in 1957 that established the European Economic Community. In order to reach the goal of development Member States committed to "reducing the differences existing between the various regions and the backwardness of the less favoured regions" (European Economic Community, 1957). Guaranteeing success in the undertaking, the European Investment Bank (EIB) and the European Social Fund (ESF) were instituted. While the former was tasked to provide loans with low-interest rates to the Member States for supporting infrastructure projects, the latter was designed to supply aid to immigrant workers.

However, no comprehensive plan took off. Leonardi gives two reasons for that: an institutional and a circumstantial one (Leonardi, 2005). From an institutional point of view, the Treaty was negotiated between the Member States and between the Member States and the European institutions. Accordingly, regions, provinces, or cities were not involved in the decision-making process. The second reason was the fact that the first interventions of the EEC were sectorial, and the procedures were dominated by the national governments. It would take almost twenty years for the Member States to agree on how to proceed with the development of regional policies.

The first common policy of the EU was the Common Agricultural Policy (CAP), with its subsequent financial instrument the European Agricultural Guarantee Fund (EAGF). The situation of European farmers was preoccupying European policymakers since the beginning as the overall increase of income in other sectors due to the economic growth which had been experienced was not reflected in the farming sector. Elevating national systems of agricultural support to a supranational level, the CAP was created in 1962. Its declared goal was the preservation of a distinctive economic sector with unique institutional and social features. By creating this system of price support, fearing the exports of farmers from third-world countries, the agricultural policy had an anti-market character adopting national strategies of economic modernisation and attaching small farmers' loyalty to rebuilt democracies (RIEGER).

Over time, the CAP had to be modified to not harm the principles of free trade of the World Trade Organisation (WTO). Due to rising costs in the 1990s, the CAP was reformed, focusing on decoupling income support from production subsidies through price policy. Therefore, the system evolved from one centred on the administration of prices into a system of direct payments to farmers. Furthermore, also a second component of the agricultural policy was introduced, namely rural development. Traditionally, the CAP absorbed most resources of the European budget for common European policies. In the Multiannual Financial Framework (MFF) of 2021-2027, for the first time, CAP and spending for economic, social, and territorial cohesion should draw in the same amount of resources, one-third of the EU budget – see figure 4. Moreover, currently, the European Commission, the European Parliament, and the European Council are negotiating a new legal framework for the CAP that will come into force on the 1st of January 2023.

Figure 5: Evolution of the main policy areas in the EU budget

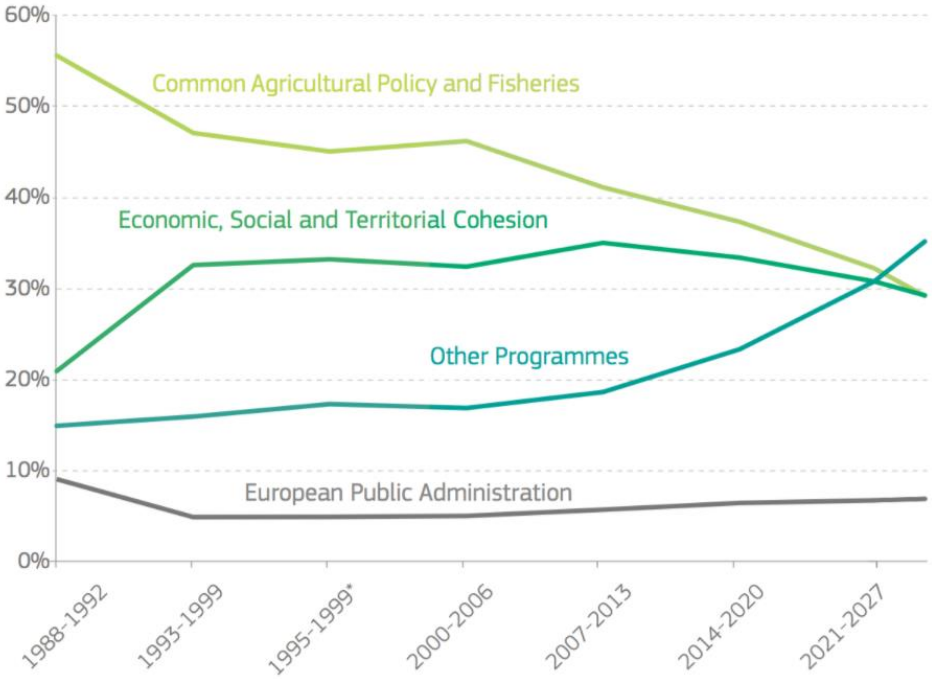


Figure 2 – Evolution of main policy areas in the EU Budget (elaboration by the European Commission)

Source: Donati, 2018

A series of events led to the establishment of the third Cohesion fund, the European Regional Development Fund (ERDF), in 1975. First, Europe was hit by the two oil crises that contributed to the creation of the phenomenon of stagflation, i.e., a stagnant economy with an increase in prices, that revolutionised economic theory as Keynesian thought did not prove itself capable of dealing with the crises. The second reason derived partially from the issue of stagflation was the decline in competitiveness of European companies in comparison to their Asian and American competitors. Finally, the third element was coming from within Europe and was strongly backed by the United Kingdom (UK). Before its accession to the EEC, the UK realised that it would not have substantial economic gains from entering the Union (at the time the EEC) with the state of affairs of the time. With a different structure of its agricultural sector than for example that of France, it could not be expected to be refunded via the CAP, and therefore the UK pushed for the launch of a new common European policy to compensate its contributions, namely the regional policy.

The struck deal foresaw financing of 1,3 billion European Currency Units (ECU) for the period 1975-1978, representing 5 per cent of the Community budget. The resources were distributed nationally, they were based on a quota system, and were allocated for projects that had to be co-financed by national budgets and were mostly infrastructure projects. Further, the shares were set

after inter-state bargaining and were linked to budgetary balances. Also, the Member States were the ones identifying the targeted areas eligible for funding. However, the Fund was too small to have an actual impact on the regional disparities. To recap, at that time, the CAP provided income integration, the ERDF focused on the economic and territorial aspect of cohesion, and the ESF covered the social aspect.

As the regional policy was a new European policy, it was revised and modified punctually at the end of each programming cycle. Nevertheless, the most significant changes adopted were agreed upon in the Council meeting in June 1984. The allocations were increased and allocated to the Member States not anymore on the basis of fixed quotas but rather on a new system of indicative ranges. The Commission's power was also increased; initially, the Council decided on unanimity. Moreover, a particularly relevant development was the establishment of the Integrated Mediterranean Programmes (IMPs) devised to compensate Mediterranean regions for the presumed costs of admitting Portugal and Spain.

The first real turning point for the Cohesion Policy came with the Single European Act (SEA) and the first multi-annual financial perspective, the Delors-1 package. The SEA gave for the first time a treaty base to the ERDF and expressively associated the idea of cohesion with the reduction of regional disparities. The two instruments to achieve this objective were the structural funds (ERDF, ESF, and CAP) but also the EIB. Furthermore, the treaty also assigned to the Commission the duty to reform the objectives and implementation procedures.

The 'new era' for the European regional policy began under the leadership of the President of the Commission Jacques Delors. Under his presidency in 1988, the Delors-1 package deal was approved that significantly reformed the structural funds and their application. First and foremost, the financial allocations for the structural funds were doubled in order to account for 1992 for 25 per cent of the EU budget. Then, at the heart of the deal was the introduction of four main principles guiding policy implementation.

The first one, labelled *concentration*, entails the identification of six priority objectives to concentrate spending on the neediest regions and states. The second termed *programming* involved a shift towards supporting multi-annual programmes regulated via Community Support Frameworks (CSF) that were drawn up by the Member States in line with the priorities and then approved by the Commission. In this way, the Commission repudiated the uncoordinated funding of nationally

selected projects in order to embrace the funding of programmes, outlined together with the Member States and adopting Commission-determined criteria.

The third element is *a partnership,* and it involved for the first time the requirement of also involving regional and local authorities in the planning, decision-making, and implementation of the structural funds. The last feature, *additionality,* reconfirms the obligation to ensure that European resources are not substituted for national expenditure.

In order to promote economic and social cohesion in the Community, the Cohesion policy was equipped since the beginning with six principles to guide the formulation and implementation of the European regional policy (Leonardi and Holguin, 2016). The first principle was the one of economic growth paramount to reach the convergence of less developed regions towards the developed ones. For reaching this ultimate objective of Cohesion Policy, at first, the programmes of the ERDF financed infrastructure projects in road, rail and sea transport, the start-up of new industries in response to growing demand, the transformation of existing production facilities, and the upgrading of the telecommunication links. The ESF provided training for the unskilled and upgrades of skills for the employed.

The second principle was measurability implicating the evaluation, mid-term or *ex post,* of the Cohesion Policy. While the Commission was initially hesitant to calculate the effects of the programmes, subsequent reports showed that it was having a positive effect on growth. Convergence was taking place between countries but not within countries. The third principle was the one of additionality meaning that Cohesion Policy would not substitute national funding but instead be used to augment national efforts to promote economic development. The rate of co-financing varied through time: at the beginning it was set at 50 per cent for those countries with a GNI above 90 per cent of the Community average and 25 per cent for those countries with a GNI below 90 per cent of the average. For the programming period 2014-2020, Member States obtained a rate of 25 per cent for those programmes implemented in the Convergence objective and 50 per cent for those in the Regional Competitiveness and Employment Objective.

The fourth principle centred around sustainability. The investments made by the Member States and the Regions as administrative units had to be sustainable over time, implying a financial self-sufficiency once European funding ended. In this perspective the advent of the private sector became crucial to sustain the costs and investments taking advantage of the public goods created. The fifth principle is concerned about the sound financial management. The Commission stresses the

importance of the correct use of the funds, which is guaranteed by four instruments: the biannual monitoring committees, the systematic evaluation of the programmes, the creation of a managing authority, a certification authority and an audit authority, and the introduction of the N + 2 rule. The sixth and last principle, refers to results orientation. The focus of EU funding is placed upon *ex-ante* evaluation in order to spell out the empirical needs of a country or region emerged as a tightening of the management of the Cohesion Policy.

The two following reforms have been more modest in scope and must-see within the context of the Treaty reform, deepening integration through the completion of the internal market and two enlargements. The Treaty on European Union (TEU) confirmed the cohesion objective and introduced a new Cohesion Fund that would support poorer countries (with a Gross National Product (GNP) per capita less than 90 per cent of the Community average) and finance environmental and Trans-European Network (TEN) projects. Furthermore, a Committee of the Regions (CoR) was instituted with, however, limited powers.

At the Edinburgh European Council of December 1992, the Delors-2 package was adopted. Besides doubling the resources for the period 1994-1999, some governing principles were fine-tuned. The structure of the objectives was modified, introducing the sixth objective after the accession of Sweden and Finland. Then, spatial coverage was increased from 42 per cent of the Community population to 52 per cent after German reunification. Third, the possibility to introduce a Single Programming Document instead of the CSF. Fourth, by broadening the scope of the partnership principle, the role of economic and social partners was reinforced.

With the Agenda 2000, the third financial perspective was laid out. It foresaw a reorganisation of the concentration principle with the downsizing of the seven priority objectives to three and a decrease in coverage of the Community population eligible for EU support (from more than 50 per cent to 40 per cent). Further, there was also a reduction of the Community Initiatives[3] from thirteen to four. In addition, implementation was decentralised towards the Member States by assigning them the responsibility for programme content, management, monitoring, evaluation, and control. In this respect, each Member State has to designate a Managing Authority for each programme.

[3] Community Initiatives are specific financial instruments of the EU's Cohesion Policy which were designed to find common solutions to specific problems affecting the whole continent. They were co-financed by the EU structural funds and provided added value to regional programmes. Through time their number was reduced from 13 to 4 and the INTERREG programme was consolidated as a separate objective.

In terms of the content of programmes, the Single Programming Document was further mainstreamed. Moreover, monitoring and reporting requirements were made prescriptive. An ex-ante evaluation, mid-term evaluation, and a subsequent update were introduced. And, a 'performance reserve' was launched whereby four per cent of programme allocations would be awarded at the mid-point. Ultimately, the n+2 rule was instituted requiring the Member States to spend the funds by the end of the second year after their commitment.

The reform prior to the programming cycle 2007-2013 has to be analysed through the lens of that time, with the most important development being the accession to the EU of 10 new Member States and the Lisbon Strategy calling for a boost of European growth through the knowledge economy and innovation and missing infrastructures. This reform is the most radical since the first Delors package. One aim was to set a more strategic approach for EU priorities introducing the National Strategic Reference Framework (NSRF), where Member States described their national objectives and strategy in line with the Community Strategic Guidelines (CSG) identified at the European level for the Cohesion Policy.

Under the new framework, the three Objectives 1,2, and 3 were substituted by three new Objectives: Convergence, Regional Competitiveness and Employment, and Territorial Cooperation. The bulk of the resources was destined to the Convergence Objective. Three new financial instruments of the EIB were introduced, JESSICA, JEREMIE, and JASPERS. For what concerns the Regional Competitiveness and Employment Objective, all regions outside the Convergence Objective qualify and are eligible for granting. Furthermore, mid-term evaluations and the performance reserve have become optional. Lastly, each and every Member State designates an Audit Authority that is in charge of presenting an Audit Strategy and submit an annual control report.

Worth mentioning is also the independent report written by Fabrizio Barca at the request of Commissioner for Regional Policy Danuta Hübner in 2009. Barca stresses the importance of modernising the European budget and suggests that the European Union allocates a share of its budget to the provision of European public goods through a place-based development strategy pointed at economic and social objectives. The place-based approach is a long-term strategy tackling the underutilisation of potential assets and reducing persistent social exclusion through external interventions and multilevel governance performance. Although, also in the subsequent years other authors called for such an approach until now it has remained on paper as the European Commission was not inclined to discuss a new treaty reform.

The fifth financial perspective was embedded in the Europe 2020 strategy responsible for the decade 2010-2020. It highlighted smart, sustainable, and inclusive growth for Europe. The adopted proposals of the Commission concerned the CSF, Partnership Contracts, and a menu of thematic objectives in line with the Europe 2020 Strategy. The CSF that set out the key actions to address EU priorities replaced the CSGs. Furthermore, Partnership Contracts were instituted between the Commission and the Member States that outlined the overall contribution to the Thematic Objectives and concrete actions to deliver Europe 2020 objectives. Moreover, the conditionality of funding took the form of both ex-ante conditions and ex-post conditions contingent on performance.

Another difference in respect to the previous programming cycle was the introduction of the third category of regions, the intermediate one, while before there were two: less developed regions (whose GDP per capita is less than 75 per cent of the average GDP of the EU), transition regions (whose GDP per capita is between 75 per cent and 90 per cent of the average GDP of the EU), and more developed regions (whose GDP per capita is above 90 per cent of the average GDP of the EU).

3.2 Programming cycles

This section wants to provide a brief overview of the evolution of the different programming cycles, each with its structure and its policy priorities since the Delors-1 package.

3.2.1 1989-1993

The first programming cycle that was established was profoundly marked by the changes set in the SEA and by the Delors-1 package. As mentioned above, the first policy principle was the geographical targeting of resources. Instead of planning interventions at the national level, a specific regional focus and target were given. Furthermore, five multi-annual programmes were identified to channel European funding (European Commission, 1993) through their relative Fund contribution:

- Objective 1: promoting the development of the regions lagging behind (where per capita GDP is less than 75 per cent of the Community average): ERDF, ESF, and EAGGF.
- Objective 2: converting the regions seriously affected by industrial decline: ERDF and ESF.
- Objective 3: combatting long-term unemployment: ESF.
- Objective 4: facilitating the occupational integration of young people: ESF.

- Objective 5a: adjusting the structures of production, processing, and marketing in agriculture and forestry: EAGGF.

- Objective 5b: promoting the development of rural areas: EAGGF, ESF, and ERDF.

The total structural funds budget was assessed at 71,368 million ECUs, and the resources allocated for Cohesion amounted to 20 per cent of the total budget. In terms of income of own resources, the traditional resources were expressed as a percentage of the Community's total GNP increased from 1,15 per cent in 1988 to 1,2 per cent in 1992.

Table 5: Overall distribution of the structural funds 1989-1993

Table 2.3 Overall distribution of the Structural Funds 1989–93 (MECU in current prices)

Member states	Ob. 1	Ob. 2	Ob. 3 & 4	Ob. 5a (agric.)	Ob. 5a (fish)	Ob. 5b	IMP	CI	CF	Total	Percentage
Belgium	–	214	344	134	15	33	–	124	–	864	1.20%
Denmark	–	25	171	91	94	21	–	28	–	430	0.60%
Germany	2955	581	1054	878	36	511	–	416	–	6431	9.00%
Greece	7528	–	–	–	–	–	648	705	280	9161	12.80%
Spain	10171	1505	837	229	92	265	–	1128	859	15086	21.20%
France	957	1225	1442	1274	135	874	462	573	–	6942	4.70%
Ireland	4460	–	–	–	–	–	–	297	144	4901	4.90%
Italy	8504	387	903	493	106	360	452	667	–	11872	16.70%
Luxembourg	–	12	11	29	–	3	–	22	–	77	0.10%
Netherlands	–	165	405	79	43	33	–	89	–	814	1.10%
Portugal	8451	–	–	–	–	–	–	725	285	9461	13.20%
United Kingdom	793	2015	1502	316	58	132	–	513	–	5329	7.50%
Total	43819	6129	6669	3523	579	2232	1562	5287	1568	71368	
Percentage	61.50%	8.60%	9.30%	4.90%	0.80%	3.10%	2.20%	7.40%	2.20%	100.00%	100.00%

Source: European Commission. The impact of structural policies on economic and social cohesion in the Union 1989–1999. (Luxembourg, 1997).
IMP: Integrated Mediterranean Programme
CI: Community Initiatives
CF: Cohesion Fund

Source: Leonardi, 2005

Table 5 exhibits how Objective 1 was granted 61,5 per cent of the total structural fund's resources, Objectives 3 and 4 with 9,30 per cent, and Objective 2 with 8,60 per cent. The main beneficiaries of the Cohesion Policy were countries that joined the Community in the 80s as Spain (21,20 per cent of total resources), Portugal (13,20 per cent), and Greece (12,80 per cent). Italy received the second-highest proportion of allocations, namely 16,7 per cent. Also, for the Community Initiatives, Spain received the most funds, followed by Portugal and Greece.

A second element of the reform was the method for determining eligibility. From that moment on, the Community was the one deciding on the eligibility criteria. Under Objective 1 were eligible regions with a GDP per capita lower than 75 per cent of the Community average. Resources were allocated on the basis of need breaking the paradigm of historical allocations via the quota system. For the countries complying with Objective 1 (Greece, Ireland, Portugal, and Spain, also termed

'cohesion countries'), European funds would cover 75 per cent of the investment, while for the other countries, the contribution would provide for 50 per cent of the investment. Furthermore, also a series of Community Initiatives (16) were introduced focusing on specific thematic aspects and receiving 7.4 per cent of the total structural funds. The most relevant programmes were: STRIDE (innovation and development), LEADER (rural development), and INTERREG (border area development).

Another novelty was the introduction of the CSF containing a multi-year integrated planning process. The financial package was structured into a planning document and underwritten by the Commission, the Member State, and the Regions. Furthermore, with the establishment of the principle of additionality, structural funds were distributed in addition to national, local, or private resources. Finally, the practice of partnership set up the rules safeguarding that in countries with regional governments Regions managed the allocation of resources while in multi-regional one's national government was in charge.

3.2.2 1994-1999

The second cycle witnessed a reconfirmation of the principles introduced in 1989. To Objective 3 was added the integration into the working life of young people, and Objective 4 changed into facilitating the adaptation of workers to industrial changes and changes in production systems. The most relevant innovation was the effective doubling of resources destined to the Cohesion policy, reaching 162,129 MECUs. The repartition among the countries also slightly changed as illustrate by table 6. The country receiving most funds remained Spain with 26,2 per cent of the total allocations, followed by Germany with 13.4 per cent due to the German unification process, and Italy with 13.30 per cent. The countries that lost most out were Italy (-3.4 per cent in comparison to the previous cycle), Portugal and Ireland (-2.3 per cent), and Greece (-1.9 per cent).

Table 6: Overall distribution of the structural funds 1994-1999

Table 2.5 **Overall distribution of the Structural Funds, 1994–99 (MECU in current prices)**

Member states	Ob. 1	Ob. 2	Ob. 3 & 4	Ob. 5a (agric.)	Ob. 5a (fishing)	Ob. 5b	CI	CF	Total	Percentage
Belgium	730	341	465	170	25	77	288	–	2096	1.30%
Denmark	–	119	301	127	140	54	103	–	844	0.50%
Germany	13640	1566	1941	1070	75	1227	2212	–	21731	13.40%
Greece	13980	–	–	–	–	–	1154	2602	17736	10.90%
Spain	26300	2415	1843	326	120	664	2782	7950	42400	26.20%
France	2190	3769	3203	1746	190	2236	1605	–	14939	9.20%
Ireland	5620	–	–	–	–	–	482	1301	7403	4.60%
Italy	14860	1462	1715	681	134	901	1898	–	21651	13.30%
Luxembourg	–	15	22	39	1	6	20	–	103	
Netherlands	150	650	1079	118	47	150	422	–	2616	1.60%
Portugal	13980	–	–	–	–	–	1048	2601	17629	10.90%
United Kingdom	2360	4580	3377	186	89	817	1572	–	12981	8.00%
Total	93080	14917	13946	4463	821	6132	13586	14454	162129	
Percentage	57.90%	9.20%	8.60%	2.70%	0.50%	3.80%	8.40%	8.90%	100.00%	100.00%

Source: European Commission. The impact of structural policies on economic and social cohesion in the Union 1989–1999. (Luxembourg, 1997).
CI: Community Initiatives
CF: Cohesion Fund

Source: Leonardi, 2005

Although less than in the previous cycle, the most financed Objective persisted to be the first one with 57.9 per cent, then Objective 2 with 9.20 per cent, and the Cohesion Fund with 8.90 per cent. This last instrument was also considered as one of the most important changes. It was restricted to those countries with a national GDP below 90 per cent of the EU average, which included at the time Greece, Ireland, Portugal, and Spain. Cohesion Fund allocations were not fragmented on a regional basis; rather, they were allocated on a project-by-project basis, financing improvements in infrastructure and environment. The final aim of the Fund was to support countries bringing their budgets in line with the Maastricht criteria. Moreover, the Community Initiatives were decreased to 13 and received 8.4 per cent of the overall amount. The most relevant were INTERREG II, LEADER II, and URBAN.

Following the ex-post evaluation of the programming cycle, it is possible to give insights into the exact allocation of resources. Available online were evaluation reports on Objective 1 and 2 and the URBAN initiative. The Italian Regions eligible for the Objective 1 were Abruzzo (for a three-year transition period until 1997), Basilicata, Calabria, Campania, Molise, Puglia, Sardegna, and Sicilia, for a total of 21 million inhabitants covered (ECOTEC, 2003). In terms of employment rate, it decreased in all eight regions in 1999 in comparison to 1993, and the unemployment rate rose. The thematic subdivision of the resources was the following for Italy: 16.1 per cent for transportation, communications, and energy infrastructure, 20.9 per cent for the environment, 37.9 per cent for

business support and infrastructure, 9.8 per cent for human resources, 14.9 per cent for agriculture, rural development and fisheries, 0.4 per cent for the technical assistance. Italy spent for human resources below European average but most for the environment that includes research and development and energy infrastructure, however. While a detailed examination of the effectiveness is impossible since countries did not develop targets for every indicator, the report highlights a synthetic analysis of the effectiveness. This was considered strong for supporting innovation and research and development, modernising the fishing sector, and supporting telecommunications infrastructure, and developing an Information society. Nevertheless, supporting skills development and overcoming territorial imbalances was scored as weak.

Pertaining to Objective 2, eleven Regions were eligible: Piemonte, Valle d'Aosta, Lombardia, Veneto, Friuli-Venezia-Giulia, Liguria, Emilia-Romagna, Toscana, Umbria, Marche, Lazio (CSES, 2003). Data shows that from 1994 to 1999, unemployment decreased from 7.8 per cent to 6.8 per cent and also witnessed an increase in the GDP per capita. The total jobs created thanks to European funding amounted to 48'388 with a cost per job of Euro 7.996 and above average.

The URBAN Community Initiative was launched as a response to the challenges faced by Europe's cities in terms of high unemployment, a neglected physical environment, and the risk of social exclusion (GHK, 2003). With a total of 118 URBAN programmes supported, it received a total allocation of 900 million euros. In Italy, the initiative was used to finance projects for physical and environmental regeneration (63 per cent), entrepreneurship and employment (18 per cent), and social inclusion (12 per cent). Italy is the country that spent by far most of its resources for physical and environmental regeneration and less than the EU average for the other categories. The most significant impacts were achieved for the physical environment, institutional impacts, and improvements in socio-economic conditions, while social capital impacts are ranked as fourth. The worst placed categories were the spread of positive impacts on neighbouring areas and displacement of urban problems to neighbouring areas. Social capital was improved by changing the image of the area, improving the feeling of safety, building up the confidence of residents, and increasing the sense of community. Furthermore, empowered residents and organisations were more active in improving the area.

3.2.3 2000-2006

Two relevant factors influenced the negotiations of the third programming cycle. The first was the commencing of the European Monetary Union in 1999, emphasizing the integrated nature of regional and national markets within the European level. The second was the Eastern enlargement that would lead to the inclusion of 10 new Member States and would need to take into account the introduction of pre-accession funds.

In order to cope with the fight against unemployment, the Objectives were restructured. Objectives 3 and 4 were agglomerated into the new Objective 3 dedicated to professional education for unemployed and employed workers. Objectives 2 and 5b were merged into the new Objective 2, supporting the economic and social conversion of areas facing structural difficulties. For both these Objectives, the policies were regionalised, meaning that the Regions had to prepare and present regional operational programmes while the national governments were left with a coordination role.

- Objective 1: Promote the development and structural adjustment of regions whose development is lagging behind: ERDF, ESF, and EAGGF.

- Objective 2: support the economic and social conversion of areas facing structural difficulties: ERDF and ESF.

- Objective 3: supporting the adaptation and modernisation of policies and systems of education, training, and employment: ESF.

Another innovation concerned the new rural development programme, which was launched in the year 2000 and that put Regions in charge with the drawing of plans on how to allocate these funds.

Table 7: Overall distribution of the structural funds 2000-2006

Table 2.7 Overall distribution of the Structural Funds 2000–2006 (MEUR in 1999 prices)

Member states	Obj. 1	Transition ex Obj. 1	Obj. 2	Transition ex Obj. 2 & 5b	Obj. 3	Fishing out Obj. 1	CI	Cohesion fund	Total	Percentage
Belgium	0	625	368	65	737	34	209		2038	9.60%
Denmark	0	0	156	27	365	197	80		825	0.30%
Germany	19229	729	2984	526	4581	107	1608		29764	14.04%
Greece	20961	0	0	0	0	0	862	3060	24883	11.74%
Spain	37744	352	2553	98	2140	200	1958	11160	56205	26.53%
France	3254	551	5437	613	4540	225	1046		15666	7.39%
Ireland	1315	1773	0	0	0	0	166	720	3974	1.87%
Italy	21935	187	2145	377	3744	96	1172		29656	13.99%
Luxembourg	0	0	34	6	38	0	13		91	0.04%
Netherlands	0	123	676	119	1686	31	651		3286	1.55%
Austria	261	0	578	102	528	4	358		1831	0.86%
Portugal	16124	2905	0	0	0	0	671	3060	22760	10.74%
Finland	913	0	459	30	403	31	254		2090	0.98%
Sweden	722	0	354	52	720	60	278		2186	1.03%
United Kingdom	5085	1166	3989	706	4568	121	961		16596	7.83%
Reserve							155		155	0.07%
Total	127543	8411	19733	2721	24050	1106	10442	18000	211851	
Percentage	60.20%	3.97%	9.31%	1.28%	11.35%	0.52%	4.92%	8.50%	100%	100.00%

Source: INFOREGIO News, Newsletter n.65, June 1999; Note of the Commission on the distribution of the Funds for the Community Support Frameworks, 17/11/00.
CI: Community Initiatives

Source: Leonardi, 2005

Table 7 illustrates the distribution of the structural funds for the period 2000-2006. In the meantime, Austria, Finland, and Sweden are now also included. The countries that benefitted the most are Spain, with almost one-third of overall allocations (26,53 per cent), Germany (14,04 per cent), and Italy (13,99 per cent). The Objective that received the highest amount of funds was Objective 1 with 60 per cent, followed by Objective 3 with 11,53 per cent and Objective 2 with 9,3 per cent. Furthermore, the only eligible countries for the Cohesion Fund were Spain, Greece, Ireland, and Portugal.

In this programming cycle, the Community Initiatives witnessed a heavy cut, from 13 to only 4: (1) transnational, cross-border and inter-regional cooperation designed to stimulate the balanced and harmonious spatial planning and development of the European territory (INTERREG), (2) economic and social conversion of towns, cities and urban areas in crisis, in order to promote sustainable urban development (URBAN), (3) rural development through initiatives developed by local action groups (LEADER +), (4) transnational cooperation designed to promote new means of fighting all types of discrimination and inequality with regard to the labour market (EQUAL).

Overall, the budget for the seven years amounted to 213 billion Euros, and in addition, 47 billion Euros were designated for the applicant countries. A portion of these last funds was immediately available and had to be spent for pre-accession structural policies and rural development programmes.

A novelty was the introduction of the so-called 'N+2 rule' that allows Member States to receive upfront a percentage of their resources that had, however, to be allocated by the end of the second year. Moreover, a 'performance reserve' was established. The Commission withheld 4 per cent of the Member States' total allocations of the structural funds. The distribution of the reserve was then based on the performance measures. The Commission could so award to a programme 4 per cent on the basis of the evaluation report is submitted.

Within the total ERDF and CF commitments for the period 2000-2006 at the regional level 60 per cent of the resources were allocated to basic infrastructure projects, 30 per cent to the productive environment and only 2 per cent to human resources including social inclusion (SWECO, 2008). Most Eastern countries, Spain, Greece, Ireland, and some Italian Regions used the funds to particularly focus on basic infrastructure, while a more balanced distribution with the productive environment took place in Germany, France, Italy, UK, the Benelux countries and the Scandinavian ones. Regarding Italy, the investments for non-human resources are impressive: for Objective 1 40 per cent allocated to the productive environment, 58 per cent to basic infrastructure and 2 per cent to miscellaneous projects; for Objective 2 51 per cent destined to the productive environment, 47 per cent to basic infrastructure, and 3 per cent to miscellaneous projects; for the URBAN initiative 28 per cent to the productive environment, 66 per cent to basic infrastructure, and 6 per cent to miscellaneous projects; for the INTERREG initiative 34 per cent to productive environment, 9 per cent to human resources, 33 per cent to basic infrastructure, 24 per cent to miscellaneous projects. For all these four funding possibilities, Italy consistently spent less in human resources than the EU average and sometimes as it is the case with the URBAN more than 25 percentage points less than the average.

For what concerns the ESF, the fund had a total of 120 billion Euros of which 62 billion Euros were European resources while the rest (58 billion Euros) were national resources (LSE Enterprise Ltd et al., 2010). The main beneficiaries were Germany with 23 billion Euros, Spain with 18 billion Euros, the UK with 15 billion Euros, and Italy with 13 billion Euros. Most of the resources were used to implement employment policies (33 per cent), invest in human capital (29 per cent), and ensure inclusive labour markets (12 per cent). In terms of policy field, the interventions concerned the activation of job seekers (34 per cent), the adaptability of individuals (32 per cent), and youth employment (26 per cent). Promoting equal opportunities for all and social inclusion were financed with respectively 21 per cent and 14 per cent of the total allocations. Therefore, the ESF was still very much concentrated on the employability and re-integration of workers.

Yet, focusing on the Member States level the picture changes. Italy allocated 30 per cent of its resources to improving human capital, 28 per cent to improving access to employment and 20 per cent to promoting partnerships and mobilisation. Looking more closely at the expenditure category the following results are yielded:

- Development LLL systems: 11.1 per cent (above average (AA))
- Employment and training support for workers and companies: 5 per cent (AA)
- More innovative and productive ways of working: 4 per cent (AA)
- Modernisation of labour market institutions: 8.3 per cent (AA)
- Active and preventive measures to support employment: 12 per cent (below average (BA))
- Active ageing and longer working lives: 2 per cent (BA)
- Supporting self-employment and new businesses: 4.4 per cent (AA)
- Improving equal access to employment: 4.4 per cent (AA)
- Increasing migrants' participation in employment: 1.9 per cent (BA)
- Integrating disadvantaged people into employment: 9.9 per cent (BA)
- Reforming education and training systems: 10.4 per cent (BA)
- Promoting education and training throughout working life: 10 per cent (BA)
- Developing human capital potential in research and development: 8.1 per cent (AA)
- Partnerships networks and initiatives: 1.9 per cent (AA)
- Improving institutional capacity: 2.8 per cent (AA)
- Technical assistance: 3.6 per cent (AA)

Overall, Italy falls within the category of countries that focus their budgets on adaptability related categories of expenditures and on human capital related categories of expenditure.

An in-depth analysis of the effectiveness of each work package based on scores of various indicators demonstrates how for social inclusion with a focus on employability of vulnerable groups (WP 1) the score was the lowest (1-1.75 out of 5), for human capital with a focus on youth (WP 2) 2.5-3.5, for the work package 3 access to employment with a focus on youth, self-employed and women 2.5-3.5.

Concerning the ESF, Italy is one of the countries investing most in human capital and its efforts are also rewarded with high levels of effectiveness. Moreover, the measures taken in place for social inclusion are very poor, while the ones on employment are very positive.

For what concerns the URBAN community initiative II, it supported 70 programmes across 14 Member States and the EU contributed with 754 million Euros (ECOTEC, 2010). The main objectives were to formulate innovative strategies for sustainable economic and social regeneration of cities and exchange knowledge in relation to development and sustainable urban regeneration in the areas concerned. In Italy 10 programmes were activated with an allocation of 118.1 million Euros. The thematic emphasis was on physical and environmental regeneration and transport infrastructure (67.2 per cent in comparison to a 39 per cent EU average), social (9.6 per cent in comparison to a 31 per cent EU average), and economic regeneration and ICT (14.8 per cent in comparison to a 23 per cent EU average). Again, the data underline an Italian preference to support projects for infrastructure rather than for social measures. Furthermore, two Italian cities, Crotone and Milan did not meet their targets.

3.2.4 2007-2013

For this programming cycle, the *leitmotiv* was to stimulate growth and create jobs in all regions and cities of the European Union. For that reason, 347 billion Euros were allocated for the Cohesion Policy divided into three new Objectives. An innovation of this cycle was the expansion of the scope of the objectives: while before the focus was on enhancing growth and mitigating unemployment, now the target went beyond, taking into account for the first time broader transformative changes including new social aspects. The information of the following Objectives is derived from the Council regulation 1083/2006 (Council of the European Union, 2006).

- Convergence objective: speed up the convergence of the least-developed regions by improving conditions for growth and employment through the increasing and improvement of the quality of investment in physical and human capital, the development of innovation and

of the knowledge society, adaptability to economic and social changes, the protection and improvement of the environment, and administrative efficiency. ERDF, ESF, CF.

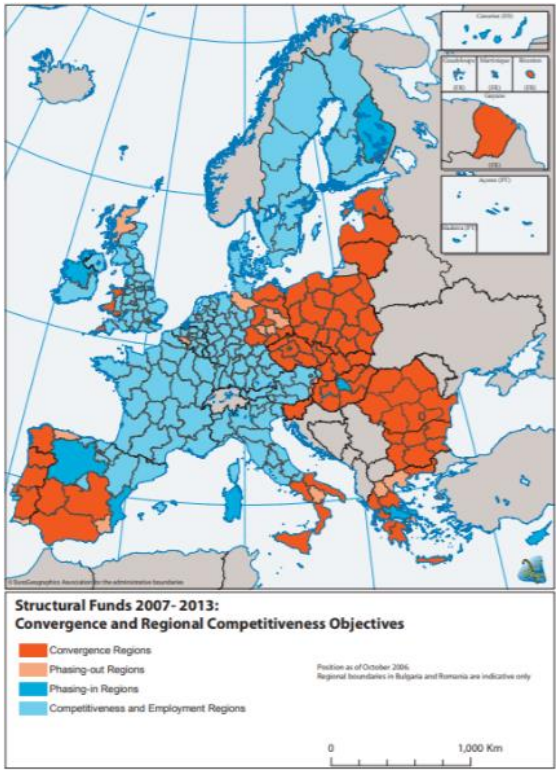
- Regional competitiveness and employment objective: aimed at strengthening the regions' competitiveness and attractiveness as well as employment by anticipating economic and social changes, including those linked to the opening of trade, through the increasing and improvement of the quality of investment in human capital, innovation and the promotion of the knowledge society, entrepreneurship, the protection and improvement of the environment, and the improvement of accessibility, adaptability of workers and businesses as well as the development of inclusive job markets: ERDF and ESF

- European territorial cooperation objective: aimed at strengthening cross-border cooperation through joint local and regional initiatives, strengthening transnational cooperation by means of actions conducive to integrated territorial development linked to the Community priorities, and strengthening interregional cooperation and exchange of experience at the appropriate territorial level: ERDF.

Under the Convergence objective are eligible those regions with a GDP per capita at or below 75 per cent of the European average. Furthermore, some regions with a GDP level of 75 per cent above the threshold due to the Eastern enlargement, but which would otherwise qualify, are also included. In terms of financial means, it is the most important objective as 81,5 per cent of the total budget is allocated to it.

The second objective covers all regions that are not eligible for the Convergence objective. Therefore, these regions have a GDP per capita above 75 per cent of the EU average. 16 per cent of the total allocations are destined for this objective. The third objective is funded with 2,5 per cent of the total budget, which is distributed across three types of programmes: cross-border cooperation programmes for areas sharing a 'common space,' cooperation programmes for large spaces like the Alpine and Mediterranean regions, and interregional cooperation programmes. Figure 6 displays the division in the various objectives of the European regions.

Figure 6: Classification of EU regions in the three Objectives



Source: European Commission, 2007

The countries that benefitted the most were Poland with 19.36 per cent of total allocations (67 billion Euros), Spain with 9.79 per cent (34 billion Euros), and Italy with 8 per cent (27 billion Euros). The countries benefitting from the 70 billion Euros of the Cohesion Fund were the Czech Republic, Estonia, Greece, Cyprus, Latvia, Lithuania, Hungary, Malta, Poland, Portugal, Slovenia, Slovakia, and on a transitional basis Spain. Here, the Community Initiatives were mainstreamed into the national and regional operational programmes.

Ultimately, the *ex-post* evaluation reports of the European Commission give insights into the effective management of the structural funds and how they were distributed according to their thematic objectives. The evaluation report of the ERDF and Cohesion Fund gathered findings by policy theme and broke them down into work packages: (1) support to SMEs and business innovation, (2) financial instruments for enterprise support, (3) support to large enterprises, (4) transport, (5) environment: waste, water and waste water infrastructure, (6) energy efficiency in public and residential buildings, (7) culture and tourism, (8) urban development and social infrastructures, (9) European territorial cooperation, and (10) delivery system (European Commission, 2016). Of most interest is the work package on urban development and social infrastructures that received almost 29

billion Euros representing 11 per cent of the total ERDF allocation. Support for urban development was concentrated in four countries Italy, Poland, Greece, and Germany. The report concludes that urban regeneration and social infrastructure projects played a major role in strengthening the growth potential of regions and enhancing territorial cohesion. They do, however, need to be embedded in a long-term strategy to be fully effective, which does entail local authorities with the capacity and skills for implementing the policy.

The Commission Staff Working Document evaluating the ESF highlighted that the fund had a total allocation of 76.8 billion Euros available for the period January 2007 until December 2015 (European Commission, 2016). Almost 70 per cent of the EU funding was allocated to support projects in convergence regions. The funds were assigned across the following categories: investments in human capital (45.5 per cent), investments in access to employment activities (34.5 per cent), social inclusion (14.3 per cent), strengthen institutional capacity (2.1 per cent), and promoting partnerships (0.7 per cent).

3.2.5 2014-2020

The fifth programming cycle was centred around the Europe 2020 strategy that outlined three new priorities: a smart growth that develops an economy based on knowledge and innovation, a sustainable growth that promotes a more efficient economy in terms of resource, greener and more competitive, and an inclusive growth that promotes an economy with a high rate of employment, ensuring social and territorial cohesion.

For this strategy, the EU also defined the following targets: an employment rate of 75 per cent, investments in research and development at 3 per cent of EU GDP, the ‘20/20/20’ climate objectives, early school dropout rate should be cut down to below 10 per cent, and at least 40 per cent of the younger generation should have a higher education degree, and the number of people at risk of poverty should be reduced by 20 million.

The major change was the abandonment of the policy goal of Convergence and the creation of categories of regions. This categorization divided European regions into less developed regions with a GDP per capita below 75 per cent of the EU average, transition regions with a GDP per capita between 75 per cent and 90 per cent, and more developed regions with a GDP per capita above 90 per cent.

Further changes were the focus on results through common and programme-specific indicators, reporting, monitoring, and evaluation, a performance framework for all programmes guaranteeing clear and measurable milestones and targets, an increase of the performance reserve up to 5 per cent of national allocations, the introduction of *ex-ante* conditionality in order to ensure conditions for effective investment and macro-economic conditionality yielding an alignment with the new economic governance.

Moreover, the European Commission set 11 thematic priorities that support the smart, sustainable and inclusive growth for the period 2014-2020 with its financial allocation:

1. Strengthening research, technological development and innovation: 43 billion Euros
2. Enhancing access to, and use and quality of, information and communication technologies: 12 billion Euros
3. Enhancing the competitiveness of SMEs: 71 billion Euros
4. Supporting the shift towards a low-carbon economy: 41 billion Euros
5. Promoting climate change adaptation, risk prevention and management: 28 billion Euros
6. Preserving and protecting the environment and promoting resource efficiency: 61.5 billion Euros
7. Promoting sustainable transport and improving network infrastructures: 56 billion Euros
8. Promoting sustainable and quality employment and supporting labour mobility: 43 billion Euros
9. Promoting social inclusion, combating poverty and any discrimination: 49 billion Euros
10. Investing in education, training and lifelong learning: 34 billion Euros
11. Enhancing institutional capacity of public authorities and stakeholders and efficient public administration: 5 billion Euros

The investments from the ERDF supported all eleven objectives but with a focus on the first four. The main priorities for the ESF were objectives 8-11 and the Cohesion Fund supported objectives 4-7 and 11. In addition, 29 per cent of the resources has been allocated both to smart and inclusive

growth objectives, while 42 per cent was assigned to the sustainable growth ones. Interestingly, as of December 2020 funds for the sustainable resources were spent by Member States at a percentage rate of 61 whereas Italy spent 59.5. For the inclusion objectives 53.6 per cent of the resources were spent and Italy was able to spend only 45.6 per cent. Finally, for the smart objectives 50.3 per cent at a European level of the resources were spent while Italy was able to spend 48.6 per cent of its funds. Therefore, Italy spends always less than the European average and although it is true that Member States have time until December 2022 to spend their funds it signals how Italy is weaker in comparison to other Member States, this being one of the many reasons affecting absorption capacity that will be taken up later on.

In terms of resources, 51 per cent was allocated towards less developed regions, 15 per cent to more developed regions, and almost 10 per cent to transition regions. Poland received most structural funds in terms of percentage 22 per cent and in absolute terms 77 billion Euros, then came Italy with 32.8 billion Euros (9.3 per cent) and Spain with 28.5 billion Euros (8 per cent).

3.3 Case studies

Nevertheless, although the European Union spends billions of Euros each year for the Cohesion Policy promoting growth and hoping to foster the catch-up process by those countries lagging behind, there is no univocal answer for what concerns its effectiveness. Are the resources well spent and used to achieve their objective?

According to the EU, there is little doubt about that. A joint paper from two Directorates-General from 2013 highlights that because of the ERDF and the Cohesion Fund in 2011, 400'000 more jobs have been created in comparison to 2010 (European Commission, 2013). Most of the jobs were reported in the UK, Italy, Germany, Spain, Poland, and Hungary demonstrating the counter-cyclical job-creation effect of the Cohesion Policy. Furthermore, more than 50'000 start-ups have been supported, and 460 km of trans-European transport network roads and 334 km of trans-European transport network rails have been completed. Even the ESF proves to be of value by helping 2,4 million people to find a job from 2007 to 2011.

Also, the ex-post evaluations performed at the end of each programming cycle make it clear how important the Cohesion Policy is for European growth. The evaluation report of 2016 of the programming period 2007-2013 yields more than one million jobs created throughout the EU via the ERDF and the Cohesion fund (European Commission, 2016). Moreover, a multiplier effect of 2.74

Euros of additional GDP for each Euro spent by the end of 2023 is guaranteed, and public investments have been stimulated with an increase of 6.5 per cent of government capital expenditure with some peaks of +50 per cent in some EU12 countries.

However, while the EU confirms the Cohesion Policy's success, the academic literature is still quarrelling. Some authors were able to find a positive and statistically significant effect between the Cohesion policy and growth (Mohl and Hagen, 2010; Becker et al., 2010; Falk and Sinabell, 2008, Cappellen et al., 2003). While others, found no impact on convergence (Breidenbach et al., 2016; Dall'Erba and Le Gallo, 2008; Boldrin and Canova, 2001).

The discrepancy in results is most likely related to the difference in methodology concerning the number of Member States sampled, the level of classification of regions used (NUTS1-2-3), and the statistical methods adopted by the scientists. In recent years due to the development of statistical measures, the counterfactual method became widely used, allowing to differentiate between the policy impacts of all other characteristics of the territorial ecosystem that are not of interest. Looking at individual countries, adopting still different identification strategies and data sets, they showed that EU-wide aggregated results risk to average out important differences and cover differences within countries.

In addition to that, the Cohesion Policy is a multifaceted policy that seeks to address different objectives and is therefore hard to assess. Even though the eligibility criteria are explicit – for instance, Objective 1 is defined as NUTS-2 regions with GDP per capita lower than 75 per cent of the EU average – regions may qualify for different levels of funding. This is the result of a combination of the funding mechanism and the Council negotiations; thus, the aid intensity within Objective 1 regions can vary significantly.

Crescenzi and Giua investigated the effects of the Cohesion Policy on regional growth and employment by applying a counterfactual method (Crescenzi and Giua, 2020). In contrast to previous studies adopting data from the EU aggregated level and comparing regions at the NUTS-2 level, they take into account country-level heterogeneity and study regions at the NUTS-3 level. Therefore, they estimate the impact in the regions of each country separately, relying on the same identification strategy. For the period 2000-2014, the authors identify a positive effect of the Cohesion Policy on economic growth, yet the positive economic impacts are distributed differently across countries. Germany results to be the big winner in terms of regional growth, UK beneficiary regions are better off in terms of employment levels, while for Southern countries the situation is different: in Italy, a

short-term positive impact in terms of regional employment was recorded that vanished after the crisis and Spain did not benefit at all from the Cohesion Policy until the crisis and witnessed a positive effect only during the 2010-2014 period in terms of higher growth.

Another stream of literature looks at the impacts of Cohesion Policy from a different angle, indicating how the level of national institutions, macro-economic policies, and the social context are relevant in fostering economic growth. Ederveen et al. found that ERDF funding is significant on convergence only when taking into account variables such as openness, corruption, and inflation (Ederveen et al., 2006). Tomova et al. used national data for the EU27 in the period 1980-2010 and discovered that Member States with sound macroeconomic policies such as low levels of government debt have positive effects on socio-economic objectives (Tomova et al., 2013).

Moreover, Dall'Erba and Fang reflect in their meta-analysis of the impact of EU structural funds on regional growth on the three strands of growth theory usually used to capture the role of public investments in stimulating growth (Dall'Erba and Fang, 2017). The first one is the neoclassical growth framework relying on the assumptions of decreasing returns to capital and constant exogenous rate of technological progress. Hence, structural funds increase the growth rate of the recipient area, and the increase in economic activity does not change in the long run due to the decreasing returns to capital. Here, only changes in the rate of technological progress vary the steady growth rate. The second strand, the endogenous growth theory, is founded on the acceptance of constant returns to capital at the regional level, local externalities, and endogenous technological progress. Also, new investments in public capital foster the marginal product of private capital, which again increases capital accumulation and growth. The third strand, new economic geography, states that the construction of transportation infrastructures leads to a higher degree of accessibility and economic development in the regions where they are built. These projects are very important to connect remote and economically weaker regions with the core and the capital, usually a driving hub. Interestingly, the empirical literature has focused more on neoclassical convergence models, although since its conception, the Cohesion Policy has favoured infrastructure projects that do have a higher multiplier effect, especially in times of economic downturn.

A further stream of literature investigates the impacts of Cohesion Policy through the absorption capacity of a region. Yet, the field of research on the determinants of a region's abilities to efficiently manage European funds remains largely unexplored. Especially new EU Member States are faced on the one side with the possibility of receiving large amounts of money, and on the other side, they may lack the human capital and skills to administer the resources writing, implementing, and reporting a

project. Furthermore, in those countries that are also mostly former communist countries with a traditional centralist government, the involvement of local actors and other stakeholders such as social or private partners might also result in a challenge.

The literature identifies three approaches to examine absorption capacity:

- Macroeconomic absorption capacity in terms of GDP (limit of transfer of EU funds to a maximum of 3.8 per cent of a country's GDP);
- Financial absorption capacity in terms of the ability to co-finance programmes and projects from structural funds;
- Administrative capacity in terms of the ability of central and local authorities to prepare programmes and projects, to report, coordinate and implement them.

Kieran-Skabic and Tijanic adopted payments per capita and payments/commitments as indicators of the regional absorptive capacity (Kersan-Skabic and Tijanic, 2017). Their analysis yields that labour force characteristics (proxied by educational level and unemployment rates), investments, decentralisation, infrastructure development, and institutional framework (proxied by good governance and control of corruption) are crucial determinants for absorption capacity. Furthermore, they found important differences across regions in relation to their level of development.

These findings were also confirmed by Incaltarau et al., demonstrating that increasing government effectiveness and combating corruption had strong boosting effects on the absorption capacity of structural funds, particularly in new Member States in the period from 2007-2015 (Incaltarau et al., 2020). Interestingly, political decentralisation and domestic financial capacity did not result as significant. They were also able to outline a categorisation of EU countries in terms of absorption capacity: most of the new Member States with a low absorption capacity with the exception of Lithuania, Estonia, and Poland, Southern periphery countries such as Italy and Spain that also had low absorption rates, and the other EU-15 countries with high performance.

3.4 Conclusions

This brief synopsis of the Cohesion Policy yields how its historical evolution was initially marked by its exclusion from the European project, although its goal of pursuing regional development was present in the preamble of the Treaty of Rome. Through time, via exogenous factors such as the economic crises in the 70s and 90s and the EEC losing ground in competitiveness, in addition to

endogenous factors such as the enlargement, the regional policy in 1989 embodied the Cohesion Policy. Since then the Cohesion Policy has moved more and more to the centre of the EU not merely in terms of capturing an increasing part of the European budget – moving from 20 per cent to 30 per cent of the overall budget - but also in terms of impacting on European policies and objectives mirrored as the Agenda 2000, Europe 2020, and recently in the Next Generation EU.

Of equal relevance was the development of the setting of the programming cycles. Three major changes have been recognised as revolutionising the framework of the programming cycles. First, the shift from quota-based allocations to a new system of indicative ranges took into account the economic development of the territorial areas of the EU in terms of GDP. Second, the introduction of multiannual financial frameworks with a long-term budget covering periods of up to seven years. Third, the inclusion of local actors, mainly regions but increasingly also economic and social stakeholders and cities in the consultation, decision-making, and monitoring process.

A still ongoing debate, overlapping with the analysis of the Cohesion Policy, is one of its impacts and economic results that are brought about in the European regions. On the one side, the European Union is fiercely defending the Cohesion Policy declaring that it increases GDP growth and fosters job creation, and relying on the basis of studies by some social scientists; on the other side, other social scientists have found the opposite, that there is no effect between Cohesion Policy and the so-called economic convergence of the less developed regions. Without entering the merits of the debate, the discrepancy in results is most likely related to the difference in the methodology adopted, concerning the number of Member States sampled, the level of classification of regions used (NUTS1-2-3), and the statistical methods adopted by the scientists.

Chapter 4 - Cohesion Policy and the Fostering of Social and Human Capital

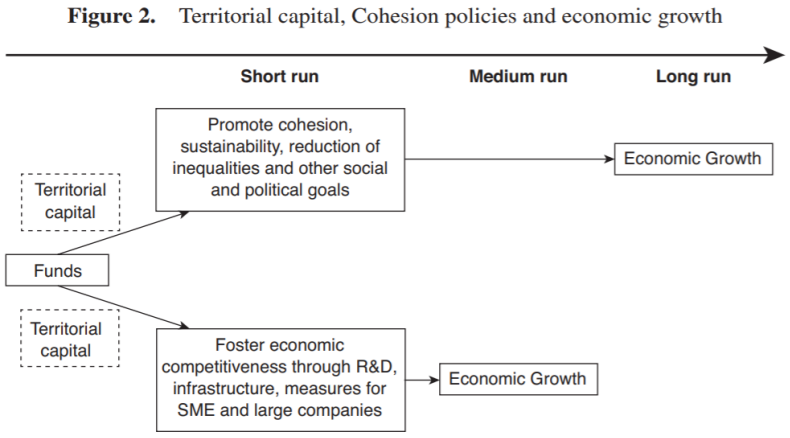
The previous chapters have examined separately the two main factors of this thesis namely in a first-place social capital and then the Cohesion Policy. However, it is the aim of this work to verify whether there is a relationship between the two factors. While chapter 5 will provide for the empirical analysis, this chapter 4 focuses on the empirical evidence which studies have found which conjugates Cohesion Policy and its impacts on two forms of capital: human and social.

4.1 Case studies

In the niche sector of literature studying Cohesion Policy's impacts on human and social capital, two strands can be distinguished. The first one encompasses these two forms of capital under the umbrella term “territorial capital” together with other forms of capital, while the second consists of authors who investigate the relationship between the two variables. Before starting to illustrate the studies, it is important to report how scarce the academic landscape is in terms of evidence in this field. This may signal that it is still very much an unknown territory but about to be crossed by few researchers adventuring on the topic, and we offer that this thesis is one such case as chapter 5 will show; we also surmise that, most likely this is due to the lack of data at the local level particularly on a longitudinal scale, and also to not up-to-date statistical methods.

Regarding the first line of studies, a thorough description of the concept of territorial capital has already been provided in chapter 2. Here, results are presented mainly from two researchers, Fratesi and Perucca, who followed the footsteps of Camagni, investigating the subject of territorial capital and the effectiveness of Cohesion Policy. In their first paper of 2014, these authors assume that Cohesion Policy investments can be classified into two categories: interventions designed to reach social and political outcomes and investments with the main objective of promoting economic growth (Fratesi and Perruca, 2014). Furthermore, their *ex-ante* assumptions rely on the mechanisms illustrated in the Figure 7 below.

Figure 7: Relationship between territorial capital and economic growth



Source: Fratesi and Perruca, 2014

While interventions fostering economic growth through R&D, infrastructure, measures for SMEs and large companies yield effects immediately in the medium term, those investments promoting cohesion, sustainability, reduction of inequalities, and other social and political goals reap the benefits only in the long term.

These authors then test their hypothesis using data from Central and Eastern European countries. They discover that there is no predefined effect of the Cohesion Policy, rather, that the impact depends on the kind and amount of territorial capital available in a region. Investments in immaterial assets seem to have increasing returns, yet varying on the degree of endowment: there is a positive impact between human capital and entrepreneurship, innovation, information and telecommunication policies, and also positive labour market policies for women. Moreover, their most important conclusion is that if the Cohesion Policy through the structural funds is more effective in regions with high levels of territorial capital, it conveys the message that investing in more developed regions pays greater returns than investing in weaker regions. Even though this counters the goals of Cohesion Policy. Therefore, the solution to this policy dilemma in order to affirm the goals of Cohesion Policy seems to be the enhancement of economic growth through improvements of territorial capital in the medium-long term.

These findings are confirmed in their article of 2017, demonstrating how territorial capital can act as a facilitator or inhibitor to economic growth policies (Fratesi and Perruca, 2017). Poorer regions, receiving most structural funds, with weaker territorial capital target mostly investments in basic infrastructure that does not impact immediately on growth but set the prerequisites for future growth. Richer regions received fewer funds but are able to invest those funds in interventions with

a weaker direct relation with growth, such as social and political policies. Ultimately, in order to break the vicious cycle, investments in structural assets of the region are required.

As it is the case with territorial capital also other studies established a link between Cohesion Policy and growth via investments in human capital. The role of human capital in fostering economic growth has been by now ascertained by the academic literature. Interestingly enough, the less developed European regions allocate around 23 per cent of their Cohesion Policy funding towards human capital, defined as labour market measures, education, or social inclusion (European Commission, 2014).

However, all other regions allocate 44 per cent of their resources to human capital interventions, almost double the amount of less developed regions. Yet, one issue persists as it is the case for social capital, and that is the definition of the human capital variable. There is no uniform agreement on which proxy is the most suited; some authors use the enrolment rate while others the average years of schooling and others again the percentage of citizens at university.

A report completed by Verga and Veld for the DG Economic and Financial Affairs of the European Commission in 2009 identified the gains that occurred from human capital and interventions in R&D (European Commission, 2009). Furthermore, Becker et al. analysed four programming periods: 1989-1993, 1994-1999, 2000-2006, and 2007-2013 and found that regions responded heterogeneously with smaller effects in regions with weak institutions and with levels of corruption and where human capital is scarce (Becker et al., 2018). They also suggest that if a region's human capital endowment would be raised by one standard deviation, it could gain an additional 0.63 percentage points of annual growth.

In preparation for the impact assessment of the funds for the post-2020 programming period, a report has been published to support the European Commission's Directorate-General for Employment, Social Affairs, and Inclusion (European Commission, 2018). This *communique* analysed the effects of five funds: the ESF, the Youth Employment Initiative, the Fund for European Aid to the Most Deprived, the Employment and Social Innovation programme, and the European Globalisation Adjustment Fund. The human capital investments of all funds generated benefits in terms of improved skills and employability, labour market integration, social innovation and exchange of knowledge, and improved quality of and access to education. The exact costs of these interventions do vary across the Member States and depend on the calculation method, the range of unit costs, and the complexity of assessing administrative costs.

If the literature on Cohesion Policy and human capital is scarce, the one considering the relationship between Cohesion Policy and social capital is even scarcer. Only few authors accepted the challenge to investigate this unexplored territory, and their works are reported as follows. Two of the most important scientists in this field are Leonardi and Nanetti, who already contributed to the work of Putnam's "Making Democracy Work: Civic Traditions in Modern Italy" that has been mentioned.

Nanetti and Holguin then further analysed the interrelation between Cohesion Policy and social capital by looking at the case study of Naples and its neighbourhood of Pianura (Nanetti and Holguin, 2016). The city of Naples was chosen due to its social and political deterioration caused by mismanagement, clientelism, political patronage on the one hand and, on the other, the presence of the mafia organisation Camorra. After the nation-wide judicial investigation, *Mani pulite*, a new mayor, Antonio Bassolino, was elected in 1993. He particularly pushed for Naples' participation in EU structural fund programmes and attained an agreement with the European Commission with which the Integrated Development Program (1996-2006) was agreed and implemented.

Already at that time, the nexus between the Cohesion Policy and social capital was expressed via three important aspects: the multi-level governance approach, the socioeconomic partnership, and the institutional learning. The conceptual framework defining the strategy of social capital created through the integrated development program is illustrated by figure 8.

Figure 8: Conceptual framework of the creation of social capital through the integrated development program

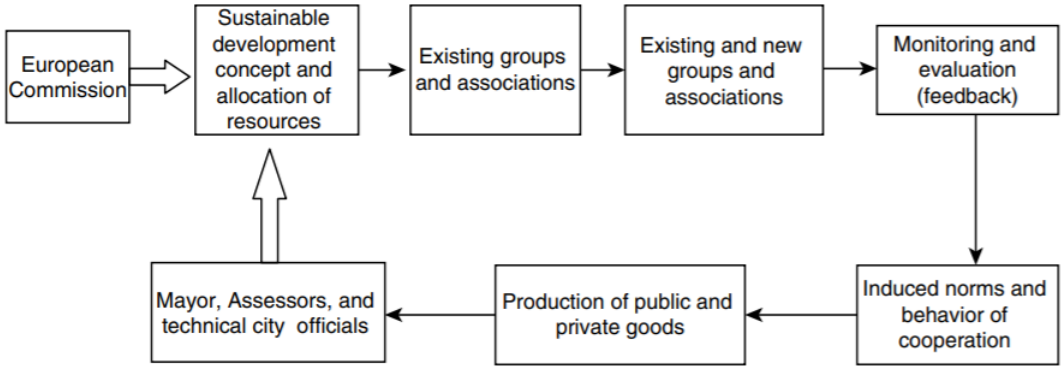


Figure 6.1 Conceptual framework of the first cycle of social capital formation in Pianura with the integrated development Program.
Source: Leonardi and Nanetti, 2008.

Source: Leonardi and Nanetti, 2008

The choice of intervention fell on the neighbourhood of Pianura because of four main factors, of which three due to their negative character and the last one for its potential. The first factor was the geographical complementarity with the URBAN program that operated in the neighbourhoods of the centre. The second was programmatic complementarity between the program in Pianura and the Naples' URBAN program. Third, the unique level of urban degradation characterising Pianura, with over 80 per cent of illegal housing and no service infrastructure. And finally, as a positive aspect, the promising social and economic potential such as the presence of young families, artisan traditions, and Catholic schools.

The Integrated Development Program should have initially lasted only five years unfolded over a ten-year time period due to the difficulties encountered in the implementation of the program. With circa 70 million dollars, it was the largest neighbourhood program undertaken by an Italian municipality until then. The program identified eleven objectives that were divided among five components: transport, environmental protection, service infrastructure, production and commercial development, technical assistance, and evaluation.

The ex-post evaluations at the end of the ten years determined an important growth in the stock of social capital in Pianura encompassing the creation of new neighbourhood associations such as the association of producers of local quality products and the anti-Camorra merchant association. The ex-post assessment evaluated the program on defining elements of social capital that were measured through surveys. These elements were trust, solidarity, action, neighbourhood identity, participation, and quality of life. It can be said that during the first survey, all elements yield very low levels for all indexes constructed and also below the municipality average. However, through time, the last survey indicated how the situation improved with higher scores attained for the quality of life, the sense of identity, the trust level, the participation level, and the action one closing the gap with the other neighbourhoods. Therefore, this study determined how relevant Cohesion Policy can be in fostering social capital in the medium-term.

Another very important contribution to this subject is the one made by Accetturo, De Blasio, and Ricci of 2014 (Accetturo et al., 2014). They examine the effects of transfers of the structural funds on trust and cooperation in subsidized regions. Looking at Objective 1 regions, results show that the receipt of EU funds lowers all the indicators of social capital. Further, they found that good local governments attenuate the negative effects of the transfers, in line with Leonardi and Nanetti's

findings. According to the authors, the more general findings are in line with previous literature arguing for the rent-seeking character of transfers, the growing payoffs for deviant behaviours, and decreasing degree to which citizens are willing to cooperate with each other. Additionally, due to the mismanagement of funds and fraudulent local politicians, individuals are forced to choose between behaving in a civic way or accepting bribes and transfers received by the local government. Still, the authors contemplate that the findings can be explained in the light of the fact that the transfers go to regions with low administrative capacity and poor effectiveness of local public goods.

4.2 Conclusions

The screening of the present literature on Cohesion Policy and its impacts on human and social capital determined how scientists have focused more on the economic effects of EU structural funds neglecting the ones on social aspects. Nevertheless, the connection of capital in both forms fostering economic growth, although mainly in the medium and long-term period has been ascertained. Yet, European less-developed regions always appeared less patient, thus preferring to invest in infrastructure projects with immediate economic returns.

Still, the lack of sufficient literature on the topic further justifies the thrust of the current thesis with its focal point being the analysis of the effects of social capital on the Cohesion Policy, launching a discussion not present in current research. Therefore, chapter 5 will start off by treasuring current research as well as the procedures and statistical methods adopted in order to develop its own analysis of the current state of the influence of social capital on Cohesion Policy spending in Italian regions.

Chapter 5 - Empirical Analysis

This chapter will be dedicated to the empirical and statistical analysis of the relationship between the Cohesion Policy and social capital. Chapter 4 delineated the current advancement of the literature evaluating the effects of the Cohesion Policy on the promotion of social and human capital. However, even fewer authors devoted their work to study the effects of social capital on the application of the Cohesion Policy. This relationship is going to be in the spotlight of the following analysis.

The examination will follow a two-step procedure. In a first moment the index of social capital will be computed following the identification strategy adopted by Sabatini (Sabatini, 2005). Then, a regression analysis will be performed to enquire about the relationship between a proxy for the Cohesion Policy and the social and human capital index.

5.1 Principal Component Analysis

Before moving to the explanation of the analysis, two common problems in empirical research on social capital are assessed. The first one is the common use of macro indicators, whose data available in terms of time series, are not directly pertinent to social capital's key dimensions. The use of indicators such as crime rates, participation rates in tertiary education, turnout at elections, and blood donation are widespread in research, yet their adoption increased the confusion around the term social capital and its relationship with its outcomes. Therefore, very often the proxies used for social capital are outcomes of social capital itself and undoubtedly there is a positive relationship between them. So, in line with Sabatini, this study concentrates on inputs of social capital and not on its outcomes discovered in the literature. Furthermore, this has also been performed in order to avoid risks of reverse causality in the regression, where the dependent and independent variable are associated and do affect each other in a way not presented by the model.

The second issue with which scientists are confronted is "aggregation". Most of current cross-national studies on the economic outcomes of social capital are based on different measures of trust derived from the World Values Survey. There, trust is measured at a micro level and relates to the specific environment influenced by various factors in which the individual lives. Aggregating this micro level data to a new macro measure of trust loses its bond with the social circumstances in which the information was created in the first place. As a consequence, in this study, measures of trust will not be taken into account in the computations.

In order to perform the regression analysis, first a principal component analysis (PCA) is carried out, which is perfectly suited to investigate multidimensional concepts such as social capital. PCA is used to reduce the dimensionality of a large data set by transforming it into a smaller one that still contains most of the information. It is thus possible to examine with the smaller dataset the variance-covariance structure of the large dataset and run the statistics which is more comfortable than using the large dataset. Additional information on how PCA was used in other political science publications can be found here (Sabatini 2005, 2009; Sandberg and Lundberg, 2012; Pickel et al, 2016; Calcagnini and Perugini, 2019).

The analysis is based on a dataset computed by the author encompassing several variables that have been separated in five social capital dimensions following the footsteps of Sabatini: strong family ties, weak informal ties, voluntary organisations, political participation, and civic awareness, which then all together form the social capital index. However, this study differentiates for at least two reasons from Sabatini's work. While Sabatini only takes into account the coordinates of the regions for his score on the first principal component, here, a more in-depth analysis is offered. The PCA is calculated as an equation of the different variables for each dimension with their respective weight in the first two or three principal components depending on the overall proportion of the variance explained by each component. Moreover, Sabatini takes a snapshot of the Italian situation not examining a historic time series as here is done and he also uses data of variables from different years weakening his analysis.

Data has been retrieved from the Italian National Institute of Statistics (ISTAT) for the timeframe from 2009-2017. The initial intention was to cover the ten-year period from 2007 to 2017, however due to lack of data for the years of 2007 and 2008 for the bonding dimension, these years have been dropped.

5.1.1. Strong family ties

The element of strong family ties has been constructed to represent the form of bonding social capital. The indicators included refer to the family composition (COPFIG, NOCOPFIG, FAMSING, FAM5COMP, PERSSOL, PERSANZSOL) and the satisfaction of family relations (SODDPAR). All the variables nomenclature is provided in the appendix in Table A1. In comparison to Sabatini's study in order to replace indicators for which data was not available two new variables have been added PRANZCAS and PRANZMENS (percentage of people eating lunch at home or at school/place of

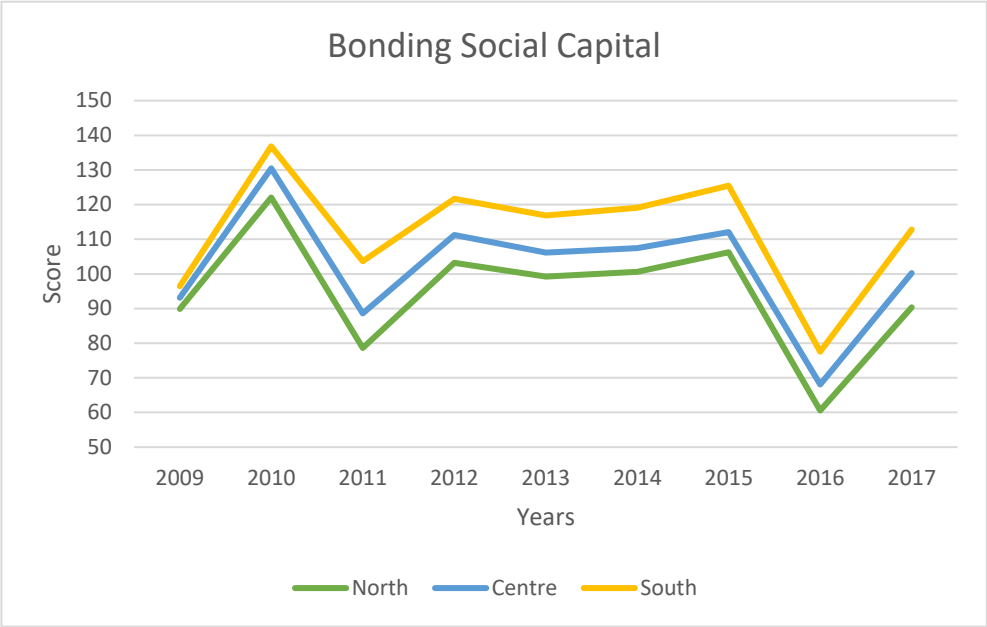
work). A PCA has been performed for each of the 9 years and in the Appendix, the example is given of the data of the first year, 2009, which are the ones that will be discussed.

The correlation matrix presented in the appendix shows a positive correlation between the variables COPFIG, FAM5COMP, SODDPAR, PERSANZOL, and PRANZCAS and a negative one between these variables and PERSSOL, PRANZMENS, and COPNOFIG. This is no surprise as many variables are mutually exclusive, for examples couples with children are not part of the couples with no children variable.

The first principal component explains about 75 per cent of the variation in the data and the cumulative variation taking into account the first, second and third component 94 per cent. The variables positively related to the first component are FAM5COMP, PRANZCAS, and PRANZMENS. Out of these FAM5COMP and PRANZCAS are negatively associated to the first component, while PRANZMENS positively. The second component is constituted of FAMSINGL, SODDPAR, and PERSSOL all three of them have a negative loading. COPFIG, COPNOFIG, and PERSANZSOL relate to the third component; while the first one is positive the other two are negative. More or less all variables contribute to a similar extent when the loadings of the PCA are computed, yet three variables particularly contribute to the linear combination: COPFIG, COPNOFIG, and PERSANZSOL with 0,52 and SODDPAR with 0,76.

First of all, the results of the PCA scores that can be consulted in the Appendix as A2 demonstrate the divide between Southern and Northern regions that has been also established by previous studies. Overall, as depicted by the Graphs 1 and 2, the overall level of bonding social capital is highest in regions of Southern Italy while lowest in regions in the North. The dip in 2016 can only be explained by looking at the single data of each variable used in this dimension. Generally speaking, the year 2016 is characterised by a break with previous patterns (two-year period) as increasing or decreasing trends for most variables are observed. Specifically, this is true for two variables with the highest PCA loading namely SODDPAR and COPNOFIG for which respectively in 13 regions and in 11 regions a reversal of the trend was noticed.

Graph 1: Bonding Social Capital



Source: own calculations

5.1.2 Informal networks of weak ties

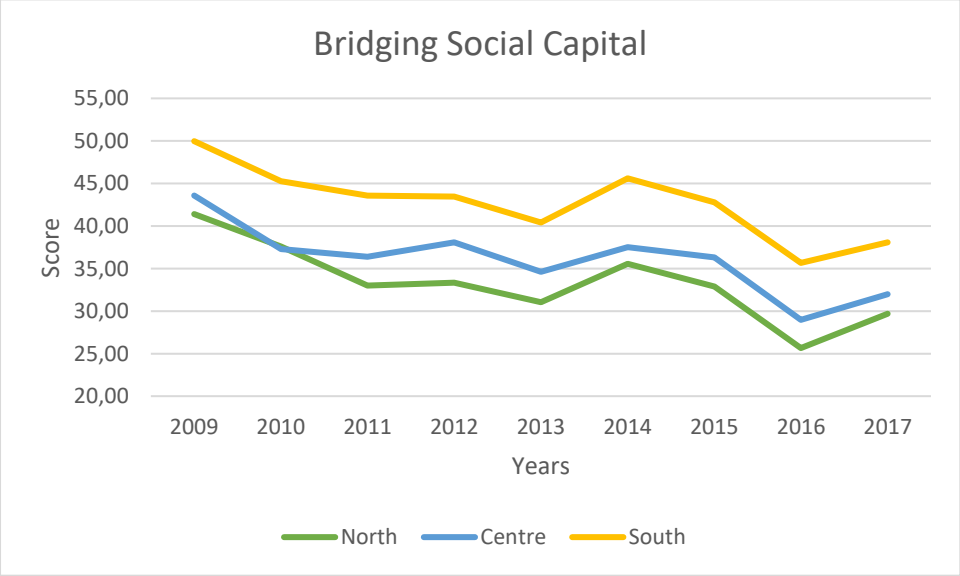
This second element of social capital depicts the relations between individuals with their friends and neighbours. In line with Putnam's neighbourhood networks that promoted social capital, attention is drawn to the relation of production and consumption of social capital: a higher stock of social capital enhances the returns to the time devoted to social participation and more social participation leads to the accumulation of social capital. Therefore, the variables that have been chosen are for the extent of the intensity of relations INCAMI2S and NOINCAMI, while one indicator has been used for the evaluation of the relations with friends namely SODDAMI and lastly one for social engagement depicted by SPORT.

Figure 2 illustrates the correlation matrix of the variables indicating weak informal ties. Clear negative correlations result for what concerns satisfaction of friends (SODDAMI) and SPORT as well as NOINCAMI and INCAMI2S. Furthermore, a negative relationship is present between people who rarely meet friends (NOINCAMI) and SODDAMI depicting the importance of encountering regularly friends. Also, a positive correlation has been found between SPORT and INCAMI2S as people who practice a group sport are more likely to have more frequent meetings with the team after practice or the match.

The first principal component accounts for 46 per cent of the variation, however the second one was also included to gain an explanation of the variance of around 83 per cent. The first component entails SODDAMI and NOINCAMI, and. SODDAMI is positively associated, while NOINCAMI negatively. The second principal component includes INCAMI2S and SPORT, with the first one being positively related and the second negatively. The highest loadings are given by INCAMI2S with 0,77 and SODDAMI with 0,66.

Table A4 depicts the evolution throughout years of the dimension of informal networks of weak ties. As with bonding social capital also with its dimension of bridging, the picture yields a country split in two. Again, the South has the highest scores of informal networks of weak ties while the North has lower scores. Moreover, the findings confirm the snapshot taken by Sabatini in 2005 (Sabatini, 2005). Graph 3 displays the trend of bridging social capital which is slightly downward with no signs of convergence. Throughout the 9-year period, the regions with the highest score of informal networks of weak ties are Campania, Basilicata, and Calabria; the one's with the lowest scores are Trentino Alto-Adige, Lombardia, and Friuli-Venezia Giulia.

Graph 2: Bridging social capital



Source: own calculations

5.1.3 Voluntary organisations

A consistent part of the literature considered membership in voluntary associations in their empirical analyses when assessing social capital. It is assumed that such involvement fosters the realisation of common goals and facilitates the spread of cooperative values and trust. The variables

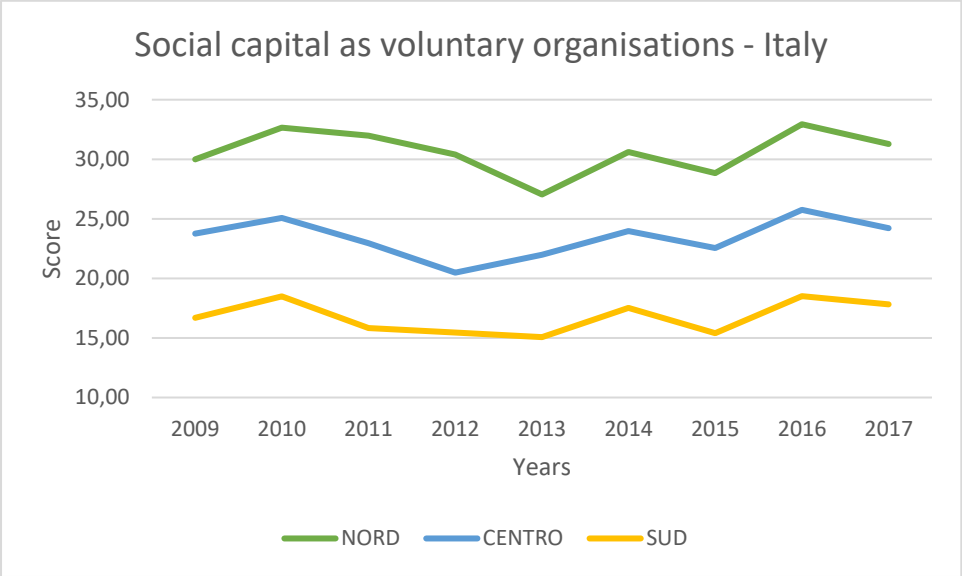
adopted determine the degree of engagement of members at meetings of ecological (RIUASEC) and cultural (RIUASCU) associations, or overall involvement (RIUASVO). Furthermore, also the inclination to donate money to associations (SOLDASS), the number of workers in social cooperatives (SOCCOOP), and the number of people doing voluntary work (VOL).

Figure 3 exhibits the correlation matrix for this dimension. As expected, all variables are correlated to each other since they describe the dimension from the same perspective.

The first principal component accounts for 87 per cent of the variation, however the second one was also included to gain an explanation of the variance of around 95 per cent. RIUASCU, RIUASVO, SOLDASS, and VOL are negatively related to the first principal component. RIUASEC is also negatively correlated but to the second principal component. At the same time, it also has the biggest loading -0,9.

The results also present in the Appendix demonstrate how again the clustering it terms of geographical proximity occurred. Regions in the North are characterised by high levels of engagement in voluntary work, while regions in the South have the lowest values. This trend is confirmed throughout the whole time period with Trentino Alto-Adige scoring the highest around 50 and Campania or Calabria at the bottom around 15. Furthermore, these findings also replicate the ones of Sabatini who derived the same conclusion in the early 2000s (Sabatini, 2005). The tendency is represented by the Figure below as an average of the classification of regions into three macro areas.

Graph 3: Social capital as voluntary organisations



Source: own calculations

5.1.4 Active political participation

Political parties have been also considered as a type of formal networks integrated into the social capital's definition. They are represented by people going to a demonstration (CORTEO), attending a political meeting (COMIZIO), working for free for political parties (ATGRAPAR), and donating money to parties (SOLDPAR).

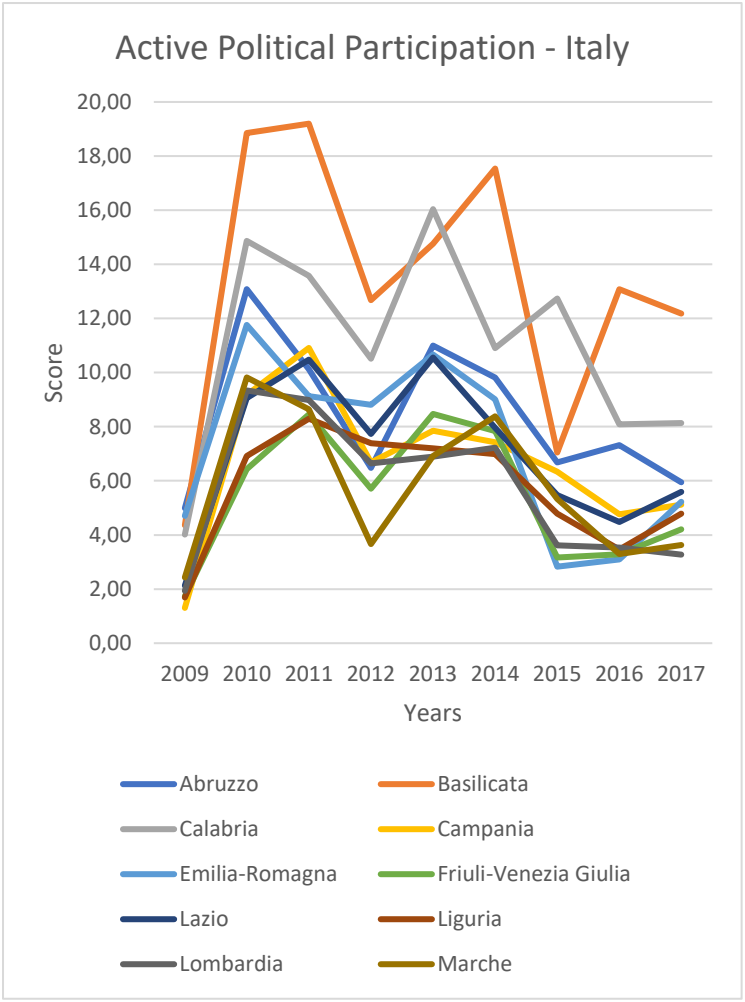
The correlation matrix displayed by Figure 4 shows that almost all variables are positively correlated with each other. Only CORTEO and SOLDPAR, interestingly have a weak negative correlation. The positive strongest one is people doing voluntary work for political parties (ATGRAPAR) and people attending political meetings or rallies. This might also be due to the fact that people volunteering for political parties might do that exactly at rallies helping out the political organisation.

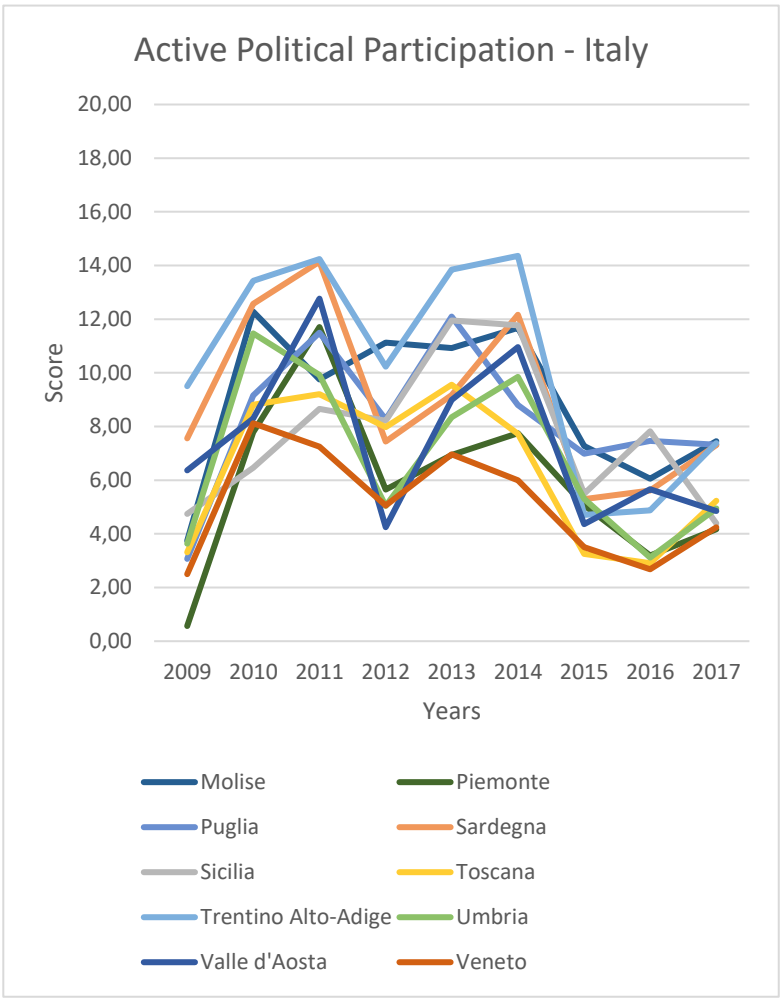
The first principal component explains 52 per cent of the variance, yet in order to have an even stronger explanatory power also the second component is included for a total of 82 per cent. COMIZIO and ATGRAPAR are part of the first principal component and are both negatively correlated. CORTEO and SOLDPAR are in the second principal component and albeit the CORTEO is positively related, SOLDPAR is negatively correlated. The classification of the variables is indeed in line with the results of the correlation matrix and exhibits for all four variables high scores all above 0,5.

After performing the PCA, for the first time the North-South scheme has been surpassed and a mixed picture emerges. In 2009, the regions with the highest score were Trentino Alto-Adige, Sardegna, and Valle d'Aosta; the one's with the lowest Piemonte, Campania and Liguria. 9 years later the situation is different and the highest scoring regions were Basilicata, Calabria, and Molise while at the bottom were Lombardia, Marche, and Piemonte. While at a first look the findings might seem confusing the inconsistency is also influenced by the rapid changing of Italian national governments. In this 9-year time period, Italian citizens witnessed 5 governments. This environment of political distrust and unsatisfaction is one of the causes of the decline of political participation indicators. In fact, on average attendance to political meetings between 2017 and 2009 declined of 2,15 percentage points, participation at demonstrations -1,6 percentage points, donations to political groups -1,2 percentage points and voluntary work for parties -0,65 percentage points. Yet, huge differences arise, in terms of attendance, the decrease was of 7 percentage points in Sardegna and Sicilia, while Calabria actually witnessed an increase of 0,7 percentage points.

Furthermore, for what concerns the unexpected high scores for certain Southern regions especially Calabria and Basilicata, the explanation can be found in the data of the single variables. When thinking about political participation in the South people usually refer to the lower turnout at elections and therefore allude at the poor citizen engagement and disenchantment towards public affairs. Yet, in reality, examining political participation through another lens a different kind of image appears. Following years of decline, political activism is still vivid in certain parts of the country. In Basilicata 12 per cent of the population went to a political meeting, three times more than people in Emilia-Romagna and even four times more than citizens in Lombardia. Second is the Calabria and only on the third place Trentino Alto-Adige. The same holds for participation in demonstrations which is much higher in Calabria and Basilicata than in the aforementioned Northern regions. Also, in terms of voluntary work for political parties, individuals in Basilicata are more active, followed by the ones in Emilia-Romagna and then, again, people from Calabria. However, if donations to political parties are analysed Trentino Alto-Adige is on the first place, succeeded by Emilia-Romagna and then Basilicata. It seems therefore, that while in Basilicata and Calabria a more active political participation survived, in the three Northern regions a passive support is preferred via donations.

Graph 4: Social capital as active political participation





Source: own calculations

5.1.5 Civic awareness

In their book 'Making Democracy Work' Putnam et al. set up an indicator measuring civic engagement proxied by the number of people reading newspapers (Putnam et al., 2013). The underlying ratio was that citizens who inform themselves have a better knowledge of politics, economics, and societal issues and are more confident in influencing the decision-making process. In this work the aspect of civic engagement has been kept separate from the other social capital indicators in order to assess this claim. The adopted variables all measure the degree to which an individual decides to get inform about public affairs by reading newspapers (SIQUOT), following debates (DIBATT), if a person talks about politics every day or never (PARPOLTG and NOPARPOLTG), if a person informs him or herself every day or never (INFOPOTG and NOINFORPO), and if a person talks about current affairs when meeting a friend (SIAMIC).

The correlation matrix portrays a clear picture of the variables involved for civic awareness. As expected, a positive relationship is present between individuals who do not talk about politics or current affairs (NOPARLPOLTG) and people who do not inform themselves (NOINFOPO). The same is true for people who do inform themselves (INFOPOTG) and those who read newspapers (SIQUOT) and between people who talk about politics (PARPOLTG) and individuals who inform themselves (INFOPOTG). Similar results are obtained for the negative correlations between SIQUOT and NOINFOPO and NOPARLPOLTG and between INFOPOTG and NOINFOPO and NOPARLPOLTG. Yet, very interesting is the positive correlation between people who do not inform themselves about politics (NOINFOPO) but who, when meeting friends talk about politics and share their opinion (SIAMIC). This aspect is striking as it might allude on the one side on the beneficial effects of friendship as a source of information, and on the other side not informed people are giving their opinion on a topic which is not their field of expertise.

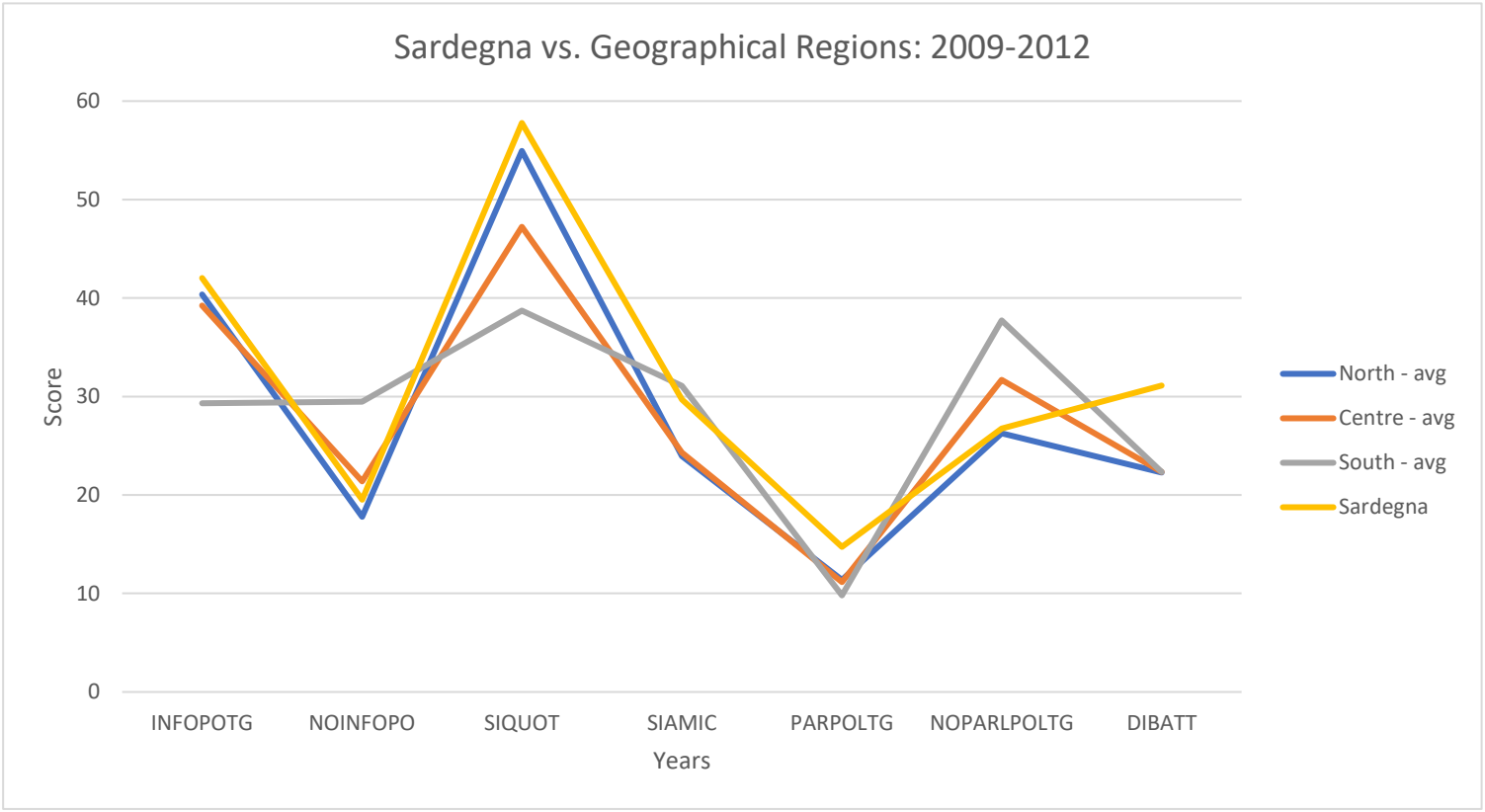
The first principal component explains 70 per cent of the variation, nevertheless, the first three components were taken into consideration for a cumulative proportion of 91 per cent. INFOPOTG, NOINFOPO, SIQUOT, and NOPARLPOLTG are all related to the first principal component. INFOPOTG and SIQUOT are positively related while NOINFOPO and NOPARLPOLTG negatively. The second component is constituted of SIAMIC and DIBATT both positively associated. Finally, the third component comprises the positively related variables PARPOLTG. In terms of loadings the highest ones are DIBATT with 0,77 and PARPOLTG with 0,7.

The Table A8 present in the Appendix shows the historic trend of the scores of civic awareness. The results yield a well-known state of the art with Italy split anew in two: the North with the highest scores and the South with the lowest. Regions with a high score of civic awareness are Trentino Alto-Adige, Emilia-Romagna and Friuli-Venezia Giulia, and more surprisingly Sardegna. The second-biggest island of the country is the region that at least for the first four years has the highest result in civic awareness.

The two Graphs, 6 and 7, below illustrate the performance of Sardegna in comparison to the average of the North, Centre, and the South in terms of their scores for the single variables. In the first years Sardegna consistently scores higher than its geographical region of belonging, the South, but also higher than Northern regions. Obviously, the graphs represent an average so there are outliers as Trentino Alto-Adige who also score nearly as high as Sardegna. From 2013 to 2017 Sardegna is then outperformed by Trentino Alto-Adige and in certain years also by Friuli-Venezia Giulia and Emilia-Romagna. While there is a steady decline of the PCA score of civic awareness in the whole

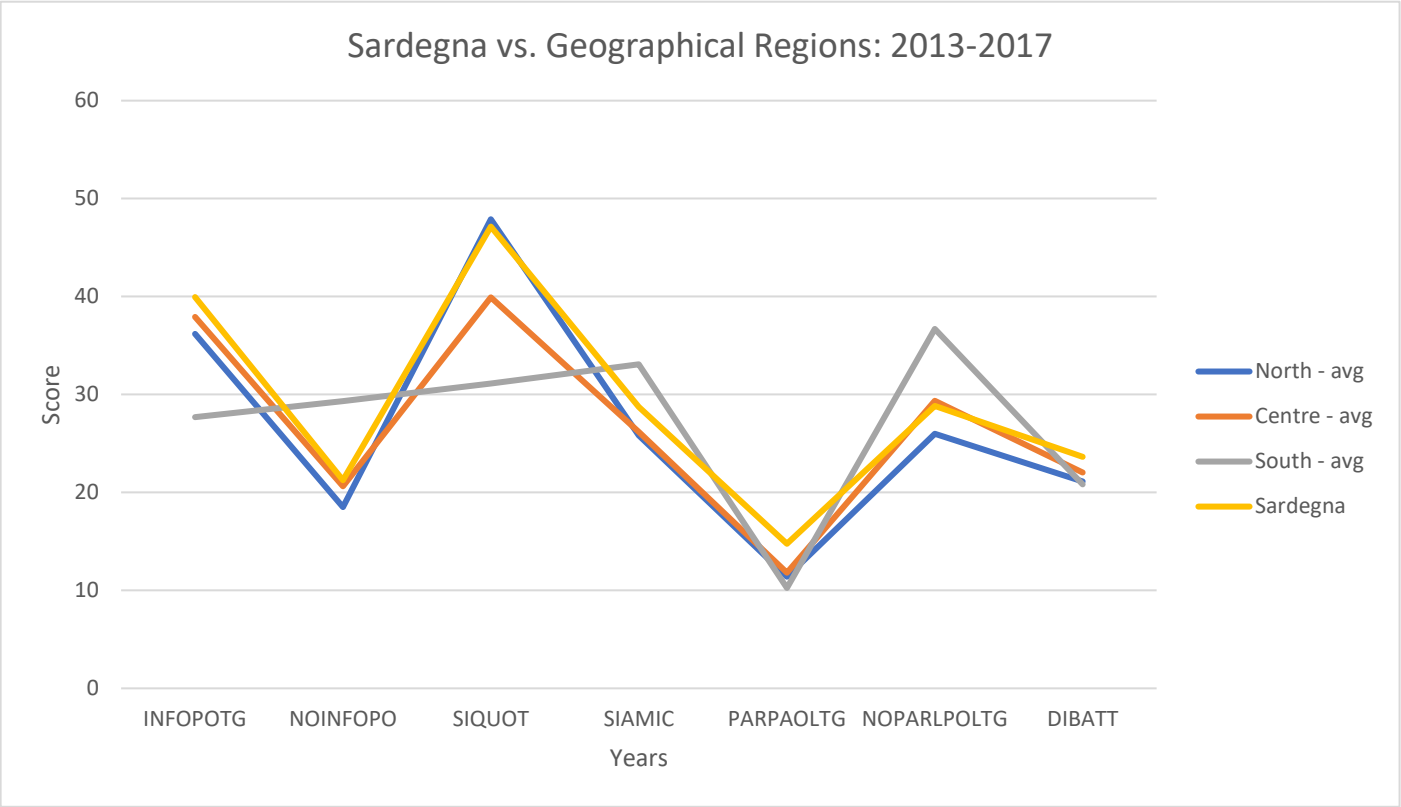
country, it is particularly meaningful in Sardegna. The island witnessed in the period from 2009 to 2017 huge drops in people reading newspapers (-17 percentage points), people following debates (-17,5 percentage points), and people who inform themselves every day on politics (-6,5 percentage points). In comparison to Trentino Alto-Adige, Friuli-Venezia Giulia, and Emilia-Romagna the decline was slightly more contained: for INFOPOTG -11,7, -14, and -12,5, for SIQUOT -14,3, -13,7, and – 8,7, and for DIBATT -8,8, -8, and -10,2.

Graph 5: Sardegna and the Italian geographical regions from 2009 to 2012



Source: own calculations

Graph 6: Sardegna and the Italian geographical regions from 2013 to 2017



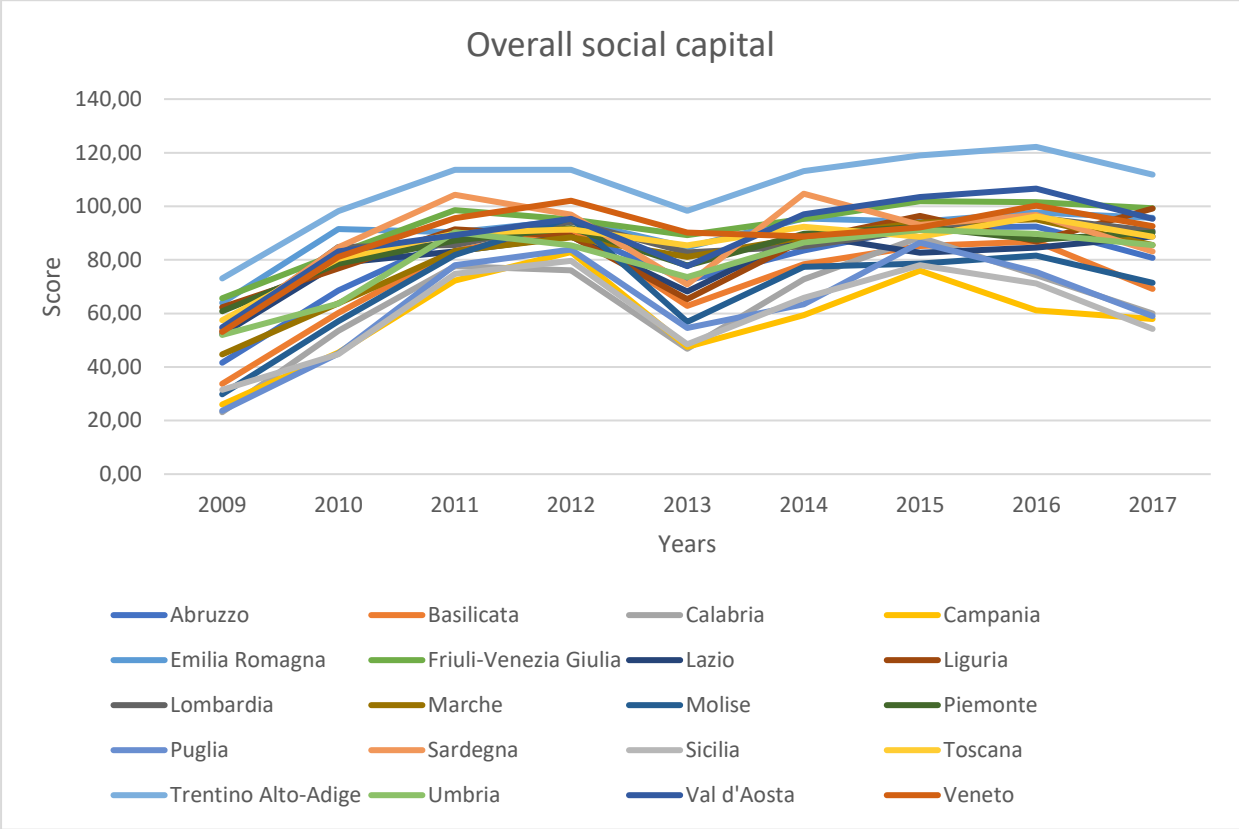
Source: own calculations

5.1.6 Social capital index

Finally, to conclude the PCA the total social capital score is being calculated (Graph 8). In order to do so, all five dimensions have been taken into account for a total of 29 variables. The first principal component explains 53 per cent of the variance, nonetheless, as this final score will also be included into the regression, a higher proportion of explanation is desired leading to the inclusion of the first seven components for a total of 90 per cent of the variance explained.

The findings of the PCA on the entire dataset show that the regions of the North are the ones with an overall higher social capital score than those of the South; the Centre positions itself halfway the ranking. This result confirms the findings of previous research (Putnam et al. 1993; Micucci and Nuzzo, 2003; Calcagnini and Perugini, 2019) Trentino Alto-Adige is with an average of 107 the region with the highest scores for social capital, followed by Friuli-Venezia Giulia with 92 and then Emilia-Romagna with 90. The regions with the lowest average score are Campania with 59, Sicilia with 61 and then Puglia 63. These results validate the ones found by Sabatini in 2005 demonstrating that after nearly 20 years the distribution of social capital in Italy has remained unchanged.

Graph 7: Overall social capital



Source: own calculations

5.2 Regression analysis

After having analysed the evolution of social capital in Italy with most recent data, in this and in the following sections a regression analysis will be performed. The scope is to investigate an unexplored terrain by looking at the direct effects social capital has on the spending of European funds. While until now to the best of our knowledge no study has been published on this matter, a first attempt will be carried out in this work.

The underlying assumption is that a high level of social capital and in particular understood as a strong network of relations between citizens, associations, the public sector and private companies facilitates the pay out of resources from the Cohesion policy since it creates a fruitful environment in which all the stakeholders are involved not only in the process of drafting Regional Operative Programmes (ROP) and are therefore actively consulted but also play a major role in the implementation process. The importance of mitigating inequality through linking social capital has also been analysed by Blasio and Nuzzo (Blasio and Nuzzo, 2004).

The second hypothesis is derived from the investigation performed by Sabatini who found a positive and significant correlation between bonding social capital and territorial backwardness represented by high levels of relative poverty, unemployment, and job insecurity (Sabatini, 2009). Further, as described by Leonardi and Nanetti bonding social capital favours through self-help the increased wellbeing of a specific group and not of the overall community (Leonardi and Nanetti, 2008). Therefore, it is assumed that in such an environment, bonding social capital is a biasing force in the implementation of the Cohesion Policy.

Thus, below the various hypotheses tested are reported:

- Hypothesis 1: Social capital affects positively the spending of European resources
- Hypothesis 2: The bonding form of social capital is negatively related to the spending of European resources
- Hypothesis 3: The linking form of social capital is positively related to the spending of European resources

In order to assess the three hypotheses, each of the five dimensions are being tested and in addition a regression is also run with the social capital index defined above. For the Cohesion Policy three proxies have been constructed referring to the absorption capacity of the region characterised by the proportion of European resources spent each year over the total amount of resources at its disposal. The programming cycle analysed is the one of 2007-2014. Two of the three variables concern the two biggest funds: the European Social Fund and the European Regional Development Fund and the third proxy relates to the total spending of European funds. The data has been retrieved from the official European website of the Cohesion Policy: cohesiondata.ec.europea.eu (European Commission, 2021).

Further, control variables have also been used and the selection follows previous studies (Micucci and Nuzzo, 2003; Blasio and Nuzzo, 2004; Calcagnini and Perugini, 2019). Included are the economic variables of regional Gross Domestic Product per capita, productivity of the industry sector, of the services sector, and of the commercial sector. Moreover, household income, private investments, birth rate of businesses, unemployment, youth unemployment, and the so-called Not in Education, Employment, or Training (NEET) people. All the information has been collected from ISTAT.

5.2.1 Correlation analysis

Before moving to the regression analysis, a first look is given at the correlation of the variables in each dimension and only the significant relationships are taken into account. For bonding social capital, productivity of the services sector, GDP per capita, household income, and productivity of the commercial sector are all positively correlated to each other. A negative correlation is present between these variables and unemployment and to a lesser extent also with bonding. For its part, bonding is positively correlated with unemployment and negatively with all the other variables (Figures 9a-9c).

In the dimension of bridging social capital, almost the identical pattern is visible. Productivity of the services sector, household income, GDP per capita, and productivity of the commercial sector are positively correlated to each other, while they are negatively correlated to unemployment and bridging. As bonding, bridging is positively correlated to unemployment and negatively to the remaining variables (Figures 10a-10c).

In the third dimension on linking social capital, unemployment and NEETs are negatively correlated to linking, GDP per capita, and productivity of the services sector. Yet, GDP per capita, productivity, and linking are strongly positively correlated. Furthermore, linking is also positively correlated to the birth rate of new businesses and very slightly to Cohesion Policy (Figures 11a-11c).

In terms of active political participation, productivity of the industry sector and of the services sector and GDP per capita are all positively correlated to each other. Unemployment is negatively correlated to the three aforementioned variables. At the same time unemployment is positively correlated to active political participation, private investments and Cohesion Policy (Figures 12a-12c).

For the fifth dimension, the one of civic awareness, productivity of the commercial sector, household income, GDP per capita, and civic awareness are negatively correlated to NEETs and youth unemployment. Whereas they are positively correlated to each other. Moreover, youth unemployment is positively correlated to Cohesion Policy, private investments, and NEETs (Figures 13a-13c).

Finally, for the social capital index youth unemployment is negatively correlated to productivity of the services sector, GDP per capita, and household income. Simultaneously, these last three variables are positively correlated to each other. The social capital index is negatively correlated

to youth unemployment but positively to productivity of the services sector, GDP per capita, household income, and the Cohesion Policy (Figures 14a-14c).

5.2.2 Empirical model

The empirical model adopted is the following:

$$CP_i = \alpha_0 + \alpha_1 SC_i + \alpha_k \sum_{k=1}^{N} X_1^k + F1_i + F2_i + e_i$$

The equation can be explained as follows: the subscript i refers to the single regions; CP is the dependent variable and stands for the Cohesion Policy interpreted by the ability of a region to spend European resources; SC is the social capital dimension or the index of social capital; $X_1^k$is the vector of the different control variables; $F1_i$includes the fixed effects for geographical distribution and $F2_i$ for the classification of regional eligibility of EU funds and e_i is the error term.

5.2.3 Estimation results

The results of the regression are illustrated in the Appendix. Some general considerations are that there are no huge differences in coefficients between the different models. Moreover, at least one economic control variable is always significantly related to the dependent variable. Looking at the model accuracy it is possible to assess the goodness-of-fit of the outcomes by looking at, the R-squared, the F-statistic, and the residual standard error. For what concerns the R-squared, that explains the proportion of variation in the data that can be explained by the model, is quite high although with significant differences among dimensions. The R-squared for bonding social capital reaches 0,79, while the one for active political participation is 0,51. Considering the F-statistic, which tests if all the regression coefficients are equal to zero and the model has no predictive capability, it results statistically significant for all dimensions. Lastly, calculating the residual standard error, that represents the average variation of the individual observations points around the fitted regression line, with an average of 0,5 it demonstrates that the observed various proxies for Cohesion Policy deviate from the true regression line by nearly 0,5 units on average.

Bonding social capital yields a negative and statistically significant relationship with the proxy for European funds. Holding all other variables constant, an increase in bonding social capital predicts a decrease of up to -0,33 in the spending of European resources. This implies that strong family bonds

hinder the creation of ties with public and private organisations and businesses that could facilitate the smooth implementation of regional operative programmes. Furthermore, significant are also productivity of the industrial and commercial sector, GDP per capita and unemployment. The spending related to the ERDF fund generates the highest coefficient.

Bridging social capital encompassing the relations of individuals with friends and neighbours is also negatively related to the expense of EU funds. Interestingly, the coefficient is higher than the one of bonding social capital. Each increase in bridging social capital corresponds to a decrease of 0,4 of EU funds. Other significant variables are household income, productivity of the industry and commercial sector, GDP per capita and unemployment. Also, here the highest coefficient of bridging social capital is given by the second model.

Linking social capital is, on the contrary to the first two, positively related to any type of proxy for European resources. An increase in linking social capital provides an increase of 0,8 of spending of EU funds. This is the highest coefficient for any form of social capital, and it results from the first model. It shows, thus, how relevant networks and ties are between individuals, groups or corporate actors stemming from public agencies, religious/political groups, legal institutions, and business interests. The result seems to confirm the hypothesis of Putnam, Leonardi and Nanetti on the positive role that active networks of organisations of civil society play in generating development responses (Putnam et al. 1993). Furthermore, other statistically significant control variables are GDP per capita and youth unemployment.

While the first three forms of social capital have been thoroughly examined by past research, the next two ones represent newcomers since these particular dimensions of social capital have never been analysed individually. Even though active political participation is negatively related to the dependent variable it does so in a weak manner, -0,24, civic awareness is so too. An increase in civic awareness leads to a decrease of 0,4 of ABSCAPERDF. Further significant variables are GDP per capita, youth unemployment, and productivity of the services sector for political participation and productivity of the commercial sector and NEETs for civic awareness. For both the highest coefficient of the social capital dimension is obtained from the model with spending of ERDF resources.

The overall composite social capital index is positively related to any of the three proxies of European resources spending with a coefficient of 0,39 derived from the first model. An increase in social capital yields an increase of almost 0,4 of spending of EU funds. Other significant variables are youth unemployment and household income.

To conclude, it can be affirmed that all three hypotheses tested revealed to be true. The social capital index displays a positive relationship with the Cohesion Policy proxied by the spending of EU resources. Furthermore, bonding social capital is as expected negatively associated and linking social capital positively associated. The findings confirm the importance of the linking form of social capital as a form of driver while bonding social capital as a slowing down or mitigating force. In addition, two "new" dimensions of social capital, active political participation and civic awareness, have also been scrutinised with negative coefficients. Out of all five dimensions, active political participation emerged as the weakest while linking social capital as the strongest.

Chapter 6 - Conclusion

The aim of this thesis has been twofold: provide, first, a neat qualitative analysis of the concept of social capital comprising its definition, the forms of social capital, its conceptualisation and its operationalisation. Likewise, past studies regarding social capital in Europe and in Italy have been discussed. Then, the Cohesion Policy has been examined and especially its evolution throughout the decades. The study of these subject matters was crucial in order to have the instruments to answer the three research question related to this part that were: What is social capital and its expected policy outcomes? What are the goals and means of the Cohesion Policy? How is social capital relevant to the pursuit of the goals of the Cohesion Policy?

The examination of the literature on social capital and especially of its definition led to the conclusion that as a relatively new concept no standard definition has been adopted and accepted by scientists. It is noteworthy that the conceptualisation of the term varied not only through time but also through the kind of applied field including sustainable development, and as with time the concept was employed in more areas of interest it gained the attention of many researchers and in notoriety. Yet, in the author's opinion what is equally important to the definition is its overall conceptualisation and the identification of the forms or dimensions of social capital. The descriptive elements of bonding, bridging, and linking social capital go into the right direction while at the same time the introduction of new forms is not excluded.

The same applies to its policy outcomes which are heavily debated. The origin of the disagreement lies in the fact that due to its multidimensionality social capital can be interpreted and analysed in different ways. Scientists have therefore focused in their empirical studies on one aspect of social capital. Another issue is the case of the methodology, when choosing proxies for social capital not enough attention is paid to the selection and the distinction between output and input indicators that may enhance the risk of reverse causality. Therefore, it is the author's believe that only studies adopting input indicators do have a methodological and statistical relevance. Taken that into account, the potential of social capital has not yet been fully explored in every field, which also stems from the difficulty of retrieving data at a local level taking into account interregional or even intermunicipality differences; and also, from the lack of reliable time series data.

The Cohesion Policy was created to offset the increasing discrepancies highlighted by the crises of the second half of the century and to foster the convergence process of the less developed territories of the Union. Its main goal established in the Rome Treaty and modified by the Treaty of

the European Union is to enhance economic and social cohesion through the overcoming of disparities in terms of development between regions. In recent years this general aim is supported by strategies as the Agenda 2000 or Europe 2020. Furthermore, the concrete means of the Cohesion Policy are its funds which are the European Regional Development Fund, the Cohesion Fund, the European Social Fund, the European Agricultural Fund for Rural Development (financing the Common Agricultural Policy), and the European Maritime and Fisheries Fund.

Social capital can be particularly effective in the implementation of the goals of the Cohesion Policy. First of all, several studies have established that those regions in Europe but also in Italy with the strongest economy and higher growth also have the highest stocks of social capital in the country implying a positive relationship between economic development and amount of social capital. This hypothesis has also been confirmed by this work in the case of Italy. Second, in the field of development economics the dimension of linking social capital is the one enabling a community or a territory to grow. Third, linked to the second point, linking social capital enables through the creation of networks between different groups, individuals, associations, and businesses to bring forward policy demands which help to better draft the Regional Operative Programmes and at a later time to better execute the implementation process.

Second was the case study translating the theory apprehended in the first part into an operative analysis. The object of inquiry were Italian regions. To the best of the author's knowledge this is the first empirical analysis of its kind examining the effects of social capital on the implementation of the Cohesion Policy. At the beginning, a PCA has been performed, a method particularly useful for multidimensional concepts as social capital. Following previous studies, social capital has been analysed in its single dimensions: bonding social capital, bridging social capital, linking social capital, social capital as active political participation, and social capital as civic awareness. Most dimensions confirm the divide between Northern and Southern regions. While the former had high scores in the last three forms of social capital, the latter had the highest scores in the first two ones. Ultimately, an overall composite index of social capital has been computed which demonstrated how the stock of social capital is high in regions of the North while lower in regions of the South.

The second part of the empirical analysis foresaw a regression analysis that would establish the relationship between social capital and Cohesion Policy proxied by the spending ability of each region. In advance, three hypotheses were defined that would help answer the last research question,

which is reported here: To what extent does the social capital affect the Cohesion Policy in Italian Regions?

In a first moment, a correlation analysis was computed that showed that bonding was weakly negatively correlated to the Cohesion Policy, bridging moderately, linking was positively weakly correlated, the same as active political participation and civic awareness which were, however, negatively correlated, and lastly the social capital index which was strongly positively correlated to Cohesion Policy.

Then, a regression was run for all five dimensions of social capital and linking social capital was positively related to the regional spending capacity while all other forms were negatively related. Finally, the social capital index was inserted into the regression yielding a positive score. Therefore, it can be said that social capital plays a positive role in the implementation of the Cohesion Policy. And, it is important to note that when decomposing social capital not all forms contributed equally and in the same way. In order for a region to increase its ability to spend European resources, it would need to do so by enhancing linking social capital.

The findings of this work contribute to shed a light on a very debated topic, social capital. Many conclusions confirm results that have been discovered by past scientists, yet there are still some aspects that need to be explored by future research and it is the auspice of the author that such work on social capital continues. Of interest are also the type of networks that people establish through the internet or social platforms and how these lead to the creation of different and modern forms of ties and relations between people, friends, neighbours, groups, associations, and the public administration.

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Appendix

Figure A1. Correlation matrix representing strong family ties

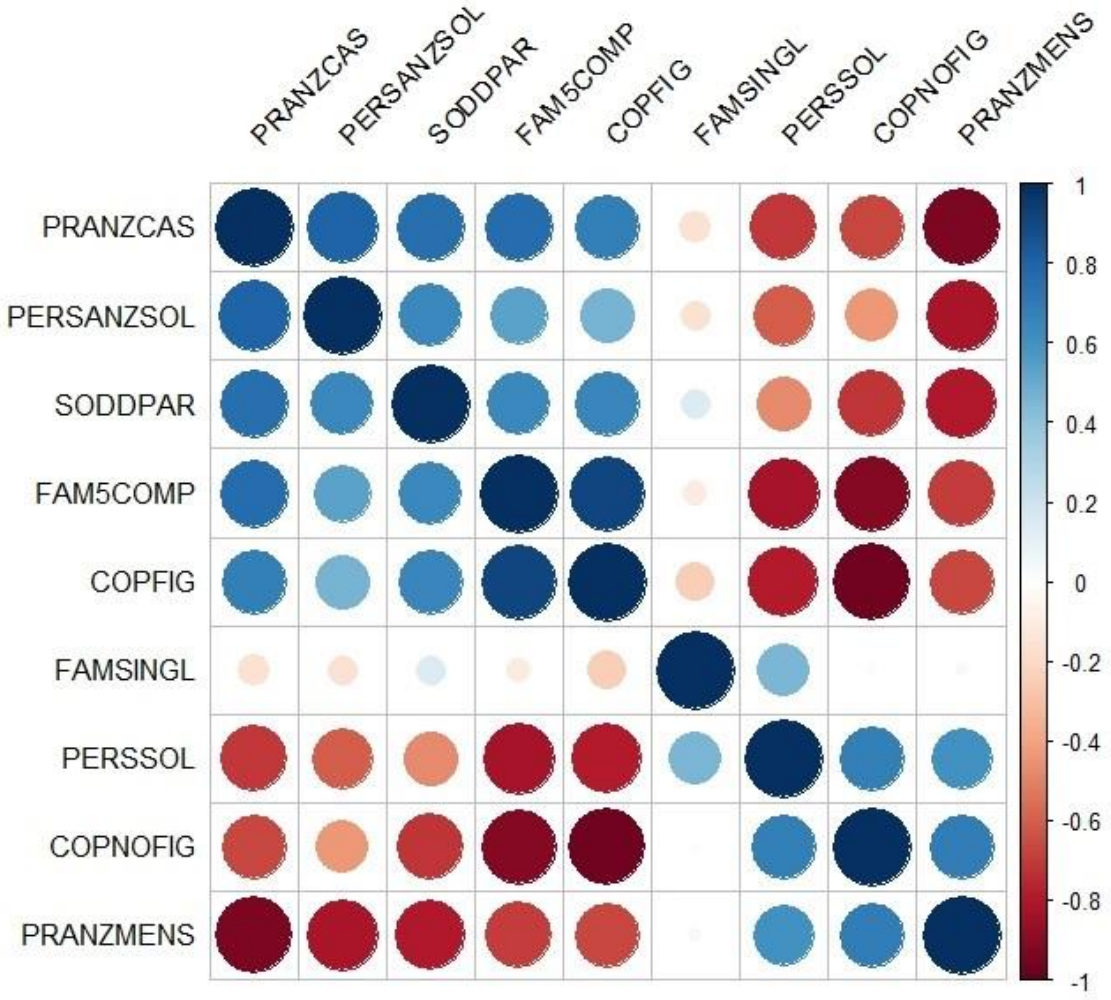

Table A1. Indicators of strong family ties											
			Mean and Standard Deviation								
Label	Description	Source	2009	2010	2011	2012	2013	2014	2015	2016	2017
COPFIG	Couples with children, in thousands	ISTAT	55,95 (5,56)	55,01 (5,19)	54,7 (4,76)	54,24 (4,84)	53,66 (4,68)	53,23 (5,05)	52,67 (5,17)	52 (4,91)	51,24 (4,7)
COPNOFIG	Couples with no children, in thousands	ISTAT	31,07 (5,4)	31,67 (4,86)	31,27 (4,58)	30,62 (4,49)	31,3 (4,48)	31,93 (4,89)	31,84 (5,02)	32,04 (4,64)	32,64 (4,32)
FAM5COMP	Families with 5 components and more, in thousands	ISTAT	5,95 (2,36)	5,79 (2,34)	5,66 (2,11)	5,76 (2,28)	5,61 (2,07)	5,25 (2,37)	5,07 (1,74)	5 (1,66)	5 (1,75)
FAMSINGL	Singles-families, in thousands	ISTAT	13,01 (1,42)	13,27 (1,53)	14 (1,83)	15,15 (2,22)	15,03 (2,37)	14,84 (2,37)	15,53 (2,26)	15,96 (2,49)	16,12 (2,11)
SODDPAR	People aged 14 and more who are satisfied with their relatives, for every 100 people with the same characteristics	ISTAT	55,38 (5,8)	55,03 (5,77)	55,99 (5,86)	54,62 (5,81)	57,08 (5,88)	56,34 (5,5)	56,78 (6,57)	57,14 (5,66)	56,61 (4,98)
PRANZCAS	People aged 3 and more who eat lunch at home for every 100 people	ISTAT	74,83 (7,88)	74,93 (7,95)	74,69 (8,05)	75,69 (8,56)	76,05 (7,99)	75,34 (8,35)	75,12 (7,89)	74,86 (7,71)	74,89 (8,32)

	with the same characteristics										
PRANZMENS	People aged 3 and more who eat lunch in a school/company canteen	ISTAT	7.320 (3,2)	7,53 (3,63)	7,49 (3,33)	7,3 (3,5)	7,23 (3,17)	7,3 (3,7)	7,46 (3,64)	7,13 (3,1)	7,19 (3,29)
PERSSOL	Single persons per 100 households with the same characteristics	ISTAT	28,32 (3,98)	28,73 (3,7)	30,07 (3,73)	30,87 (4,02)	30,74 (4,14)	30,99 (3,96)	31,79 (3,9)	32,53 (3,93)	33,01 (4,55)
PERSANZSOL	Single persons aged 60 years and more for every 100 singles with the same characteristics	ISTAT	56,99 (5,58)	56 (4,96)	55,66 (5,01)	56,01 (4,45)	56,23 (4,08)	55,17 (3,57)	54,42 (3,57)	53,53 (3,97)	53,32 (4,64)

Table A2. Historic trend of indicators of strong family ties

REG	2009	2010	2011	2012	2013	2014	2015	2016	2017
Abruzzo	91,16	120,82	96,71	121,21	111,90	114,86	119,25	73,21	113,30
Basilicata	98,12	139,97	103,79	121,83	116,11	118,21	128,13	79,01	105,90
Calabria	94,73	139,26	103,17	119,20	116,53	121,42	128,01	81,48	111,54
Campania	95,82	142,57	110,27	125,47	120,89	122,49	128,45	78,12	125,08
Emilia-Romagna	90,79	121,68	76,34	98,33	96,54	97,31	103,39	61,32	91,47
Friuli-Venezia Giulia	93,98	123,95	81,03	105,72	100,42	102,34	108,95	58,78	92,32
Lazio	87,75	122,51	85,92	110,79	108,95	108,14	113,39	72,22	97,74
Liguria	103,48	130,26	85,03	113,33	105,62	107,66	115,05	64,02	93,45
Lombardia	81,67	117,77	76,45	99,63	95,34	99,82	102,39	54,17	93,42
Marche	95,96	135,19	93,97	115,35	109,35	108,97	115,56	70,72	105,27
Molise	101,84	139,10	106,36	124,54	118,07	120,89	128,27	77,37	108,76
Piemonte	91,07	122,51	75,95	100,95	100,42	101,41	108,64	58,77	95,83
Puglia	99,81	143,41	109,74	123,72	119,35	122,74	127,01	75,18	119,19
Sardegna	89,61	129,65	96,46	113,99	113,73	111,44	118,93	78,01	101,38
Sicilia	100,32	139,64	103,05	123,68	118,38	120,63	125,32	78,02	117,12
Toscana	91,58	127,81	84,87	107,59	100,61	103,15	107,86	61,24	97,29
Trentino Alto-Adige	78,56	115,16	77,41	100,01	94,51	94,96	102,15	58,75	87,84
Umbria	97,23	136,33	89,76	111,18	105,70	109,64	111,42	68,13	100,54
Val d'Aosta	93,68	120,27	71,84	104,40	100,62	98,07	102,12	68,12	73,57
Veneto	85,93	124,66	85,05	103,34	100,47	103,48	107,05	60,57	95,15

Table A3. Indicators of weak informal ties											
			Mean and Standard Deviation								
Label	Description	Source	2009	2010	2011	2012	2013	2014	2015	2016	2017
INCAMI2S	People aged 6 and more who meet friends more than once a week, for every 100 people of the same area	ISTAT	27,7 (1,3)	27,79 (2,12)	28,54 (1,89)	27,22 (1,72)	24,49 (2,3)	27,05 (1,79)	27,27 (1,82)	27,13 (2,48)	27,24 (2,55)
SODDAMI	People aged 14 and more who are quite satisfied with the level of satisfaction with friendships, for every 100 people with the same characteristics	ISTAT	57,74 (3,84)	57,62 (3,33)	58,86 (3,49)	57,84 (3,65)	58,99 (3,71)	58,75 (3,35)	58,9 (4,47)	59,08 (3,71)	58,96 (3,43)
SPORT	People aged 3 and more who continuously practice sports, for every 100 people with the same characteristics	ISTAT	21,48 (4,71)	22,7 (4,84)	22,17 (5,59)	21,96 (5,34)	21,68 (5,1)	23,07 (5,53)	23,92 (5,17)	24,85 (5,69)	24,7 (5,06)
NOINCAMI	People aged 6 and more who never meet friends, for every 100 people with the same characteristics	ISTAT	4,04 (0,81)	4,22 (0,8)	4,2 (0,84)	4,6 (0,88)	5,39 (1,33)	4,8 (0,93)	5,11 (0,71)	4,79 (0,88)	5,18 (0,98)

Figure A2. Correlation matrix representing weak informal ties

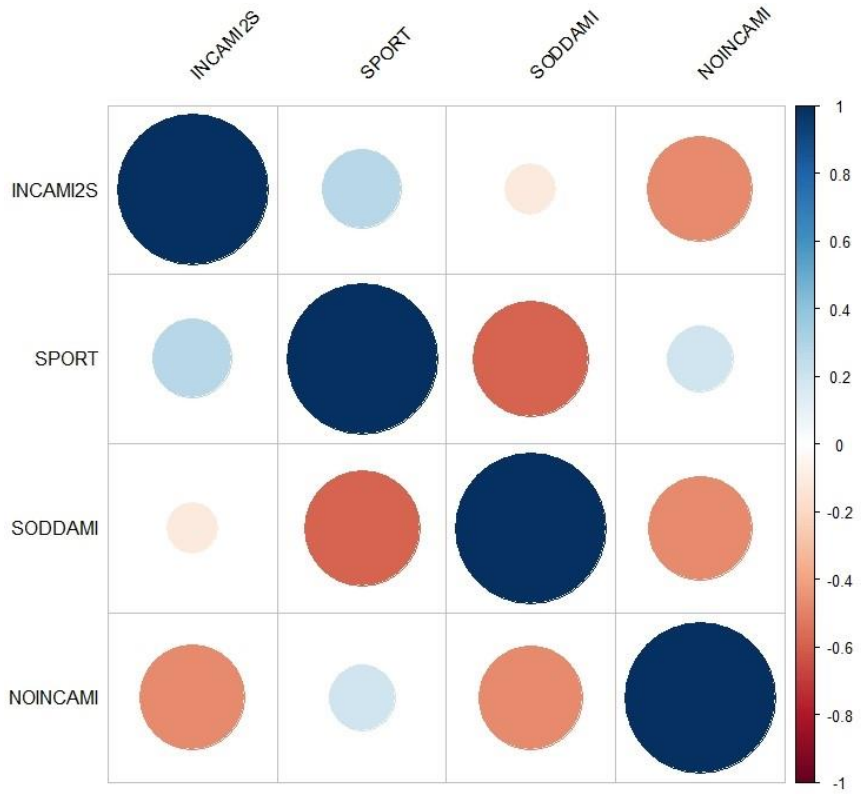

Table A4. Historic trend of indicators of weak family ties

REG	2009	2010	2011	2012	2013	2014	2015	2016	2017
Abruzzo	46,79	45,79	41,14	41,59	40,89	42,58	38,95	35,04	36,53
Basilicata	53,98	46,94	42,13	47,77	42,01	51,41	44,52	38,89	37,49
Calabria	52,52	44,44	44,99	40,84	43,93	47,81	45,64	38,09	42,38
Campania	50,00	49,02	46,74	46,29	45,20	50,54	46,63	41,76	41,53
Emilia-Romagna	41,60	39,19	34,51	34,90	29,07	38,38	36,61	29,53	30,90
Friuli-Venezia Giulia	41,07	36,72	32,00	31,18	27,90	34,88	32,83	27,53	30,33
Lazio	44,24	38,55	41,47	41,84	35,26	37,50	35,29	27,52	32,23
Liguria	44,62	38,16	40,46	36,00	32,45	37,16	35,23	29,52	28,26
Lombardia	39,44	36,38	32,68	30,20	28,46	32,08	31,74	23,60	28,30

Marche	46,99	38,11	34,70	37,23	36,01	40,58	36,16	30,95	33,82
Molise	51,39	42,90	43,79	43,50	35,05	45,98	45,66	35,77	41,49
Piemonte	40,50	37,07	31,72	35,35	34,89	36,14	36,42	27,67	30,18
Puglia	48,75	43,13	44,37	42,44	38,12	43,79	41,30	31,60	37,51
Sardegna	45,82	42,44	40,81	40,25	37,02	37,27	37,15	30,89	34,62
Sicilia	50,51	47,32	44,68	45,05	40,98	45,45	42,31	33,28	33,01
Toscana	40,39	34,71	32,37	34,89	34,00	36,05	36,05	30,58	30,97
Trentino Alto-Adige	37,71	33,98	28,65	30,16	29,74	30,29	28,76	21,36	26,79
Umbria	42,70	37,85	37,00	38,39	33,14	35,97	37,78	26,83	30,92
Val d'Aosta	44,41	43,23	30,71	35,30	34,46	36,39	27,22	21,67	34,02
Veneto	41,86	36,08	33,11	33,70	31,32	39,07	34,12	24,34	28,82

Table A5. Indicators of voluntary organisations											
			Mean and Standard Deviation								
Label	Description	Source	2009	2010	2011	2012	2013	2014	2015	2016	2017
RIUASEC	People aged 14 and more who have joined meetings in ecological associations and similar ones at least once a year for every 100 people of the same area	ISTAT	1,86 (0,61)	1,84 (0,54)	1,92 (0,69)	1,67 (0,4)	1,55 (0,48)	1,75 (0,59)	1,69 (0,46)	1,7 (0,4)	1,64 (0,46)
RIUASCU	People aged 14 and more who have joined meetings in cultural circles and similar ones at least once a year for every 100 people of the same area	ISTAT	9,91 (3,66)	10,44 (3,89)	10,25 (4,01)	9,43 (3,92)	8,77 (3,39)	9,53 (3,81)	10,3 (3,87)	10,07 (3,69)	9,41 (3,1)
RIUASVO	People aged 14 and more who carried out free activities in voluntary associations in the last months, for every 100 people with the same characteristics	ISTAT	9,19 (3,51)	10,1 (3,94)	10,21 (4,32)	9,65 (4,06)	9,57 (3,65)	10,32 (3,79)	11,11 (3,99)	11,03 (4,32)	10,52 (3,76)
SOLDASS	People aged 14 and more who have given money to an association at least once a year for every 100 people of the same area	ISTAT	16,85 (6,47)	18,14 (6,68)	17,35 (7,1)	15,28 (6,34)	13,2 (5,78)	14,95 (5,8)	15,8 (6,59)	15,42 (5,76)	15,1 (5,69)

VOL	People aged 14 and more who did voluntary work over the total population	ISTAT	11,88 (4,26)	12,79 (4,76)	12,74 (5,13)	11,93 (4,91)	11,67 (4,48)	12,8 (4,55)	13,48 (4,86)	13,44 (5,21)	13,28 (4,53)

Figure A3. Correlation matrix of indicators of voluntary organisations

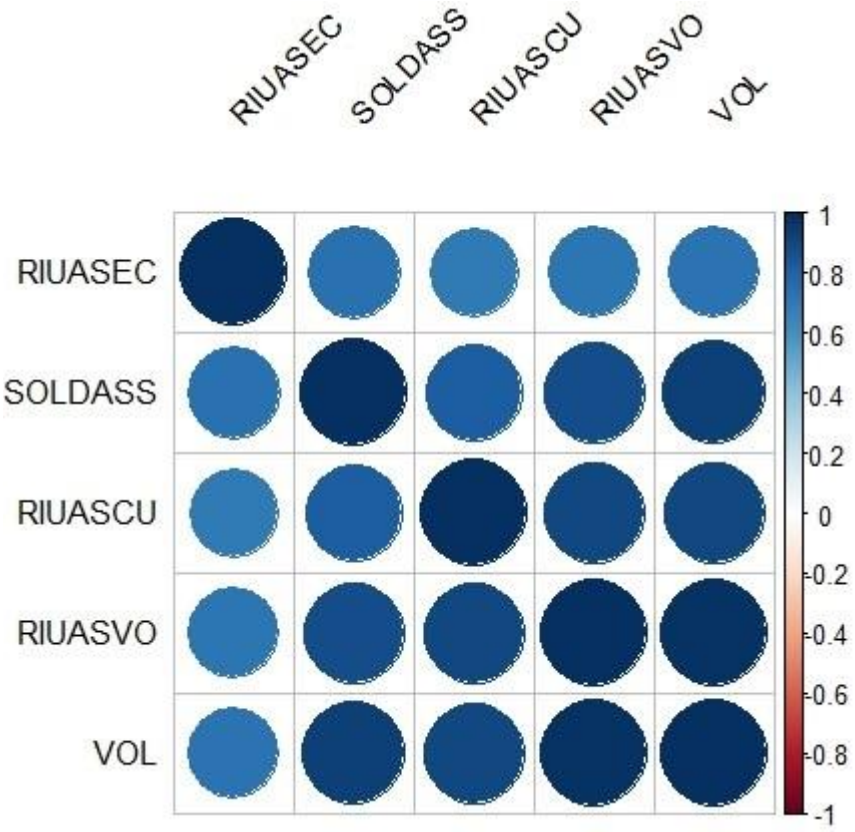

Table A6. Historic trend of indicators of voluntary organisations

REG	2009	2010	2011	2012	2013	2014	2015	2016	2017
Abruzzo	16,30	17,91	21,03	14,95	16,74	20,74	17,56	21,31	18,38
Basilicata	20,77	23,28	18,53	16,76	20,14	19,34	17,44	20,13	23,34
Calabria	15,74	18,48	13,55	13,98	10,70	16,32	13,67	15,74	13,14
Campania	12,81	12,79	10,99	12,05	9,97	11,64	10,60	12,63	14,38
Emilia-Romagna	31,00	30,44	29,30	25,55	25,32	28,00	24,29	27,18	31,35
Friuli-Venezia Giulia	28,51	33,34	33,14	29,83	27,03	30,09	29,52	32,24	32,35
Lazio	18,37	21,52	16,97	17,44	17,85	19,07	16,23	20,45	19,73
Liguria	22,11	23,59	21,05	24,72	17,85	22,28	21,23	25,03	27,87
Lombardia	28,33	32,04	30,70	29,09	26,20	29,56	25,76	31,04	28,32
Marche	25,58	24,04	25,35	20,75	22,03	24,35	25,92	28,19	24,45

Molise	14,73	20,81	14,01	17,33	16,07	19,11	12,80	21,70	19,04
Piemonte	25,47	27,04	27,33	24,78	20,82	28,24	24,86	26,08	26,65
Puglia	14,34	15,17	12,91	13,20	14,58	13,83	15,01	17,74	15,47
Sardegna	24,95	26,79	23,11	22,73	20,95	26,89	22,90	24,80	25,19
Sicilia	13,85	12,65	12,51	12,67	11,39	12,40	13,30	14,01	13,70
Toscana	28,09	31,29	26,51	24,07	26,83	28,14	22,79	27,88	26,34
Trentino Alto-Adige	47,88	52,15	50,34	49,10	45,21	49,84	47,77	53,19	47,99
Umbria	23,04	23,47	22,98	19,67	21,18	24,31	25,30	26,49	26,31
Val d'Aosta	26,24	30,43	30,93	28,32	23,41	27,28	30,80	33,93	24,08
Veneto	30,31	32,21	33,08	31,85	30,53	29,55	26,53	34,82	31,61

Table A7. Indicators of social capital as active political organisations												
			Mean and standard deviation									
Label	Description	Source	2009	2010	2011	2012	2013	2014	2015	2016	2017
COMIZIO	People aged 14 and more who have joined a political meeting in the 12 months before the interview, for every 100 people of the same area	ISTAT	6,88 (3,12)	7,66 (3,78)	6,47 (3,15)	5,12 (2,83)	7,85 (3,93)	6,22 (2,98)	5,29 (2,48)	4,43 (2,56)	4,73 (2,56)
CORTEO	People aged 14 and more who have joined a march in the 12 months before the interview, for every 100 people of the same area	ISTAT	5,34 (1,45)	4,65 (1,67)	6,03 (1,58)	4,66 (1,49)	4,48 (1,44)	4,39 (1,59)	4,16 (1,25)	4,55 (1,78)	3,73 (1,51)
ATGRAPAR	People aged 14 and more who have carried out unpaid work for a political party in the 12 months before the interview, for every 100 people of the same area	ISTAT	1,4 (0,45)	1,48 (0,61)	1,38 (0,4)	1,05 (0,36)	1,13 (0,37)	1,16 (0,31)	1,08 (0,28)	0,95 (0,32)	0,75 (0,26)
SOLDPAR	People aged 14 and more who have given money to a political party in the past 12 months before the interview, for every 100 people of the same area	ISTAT	2,67 (1,23)	2,81 (1,15)	2,5 (1,19)	1,9 (0,83)	2,62 (1,23)	2,47 (1,05)	1,99 (0,93)	1,77 (0,8)	1,47 (0,7)

Figure A4. Correlation matrix of indicators of active political participation

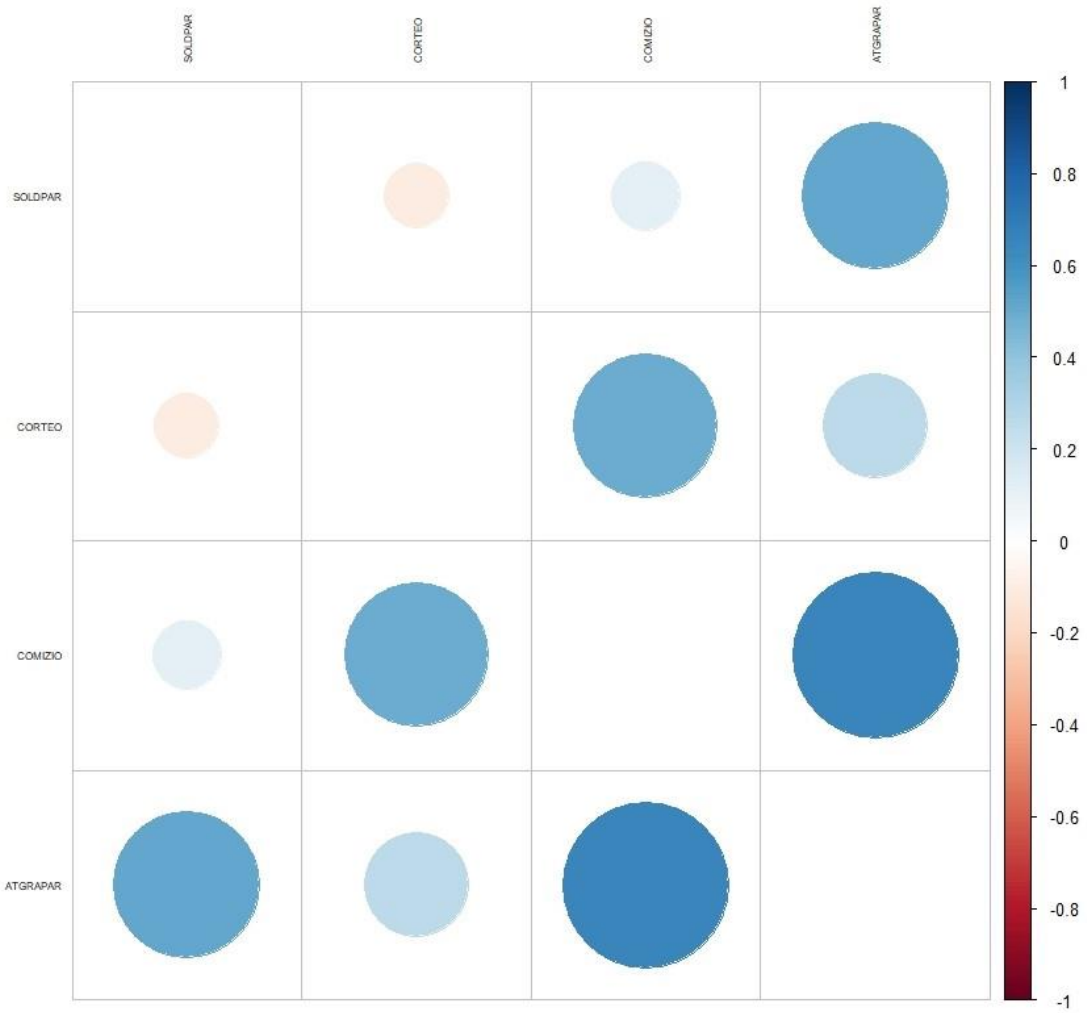

Table A7. Historic evolution of indicators of active political contribution

	2009	2010	2011	2012	2013	2014	2015	2016	2017
Abruzzo	4,99	13,08	10,13	6,48	11,00	9,82	6,68	7,32	5,95
Basilicata	4,36	18,85	19,20	12,68	14,76	17,55	7,05	13,08	12,18
Calabria	4,01	14,87	13,58	10,51	16,04	10,90	12,73	8,09	8,13
Campania	1,30	9,17	10,91	6,68	7,85	7,42	6,33	4,76	5,12
Emilia-Romagna	4,71	11,76	9,13	8,82	10,66	9,02	2,83	3,10	5,22

Friuli-Venezia Giulia	1,73	6,43	8,46	5,71	8,47	7,84	3,17	3,29	4,20
Lazio	2,13	9,06	10,48	7,73	10,56	7,96	5,47	4,47	5,59
Liguria	1,69	6,92	8,30	7,39	7,20	6,99	4,79	3,46	4,79
Lombardia	1,93	9,34	8,99	6,65	6,90	7,23	3,62	3,54	3,28
Marche	2,43	9,82	8,65	3,67	6,91	8,39	5,33	3,30	3,63
Molise	3,74	12,28	9,76	11,13	10,92	11,68	7,28	6,06	7,46
Piemonte	0,57	7,78	11,71	5,65	6,94	7,75	5,06	3,20	4,17
Puglia	3,07	9,16	11,50	8,27	12,10	8,80	6,99	7,47	7,32
Sardegna	7,56	12,57	14,14	7,45	9,17	12,17	5,29	5,61	7,31
Sicilia	4,75	6,47	8,66	8,22	11,95	11,77	5,50	7,83	4,39
Toscana	3,31	8,82	9,21	7,98	9,56	7,73	3,26	2,91	5,23
Trentino Alto-Adige	9,50	13,43	14,24	10,23	13,85	14,36	4,71	4,87	7,38
Umbria	3,64	11,47	9,93	5,04	8,35	9,85	5,30	3,12	4,95
Valle d'Aosta	6,36	8,30	12,77	4,25	8,99	10,96	4,36	5,66	4,86
Veneto	2,50	8,12	7,25	5,05	6,97	6,00	3,50	2,68	4,24

Table A9. Indicators of social capital as civic awareness												
			Mean and standard deviation									
Label	Description	Source	2009	2010	2011	2012	2013	2014	2015	2016	2017
INFOPOTG	People aged 14 and more keeping themselves informed on politics every day, for every 100 people of the same area	ISTAT	35,1 (6,85)	33,58 (7,34)	38,6 (7,63)	35,59 (6,95)	38,02 (7,51)	35,06 (6,84)	34,28 (6,78)	30,78 (5,82)	27,54 (5,17)
NOINFOPO	People aged 14 and more never informing themselves on politics, for every 100 people of the same area	ISTAT	23,14 (6,75)	23,9 (6,84)	22,09 (10,84)	23,6 (6,28)	21,17 (6,31)	22,31 (5,88)	22,15 (6,13)	24,46 (6,35)	26,24 (6,28)
SIQUOT	People aged 14 and above and more reading newspapers, for every 100 people of the same area	ISTAT	49,45 (9,42)	46,55 (9,77)	47 (10,84)	44,65 (9,55)	42,05 (10,09)	40,89 (10,52)	40,29 (9,25)	38,97 (9,4)	35,74 (9,25)
SIAMIC	People aged 14 and more who, when meeting friends, talk about current affairs and share their opinion, for every 100 people meeting friends of the same area	ISTAT	25,53 (4,58)	26,95 (5,03)	28,73 (4,14)	26,29 (3,51)	31,32 (3,99)	29,55 (5,29)	28,81 (4,79)	26,83 (4,73)	27,52 (3,85)

PARPOLTG	People aged 14 and more talking about politics everyday, for every 100 people of the same area	ISTAT	10,16 (1,87)	9,76 (2,1)	12,38 (2,17)	10,54 (1,87)	15,77 (2,36)	12,11 (2,18)	10,52 (1,63)	8,8 (1,2)	7,91 (1,58)
NOPARLPOLTG	People aged 14 and more never talking about politics, for every 100 people of the same area	ISTAT	31,71 (6,79)	32,98 (7,23)	30,87 (6,47)	32,2 (6,24)	27,38 (6,59)	30 (6,02)	30,58 (6,12)	32,51 (6,3)	34,25 (5,91)
DIBATT	People aged 14 and more having listened to a political debate in the 12 months before the interview, for every 100 people of the same area	ISTAT	24,33 (3,99)	23,23 (3,12)	22,59 (2,99)	19,71 (2,91)	27,65 (2,72)	22,93 (3,01)	19,98 (2,28)	18,27 (2,61)	17,15 (2,4)

Figure A5. Correlation matrix of indicators of civic awareness

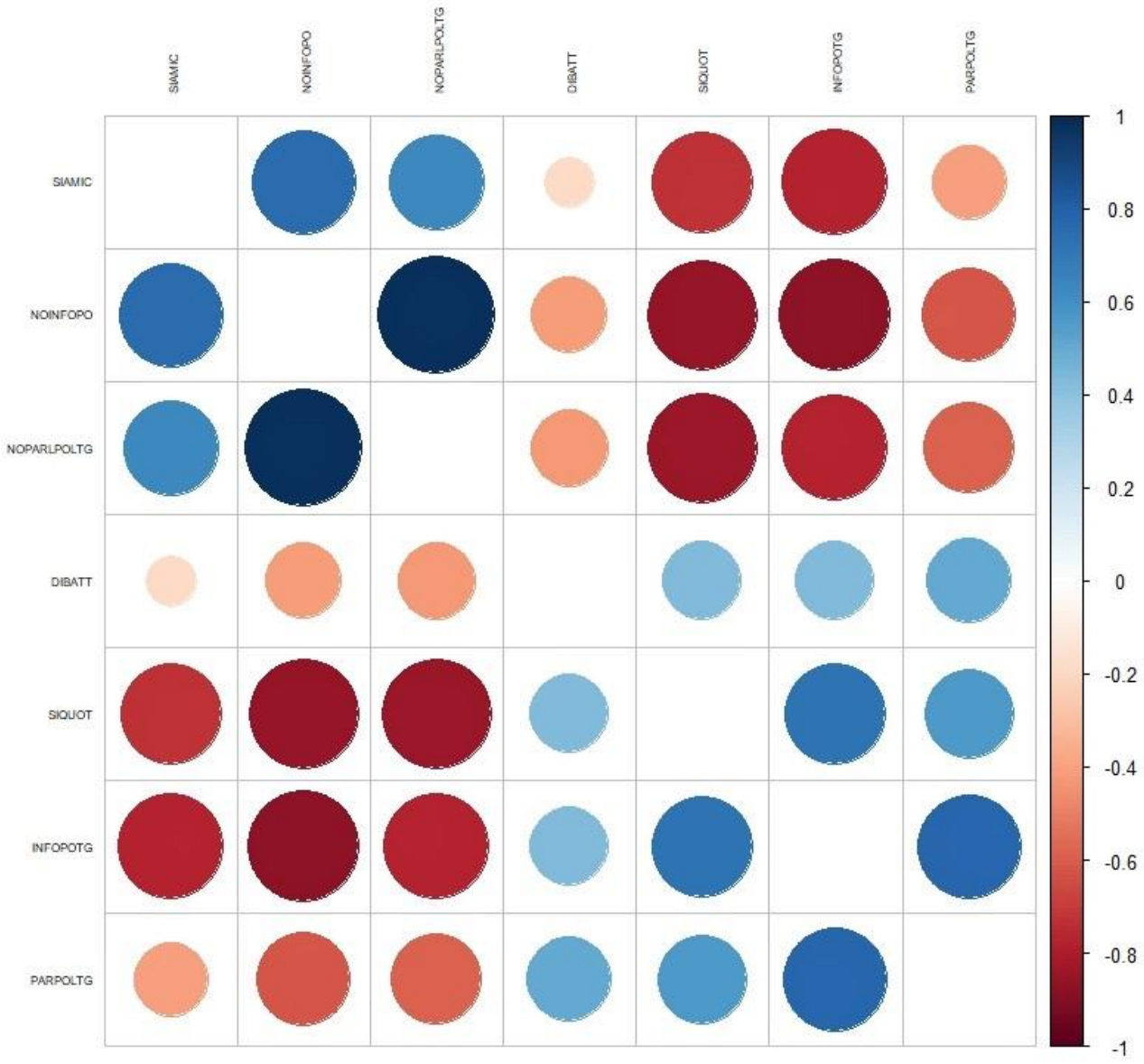

Table A8. Historic evolution of indicators of civic awareness

REG	2009	2010	2011	2012	2013	2014	2015	2016	2017
Abruzzo	45,97	42,51	47,00	55,09	34,67	45,27	36,82	36,71	27,77
Basilicata	34,73	29,55	35,57	42,10	16,59	38,97	23,28	22,93	16,37
Calabria	23,61	29,50	34,82	42,37	14,26	31,12	31,04	14,74	13,12
Campania	32,82	26,84	30,94	36,74	4,08	28,65	22,89	11,97	8,04
Emilia-Romagna	57,03	61,23	57,73	63,46	46,41	53,11	49,10	32,27	31,26

Friuli-Venezia Giulia	59,66	56,38	62,99	60,91	49,28	58,76	51,99	45,26	33,72
Lazio	51,58	52,53	57,16	55,99	34,55	50,28	40,90	37,59	30,19
Liguria	54,90	53,54	55,23	62,75	36,58	48,20	46,00	29,96	33,70
Lombardia	48,50	54,07	54,12	58,74	37,57	46,19	43,05	39,31	26,30
Marche	45,29	38,72	48,25	48,11	43,53	44,06	41,90	35,84	30,31
Molise	33,70	37,68	38,98	50,27	17,55	45,25	23,33	19,23	11,91
Piemonte	52,00	49,13	57,07	58,11	43,68	46,51	43,03	32,28	26,40
Puglia	27,94	28,14	33,24	37,16	12,43	28,77	26,84	20,79	9,60
Sardegna	66,03	66,81	73,23	70,64	40,79	65,19	47,20	42,43	34,95
Sicilia	27,92	22,24	30,52	42,60	12,43	24,84	22,76	15,93	4,80
Toscana	50,15	52,60	54,15	56,92	40,09	50,57	44,73	37,63	26,89
Trentino Alto-Adige	65,13	60,18	68,69	64,70	45,45	67,25	54,30	48,62	38,60
Umbria	47,83	41,20	53,61	50,39	34,84	43,21	50,05	33,68	29,56
Val d'Aosta	44,31	45,42	56,43	61,09	36,07	55,38	48,65	41,15	32,41
Veneto	53,02	54,79	57,49	63,17	45,93	52,02	46,22	42,51	32,76

Table A9. Historic evolution of indicators of total social capital

REG	2009	2010	2011	2012	2013	2014	2015	2016	2017
Abruzzo	41,59	68,59	88,48	90,68	72,22	83,47	92,08	92,42	80,76
Basilicata	33,72	60,20	83,38	91,37	62,78	78,37	85,19	86,78	69,20
Calabria	23,12	53,51	77,67	76,10	46,79	72,68	88,40	74,34	59,93
Campania	25,99	45,35	72,24	82,90	47,53	59,38	75,94	61,12	57,93
Emilia-Romagna	63,95	91,45	90,32	94,78	84,66	95,42	94,30	97,67	95,68
Friuli-Venezia Giulia	65,65	82,43	98,58	95,06	89,21	95,28	101,89	101,52	99,24
Lazio	52,23	78,81	83,15	88,70	68,21	89,44	82,60	84,59	88,77
Liguria	62,29	76,80	91,36	88,88	65,38	87,47	96,37	86,89	99,16
Lombardia	53,35	84,84	85,54	94,30	82,74	85,08	91,29	95,79	90,75
Marche	44,71	63,73	83,20	88,43	81,09	88,35	93,84	95,10	85,52
Molise	29,81	57,05	81,87	95,72	56,89	77,44	78,61	81,56	71,39
Piemonte	60,82	78,59	87,19	91,82	77,90	89,75	92,31	87,51	90,13
Puglia	23,66	45,02	78,04	83,88	54,53	63,47	86,42	75,52	58,95
Sardegna	53,97	84,75	104,25	96,82	70,82	104,69	93,02	96,78	83,18
Sicilia	31,48	44,76	74,73	79,63	48,51	65,80	78,02	71,13	54,16
Toscana	57,45	80,37	89,86	91,38	85,40	92,30	88,59	96,18	88,69
Trentino Alto-Adige	73,06	98,20	113,59	113,60	98,33	113,08	118,94	122,17	111,80
Umbria	51,96	63,60	90,30	85,39	73,58	86,43	91,19	89,72	85,54
Val d'Aosta	54,80	83,18	89,27	95,31	77,69	96,98	103,46	106,59	95,37
Veneto	53,09	81,04	95,52	102,07	90,21	88,81	92,13	100,23	92,58

Figure 9a. Correlation bonding social capital - ABSCAPESF

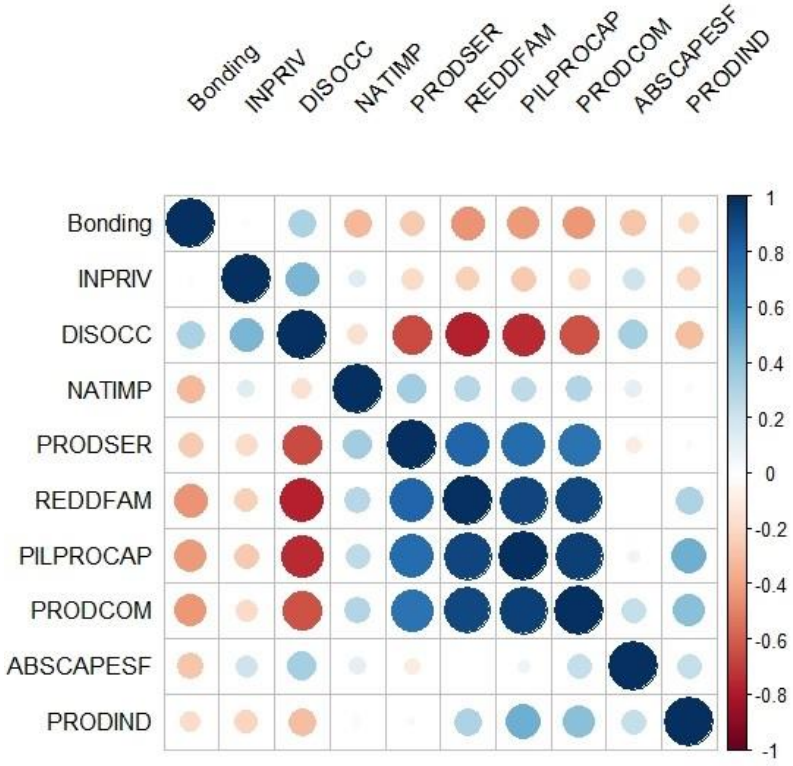

Figure 9b. Correlation bonding social capital - ABSCAPERDF

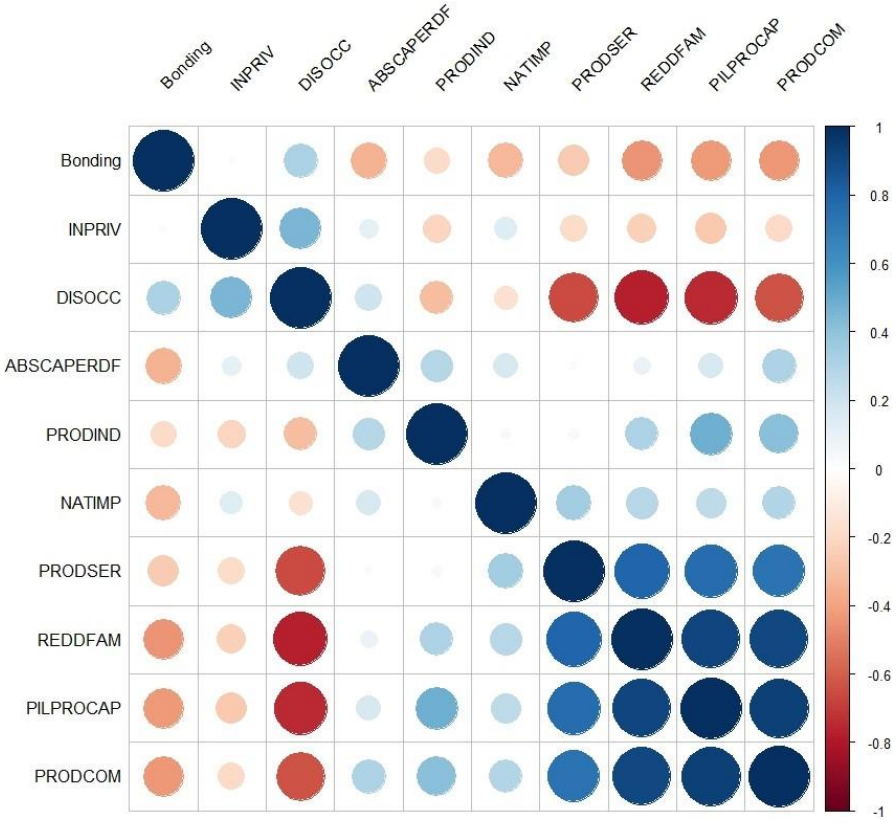

Figure 9c. Correlation bonding social capital - ABSCAPTOT

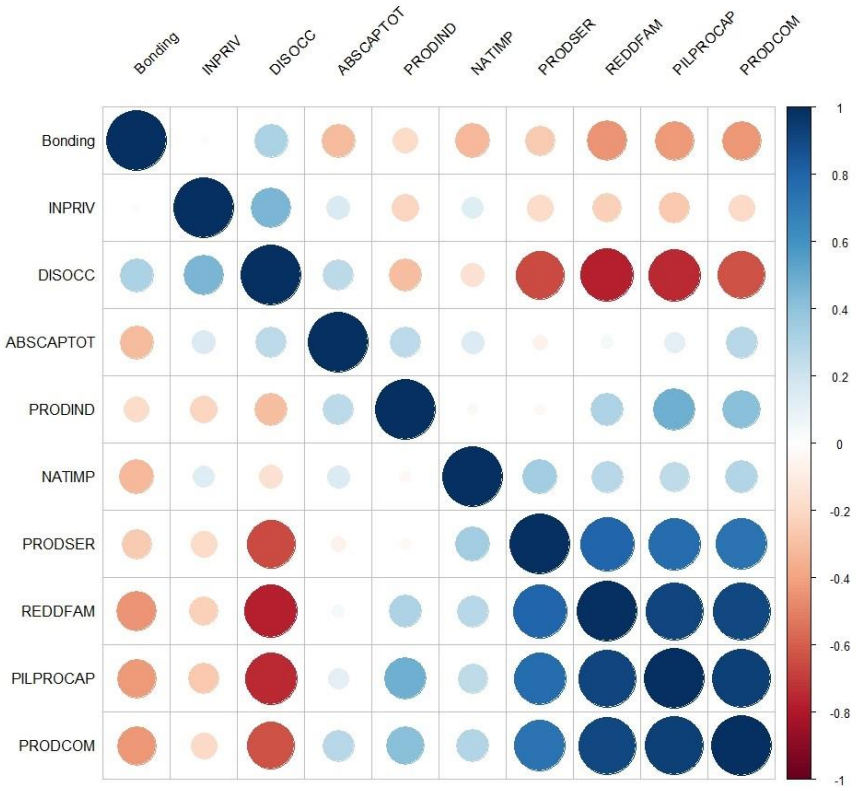

Figure 10a. Correlation bridging social capital - ABSCAPESF

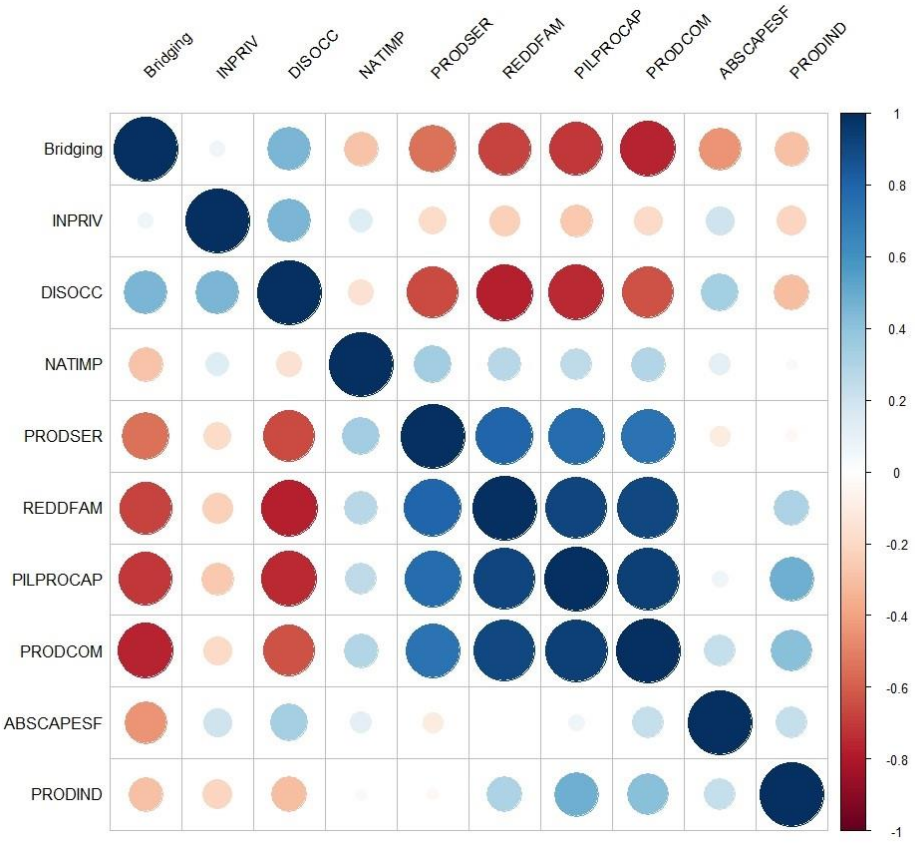

Figure 10b. Correlation bridging social capital - ABSCAPERDF

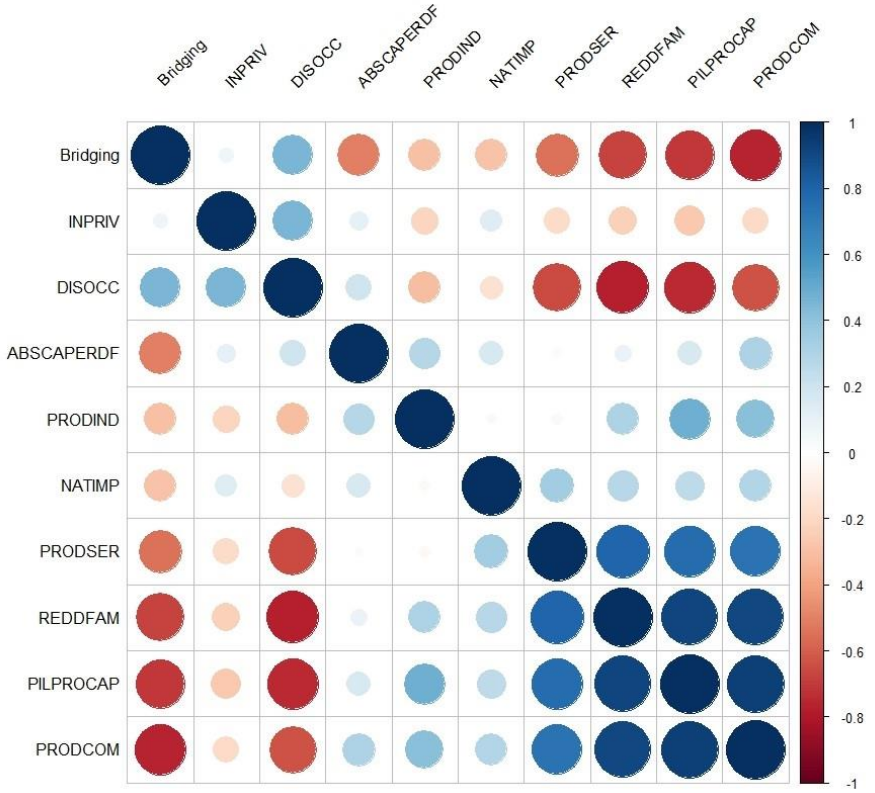

Figure 10c. Correlation bridging social capital – ABSCAPTOT

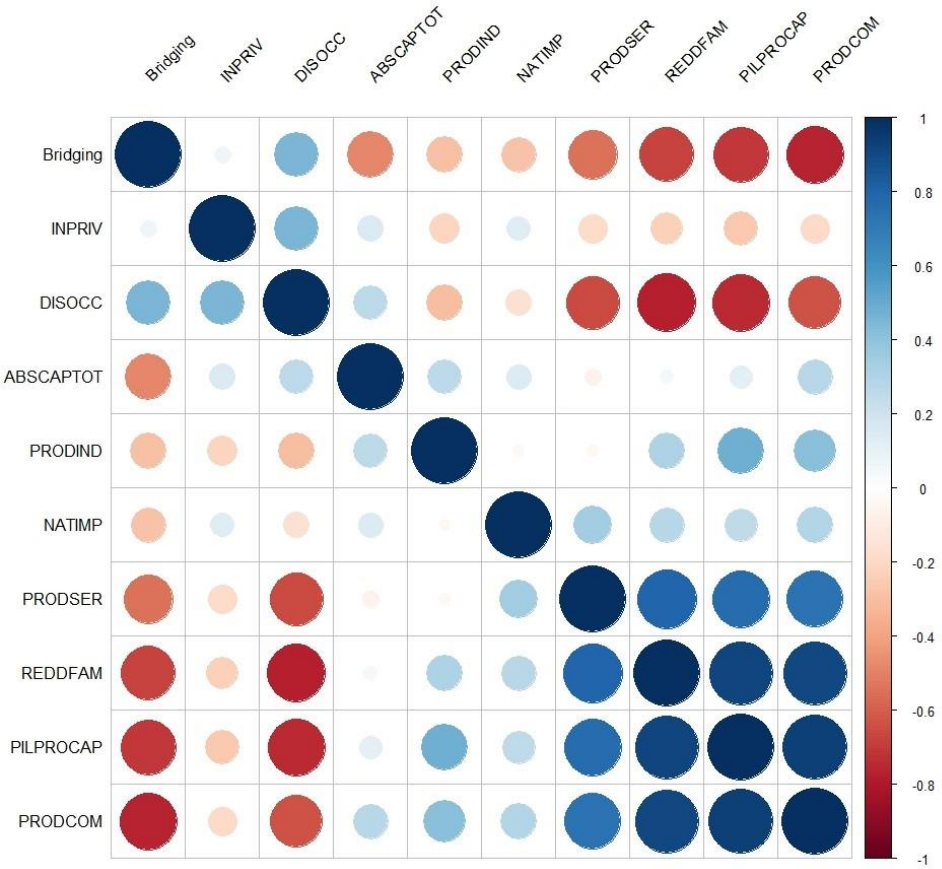

Figure 11a. Correlation linking social capital - ABSCAPESF

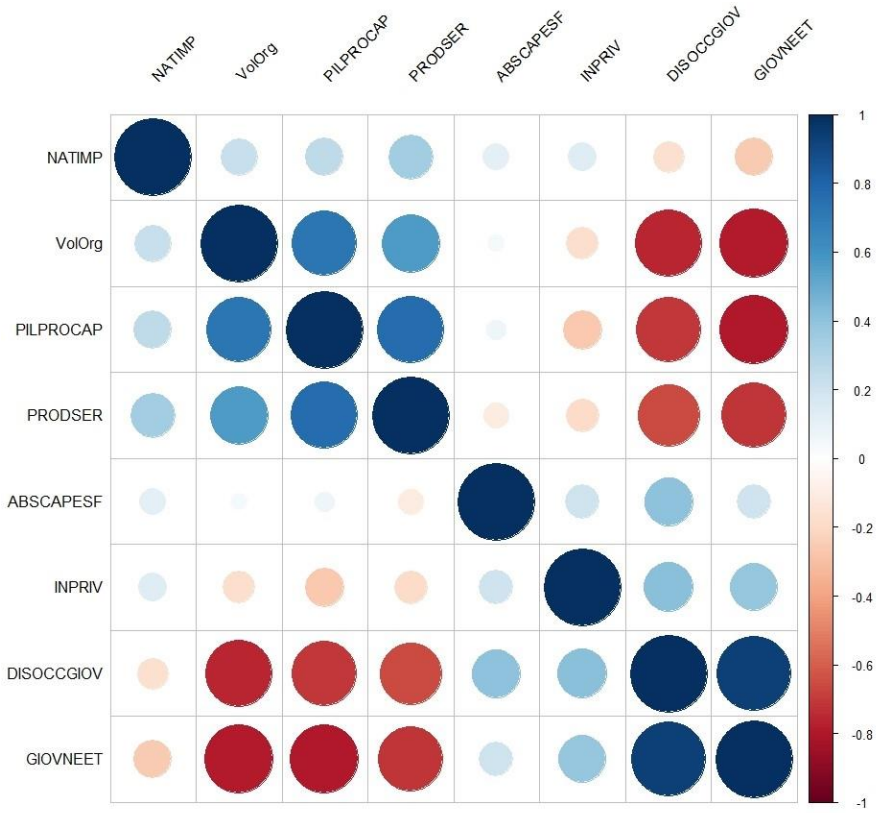

Figure 11b. Correlation linking social capital – ABSCAPERDF

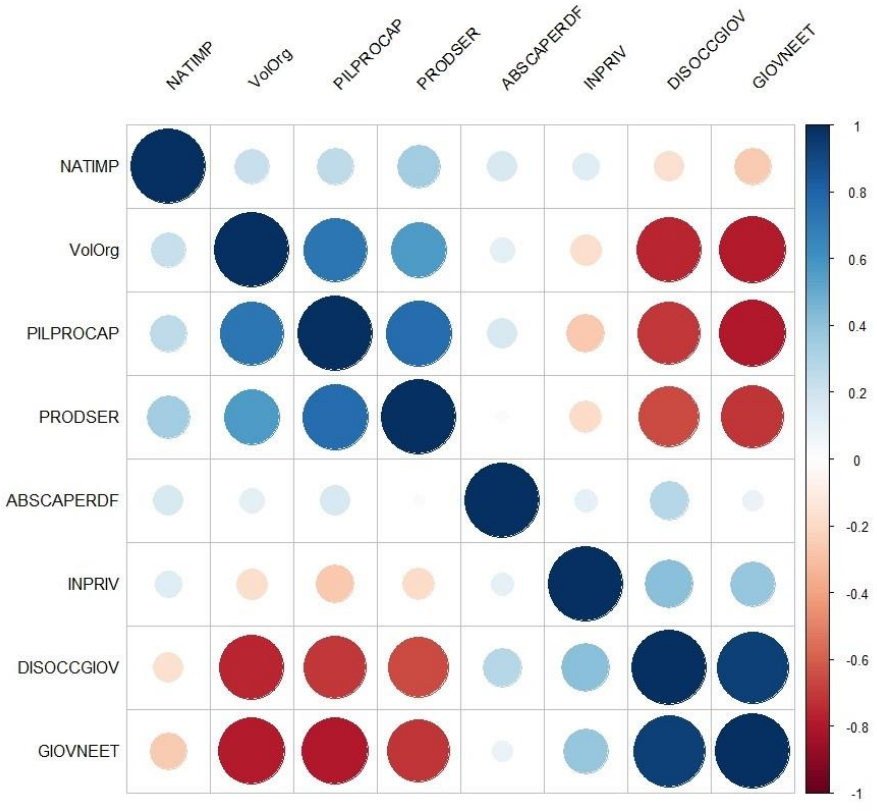

Figure 11c. Correlation linking social capital – ABSCAPTOT

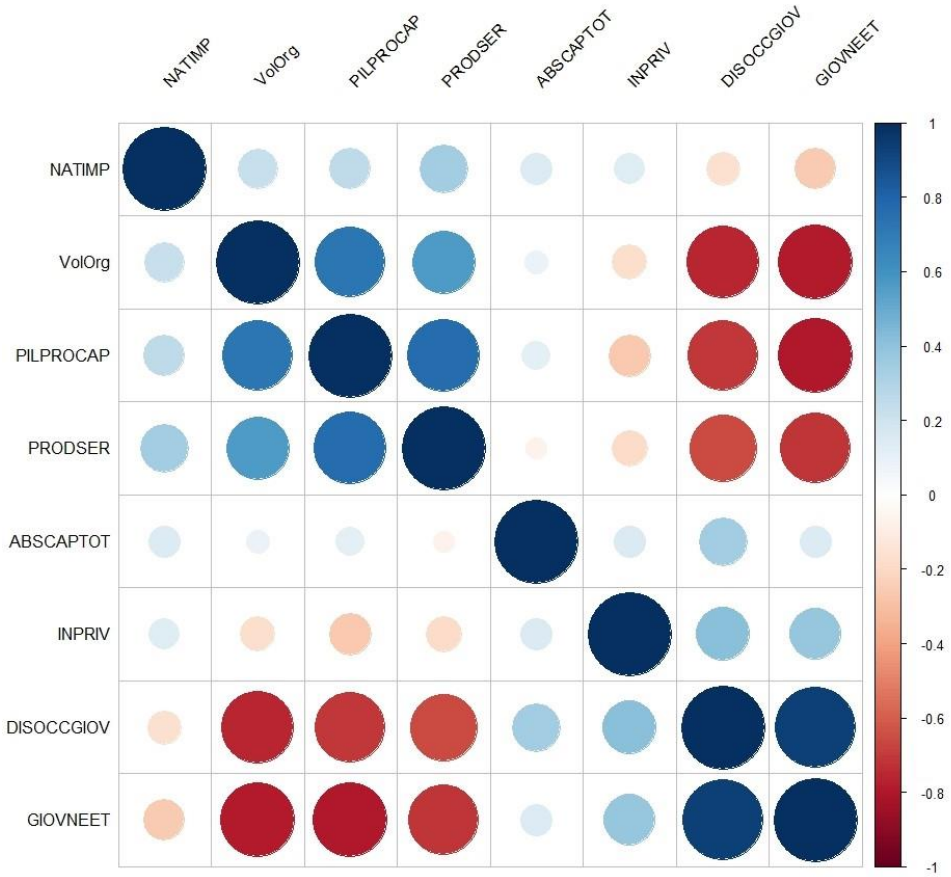

Figure 12a. Correlation active political participation – ABSCAPESF

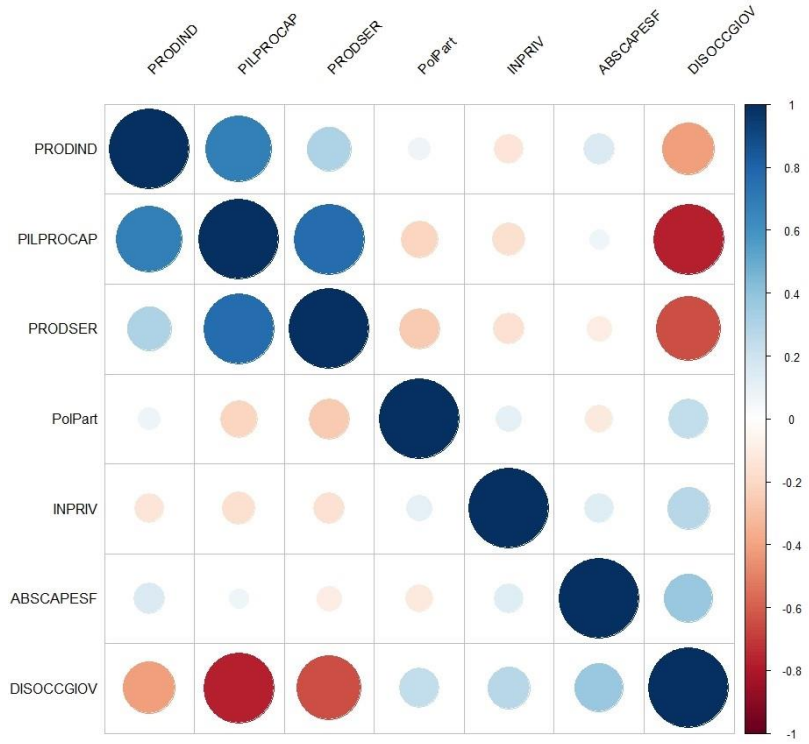

Figure 12b. Correlation active political participation - ABSCAPERDF

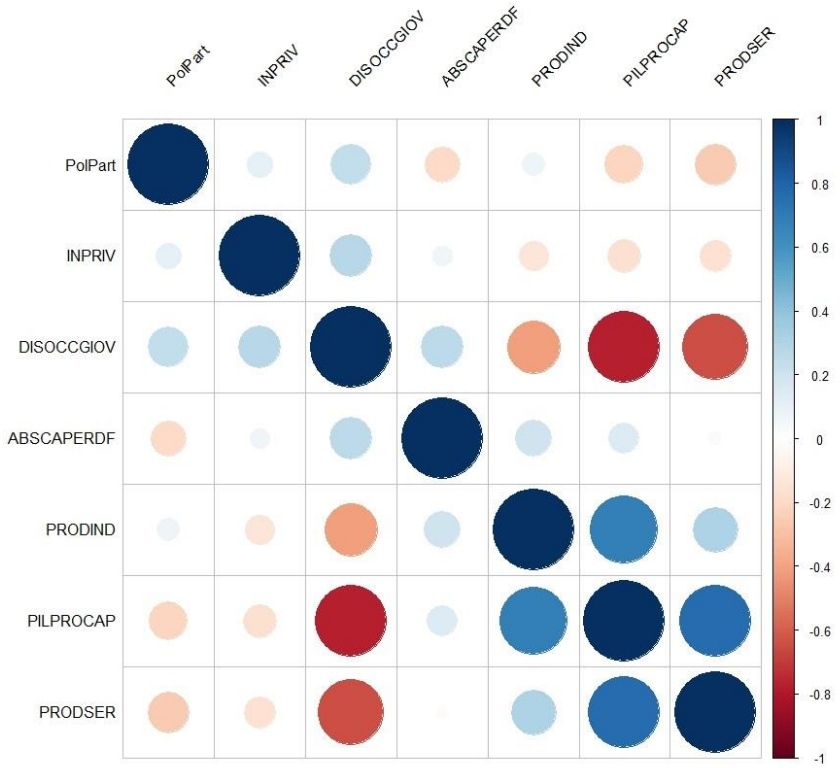

Figure 12c. Correlation active political participation - ABSCAPTOT

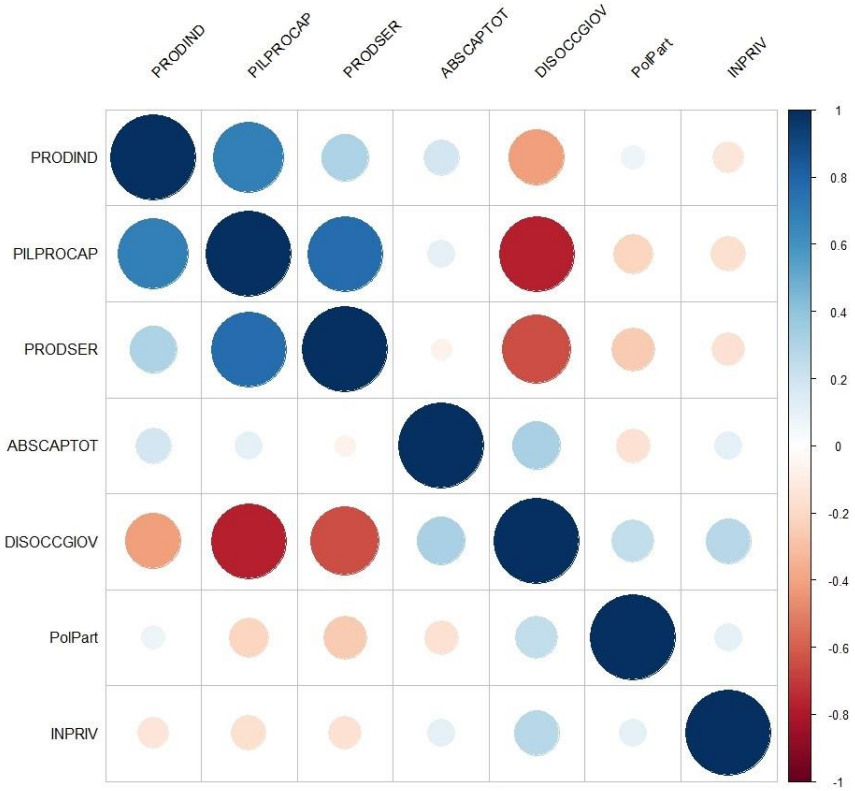

Figure 13a. Correlation civic awareness - ABSCAPESF

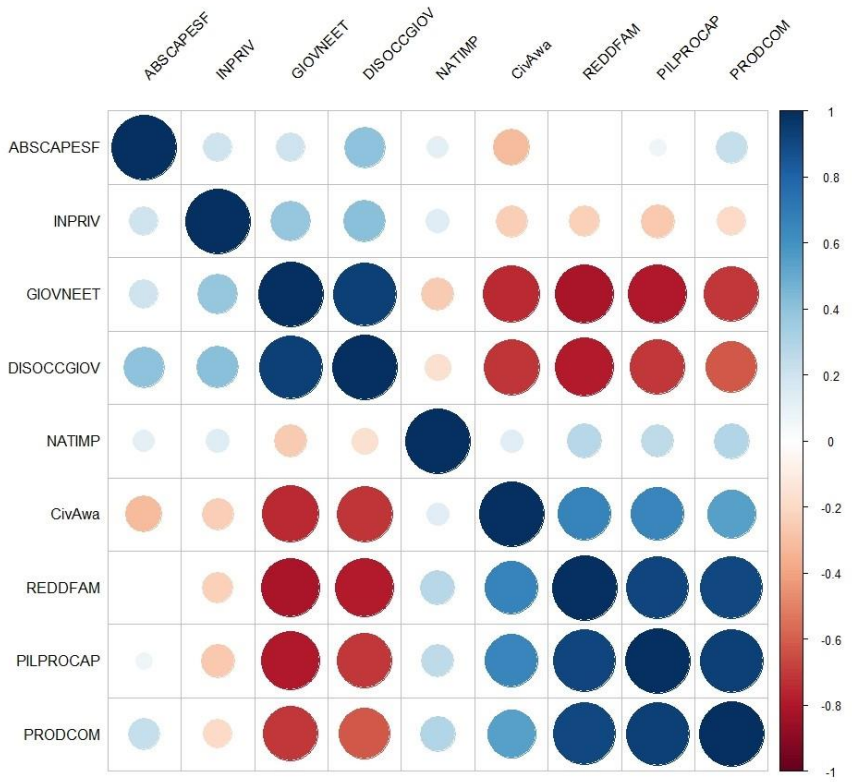

Figure 13b. Correlation civic awareness – ABSCAPERDF

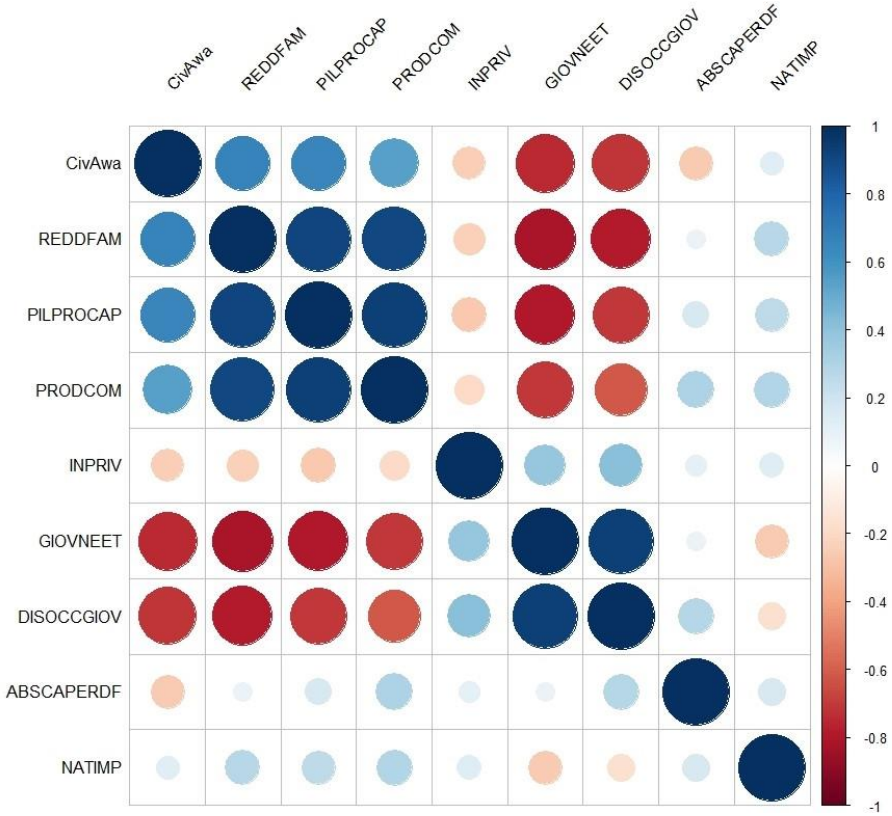

Figure 13c. Correlation civic awareness – ABSCAPTOT

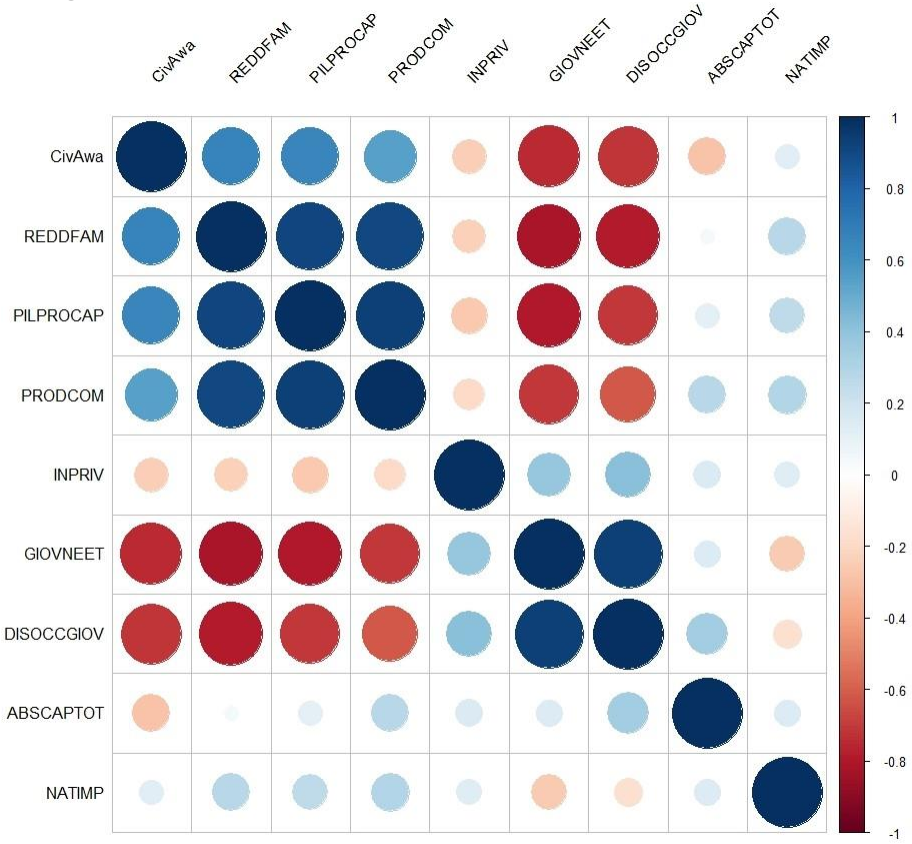

Figure 14a. Correlation social capital index – ABSCAPESF

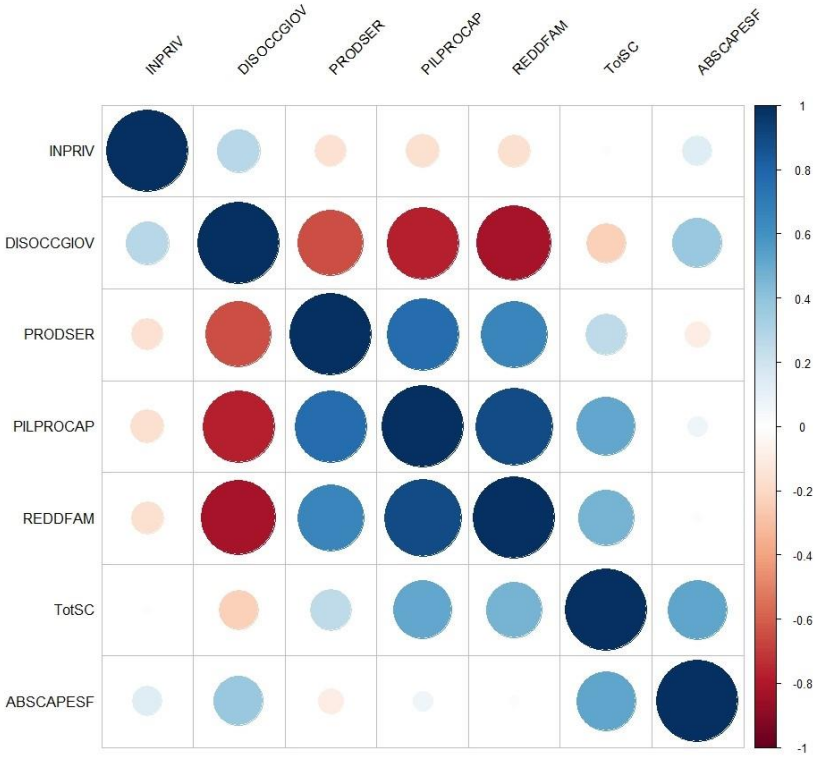

Figure 14b. Correlation social capital index - ABSCAPERDF

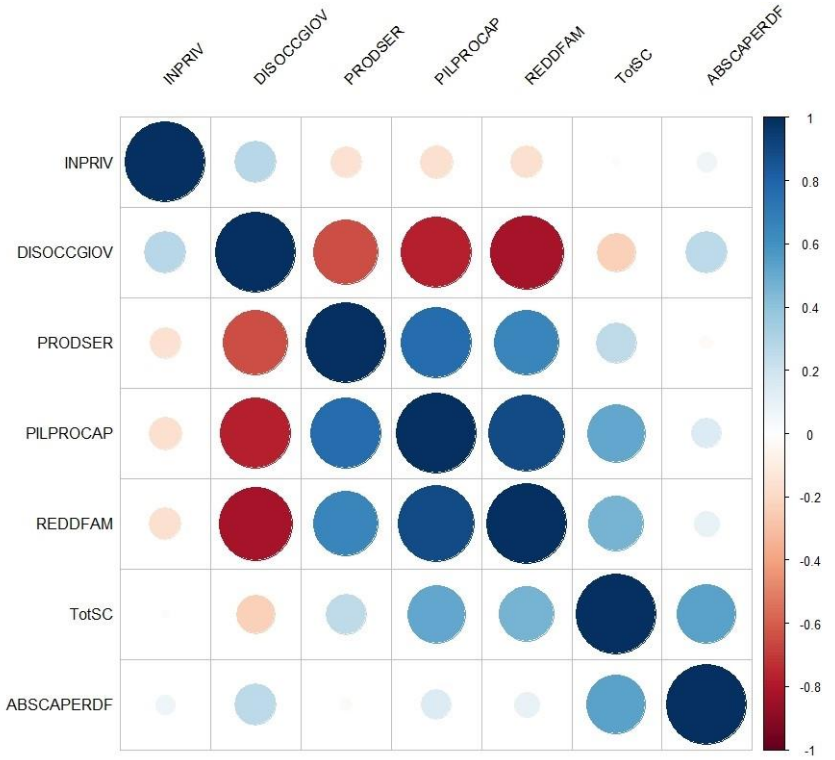

Figure 14c. Correlation social capital index – ABSCAPTOT

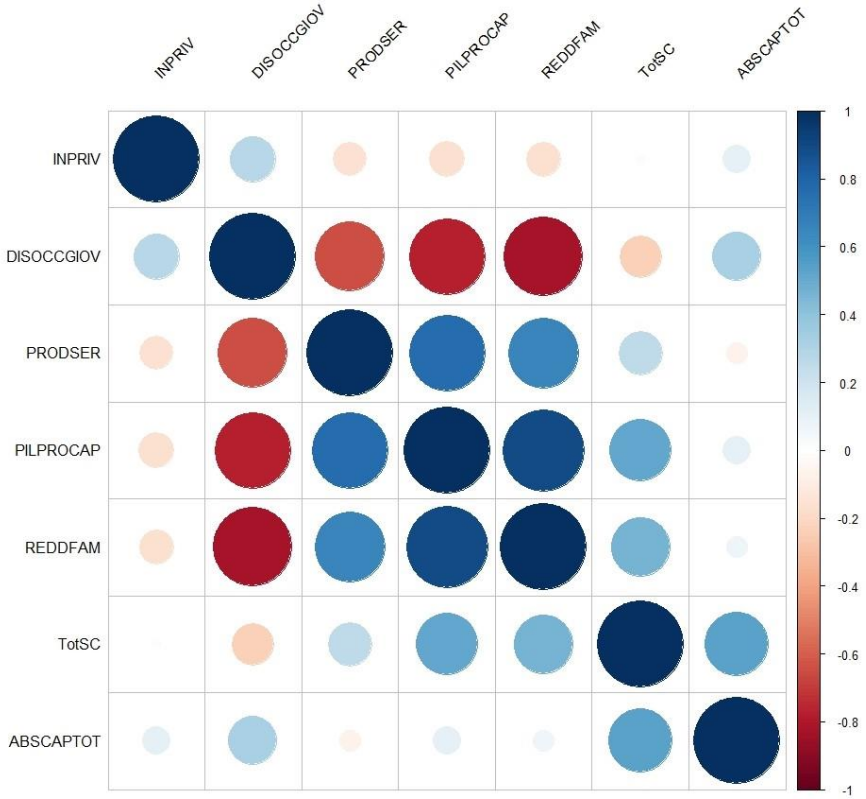

Table A10. Regression results of bonding social capital

Bonding Social Capital

	Dependent variable:		
	ABSCAPESF	ABSCAPERDF	ABSCAPTOT
	(1)	(2)	(3)
FIXREG	-0.132	-0.199	-0.167
	(0.119)	(0.128)	(0.122)
FIXELI	0.970***	1.016***	1.001***
	(0.108)	(0.116)	(0.111)
Bonding	-0.289***	-0.329***	-0.312***
	(0.055)	(0.059)	(0.056)
REDDFAM	0.475**	0.349*	0.413**
	(0.183)	(0.196)	(0.187)
INPRIV	0.002	-0.062	-0.031
	(0.069)	(0.074)	(0.070)
PRODIND	0.658***	0.670***	0.669***
	(0.094)	(0.101)	(0.096)
PRODCOM	1.147***	1.136***	1.150***
	(0.157)	(0.168)	(0.161)
PRODSER	0.050	0.103	0.077
	(0.138)	(0.148)	(0.141)
NATIMP	-0.138**	-0.094	-0.116*
	(0.061)	(0.065)	(0.062)
PILPROCAP	-2.045***	-2.044***	-2.059***
	(0.284)	(0.304)	(0.290)
DISOCC	1.195***	1.043***	1.125***
	(0.118)	(0.126)	(0.121)
Constant	-0.334***	-0.410***	-0.376***
	(0.095)	(0.101)	(0.097)
Observations	96	96	96
R^2	0.793	0.754	0.779
Adjusted R^2	0.766	0.722	0.750
Residual Std. Error (df = 84)	0.463	0.496	0.474
F Statistic (df = 11; 84)	29.335***	23.438***	26.894***
Note:			*p<0.1; **p<0.05; ***p<0.01

Table A11. Regression results of bridging social capital

Bridging Social Capital

	Dependent variable:		
	ABSCAPESF	ABSCAPERDF	ABSCAPTOT
	(1)	(2)	(3)
FIXREG	-0.203	-0.276**	-0.242*
	(0.122)	(0.134)	(0.127)
FIXELI	0.771***	0.804***	0.793***
	(0.116)	(0.128)	(0.121)
Bridging	-0.390***	-0.414***	-0.405***
	(0.082)	(0.089)	(0.085)
REDDFAM	0.470**	0.351*	0.412**
	(0.187)	(0.205)	(0.194)
INPRIV	-0.017	-0.081	-0.050
	(0.071)	(0.077)	(0.073)
PRODIND	0.553***	0.553***	0.557***
	(0.095)	(0.105)	(0.099)
PRODCOM	0.867***	0.840***	0.859***
	(0.172)	(0.188)	(0.178)
PRODSER	-0.041	-0.008	-0.024
	(0.138)	(0.151)	(0.143)
NATIMP	-0.038	0.019	-0.009
	(0.060)	(0.066)	(0.062)
PILPROCAP	-1.708***	-1.671***	-1.701***
	(0.288)	(0.316)	(0.300)
DISOCC	1.071***	0.908***	0.995***
	(0.121)	(0.133)	(0.126)
Constant	-0.300***	-0.377***	-0.342***
	(0.098)	(0.107)	(0.101)
Observations	96	96	96
R^2	0.785	0.732	0.763
Adjusted R^2	0.756	0.696	0.732
Residual Std. Error (df = 84)	0.473	0.518	0.491
F Statistic (df = 11; 84)	27.811***	20.815***	24.592***
Note:			*p<0.1; **p<0.05; ***p<0.01

Table A11. Regression results of linking social capital

Linking Social Capital

	Dependent variable:		
	ABSCAPESF	ABSCAPERDF	ABSCAPTOT
	(1)	(2)	(3)
FIXREG	-0.102	-0.161	-0.133
	(0.163)	(0.170)	(0.166)
FIXELI	0.241	0.376*	0.313
	(0.186)	(0.193)	(0.189)
VolOrg	0.801***	0.741***	0.776***
	(0.167)	(0.174)	(0.170)
INPRIV	-0.090	-0.159	-0.126
	(0.095)	(0.099)	(0.097)
PRODSER	-0.194	-0.230	-0.214
	(0.151)	(0.157)	(0.153)
PILPROCAP	0.442***	0.438***	0.443***
	(0.154)	(0.160)	(0.157)
DISOCCGIOV	1.512***	1.353***	1.441***
	(0.284)	(0.295)	(0.288)
GIOVNEET	-0.256	-0.158	-0.207
	(0.409)	(0.424)	(0.415)
NATIMP	0.070	0.115	0.094
	(0.080)	(0.083)	(0.081)
Constant	-0.105	-0.189	-0.149
	(0.126)	(0.131)	(0.128)
Observations	96	96	96
R^2	0.603	0.556	0.583
Adjusted R^2	0.561	0.510	0.539
Residual Std. Error (df = 86)	0.634	0.658	0.644
F Statistic (df = 9; 86)	14.500***	11.988***	13.334***
Note:			*p<0.1; **p<0.05; ***p<0.01

Table A12. Regression results of social capital as active political participation

Social Capital as Active Political Participation

	Dependent variable:		
	ABSCAPESF	ABSCAPERDF	ABSCAPTOT
	(1)	(2)	(3)
FIXREG	0.153**	0.147**	0.151**
	(0.065)	(0.066)	(0.065)
FIXELI	0.144	0.188**	0.168*
	(0.089)	(0.090)	(0.089)
PolPart	-0.198***	-0.241***	-0.222***
	(0.056)	(0.056)	(0.056)
INPRIV	0.050	-0.009	0.020
	(0.086)	(0.087)	(0.086)
PRODIND	0.054	0.115	0.086
	(0.097)	(0.098)	(0.097)
PRODSER	-0.332***	-0.287***	-0.311***
	(0.108)	(0.109)	(0.108)
PILPROCAP	0.899***	0.768***	0.838***
	(0.184)	(0.185)	(0.184)
DISOCCGIOV	1.041***	0.933***	0.993***
	(0.089)	(0.090)	(0.089)
Constant	-0.101*	-0.122**	-0.113**
	(0.053)	(0.053)	(0.053)
Observations	160	160	160
R^2	0.544	0.506	0.528
Adjusted R^2	0.520	0.479	0.503
Residual Std. Error (df = 151)	0.661	0.667	0.661
F Statistic (df = 8; 151)	22.495***	19.301***	21.148***
Note:			*p<0.1; **p<0.05; ***p<0.01

Table A13. Regression results of social capital as civic awareness

Social Capital as Civic Awareness

	Dependent variable:		
	ABSCAPESF	ABSCAPERDF	ABSCAPTOT
	(1)	(2)	(3)
FIXREG	-0.363***	-0.433***	-0.402***
	(0.131)	(0.136)	(0.133)
FIXELI	0.147	0.280*	0.217
	(0.145)	(0.151)	(0.147)
CivAwa	-0.314***	-0.407***	-0.364***
	(0.100)	(0.104)	(0.102)
INPRIV	-0.060	-0.125	-0.094
	(0.080)	(0.083)	(0.081)
PRODCOM	1.008***	0.931***	0.976***
	(0.186)	(0.193)	(0.188)
PILPROCAP	-0.980***	-0.845***	-0.917***
	(0.247)	(0.257)	(0.250)
DISOCCGIOV	1.739***	1.543***	1.650***
	(0.243)	(0.253)	(0.246)
GIOVNEET	-1.225***	-1.120***	-1.180***
	(0.316)	(0.329)	(0.320)
NATIMP	0.008	0.054	0.032
	(0.069)	(0.071)	(0.069)
REDDFAM	0.366*	0.296	0.333
	(0.206)	(0.215)	(0.209)
Constant	-0.489***	-0.552***	-0.525***
	(0.110)	(0.114)	(0.111)
Observations	96	96	96
R^2	0.712	0.677	0.699
Adjusted R^2	0.678	0.639	0.663
Residual Std. Error (df = 85)	0.543	0.565	0.550
F Statistic (df = 10; 85)	21.038***	17.819***	19.698***
Note:			*p<0.1; **p<0.05; ***p<0.01

Table A14. Regression results of the social capital index

Social Capital Index

	Dependent variable:		
	ABSCAPESF	ABSCAPERDF	ABSCAPTOT
	(1)	(2)	(3)
FIXREG	0.027	0.035	0.031
	(0.059)	(0.064)	(0.061)
FIXELI	0.051	0.092	0.073
	(0.071)	(0.076)	(0.073)
TotSC	0.392***	0.343***	0.369***
	(0.061)	(0.066)	(0.063)
INPRIV	-0.035	-0.098	-0.068
	(0.076)	(0.082)	(0.078)
PILPROCAP	0.230	0.263*	0.249*
	(0.140)	(0.152)	(0.145)
DISOCCGIOV	1.016***	0.917***	0.972***
	(0.093)	(0.101)	(0.096)
PRODSER	-0.071	-0.078	-0.075
	(0.089)	(0.097)	(0.093)
REDDFAM	0.467***	0.419***	0.445***
	(0.121)	(0.131)	(0.126)
Constant	-0.107**	-0.130**	-0.120**
	(0.046)	(0.050)	(0.048)
Observations	160	160	160
R^2	0.648	0.563	0.611
Adjusted R^2	0.629	0.540	0.590
Residual Std. Error (df = 151)	0.581	0.627	0.601
F Statistic (df = 8; 151)	34.702***	24.307***	29.589***
Note:			*p<0.1; **p<0.05; ***p<0.01

Executive Summary

The present thesis' general aim is to present a ground-breaking analysis of the relationship between social capital as a territorial asset and the Cohesion Policy which is designed to produce development results. As a consequence, to pursue this aim, social capital has been operationalised and assessed in the context of the Structural Funds of the programming cycle 2007-2013.

The **first chapter** provides a clear introduction to the topic of the European Union's (EU) development policy moving back in time from the new European instrument, the Resilience and Recovery Facility launched last year, 2020. Its vision is to promote the EU's economic, social and territorial cohesion by steering, at the same time, Europe through the digital and green transition and making the continent more resilient to future crises. Yet, fostering Europe's cohesion is not a revolutionary new act *per se* as the EU has been trying since the agreement of the Single European Act of 1986 and the launch of the Cohesion Policy in 1989 to reduce disparities in the level of development between European regions. If, after thirty-five years the Union is chasing the same goal, and even when taking into account the accession of other states, it should be cause for reflection to what extent the Cohesion Policy contributed to the balanced economic growth of its Member States.

While most studies on Cohesion Policy have focused on the economic effects in European regions, less attention has been devoted to the drivers of Cohesion Policy or those factors that enable a timely formulation of the Regional Operative Programmes (ROPs) and their implementation. In this regard, current literature has tended to put under the spotlight mostly the quality of local and national institutions or the stock of human capital and only with few exceptions it has taken into account social capital a concept that remains until now underrated and at the same time less investigated.

The specific purpose of this work is therefore twofold. First, to examine closely the concept of social capital and its effects on economic development. Second, by presenting a case study of Italian regions, the relationship between the Cohesion Policy and social capital is studied through the lens of the impact of the latter on the implementation of ROPs and spending of European resources. The four research questions driving the research are:

- *What is social capital and its expected policy outcomes?*
- *What are the goals and means of the Cohesion Policy?*
- *How is social capital relevant to the pursuit of the goals of the Cohesion Policy?*
- *To what extent does social capital affect the Cohesion Policy in Italian Regions?*

The **second chapter** is dedicated to respond to the first research question by providing a comprehensive overview of the concept of social capital. As the term was interpreted in the late 20th century it was to offer an alternative narrative to the classical economic theories, by introducing the importance of the community to build trust and a more cohesive society. It got popularised through various academic fields and incrementally chosen, due to its multidimensional nature, by a number of researchers. However, no agreement could yet be found on a clear definition leading to plethora of interpretations at different levels of analysis. For example, the three most important authors on social capital Bourdieu, Coleman, and Putnam addressed social capital in three different ways: the first, looked at social capital from an individual perspective as an asset derived from a person's social position and status. Coleman analysed social capital from a group perspective describing it as a public good shaped by the social interactions, relationships and networks of individuals. Putnam was more interested in the collectivisation of social capital at the aggregate level considering the amount of diffused trust available in a community as well as features of social organisations such as norms and networks. A number of later authors embraced either one or the other perspective contributing to the further examination of the concept.

Important is the distinction of social capital in its three forms: bonding, bridging, and linking. Bonding social capital refers to the relations between family members; bridging to the connections with friends, associates, and colleagues; while linking concerns the ties between members of associations of civil society.

One of the biggest issues with social capital is its operationalisation. Since it exists between people and within social interactions it cannot be exactly determined. Therefore, many authors have used proxies or indicators and measured different manifestations of social capital. The most common indicators stem from the structural, relational or cognitive dimensions and can be identified as trust, network structure, civic engagement, social networks, social cohesion, norms and values.

The analysis of studies of social capital in Europe and in Italy do not allow to draw a coherent picture. Social capital's effects have been evaluated in relation with well-being, civic engagement, economic growth, health, and innovation. Nevertheless, there are no unanimous findings as the results tend to vary across the territorial level chosen, the statistical method used, and the type of proxy adopted for social capital.

The **third chapter** focuses on delineating the evolution of the European Cohesion Policy aiming a closer look at the different programming cycles with its different investment and policy priorities.

While any effective effort to tackle the differences between regions was not present as the European project took off in the 1950s, it took Member States almost twenty years to agree on the development of regional policies.

A real acceleration took place only after the European continent was hit by the two oil crises of 1973 and 1979, that contributed to the occurrence of the phenomenon of stagflation and the decline in competitiveness of European industry in comparison to their Asian and American competitors. A first attempt to legislate a regional policy was made with the establishment of the European Regional Development Fund (ERDF) in 1975. Future modifications culminated in the Single European Act and the Delors-1 package that gave a treaty base to the ERDF, and expressively associated the idea of cohesion with the reduction of regional disparities and introduced the multi-annual financial perspective.

Importantly the Delors-1 package introduced four main principles guiding policy implementation: concentration, programming, partnership, and additionality. In the following years, as for example through the second Delors package, the Cohesion Policy was further integrated with new elements influenced also by the long-term strategies as the Agenda 2000 and Europe 2020.

A still ongoing debate, overlapping with the analysis of the Cohesion Policy, is one of its impacts and economic results that are brought about in the European regions. On the one side, the European Union is fiercely defending the Cohesion Policy declaring that it increases GDP growth and fosters job creation, relying on the basis of studies by some social scientists; on the other side, other social scientists have found the opposite, that there is no effect between Cohesion Policy and the so-called economic convergence of the less developed regions. Without entering the merits of the debate, the discrepancy in results is most likely related to the difference in the methodology adopted, concerning the number of Member States sampled, the level of classification of regions used (NUTS1-2-3), and the statistical methods adopted by the scientists.

The **fourth chapter** puts under the spotlight the relation between the Cohesion Policy and social capital. Until now, the literature has aimed its attention at the effects of the Cohesion Policy on the fostering of social capital and human capital (that is people's education and skills) neglecting the impacts of the latter on the former. One strand of the literature focuses on how the Cohesion Policy promotes territorial capital (the stock of assets that form the basis for endogenous development in each territory) that in turn affects economic growth in two ways: by promoting cohesion, sustainability, reduction of inequalities and other social and political goals or by fostering economic

competitiveness through R&D, infrastructure, measures for SMEs and large companies. While the former yields benefits in the long term, the latter does it in the medium term.

As it is the case with territorial capital also other studies established a link between Cohesion Policy and growth via investments in human capital. The role of human capital in fostering economic growth has been by now ascertained by the academic literature. Interestingly enough, the less developed European regions allocate around 23 per cent of their Cohesion Policy funding towards human capital, defined as labour market measures, education, or social inclusion, while all other regions at least 44 per cent.

Other authors focusing on social capital found that when analysing the Integrated Development Program of the neighbourhood Pianura in Naples, the plan led to an important growth in the stock of social capital encompassing the creation of new neighbourhood associations and improvements in the quality of life, the sense of identity, the trust level, and the participation level of residents.

One conclusion of this inquiry is that scientists have focused more on the economic effects of EU structural funds ignoring the ones on social aspects. Nevertheless, the connection of capital in both forms fostering economic growth, although mainly in the medium and long-term period has been ascertained. Still, the lack of sufficient literature on the topic further justifies the thrust of the current thesis with its focal point being the analysis of the effects of social capital on the Cohesion Policy, helping to launch a discussion not present in current research.

Treasuring the detailed study of the last chapters, **chapter five** is dedicated to the statistical analysis concentrating on the effects of social capital on the application of the Cohesion Policy and implementation of EU funds. The examination follows a two-step procedure. In a first moment the index of social capital is computed following the identification strategy adopted by Sabatini (Sabatini, 2005). Then, a regression analysis is performed to enquire about the relationship between a proxy for the Cohesion Policy and the social and human capital index.

In order to perform the regression analysis, first a principal component analysis (PCA) is carried out, which is perfectly suited to investigate multidimensional concepts such as social capital. The analysis is based on a dataset computed by the author encompassing several variables that have been separated in five social capital dimensions following the footsteps of Sabatini: strong family ties (bonding social

capital), weak informal ties (bridging social capital), voluntary organisations (linking social capital), political participation, and civic awareness, which then all together form the social capital index.

The findings confirm a well-known picture among Italian experts. The historical divide between Northern and Southern regions persists also in the analysis of the dimensions of social capital. This is particularly the case of bonding and bridging social capital with higher values in Southern Italy and linking social capital with higher values in the regions of the North. Furthermore, active political participation and civic awareness yield a more mixed picture with certain outlier regions of the South scoring together with Northern regions. The findings of the PCA on the entire dataset show that the regions of the North are the ones with an overall higher social capital score than those of the South; the Centre positions itself halfway the ranking.

The second step involved a regression analysis performed for each individual dimension and then the social capital index. The dependent variable is a proxy for the Cohesion Policy which has been identified as the absorption capacity of the region characterised by the proportion of European resources spent each year over the total among of resources at its disposal. The programming cycle analysed is the one of 2007-2013. Two of the three variables concern the two biggest funds: the European Social Fund and the European Regional Development Fund and the third proxy relates to the total spending of European funds. Furthermore, the regression model entailed a vector for a number of economic variables that have been previously found to be relevant in analyses with social capital, and fixed effects one for the regions and one for the different classification of eligibility criteria for European funds established by the Cohesion Policy.

Three hypotheses tested have been identified, which derive from past investigations:

- *Hypothesis 1: Social capital affects positively the spending of European resources*
- *Hypothesis 2: The bonding form of social capital is negatively related to the spending of European resources*
- *Hypothesis 3: The linking form of social capital is positively related to the spending of European resources*

Before moving on to the results of the regression analysis, a preliminary correlation analysis was performed for each dimension. A negative correlation was present between bonding and bridging social capital, active political participation, civic awareness and the Cohesion Policy and a positive one between linking social capital and the social capital index and the Cohesion Policy.

After presenting the empirical model, the estimation results were in line with the correlation analysis. Bonding social capital was negatively related to the spending of European resources with a coefficient of -0,33, alike bridging social capital -0,4, active political participation with -0,24, and civic awareness with -0,4. An increase in linking social capital provides an increase of 0,8 of spending of EU funds such as an increment of the social capital index is related to an increase of 0,39 of Cohesion Policy.

Therefore, it can be affirmed that all three hypotheses tested revealed to be true. And, while the first three forms of social capital have been thoroughly examined by past research, for the first-time an accurate examination has been performed also on political participation and civic awareness.

The **sixth and last chapter** draws the final conclusions of the thesis. As already mentioned above, this thesis had a dual aim: provide, first, a neat qualitative analysis of the concept of social capital comprising its definition, the forms of social capital, its conceptualisation and its operationalisation. Likewise, past studies regarding social capital in Europe and in Italy have been discussed. Then, the Cohesion Policy has been examined and especially its evolution throughout the decades.

Inherent to this first part were the three research questions: What is social capital and its expected policy outcomes? What are the goals and means of the Cohesion Policy? How is social capital relevant to the pursuit of the goals of the Cohesion Policy?

In sum, the examination of the literature on social capital and especially of its definition led to the conclusion that as a relatively new concept no standard definition has been adopted and accepted by scientists. The descriptive elements of bonding, bridging, and linking social capital go into the right direction while at the same time the introduction of new forms is not excluded. The same applies to its policy outcomes which are heavily debated. The origin of the disagreement lies in the fact that due to its multidimensionality and the methodology adopted, social capital can be interpreted and analysed in different ways.

For what concerns the Cohesion Policy, it was created to offset the increasing discrepancies highlighted by the crises of the second half of the last century and to foster the convergence process of the less developed territories of the Union. Furthermore, the concrete means of the Cohesion Policy are its funds which are the European Regional Development Fund, the Cohesion Fund, the European Social Fund, the European Agricultural Fund for Rural Development (financing the Common Agricultural Policy), and the European Maritime and Fisheries Fund.

Social capital can be particularly effective in the implementation of the goals of the Cohesion Policy. First of all, several studies have established that those regions in Europe but also in Italy with the strongest economy and higher growth also have the highest stocks of social capital in the country implying a positive relationship between economic development and amount of social capital. This hypothesis has also been confirmed by this work in the case of Italy. Second, in the field of development economics the dimension of linking social capital is the one enabling a community or a territory to grow. Third, linked to the second point, linking social capital enables through the creation of networks between different groups, individuals, associations, and businesses to bring forward policy demands which help to better draft the Regional Operative Programmes and at a later time to better execute the implementation process.

The second part of the thesis was constructed in order to respond to the research question: To what extent does the social capital affect the Cohesion Policy in Italian regions? To the best of the author's knowledge this is the first empirical analysis of its kind examining the effects of social capital on the implementation of the Cohesion Policy. At the beginning, a PCA has been performed, a method particularly useful for multidimensional concepts as social capital. Following previous studies, social capital has been analysed in its single dimensions: bonding social capital, bridging social capital, linking social capital, social capital as active political participation, and social capital as civic awareness. Most dimensions confirm the divide between Northern and Southern regions. Ultimately, an overall composite index of social capital has been computed which demonstrated how the stock of social capital is high in regions of the North while lower in regions of the South.

The second part of the empirical analysis foresaw a regression analysis that would establish the relationship between social capital and Cohesion Policy proxied by the spending ability of each region. In order to do so three hypotheses were defined. A regression was run for each dimension and linking social capital together with the social capital index were positively related to the regional spending capacity while all other forms were negatively related. Therefore, it can be said that social capital plays a positive role in the implementation of the Cohesion Policy. And, it is important to note that when decomposing social capital not all forms contributed equally and in the same way.

The findings of this work contribute to shed a light on a very debated topic, social capital. Many conclusions confirm results that have been discovered by past scientists, yet there are still some aspects that need to be explored by future research and it is the auspice of the author that such work on social capital continues. Of interest are also the type of networks that people establish through the

internet or social platforms and how these lead to the creation of different and modern forms of ties and relations between people, friends, neighbours, groups, associations, and the public administration.