



Ca' Foscari  
University  
of Venice

Master's Degree  
programme  
in International  
Management

Final Thesis

**Business  
Networks:  
the role of social  
factor**

Exploring Regional Contrasts: A  
Comparative Study of Veneto and  
Sicily, focusing on the Etna Valley  
Phenomenon

**Supervisor**

Ch. Prof. Anna Moretti

**Graduand**

Eleonora Raiti

Matriculation Number 889455

**Academic Year**

2022 / 2023



# INDEX

<b>INTRODUCTION .....</b>	<b>6</b>
<b>CHAPTER I BUSINESS NETWORKS .....</b>	<b>8</b>
1.1 From Coase to hybrid form: the social factor .....	8
1.2 Embeddedness and Predictive social cohesion theory [PSC] .....	10
1.2.1 Powell and the third way.....	12
1.3 The theory of social exchange applied to market exchange: business networks.....	15
1.4 Definition: Kind of Networks what are the differences with districts, ATI, and consortium. .....	18
1.5 Reasons and advantages to create business network .....	20
1.5.1 Performance Economic aspect.....	20
1.5.2 Innovation and competitiveness.....	22
1.5.3 Problem solving.....	23
1.5.4 MANAGERIAL CAPACITY: labour law institute codatoriality .....	23
1.5.5 Fiscal advantage .....	24
1.6 Theories and models of business network control mechanism .....	24
1.6.1 Efficiency versus inclusiveness.....	27
1.6.2 Internal versus external legitimacy.....	28
1.6.3 Flexibility versus stability .....	28
<b>CHAPTER II NETWORK POLICY.....</b>	<b>30</b>
2.1 Political and economic context .....	30
2.2 Regional, National and European industrial policy .....	31
2.2.1 "European Policies for Network Infrastructure: A Comprehensive Overview .....	32
2.2.2 Italian Business Networks: Integrating National and Regional Policy Landscapes	33
2.3 Analysis on social and economic impacts (What did not work) and use of Best practices for the guidelines (How to construct a good policy).....	35
<b>CHAPTER III VENETO AND SICILY: ECONOMIES AND POLICIES IN COMPARISON .....</b>	<b>41</b>
3.1 Analysis on macro and micro economic data in Veneto .....	42
3.2 Analysis on macro and micro economic data in Sicily .....	43
3.2.1 South skilled migration problem.....	45
3.3 Government transfers and network industrial policy.....	46
3.4 The two regional policies compared .....	49
3.5 Spending capacity and efficient use of resources: where does the problem arise?.....	55
3.6 The social capital factor makes the difference: when was the gap born? .....	59
3.7 A possible solution: policies to create social capital and promote the network .....	65
<b>CHAPTER IV ETNA VALLEY, EHT and HFR PROJECT .....</b>	<b>69</b>

4.1 Why Catania?.....	70
4.2 The development of Information and Communication Technologies (ICT) and ETNA HI-TECH .....	71
4.3 Hydrogen from renewable [HFR] .....	74
4.3.1 The need to get involved in a team.....	75
<b>CONCLUSION .....</b>	<b>79</b>
<b>BIBLIOGRAPHY .....</b>	<b>81</b>
<b>SITOGRAPHY .....</b>	<b>84</b>
<b>APPENDIX A.....</b>	<b>85</b>
<b>APPENDIX B.....</b>	<b>90</b>

## INDEX OF FIGURES

<b>Figure 1</b> Difference between the three forms of economic organisation.....	13
<b>Figure 2</b> Performance variables of networked enterprises by macro area.....	21
<b>Figure 3</b> Profitability indicators of networked enterprises by macro area.....	22
<b>Figure 4</b> Network contracts and involved enterprises by contract type (cumulative values as of December of each year).....	24
<b>Figure 5</b> Key Predictors of Effectiveness of Network governance forms.....	27
<b>Figure 6</b> - Public leverage: relationship between subsidised investments and concessions .....	34
<b>Figure 7</b> Network contracts by level of geographical heterogeneity and contract type (% of total) .....	38
<b>Figure 8</b> Interregional network contracts with enterprises located in different geographical areas (% of total).....	38
<b>Figure 9</b> Allocated funds 2010-2016.....	47
<b>Figure 10</b> Comparison of allocated and granted funds 2010-2016: Analysis by macro area.....	48
<b>Figure 11</b> Facilities granted 2010-2016.....	48
<b>Figure 12</b> Subnational Human Development Index, 2021 ..	<b>Errore. Il segnalibro non è definito.</b>

# INTRODUCTION

The Italian entrepreneurial landscape is primarily characterized by Small and Medium Enterprises (SMEs), which, while potentially constraining growth, also provide opportunities for agile decision-making and adaptation to dynamic market demands. Business networks are increasingly prevalent, particularly within the Italian context. The National Observatory on Business Networks, a collaborative effort between RetImpresa, InfoCamere, and Ca' Foscari University of Venice, has observed a consistent rise in network contracts in recent years, with 5000 networks encompassing 30700 companies. The imperative for collaboration stems from emerging challenges in innovation, digitalization, internationalization, and sustainability, including environmental and social sustainability. Given the observed positive impacts of participation in network contracts, this study aims to discern optimal policies and analyze factors conducive to network formation, drawing from the experiences of existing networks.

The literature pertinent to this subject extends beyond business studies, intersecting with sociology. It traces the evolution of theories regarding business networks, from Coase's Transaction Cost Theory to contemporary studies by authors like O.E. Williamson, Granovetter, and Powell. Coase's seminal work in 1937 challenged the notion of perfect competition, introducing Transaction Cost Theory, which explores why firms exist and their optimal size. Williamson expanded on this, exploring factors like bounded rationality and asset specificity, leading to hybrid forms of governance. Granovetter's concept of Embeddedness emphasizes the social aspect of economic relations, influencing theories like Powell's on network organization. Powell introduces networks as a distinct form of organization alongside market and hierarchy, emphasizing the role of trust, know-how, and speed in fostering collaboration. Prenkert and Hallén's work further delineates business networks, combining aspects of social and market exchange theories to understand the dynamics of resource allocation and interaction within networks. This holistic approach integrates economic, social, and organizational perspectives to provide a comprehensive understanding of business networks.

The initial chapter delves into the literature surrounding business networks and the interrelations cultivated within corporate settings, elucidating the benefits of network

participation and the mechanisms of control aligned with predefined objectives. Subsequently, the second chapter scrutinizes policies implemented across various institutional levels: European, national (Italian), and regional. The third chapter undertakes a comparative analysis of the present conditions in the Veneto and Sicily regions, appraising their socio-economic contexts and recent policy initiatives, while delineating disparities in spending capacity and social capital between the two regions. The fourth chapter scrutinizes the case of the Etna Valley, examining the genesis of the EHT consortium and exploring a specific project, "HFR," which exemplifies how collaborative efforts among diverse individuals can yield superior and more efficient outcomes compared to solitary developmental pursuits.

It is evident that social cohesion plays a pivotal role in regional economic development. While policies aimed at fostering the consolidation of small and medium-sized enterprises may offer some benefits, the contextual milieu and the stakeholders involved are fundamental drivers of substantive change.

# CHAPTER I

## BUSINESS NETWORKS

In this chapter it will be examined the concept of network and how the development of business networks derived from social factors. The economic and management theory starts from the neoclassical concept of market until nowadays where the firm is not only an instrument to create profit but an entity that inside its context has a social impact. There are also mechanisms to manage as best as possible structure of the network but also in this case we cannot look at the problem with a one-way solution but with the need to find an equilibrium according to the situation and the tools at one's disposal.

### 1.1 From Coase to hybrid form: the social factor

The “*Neoclassical economics theory*“, whose father is considered Alfred Marshall, is based on the idea of perfect competition and on the issue of price taking and horizontal demand curve for the firm. One of the authors that influences the most XX theory was Cournot with its mathematical concept of perfect competition, an equilibrium where each firm achieves the profit maximisation, and we have the efficient allocation of resources. The study relies on consumers’ rational decision- making and holds a high regard for the concepts of supply and demand in a functioning free market. Every actor inside the market is autonomous and always acts in the same conditions of exchange according to the production function cost, the demand is decided by external factors, so price and quantity are only consequences. As the company evolved, however, this definition has become narrow.

*“A firm, therefore, consists of the system of relationships which comes into existence when the direction of resources is dependent on an entrepreneur”.*

*“Outside the firm, price movements direct production, which is co-ordinated through a series of exchange transactions on the market. Within the firm these market transactions are eliminated, and in place of the complicated market structure with exchange transactions is substituted the entrepreneur-co-ordinator, who directs production. It is clear that these are alternative methods of co-ordinating production”*

*(Coase, 1937)*



Coase in the *nature of the firm (1937)* disrupted the idea of perfect competition and introduced the Transaction cost theory answering two important questions: *why do firms exist and why is each firm a certain size?* The point is that there are costs of market exchange, and these costs can underpin the creation and maintenance of the institutional structure and functioning of the economy. The firm is not a simple mathematical function which turns input to output but a complex structure that interacts with others and makes choices between **market or hierarchy** that in the market rule could be translated to the choice *make or buy*.

In the hierarchical model the parts are not autonomous, on the contrary: one produces as a function of the other and both are without autonomous decision-making power. Nobody is an autonomous entity, but every firm is connected and produce as a function of the other: **interdependence**.

The existence of transaction costs depends on three factors: *bounded rationality, opportunism and asset specificity*. From the concept of interdependence O.E. Williamson (1981) started to explore the *Transaction cost economics* and arrived at the hybrid forms. He considered new elements that neoclassical economy ignored as *bounded rationality, opportunism and asset specificity* that explain why the exchange relationships B2B are different from other kinds of exchange by problems and needs. Firms have the necessity to protect themselves from risks with safeguards: contractual provisions, expedients aimed at removing from the judicial system to settle disputes, creation of relationships in which the parties create a community of interests. The latter returns and remark the idea that no-one is free to determine in a completely and autonomous way its own activity, but it is instead conditioned, the equilibrium could be inside the “continuum” of hybrid forms between market and hierarchy. Companies are no longer solely and exclusively competitors to each other, but often partners pursuing common interests through agreements and informal understandings. We could call it cooperative interdependence.

The interdependence could be an economic factor but also the social factor affects business relationships. According to the theory of embeddedness, each economic operator exists, operates and has its own identity in a given social organisation and context characterised by its own local institutions and a given community. These would

be able to influence the structure of the transactions carried out by economic operators as much as the hybrid forms of government hybrids, indicated by O. E. Williamson as criteria to select partners, to avoid risks of opportunism and to reduce the transaction costs.

At this point it is useful to start a focus on the concept of Embeddedness and network and theories that explain why social aspect is a key factor to concern the development of a business model as a network. In fact, social relationships and the effect of the social context have a high impact on business relationships, and it is also a characteristic of the Italian district.

## **1.2 Embeddedness and Predictive social cohesion theory [PSC]**

The definition of Embeddedness by Granovetter (1985) is:

*“Embeddedness” refers to the fact that economic action and outcomes, like all social action and outcomes, are affected by actors’ dyadic (pairwise) relations and by the structure of the overall network of relations. As a shorthand, I will refer to these as the relational and the structural aspects of embeddedness.!*

Inside the article White et al. (2004) describe the theoretical definition of network, field, and organisation. Starting from the concept of social Embeddedness (Granovetter, 1985, 1992) as a key concept in economic sociology and one of the frequently referenced notions in the literature on networks. We could use it to understand and explain social, political, economic, and familial relations and how this property of structure makes actors integrated in cohesive clusters or multiplex relations of social networks, facing the different sets of opportunities and constraints than have those who miss such connections or encumbrances.

To understand the theoretical background, we can refer also to the *structural cohesion* that together with embeddedness has been investigated under the **Predictive Social Cohesion (PSC) theory**, which predicts a wide range of consequences (Durkheim, 1897). The use of this theory with its theoretical and empirical implications for social life were applied by Moody and White (2003) successfully for example in predicting coordinate political action among firms in the Fortune 500 or by Powell et al. (2004) to the study contracts in the evolution of the biotech industry.

**Structural cohesion** has its importance to individuals and groups dimension due to the linkages between people, the numerous and big exchange of information that happens through multiple channels, the building of trust and reliability on information that flow and for the support that give to construction of robustness on social groups and adaptive resilience through multi connectivity. It measures and provides a way to find the extent of linkage inside a social field or organisation in its network environment.

In this context where it is important the introduction of definition of organisations and fields easily comes to mind “the nature of the firm” by Coase’s (1937) refers to the economic organization. As firms and markets offer alternative instruments in the economic transactions required for production, inside organizations and fields there are complementary mechanisms that structure patterns of relations.

Organizations follow more rules and authority, while fields are more flexible, with fewer rules, its constraints on interaction are responsible for resources and information flows outside of organisations.

White at all. define the mono/multi-cone structure and use the concepts to explain the importance of interaction and the mechanism that we observe inside the network. According to the PSC theory the quantity of cohesion is an instrument of amplification, the numerous linkages and the presence of multiple channels are used by organization to overcome the distance inside single-path network transmission. The PSC theory is also used to identify and study the benefits of organization of integration into larger fields. Knowing a cohesive network helps us to understand social phenomena and the behaviour inside organization, network, and field.

There are two main types of cohesive structures in networks: mono-cone hierarchies and multi-cone ridge structures. By understanding the organizational and field elements of networks and their connections at various levels, we can create a foundation for organizational theory. This approach considers not only the internal networks of organizations but also the various kinds and strengths of connections they have with the broader fields they are a part of.

The multi-cone structures help to pay attention to the key role in the organization's connectivity. Despite the distance there are elevated levels of multi connectivity between distant social positions in a field or organisation if the actors are cohesive. Also, the presence of solidarity in terms of perceived agreement influences the ties where individuals are distant. Multi-cone structures give us a framework to explain the mechanism of organizations that have strong influence from intermediaries, subgroups, and role positions differently configured than mono-cone cohesive structures.

The Theory of multi-cone structures in organizations are useful to neighbourhood-based network processes so applicable to the study of markets, competition, and organizational fields and communities whose global structure emerges from local processes. If amplified by cohesion arguments, multi-cone structures provide a powerful model of information flows and social influence in organizations and fields be they informal or formal.

### **1.2.1 Powell and the third way**

*“My aim is to identify a coherent set of factors that make it meaningful to talk about networks as a distinctive form of coordinating economic activity.”*

Powell (2003) introduces a third form of organization in addition to market and hierarchy: network. While Williamson sustains that we can find hybrid form between the two mentioned before, Powell argues that there is a distinct way how the firm coordinates their economic activities with other actors according to the kind of interactions that take place among them. The objective is to create a theoretical model near to the economic reality.

The table (figure 1) below could sum up the difference between the three forms of economic organisation. It is useful to evidence how the means of communication inside networks are “relational,” the level of commitment is high, and the methods of conflict are “norm of reciprocity,” to create embeddedness and reliance is better than face the conflict. We have to consider also that each node could be both source of conflict and of harmony.

Key Features	Forms		
	Market	Hierarchy	Network
Normative Basis	Contract— Property Rights	Employment Relationship	Complementary Strengths
Means of Communication	Prices	Routines	Relational
Methods of Conflict Resolution	Haggling— resort to courts for enforcement	Administrative fiat—Supervision	Norm of reciprocity— Reputational concerns
Degree of Flexibility	High	Low	Medium
Amount of Commit- ment Among the Parties	Low	Medium to High	Medium to High
Tone or Climate	Precision and/or Suspicion	Formal, bureaucratic	Open-ended, mutual benefits
Actor Preferences or Choices	Independent	Dependent	Interdependent
Mixing of Forms	Repeat transactions (Geertz, 1978)	Informal organization (Dalton, 1957)	Status Hierarchies
	Contracts as hierarchical documents (Stinchcombe, 1985)	Market-like features: profit centers, transfer pricing (Eccles, 1985)	Multiple Partners Formal rules

**Figure 1** Difference between the three forms of economic organisation

The characteristics of exchanges inside networks have qualities difficult to measure, its long-term relations and the actions of parties are interdependent, but they remain two separate legal entities. Networks are “*Lighter on their feet*” than hierarchies, the allocation of resources happen through individuals who engage in reciprocal and mutually supportive actions and units in relation to each other. This situation requires flexibility and capacity to adapt in this context where benefits and problems will be shared according to a problem-solving approach.

Powell tried to apply the concept of networks inside different sectors from the traditional craft one to the most advanced like the technological one passing from district in the Emilian model. To explain how companies are involved in collaborative activities Powell uses also the biotechnology industry because it is an emblematic example of the international community of science.

He arrives at the conclusion that the reduction of uncertainty, the access to information and the reliability are the reasons why participants exchange on networks. Three are the factors on which are based network Powell theory: *know-how, the demand for speed and trust*.

- *Know-how*: intellectual capital or craft- based skills that require years of experience and education above all in activities like cultural, scientific research, mathematics, software or programming. It includes tacit knowledge difficult to codify and intangible that could not be purchased easily. Network is the best organization form for this kind of skilled labour force applicable to a wide range of activities to operate under conditions of uncertainty or situations that require operational integration.
- *Demand for speed*: it is based on economic logic and in a technological context with intense competition firms need to join forces to reduce risks and share expenses of products with a truly short life. The modern technologies require coalitions to not be left behind that are cheaper and faster for merger and acquisition. Inside an environment where it is necessary, a flexible network becomes the organization form to achieve competitive advantage and where information is free to flow in a context where through *learning by doing* it is possible to innovate and translate ideas quickly into products.
- Trust is typical of industrial districts and explains how in some social contexts the presence of solidarity facilitates long term relations. The creation of reputation of one subject is important in terms of quality of relation when repeat exchanges happen. Who has the same cultural background has more probability to connect with others in a network and the more homogeneous it is the easier it is to sustain a network thanks to the trust developed in the past.

The institutional context is responsible for the creation of networks and collaborations. Its role is to encourage the connection between centres of learning and industry through specific policies and political and legal infrastructure that sustain them. The policies make the difference if sustained.

Some years later Owen- Smith and Powell (2008) found arguments about circumstances that give rise to networks and allow them to proliferate. The idea of social ties enters into

economic paradigms and describe the relationships that are established between the actors in the perspective of a 'network-institutional' approach to social and economic life. Economic relationships can be explained in terms of different logics, not only in terms of profit instruments. The relativity of relationships implies the varying of their meanings according to the actors and logics and contexts where they are instituted.

Relationships and consequently actions depend jointly on the parties and the institutional and professional environment to which they belong. What we can consider mainly a social behaviour are also forewords of economic exchange that are the results of network and institution influence.

Until now the research follows two separate lines on institutions for organisational and political sociology and networks for economic sociology but in the reality, there are linkage between subfields. The two authors sustain that networks and institutions shape each other, rules, convention, and logics that create the institution which in turn influence relationship that create networks. Using theory of institution has underlined relational aspects while using network theory it emphasised the concept of embeddedness and social capital. Four are the fundamental ideas to explain intertwining relationships between the two theories: field, logics, embeddedness, and social capital that belong both to network and institutional theory.

To Understand how networks and institutions influence each other to shape social and economic we have to pay attention to the multiple ways how the relationship and categories are interrelated.

### **1.3 The theory of social exchange applied to market exchange: business networks.**

The idea of Prenkert and Hallén (2006) in their article published in European Journal of Marketing named "Conceptualising, delineating and analysing business networks" starts from the concept of an exchange system and describes how the theories of social exchange and market exchange define **business networks**.

In 1992 Blankenburg and Johanson defined business networks as *interconnected business relationships* according to *theory of social exchange* (Cook e Emerson, 1978) as a type of exchange network. The presence of Interaction in one relationship influences the interaction in another e so on making entities interdependent on each other remembering

the fluidity of nowadays business networks with its multi directional links and processes (Håkansson, 1982).

There is a contrast between the theoretical definition that affirm there are no limits on the network and empirical theory where the boundaries of networks are defined. Some try to solve the problem like Dubois e Gadde (2002) and Easton (1995, 1998) but Prenkert and Hallén sustain that the answer is developing and focusing the definition of business networks using a conceptualisation that over social exchange theory (symmetry): the **market exchange theory** (asymmetry).

The social concept of the *organised behavioural system of exchange* based on two basic processes, sorting and transforming, coined by Alderson and Cox (1948) was reinterpreted by Bagozzi (1974), with both utilitarian and social components, conceptualise business networks as comprising sorting and transformation processes (Alderson, 1958). He put in evidence the role of the social and institutional context of exchange processes that we can call the exchange system.

Taking a step further from the idea of Blankenburg and Johanson (1992) considering the business network as an exchange network, we consider it here as a type of *organised behavioural system of exchange*. Thus, rather than using social exchange theory as a basis we here use what can be called "*market exchange theory*" (Easton and Araujo, 1994). By so doing we recognise a direction in the shaping of resources, thereby suggesting an enrichment of the current conceptualisation of business networks.

Using market exchange theory helps us to conceptualise business networks and consequently we focus on the **directions of the transformations and exchanges of resources** in a network.

We can start to define the *concept of asymmetric* (direction) *or symmetric* (interaction) exchange. The monetary-based product exchange is characterised by asymmetry but according to Alderson, this direction proceeds from meaningless to meaningful heterogeneity through intermittent transient stages and goes to homogeneity.



Alderson's (1958) framework views the network as having two types of processes: superimposed and overlapping. The first type is characterized by directional asymmetry and unidirectionality, while the second type is primarily marked by interactive symmetry and multidirectional. These concepts enhance our comprehension of the intricate nature of business networks. The synergy between market exchange theory and Alderson's framework proves valuable in analysing interactions dominated by asymmetric bilateral exchange processes, such as those observed in markets.

However, interactions also encompass numerous symmetric multilateral exchange processes, necessitating the incorporation of social exchange theory within the network perspective for a comprehensive analysis. Consequently, the concept of interaction becomes inherently complex and multidimensional.

The interaction pattern between entities within business networks changes depending on the nature of transformation processes within each entity and the sorting processes involved in the exchange between them. The concept of interaction can be envisioned as multidimensional, incorporating components and features from both market exchange theory and social exchange theory. This conceptualization diverges significantly from traditional approaches in most empirical studies on business networks. The transformation of resources from meaningless to meaningful heterogeneity, guided by stages of homogeneity and a sense of direction in resource shaping, is identifiable in the exchange systems that constitute business networks.

The conceptualization allows us to employ sorting, transformation, and human social exchange processes as a robust theoretical tool. This tool is not only theoretically sound but also empirically viable for identifying, delineating, and analysing business networks. The combination of social and monetary exchange theories provides a conceptual model for business networks, aligning with empirical observations and the practical functioning of networks, all while acknowledging the significance of the theoretical model.

## **1.4 Definition: Kind of Networks what are the differences with districts, ATI, and consortium.**

The *Business network agreement* was introduced by the law n.33/2009 (conversion d.l. n. 5/2009, c.d. "Incentivi"), modified by "*Legge Sviluppo, n. 99/2009*" and by "*d.lgs. n. 78/2010*". This one was the instrument though Italian law give a law reference to business networks.

The legislative reference reads as follows:

*"Con il contratto di rete più imprenditori perseguono lo scopo di accrescere individualmente e collettivamente la propria capacità innovativa e la propria competitività sul mercato e a tal fine si obbligano, sulla base di un programma comune di rete, a collaborare in forme e in ambiti predeterminati attinenti l'esercizio delle proprie imprese ovvero a scambiarsi informazioni o prestazioni di natura industriale, commerciale, tecnica o tecnologica ovvero ancora ad esercitare in comune una o più attività rientranti nell'oggetto della propria impresa."*

To be part of a network it is necessary according to the Italian law to be registered who has the title of entrepreneur according to art. 2082 c.c. and formal member of the Register of Companies.

We can distinguish between two diverse kinds of aggregation: network 'debole' or the one called 'forte' (Cuffaro, 2013). The first do not provide the institution of common neither patrimonial fund. Further, the partners maintain their legal and fiscal autonomy and the program of the network produces effects direct to the legal sphere of every contractor. Usually, it is used to obtain a unique goal.

The second one has a more complicated structure with a common body and a patrimonial fund. The common organ acts as an agent of the network and its activity are related to the common program decided by member of network. Thanks to the *L. 7 agosto 2012, n.134*, it was introduced a new form of network: "*rete soggetto*" which has legal and fiscal autonomy distinct from the single company.

Unlike ATI, RTI e joint ventures, l. n. 33/2009(1) give to the business network a stability that the others do not have. Further, the three first forms mentioned are marked by illimited responsibility and joint and several liability every time the common organisation takes an obligation in the name of that all group.

Networks appear more flexible with respect to the model consortium due to the more blended discipline and the obligation imposed to the parties by the agreement always with the criteria of private autonomy. To be part of a network does not mean to lose independence on the market.

The object of the network may consist of the joint performance of certain specific stages of their economic activities, which could be also the possible object of a consortium, but it may also involve new and different activities with respect to the original ones, individually performed by the participants. The mutual goal of consortium could be pursued inside network, but it is not only the reason firms collaborate. Furthermore, the consortium requires a formal document while for the networks only in case of subjectivity.

From a **legal point** of view, the differences between networks and districts are considerable. First of all, the discipline and state law of the network contract is one while the one of districts is characterised by the fragmented assigned to various regional laws. Moreover, the network represents a more stable entrepreneurial aggregation because of the definition of the rights and obligations of the parties. The district, on the other hand, is characterised by the central element of territoriality, which is relevant from the point of view of organisation and administration, which also provides for the co-participation of local public bodies liable to lead to an expansion of the object that from economic activity comes to include further instances linked to public policies for the territory.

In summary, while the district represents situation that is relevant in law only for certain purposes, more public than economic and/or private, and that does not have a dedicated legal form, the network is a situation in law, for which the legal system provides a dedicated civil law contract and for which essentially private interests are relevant, as evidenced by the requirement on the composition of the governance body that must be complied with for the regular constitution of the case.

Districts recently increased their competitiveness because of the rise of new forms of communication. The mutual proximity typical of districts lost their potential since the coming out of their incapacity to face new challenges of the future. The instability of links between firms and **little commitment** don't make a solid base to adapt strategies to the new competitive business environment.

If we can make a mention of the European context inside the district theory, we can refer to the Cluster, but they are different from the Italian case. While in Europe the district is linked to the concept of innovation, in Italy the district is connected to traditional manufacturing and typical products. The focus of Eu on cluster derives from the capacity of this form of aggregation of contamination and diffusion of knowledge and innovation.

It could be useful to reflect about problems that obstacles the development of enterprise. For example, according to Cafaggi (Cafaggi et al., 2007) the lack of efficient service is one factor that makes service inaccessible and unable to obtain desired results. In fact, UE tries to formalize actions to sustain the SMEs through the Small Business Act (SBA) in the context of "think small first." The presence of a network of service is another topic that pulls to create connections between the Enterprise and public sector to allow development. Confartigianato, Confcommercio, Confindustria e all the associations that support the Italian business must dialogue together with the policy maker to create efficient networks.

## **1.5 Reasons and advantages to create business network**

### **1.5.1 Performance Economic aspect**

The analysis presented focuses on three expressions of the economic and financial results of networked enterprises (Revenues, Value Added (EVA), Fixed Assets), and on the four indicators measuring profitability (ROA, ROS, ROE, ROI). According to the analysis conducted by *Osservatorio nazionale sulle reti d'impresa (2022)* enterprises that used the network contract have distinct levels of performance compared to those that did not join a network.

The proposed analysis aims to show whether network companies have achieved higher performance in the last available year (2021), compared to an average of the previous years (2017-20).

Revenues refer to the turnover as an indicator of performance on market, EVA is a measure of a company's financial performance based on the residual wealth calculated by deducting its cost of capital from its operating profit, adjusted for taxes on a cash basis while fixed assets represent the investments done for the development.

<b>Variabile</b>	<b>N.</b>	<b>Media</b>	<b>Dev.Std.</b>	<b>Min</b>	<b>Max</b>
<b>Nord-Ovest</b>					
RICAVI	4.016	0,69	0,46	0	1
VA	4.046	0,72	0,45	0	1
IMM	4.010	0,63	0,48	0	1
<b>Nord-Est</b>					
RICAVI	4.632	0,68	0,47	0	1
VA	4.654	0,71	0,45	0	1
IMM	4.627	0,62	0,49	0	1
<b>Centro</b>					
RICAVI	5.115	0,68	0,47	0	1
VA	5.142	0,70	0,46	0	1
IMM	5.060	0,60	0,49	0	1
<b>Sud e Isole</b>					
RICAVI	3.779	0,68	0,47	0	1
VA	3.847	0,69	0,46	0	1
IMM	3.794	0,64	0,48	0	1

Fonte: Elaborazione propria su dati InfoCamere

**Figure 2** Performance variables of networked enterprises by macro area

Observing the table, the improvement for all the three measures is net. Over the 65% of enterprise, as indicated by the *media*, registered an increase of all three indicators.

To concern the index of profitability we can measure ROA, ROE, ROI, and ROS (Sheela, Karthikeyan 2012). The first refers to management, ROE is the return generated for investors, ROI return on investment and ROS is linked to the efficiency, capacity to transform revenue into profit.

Variabile	N.	Media	Dev.Std.	Min	Max
<b>Nord-Ovest</b>					
ROA	3.928	0,54	0,50	0	1
ROE	3.848	0,52	0,50	0	1
ROI	3.930	0,55	0,50	0	1
ROS	3.794	0,58	0,49	0	1
<b>Nord-Est</b>					
ROA	4.484	0,53	0,50	0	1
ROE	4.406	0,52	0,50	0	1
ROI	4.505	0,54	0,50	0	1
ROS	4.420	0,58	0,49	0	1
<b>Centro</b>					
ROA	4.961	0,56	0,50	0	1
ROE	4.782	0,54	0,50	0	1
ROI	4.981	0,57	0,49	0	1
ROS	4.794	0,59	0,49	0	1
<b>Sud e Isole</b>					
ROA	3.686	0,56	0,50	0	1
ROE	3.622	0,55	0,50	0	1
ROI	3.715	0,57	0,50	0	1
ROS	3.568	0,60	0,49	0	1

Fonte: Elaborazione propria su dati InfoCamere

**Figure 3** Profitability indicators of networked enterprises by macro area

Watching out the table we can see that 56% of firms increase the value of 4 indexes. The area *Sud and isole* has the percentage higher than the other for all index of profitability. The positive results of being on a network are not only linked to economic and financial aspects but it is also useful to also consider the impact and the social value that networks produce over time and the collective benefits they achieve.

### 1.5.2 Innovation and competitiveness

One of the reasons why network born is to Overcome limit in R&D, especially in sector of high-tech how suggest Powell to avoid double amount of expenses, exploit of complementary assets and obtain financial investment. According to the survey conducted by *Osservatorio nazionale sulle reti d'impresa (2022)* above 35% of networks have the aim to introduce product or process innovation or they achieve the results even if it is not their objective. Also, the external relations are important to achieve results prefixes and logics of open innovation has a big impact on innovation performance of enterprise.

The competitiveness is another motif for which the network contract was born, in particular for SME. Lombardi at al. (2023) in the volume n.93 *Le reti d'impresa nell'economia locale* explain the advantages from business network among them scale

economy, greater offering of product and services, access to financial measures and non-repayable subsidies to increase the position on national and international market. For example, it is difficult often to participate to promotional event due to minimum costs, but the participation of the group divides the expenses between each member allowing to start campaign of advertising and promotional activities even abroad increasing brand reputation and visibility.

### **1.5.3 Problem solving**

In recent years there have been verified economic crises but participation in business networks help firms to limit a heavy drop of employees and turnover that would happen in absence of a net. The instrument gave an important contribution to the capacity to resist Italian production (Costa et al. 2017). The reduction of the turnover and occupational level is diminished less than other firms.

Knowledge sharing is one of the best practices inside the network. The reduction of the “time to market” in a young sector like the technological one is a factor that helps firms to save cost and be on time compared to their competitors. The exchange of ideas **in a network allows thanks to the Links** to have many solutions to one problem and arrive at a solution in less time.

### **1.5.4 MANAGERIAL CAPACITY: labour law institute codatoriality**

The institute introduced in 2022 (d.m. nr. 205 del 29 ottobre 2021, in vigore dal 23 febbraio 2022) is dedicated to companies linked through a network contract that allow them to hire together one or more employees. An instrument to increase managerial skills in SME and the sharing of personnel skilled along the components of the network. This tool could be used to set up networks to exploit codatoriality and the possibility to hire qualified personnel for export or R&D.

After the pandemic and the war in East Europe, firms were hit by the economic instability and the fluctuation of prices. In this situation the presence of networks and codatoriality gave to entrepreneur tools by the characteristics innovative and flexible to maintain their competitiveness.

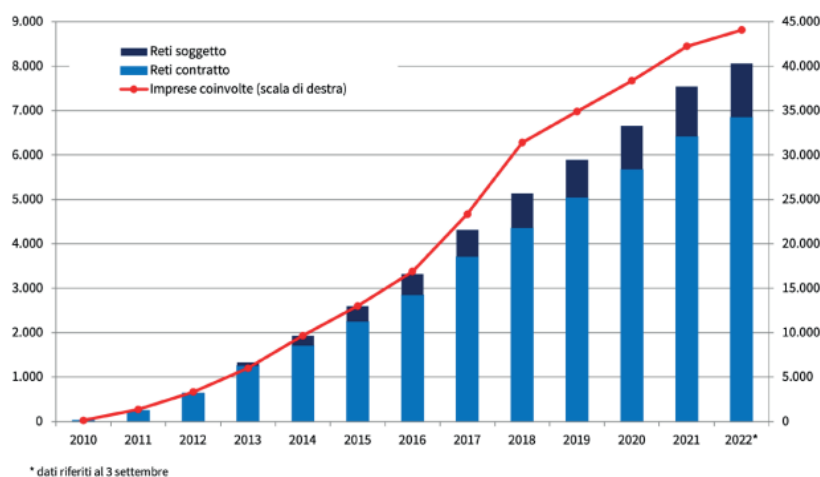
Employee *sharing* in Europe spread after the 2007 crisis to avoid the decline of occupation level and it is nowadays used in many states in Europe. Two are the main instruments

used: Strategic employee sharing to season job, technical personnel and innovation or start-up and *Ad-hoc employee sharing to face* complicated economic situations to share the worker without firing him/her.

The law institute could help firms to generate innovative ideas and face the digital and green transition and the introduction of competencies and capabilities inside SME through the formation of human capital.

### 1.5.5 Fiscal advantage

During the period 2011-2013 (L. n. 122/2010) it was planned as a financial sustains deferral in favour of companies that cooperate and increase competitiveness and level innovation. It consists in a special reserve excluded from the taxable income for the duration of the contract. One reflection is necessary on this aspect of the business network. According to other studios the reason a firm puts itself in a network is not the fiscal advantage and it has not a positive impact during the process of decision to be part or not. In fact, during the first phase the instrument of fiscal facilitation gave their improvement but the number of networks that are being born recently are nor linked to fiscal instruments.



Fonte: Elaborazioni Infocamere su dati Registro Imprese

**Figure 4** Network contracts and involved enterprises by contract type (cumulative values as of December of each year)

### 1.6 Theories and models of business network control mechanism

Networks are an important form of multi-organizational governance, the capacity to manage well networks implies enhanced learning, efficient use of resources and



capabilities to face problems and achieve competitiveness. The concept of network effectiveness has been a problematic issue at organization and network level and difficult to answer the question “effectiveness for whom?.” The network level outcome is defined by who evaluates functioning because each one could be seen differently from more points of view as explained by Provan and Milward (2001).

To achieve a goal is necessary a form of governance to ensure engagement and commitment and coordinate actions utilising resources optimally. It requires structure and institutions to control the action and it is necessary to establish when a form is more convenient than other and useful to the effectiveness. Under an economic perspective the market is not the efficient system to coordinate but there are other forms that could obtain results. Provan and Kenis () use the same approach of Powell and describe the mechanism of the network not as a hybrid form between two modes but as a unique entity. Networks could generate positive results in cases where market or hierarchical structure could fail.

*Networks are forms of social organization, which are more than the sum of the actors and their links, and which deserve to be studied in their own right (O’Toole, 1997)*

From different configurations derive different effects at network level and in this way, we can describe and establish the logic behind network-level theories. There are three basic forms of network governance and successively it is important to explore tension presence inside each one.

There are two dimensions to categorize network governance: centralised or decentralised and internal or external governance. In the first case we can talk about shared governance where each component interacts with another in a highly decentralised form or a highly centralised network if power is more concentrated. The second distinction concerns if the network is governed by participants or externally. External one is the network administrative organisation (NAO).

**SHARED GOVERNANCE:** network’s participants are the administrator, and the structure doesn’t provide separate entities. The process of decision is equal to ensure better

commitment, the involvement and responsibility to internal and external relationships. It may be useful to build a community, partnership, or alliances for the creation of new products.

**LEAD ORGANIZATION:** it is a business vertical approach like as buyer/supplier relation. This frequently happens in the field of health and human services, where a central provider agency often takes on the role of a network leader due to its significance in overseeing the flow of clients and essential resources. In lead organization governance, all major network-level activities and key decisions are coordinated through and by a single participating member. Thus, network governance becomes highly centralized and brokered, with asymmetrical power. A leading organization administers the network and/or supports the efforts of member organizations in working towards network objectives, which may closely align with the leading organization's goals. The leading organization may independently cover the expenses of network administration, receive resource contributions from network members, or actively pursue and manage access to external funding through grants or government support.

#### **NETWORK ADMINISTRATIVE ORGANIZATION [NAO]**

It was designed to govern the network and its activities. While network members continue to engage with each other, the NAO (Network Administrative Organization) model is centralized. The network broker, represented by the NAO, assumes a crucial role in coordinating and maintaining the network. In contrast to the lead organization model, the NAO differs as it is not an additional member organization offering its own services. Instead, the network is externally governed, with the NAO established, either through mandate or by the members themselves, for the exclusive purpose of network governance.

This latter form may be used as a mechanism for enhancing network legitimacy, dealing with unique and complex network-level problems and issues, and reducing the complexity of shared governance. The more structured NAO usually incorporates board structures that encompass either all or a portion of the network members.

The objective is to formulate a theoretical rationale for choosing one form over another in a manner that can anticipate the successful achievement of network-level outcomes,

commonly referred to as network effectiveness. (Provan and Milward 1995, 2001). The adoption of a particular form of governance will be based on four key structural and relational contingencies: trust, size (number of participants), goal consensus, and the nature of the task.

*“As **trust** becomes less densely distributed throughout the network, as the **number of participants** gets larger, as **network goal consensus** declines, and as the **need for network-level competencies** increases, brokered forms of network governance, like lead organization and NAO, are likely to become more effective than shared-governance networks.”*

Governance Forms	Trust	Number of Participants	Goal Consensus	Need for Network-Level Competencies
Shared governance	High density	Few	High	Low
Lead organization	Low density, highly centralized	Moderate number	Moderately low	Moderate
Network administrative organization	Moderate density, NAO monitored by members	Moderate to many	Moderately high	High

*Figure 5 Key Predictors of Effectiveness of Network governance forms*

While network managers operate, they face three basic tensions that are typical in network governance. Every form of governance and its properties means that they are subjected to greater stresses depending on their shape. Decisions which managers take to manage tensions are important for network effectiveness. Provan et Kenis, P. (2008) tried to summarise the three tensions that could be characteristic of participating in a network, but it is possible to find them in individual organisations.

### **1.6.1 Efficiency versus inclusiveness**

Efficiency is an outcome that all organisations want to achieve but there is a “price” to pay to manage tension with those goals related to other measures of effectiveness. The decision-making process is one of the processes influenced by this tension between efficiency and inclusivity. The involvement of the member and the number to take decisions can affect the speed. Trust could be a factor that contributes to the mitigation of the problem of centralized government, but the amount of energy and time spent could block the process of development and choice. Lead organization model reduces the

burden of direct involvement, but it is to consider the trade-off with the commitment of members. The NAO model maybe is the model that could give a balance of choice between efficient operation and inclusive decision making.

### **1.6.2 Internal versus external legitimacy**

Human and Provan (2000) focus on this problem of organizational legitimacy both internally and externally. The tension could be managed thanks to network governance developing internal legitimacy and legitimising interaction among organizations that could be or potential competitors. Among participants it is necessary to coordinate and involve parties including them in the network processes to increase commitment and show them outcome and advantages to be part of the group. On the other side it is useful to respect the external expectations maintaining solid relations with government and showing attention to customer. Helping this aspect members can develop a sense of commitment higher. The **mimicry** (DiMaggio and Powell 1983), that could help to manage tension and transmit the idea that cooperation is profitable for those who follow this practice thanks to increasing capacity to innovate and offer a better service or product. The idea is to find an equilibrium between internal need of an autonomous organization and external requests that bring to the organization mainly. McEvily and Zaheer (2004) also discuss the key role of network that could assume the facilitator to maintain trust but also to build trust among participants.

No-one organization perfectly responds to this description; Lead form is useful for external legitimacy and the Shared one is better for the internal need but always NAO represents a possible solution to manage and conciliate the tension. There is still a problem, that this intervention is sequential and not simultaneous to solve the problem of internal and external legitimacy.

### **1.6.3 Flexibility versus stability**

The quote "light on their feet" (Powell 1990) is addressed to the network form for its flexible nature as opposed to the bureaucratic hierarchy. Firms could achieve goals in quick time through flexible and efficient work of interaction inside the network. Also, stability is a good point for network because long term relationships allow to develop

trust and reduce time to find the right alliance to carry on projects to maximise opportunities of network in terms of outcome. To concern the stability of the network Provan and Milward (1995) that the characteristic is one of the major factors that contribute to a network's effectiveness. The binomial hierarchy or market returns, and the solution is always in the middle. Hierarchical form is necessary to give reference and a structure sustainable over time to the stream of activities done by all the actors of the network to solve problems and tensions. In this case the NAO structure is ideal to introduce after a period of maturity.

It is a duty of network management to identify the tension and act consequently. For example, if in a structure is evident problem of efficiency probably it needs more component of a hierarchical structure and other way round. The capability of management is a distinct factor to determine the structure that jointly better with context and participants in the network.

# CHAPTER II

## NETWORK POLICY

### 2.1 Political and economic context

It is not a coincidence that the law regulating network contracts was created in 2009, during the heavy crisis of 2008 when SMEs were in a state of acute difficulty. The necessity pushed the legislator to accelerate the law on business networks also following the principles of “Small business Act” (European Commission, 2008) for Europe. According to Statista (2023), the number of SMEs increased from 2008 to 2023. They estimated firms to be approximately 24.4 million and they represent the 99.8 percent of all active businesses in Europe, producing almost 52 percent of total value added in the EU and carrying out a social role in the small town and rural areas of Europe (Kossyva, et al. 2014). The closure and the failure of this kind of activity is a huge issue of the European economy. The policies focus on business networks represent a solution to avoid negative economic results of small and medium-sized enterprises.

After the accession to the Eurozone, the famous Italian districts experienced a period of crisis. Previously, the competitiveness of these districts had been safeguarded by the devaluation of the Italian currency and effective exchange rate management (Imbruglia et al., 2018). Over the years, this mechanism had hidden the inefficiencies of Italian districts, significantly influencing their performance, particularly in the north-eastern region. The abandonment of the national currency resulted in a crisis for the Italian district model. Furthermore, in the aftermath of the 2008 financial crisis, additional factors destabilized the market, necessitating the need to confront new challenges in order to maintain competitiveness.

The opening of the markets to Asian countries, the birth of a unique European market and the phenomenon of globalisation promoted companies to find other ways of overcoming the organisational form of districts in order to face the difficulties of the markets and the “dimension” problem. In addition, the Italian business structure is characterised by a strong family ownership component in company management, which has also limited the growth of companies in the new context of the fourth industrial revolution [4.0].

Therefore, the technological factor forces a new schema to innovate supply chain and abandons the territorial constraint of districts to create an industrial political economy at the European, Italian and regional levels to deal with uncertainty and conflicts.

As well, in the latter part of 2022 occurred the sharp rise in commodity price influenced by the Russian-Ukrainian conflict which has put a strain on Italian companies. This phenomenon led to a rapid acceleration in inflation and the appearance of a new element of uncertainty. In This new context they are trying to survive and face the emergence through cooperation and solidarity and by leveraging the competitive advantage that distinguishes the company's production (Pitingaro & Corsini, 2022). The momentum of aggregation initiatives continues to show a positive trend, thanks to the additional benefits offered to companies that join forces for employment protection and anti-crisis purposes. This pertains not only to the solidarity-based network contract but also to the codetermination institute, which has the potential to further promote the adoption of new organisational collaboration models among companies. On the other hand, the institutions are constructing policies to incentivize networks: the discipline on public procurement recently aims to facilitate the aggregated access of SMEs to public contracts and legal provisions that expressly include networks among the tools for managing projects under the National Recovery and Resilience Plan (PNRR), particularly on certain issues such as the circular economy and development contracts that required investments and credit from banking institutions (La Rotonda, 2022).

Among the geopolitical and economic factors that have occurred in recent times, there is already another new economic fact that is worrying: the forecast of IMF (International monetary fund) on the World Economic Outlook (October 2023) describes the concern about the German economy and its technical recession that has an impact throughout all over the eurozone.

## **2.2 Regional, National and European industrial policy**

The institutional entities have a crucial role to organise networks due to the power to decide incentive, fundings and building a network service to support the development as well as establishing rules and law to manage relations inside. Flexibility, efficiency and

speed are characteristics associated with the net and could help the dimension grow and adapt to the rapidly changing market demand.

### **2.2.1 "European Policies for Network Infrastructure: A Comprehensive Overview**

Firstly, the SBA (Small Business Act- 2008) posed the problem of paying attention to SME through 10 points in order to facilitate policies for the state members. From 2010 The European Commission successively did three important communications about industrial policies: "An Integrated Industrial Policy for the Globalisation Era" (2010), "A Stronger European Industry for Growth and Economic Recovery" (2012), and "For a European Industrial Renaissance" (2014). These reflections arise from the occurrence of two important phenomena: financial crisis and globalisation that impact on economic growth and social condition of EU citizens. Even though the economic system is relying more on the tertiary sector, the manufacturing sector needs technological knowledge to maintain a sustainable development.

European political cohesion is another tool deployed to facilitate the growth of business networks, a European program to enhance the contribution of networks on economic development with incentives to investment not only to improve performance but also to help territorial development and to strengthen forms of cooperation. The economic growth depends also on socio-institutional context and it's necessary to address policies for industry to generate local improvement.

From the point of view of incentives, the EU (European Union) during the period 2008-2012 gave to Italy about 100 million from BEI (European Bank for Investment) to sustain the birth of the business network. Retimpresa supports the system also through bank agreements and sharing information about funding together with Italian Camere di Commercio. All this institution should help the process to be followed by small firms (Imbruglia, 2018).

The quality became a key factor in the production process and SMEs are changing schema and strategies to face new market conditions, government mechanisms and organisational instruments changed to face uncertainty and typical size constraints of



Italian enterprises. The presence of family in the managerial aspect is a limiting factor together with excessive bureaucracy and the entrepreneurship culture of weak ties. The creation of ties requires engagement, and it is useful to remember how Powell (1990) in his “Neither Market Nor Hierarchy: Network Forms of Organization” sustains that the cooperation arises out of the interests of the companies themselves or out of political action.

### **2.2.2 Italian Business Networks: Integrating National and Regional Policy Landscapes**

Social capital is a crucial resource in the network logic together with territorial capital as highlighted by the success of Italian districts, in fact OECD (2001) and European Commission (2005) have recognised the importance of this structure. Concerning this, the research (Pini 2017) affirms that firms obtain relevant advantages enhancing the socio-cultural dimension of the territory: identity drive, higher network distance, positive impact on environment, social and community aspects, transfer of family knowledge, trust relation between firms and banks. The continuity of relations and mutual learning processes enable a climate of trust to be created and established over time, which is a glue capable of stimulating the action of the individual productive realities, but which is above all useful for settling conflicts, thus favouring economic activities.

If we observe several sectors and in particular Made in Italy ones, we note that they are expanding thanks to the network. The challenges of the green economy are pushing firms to adopt this kind of agreement to innovate, produce and process and obtain them in a sustainable way with more attention to the environment.

Mauriello (2013), the Head of the Unioncamere Study Centre, affirms how business networks are a modern instrument capable of answering to the nowadays need of competitiveness and at the same time remembering the relationship between typical Italian districts. The reasons that moved enterprise to sign network contracts can be traced back to sharing programs, innovating and answering to the actual problem of sustainable production and making the process more efficient thanks to the possibility of pooling information, competences and know-how by maintaining entrepreneurial autonomy.

The Italian chamber of commerce moved its action together with other institutions to use network contracts as instruments of industrial policy. *Unioncamere* joined the Minister of Economy to promote the instrument. It starts an action to create a systematic approach through memoranda of understanding with associations of categories to technical assistance, evaluate the project feasibility and play the role of incubator. The suggestion is continuing to implement incentives especially in projects that concern internationalisation, sustainability and competitiveness to help firms of the “*Made in Italy*” to maintain their leadership in an international scenario.

The Italian system must cope with competitive repositioning and readjustment strategies, especially in the South where the downsizing has caused a split to occur between companies that adopted fresh marketing strategies and innovated and those that were affected by the new market conditions. In this context, business networks have emerged as alternative models to compete inside the new market.

Examining the geographical and typological allocation of granted and disbursed incentives is crucial for interpreting the trends of national policy. It allows an assessment of the local administrations' capability to seize these opportunities and prompts a reflection on the effectiveness of public intervention choices with the aim of achieving territorial rebalancing and reducing regional disparities.

The upward trajectory of subsidised investments, despite a decrease in disbursements, confirms that incentive tools continue to act as a catalyst for private operators, encouraging them to invest. However, this influence has more pronounced effects in the Central-Northern regions compared to the Southern region which presents the ratio between subsidized investments and concessions.

	2012	2013	2014	2015	2016	2017	Totale 2012–2017
Centro-Nord	4,10	3,25	2,71	4,10	3,84	5,71	4,02
Mezzogiorno	2,09	1,93	1,42	2,12	3,73	1,83	2,13

Fonte: *MiSE, 2018*

*Figure 6 - Public leverage: relationship between subsidised investments and concessions*

This discrepancy is partly attributed to higher aid ceilings in the South, leading to a greater share of public support for investments in this region. Nevertheless, in absolute terms, the total volumes of subsidized investments in the Central-Northern regions are higher, indicating a greater availability and inclination for investment. So, in part the cultural context in which one operates can make a difference.

The only positive peak in the South occurred in 2014, primarily due to instruments funded by European funds and an acceleration of interventions coinciding with the end of the 2007-2013 programming cycle. However, an immediate decline ensued due to the sluggish start of instruments funded through the new 2014-2020 cycle. This trend underscores the predominant role played by European funds in driving investments in the South, with national policy playing a largely residual role in this part of the territory.

According to the estimates Paolo De Vivo (2020) in "*Le reti di impresa nella politica industriale*" highlights the funding gap between north and south that are partially counterbalanced by European funds.

Lastly, the situation in Sicily warrants consideration, where, despite comparable concessions and disbursements to those of Calabria, only half of the investments were realised. The problem is linked to *non-spending*, funds often risk being returned to the European sender.

### **2.3 Analysis on social and economic impacts (What did not work) and use of Best practices for the guidelines (How to construct a good policy)**

In Italy, establishing clear boundaries and enacting precise legislation regarding business networks is paramount. The delineation of these boundaries and the formulation of transparent laws play a pivotal role in providing a solid legal framework for the functioning and governance of business networks. A well-defined legal structure not only fosters a conducive environment for collaborative endeavours but also ensures accountability and fairness among participating entities. Additionally, clear regulations contribute to the overall stability and sustainability of business networks, offering a

foundation upon which businesses can confidently build partnerships and pursue shared objectives.

For example, in the case of the co-determination institute, the legal gap was only addressed with the entry into force of the implementing rules by the Ministry of Labor. The instrument came into force in 2003 as the Legislator of the had introduced in the Legislative Decree No. 276/2003 joint hiring for agricultural enterprises, also organised in a network. It is only in February 2022 that the possibility of using this tool comes into force after the intervention of the so-called D.L. Rilancio in 2020 (Art. 43-bis, d.l. nr. 34/2020) that delegated the Ministry of Labour to issue the implementing rules. Only after more than ten years did the instrument become applicable in the context of networks. An excessive amount of time for the business and economic context of the country.

Promoting networked enterprises serves as a strategic catalyst as it aids not only in the investment of the shared project but also empowers the entities themselves to explore more open and inclusive organisational models. These models are geared towards fostering the exchange of know-how and knowledge, ultimately leading to enhanced competitiveness. Additionally, the promotion of aggregations among economic operators of diverse sizes and sectors, including small and medium-sized companies excelling in the local supply chain, initiates processes of development and revitalization in the respective territories.

According to the data collected and analysed by Osservatorio nazionale sulle reti d'impresa, it certainly seems that **fiscal incentives** don't influence the birth of the network because the deeper reason is linked to innovation, R&D and internationalisation. This is explained by the table that testifies the growing number of networks despite the ending of fiscal incentive. The business aggregation is born due to other objectives, and it requires the action of political institutions, banks and trade associations to encourage the constitution and development.

According to the Report "Le Regioni a favore delle Reti d'impresa" some regions have been mostly influenced by public incentives but the fiscal incentives, watching out the number

of business networks that were borned, are not factors that influence the constitution. Other kinds of incentives, although demonstrated, were decisive in the choice of creating a business network (Abruzzo: 66% firm inside networks received benefits from their own region, Basilicata: 63% and Marche:39%). In fact, the regional incentives have generated investments in the amount of 95 million euros, three times the benefits granted. Not necessarily calls are reserved only to networks but in general **to support objectives like as R&S, business development and internationalization.**

Another factor to be taken into consideration is the issue of business size, which is far from insignificant, especially concerning the effectiveness of interventions. Multiple studies have assessed those additional effects - and hence effectiveness - are more pronounced for SMEs and startups. In the case of large enterprises, no additional effects are observed; instead, a substitution effect occurs, indicating that they would have undertaken the same investments entirely with their own financial resources, even without incentives. In summary, it makes sense to **focus incentives on SMEs** instead of large companies because of the positive investment effect they generate.

An industrial policy of **excluding networks is certainly to be avoided**, there were calls for enterprises where it was denied the participation of business network and some Italian regions adopt this scheme. It's important to also not help without distinction but the policy should maintain "a high focus" on the networks, **recognising privileges/favourable conditions**. Furthermore, the inclusion of regional limit in an innovation context could prevent the exchange of ideas and information. The establishment of **industrial policies involving the combination of two or more regions** represent a necessary and positive factor for the development and the concept of open innovation, which is one of the major advantages of networks.

In recent years, the number of inter-regional networks has increased as Industry 4.0 requires broader collaboration, especially linked to the benefit of open innovation (Pitingaro and Corsini, 2022).

It is worth emphasising that the difference between North and South is also noticeable in this theme, but the networks could offer a solution to this problem in order to reduce the

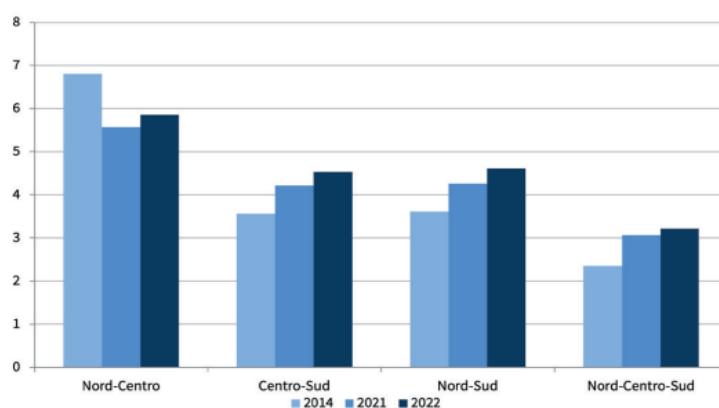
gap and boost the development of the socio-economic fabric of the most disadvantaged regions.

	2014	2021	2022	2014	2021	2022	2014	2021	2022
	Reti contratto			Reti soggetto			Totale		
Uniregionali	72,9	73,2	72,7	64,8	69,6	65,3	72,0	72,7	71,6
Biregionali (2)	19,2	18,6	18,9	17,1	18,8	21,7	19,0	18,7	19,3
Pluriregionali (>2)	7,9	8,2	8,5	18,1	11,6	13,0	9,0	8,6	9,1
<b>Totale</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>
Uniprovinciali	41,3	51,9	52,4	40,2	45,6	42,1	41,2	51,0	50,9
Biprovinciali (2)	32,9	28,7	28,7	25,6	29,1	30,6	32,1	28,7	29,0
Pluriprovinciali (>2)	25,8	19,4	18,9	34,2	25,4	27,4	26,6	20,3	20,1
<b>Totale</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>

Fonte: Elaborazione Infocamere su dati Registro Imprese

**Figure 7** Network contracts by level of geographical heterogeneity and contract type (% of total)

It is interesting to observe a progressive consolidation of the inter-regional networks involving companies from the South, which confirms the effectiveness of the tool to connect and hybridise entrepreneurial experiences that were established and developed in the North and of the Centre, enabling southern enterprises to integrate different skills and achieve economic performance that would be difficult to achieve independently. To sum up, to contrast the gap North- South might be useful to build Policies that pull interregional agreement.



Fonte: Elaborazioni Infocamere su dati Registro Imprese

**Figure 8** Interregional network contracts with enterprises located in different geographical areas (% of total)

According to the past results of political regional policies and the benefits of networks the planning of effective national and regional industrial policy must take into account principles linked to:

- **Aggregation** as a strategic lever for the competitive growth of enterprises and territories.
- Discouraging **less stable forms of aggregation**. to favour and create conditions for networked enterprises, this is achieved both by increasing the share of resources reserved exclusively for supporting networks, and by extending the bonus to projects presented in networks in the form of an increase in the score awarded in the evaluation;
- Focus on a **supra-regional growth model**, overcoming the current limits of territoriality associated with the use of regional/community resources, in order to encourage multi-regional networks that develop large-scale projects without territorial boundaries. This is to be done through the promotion of agreements between regions and/or the creation of a single ad hoc **national fund**.
- Encourage the **maximum flexibility of the network contract** in the calls for tenders, without including additional requirements in addition that limit its use/convenience.
- Awareness-raising activities on the **implementation of operational plans and effective coordination mechanisms** are crucial, given the results obtained from the business network observatory (Pira and Moretti, 2022). These efforts are aimed at harnessing the benefits of an effectively managed and organized network.
- **Harmonise regional programming** on networks by supporting those projects that aim to:
  - Develop **innovation**, including social and environmental sustainability, with a view to the circular economy;

- **Produce added value** for people through shared training, the enhancement/improvement of skills within networks and the increase of employment, especially youth employment;
- **Increase the attractiveness of the Territories** through the enhancement of heritage and local excellence in the construction of an integrated tourism product (also by experimenting with innovative models, such as dynamic packaging, marketing networking, tourism information system, custodian relationship management, etc.).
- Increase the **internationalisation capacity** of enterprises in the markets;
- Enhance **joint participation** in tenders between enterprises to meet public interest needs, strategic for the Territories.

Finally, a boost to network aggregation could come from expenditure items concerning investments for the network phenomenon, both in the start-up and development phase. It could support consultancies, common investments for the management of the programme, other consultants involved in research and/or internationalisation projects, expenses for the definition of direct business plans and financial plans for the development of investments, also through the recognition of specific **vouchers** for networks.

Regional policies investments should leverage more industrial policy instruments for network growth and allow interregional links to build an all-round interconnected industry in accordance and co-ordinated with national choices avoiding the depletion of economic resources and the effectiveness of interventions. It should be useful to reshape national taxation on the basis of these industrial policies for business networks and obtain at the same time multi-regional calls in favour of Industry 4.0.

Among the instruments and policies adopted, it is noted that it has not yet been examined how an instrument such as the tax credit (credito d'imposta) could stimulate even more investments in R&D, such as in the South of Italy, or whether the tax de-contribution in hiring, even with the instrument of co-datoriality, could represent an opportunity to meet the new labour needs. Flexibility and dynamism of work, especially for the new generations, are two of the criteria in the evaluation of job offers.



# **CHAPTER III**

## **VENETO AND SICILY: ECONOMIES AND POLICIES IN COMPARISON**

In this chapter, we undertake a comparative analysis of the two regions, Veneto and Sicily. Following an examination of regional policies, clear outcomes prompt the juxtaposition of social capital as a crucial determinant for territorial development. Merely allocating funds to the business network instrument proves insufficient; it is the business culture and the level of human resources within a territory that truly make the difference.

The national strategy for aggregations includes the stable integration of the network contract among the instruments to be promoted in economic programming choices at the European, national, and regional levels.

The findings indicate that the development of high-performing networks necessitates the cultivation of specific skills focused on facilitating knowledge exchange mechanisms and monitoring outcomes. Consequently, the establishment of such networks requires a dedicated pool of expertise, a commitment that the Observatory has undertaken to fulfil through its ongoing efforts in recent years.

In certain regions, the interest in network contracts is increasingly associated with benefits that directly impact the workers involved, owing to collaborative welfare policies. This transcends the notion of a network as a mere aggregation designed solely for maximizing benefits for participating businesses. Instead, it underscores a shift towards enhancing the corporate environment, wellbeing, and professionalism of workers as pivotal factors capable of augmenting the competitiveness of companies within these networks.

Regional data accentuate how, alongside the unique characteristics of each territory, the development of business network phenomena is significantly influenced by the capacity of local public policies to stimulate business interest through targeted measures. In this context, the prominence of Lazio (1898 networks), leading the ranking in the central part of Italy at 34.48%, is followed by Lombardy (1847), Veneto (1296 networks), and Sicily

(489). Despite a rise to 2.9% in 2018 (Infocamere), Sicily's share of regional networks remains relatively low at 5.4% (Infocamere, 2023).

The study focuses on the analysis of policies adopted by two regions, namely Veneto and Sicily, representing the macro-areas of North-east and Mezzogiorno, respectively. The objective is to comprehend the differences and similarities characterizing these two regions, along with the actions undertaken for the dissemination of business networks. This exploration starts from two distinct cultural and economic contexts described in the following paragraphs using socio-economic indicators.

### **3.1 Analysis on macro and micro economic data in Veneto**

Starting from the Veneto Region's statistical report, it is projected that in 2023 the region will maintain the Italian average GDP, exhibiting a 1% increase. Notably, Veneto distinguishes itself in terms of exports, surpassing the national average by 0.5 points (4.1%), constituting nearly half of the regional GDP (46%).

The per capita GDP in Veneto consistently surpasses the national average, showing a positive difference ranging from approximately 2,500 to 4,000 euros, depending on the year. Despite the economic challenges posed by the pandemic, the region effectively manages its recovery. While the number of businesses is decreasing, Veneto still ranks as the fifth region in terms of the number of enterprises, underscoring the entrepreneurial culture prevalent in the area. Parallel to the national trend, there is a decline in the number of sole proprietorships and manufacturing-related businesses. Corporate structures increasingly favour joint-stock companies, with growth primarily observed in service organization for businesses and individuals, contributing to the expansion of the tertiary sector. This shift signifies a strategic orientation towards more effective structuring to navigate global markets. The transformation from traditional craftsmanship to digital craftsmanship is evident, leading in a new form of craftsmanship capable of creating value and generating new employment opportunities with the goal of enhancing the competitiveness of individual companies and, crucially, the manufacturing supply chain.

The number of NEETs (Not in Education, Employment, or Training) in Veneto is the lowest nationally recorded rate at 13.9%, representing one-third of the percentage of young

people not studying or working in the island of Sicily (36.3%). The employment rate reached 65.7% in 2021, nearly returning to pre-pandemic levels and surpassing the Italian average of 58.2%. The Veneto unemployment rate decreased from 5.9% to 5.3% (compared to Italy's increase from 9.3% to 9.5%), even lower than the 2019 figure of 5.6%, although the number of inactive individuals has risen. Substantial regional disparities exist; in the South, less than half of the 20-64 age group is employed, whereas in the Central region, it is 67.2%, and in the North, it is 71.4%.

Veneto's economic resilience is evident as it maintains a robust GDP projection with notable strengths in exports and per capita income. The region showcases adaptability, transitioning towards a service-oriented economy, emphasizing innovation. The low NEET rate, high employment levels, and declining unemployment underscore Veneto's strategic positioning.

### **3.2 Analysis on macro and micro economic data in Sicily**

If we look at Sicily, the situation is quite different. In 2023, the island maintained a growth rate percentage consistent with the Italian average (1%), yet the per capita GDP significantly differs from that of Veneto. According to ISTAT (2022), these two regions are ranked 5th and 19th, respectively. Sicily, in 2022, experienced a notable increase in exports, particularly in petroleum products, with a real growth rate of 27.3%, as reported by ISTAT. Non-petroleum exports, especially in electronics (STMicroelectronics), also contributed to this growth. Concurrently, the island witnessed a rise in the closures of individual firms (Infocamere-Telemaco, 2022). The preferred legal form for entrepreneurs in 2022 was Capital Companies, demonstrating a growth of 3.07%, while Partnerships and individual businesses declined (Unioncamere, 2022).

The number of employed individuals in the region increased by 2.0% compared to 2021 but did not surpass pre-pandemic levels (ISTAT Labor Force Survey). The employment rate, partly influenced by a reduction in the working-age population, increased by 1.5 percentage points. Notably, in 2022, the indicator rose significantly for the age group 25-34 (3.7 percentage points) and those with a degree or postgraduate qualification (1.7 percentage points), potentially attributed to a decrease in the resident population within that age group.

In 2022, the activity rate (for the population aged 15-64) slightly increased to 51.2% (compared to the national average of 65.5%), despite a contraction in job opportunities. The labour market dynamics were influenced by ongoing demographic trends, as discussed in the "Demographic Trends" section of the Sicilian Economy report by the Bank of Italy (Regional Economies, 19, 2022). The decline in the number of job seekers is reflected in the unemployment rate, which decreased by 2.1 percentage points to 16.6%. Although this marks the lowest value in the last five years for the region, it remains twice the national average (8.1%).

In 2022, the initiation of the Workers' Employability Guarantee Program (GOL) marked the commencement of a new active labor market policy under the National Recovery and Resilience Plan (PNRR). The program is designed to enhance or transform workers' skills, thereby rendering them competitive in the job market.

Considerable disparities are evident in the percentage of young people classified as not in employment, education, or training (NEET), reaching 32.4% in Sicily in 2022 (13.4 percentage points higher than the Italian average), positioning the region at the bottom in Europe.

Comparing the ISTAT 2023 data from the report "Il benessere equo e sostenibile dei territori sicilia 2023" with national levels and the macro area of southern Italy, the region reports an employment rate of 46.2% for individuals aged 20-64 in 2022. This figure is 18.6 percentage points lower than the national average and 4.3 points lower than the Southern Italy average. The rate of labor force non-participation stands at 35.3%, more than double the national average, and 5.5 percentage points higher than the Southern Italy average.

Similar disparities are noted for young people aged 15-29, with an employment rate of 20.7% and a non-participation rate of 55.1%. These figures indicate differences of -13.1 and +25.6 percentage points compared to national values, respectively.

In summary, Sicily's economic landscape in 2023 reflects a diverse scenario, with growth aligning with the national average but notable discrepancies in per capita GDP compared to Veneto. Despite a surge in exports, especially in petroleum products and an increase in

employed individuals, challenges persist particularly in the NEET percentage, underscore the need for targeted interventions to address employment gaps.

Moreover, the departure of young graduates contributes even more to regional impoverishment.

### **3.2.1 South skilled migration problem**

According to the "Italiani nel mondo 2023" report, Sicily stands as the region of origin for the largest expatriate community, exceeding 815,000 individuals. Following closely, with numbers surpassing 500,000, are Lombardy (almost 611,000), Campania (+548,000), and Veneto (+526,000) (Italians in the World Report, 2023). Over the period from 2013 to 2023, Sicily has witnessed a population decline of 15.3% among those aged 15-34, in stark contrast to Veneto, which experienced a mere 2.9% decline (CGIA Mestre, 2023).

Between 2001 and 2021, the proportion of southern emigrants with high skills (holding a degree or higher qualification) nearly quadrupled, surging from around 9% to over 34%. In 2021, out of every 100 emigrants from the South, over 34 possessed a degree, 30 held at least a lower secondary school diploma, and 36 had an upper secondary school diploma. SVIMEZ estimates that in 2022, for the first time in the history of Italian internal migrations, the percentage of graduates among southern emigrants will surpass those with lower educational qualifications. The phenomenon of intellectual migration not only involves the South-North Italy direction but also Italy-Abroad. The country exhibits persistent negative migration balances of graduates abroad in the three-year period 2019-2021: around 18,000 from the Centre-North and about 11,000 from the South. However, while the Centre-North is capable of offsetting this substantial loss of human capital by attracting skills from the South, internal migrations (between regions of the country) amplify the phenomenon of a sharp loss of qualified workforce in southern regions, seriously compromising economic growth mechanisms for the area.

In 2021, the mobility index for young Italian graduates (aged 25-39) reaffirms the familiar trend of highly qualified individuals from southern regions choosing to relocate from their places of residence. The distribution, marked by a net transfer balance from/to abroad and between different regions within the country, stands at -22.7 per thousand residents with similar characteristics. This results in a significantly greater deficit compared to the

national average, which records a loss of 2.7 young graduates per thousand residents of the same age and educational level to foreign countries (Istat, Indicatori Bes dei territori, edition 2023).

In this challenging scenario, it is interesting to note that the relative increase in the percentage of returnees to southern regions is ongoing, at the expense of those in the North. In the South, despite some variability, Campania has been the region that captured the largest share of returnees in the last three years, followed by Puglia and Sicily, tied for second place. In 2021, repatriations primarily occurred to Lombardy (14 thousand, accounting for 19% of the total registrations), Lazio (over 7 thousand, accounting for 10%), Sicily (almost 7 thousand, accounting for 9%), and Veneto (almost 6 thousand, accounting for 8%).

### **3.3 Government transfers and network industrial policy**

As highlighted in Section 2.2, based on a data projection compiled by Istat and Mise, subsidized investments are experiencing growth and stimulating private investment. However, these effects are more pronounced in the North than in the South, influenced not only by resource availability but also by cultural factors related to the willingness to invest.

The availability of funds is not the sole consideration; the ability to allocate them effectively is paramount. This is exemplified by the situation in Sicily, where, despite comparable concessions and disbursements to Calabria, the generated investment is only half (De Vivo, 2020).

In Paola De Vivo's (2020) study, examining data since 2009, a period marked by deep crisis, the disparity in investment between the North and the South widens with increased state public intervention in favour of northern businesses. A peak occurred in 2017 when nearly 16 billion euros were invested, compared to the 2.6 billion euros in the South for subsidized investments. Supporting this trend is a study titled "Recent directions of industrial policy and the Mezzogiorno: an overview" by Cappellani et al. (2017), indicating that the number of aided firms in the North surpasses those in the Mezzogiorno, despite southern firms receiving a higher quantity of resources each.

This highlights the decisive role played by European funds, representing the primary source of investment generation in the Mezzogiorno, relegating national policy to a residual position. The region with the largest allocations is Sicily (2016-2020) with 418 million compared to 60 in Veneto (Figure 9). A significant 86% of the allocated funds pertain to resources from the European Union within the “*Programma Operativo del Fondo Europeo di Sviluppo Regionale (FESR)*” for the 2007-2013 and 2014-2020 programming period, incorporating ad hoc measures to support the creation of networks, clusters, and supply chains in Axis 1 related to Research and Innovation themes and Axis 3 related to the Competitiveness of production systems.

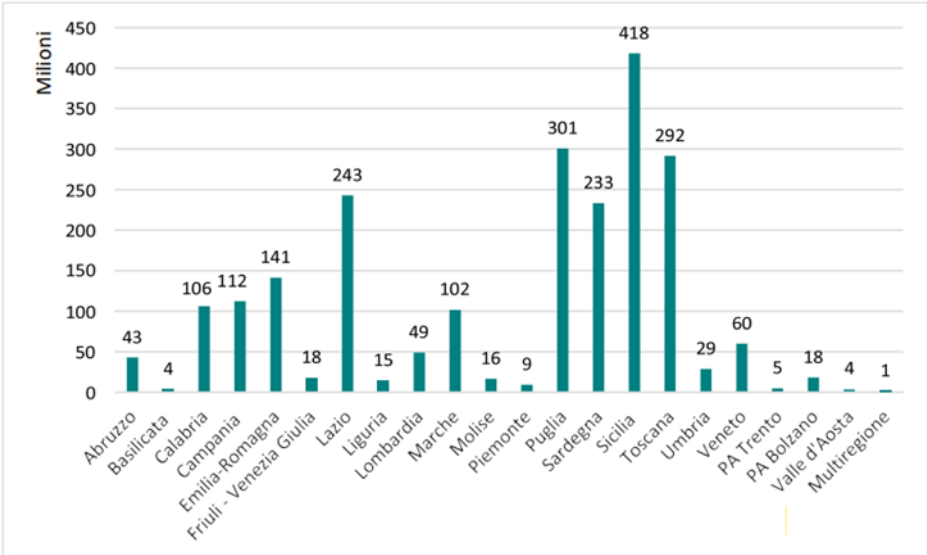
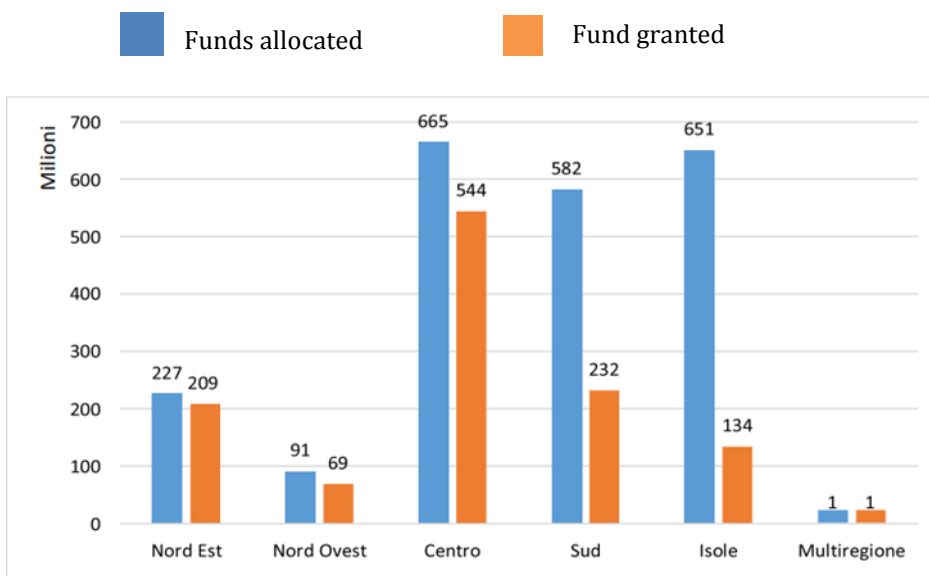
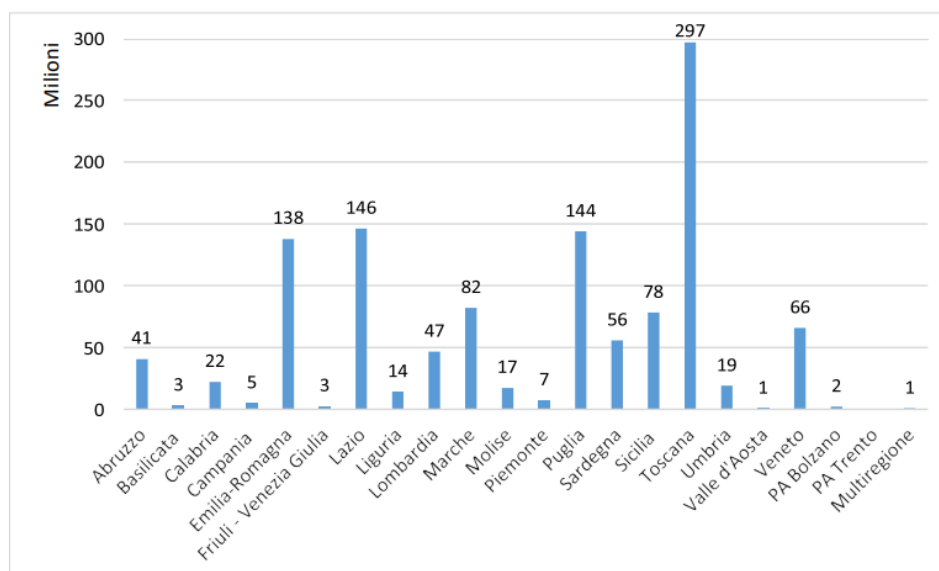


Figure 9 Allocated funds 2010-1016

Comparing the data of funds granted and allocations also assigned to networks by geographic area (Figure 10), the gap between the North and the Regions of the South and Islands, where large available budget are not matched by as many allocations, becomes evident (“Le Regioni a favore delle Reti di impresa”, aggiornamento 2017).



**Figure 10** Comparison of allocated and granted funds 2010-2016: Analysis by macro area



**Figure 11** Facilities granted 2010-2016.

Shifting our attention to policy, the analysis provided by the report "Regions in Favour of Business Networks" assists our understanding. This report examined 176 facilitation proposals published by regional administrations between 2010 and 2016, with beneficiary enterprises aggregated through network contracts.

Among these, 14% (24 interventions) are explicitly designated for network enterprises, while the remaining 86% is divided between measures exclusively reserved for business aggregations (69 interventions, constituting 39% of total interventions) and measures



open to both business aggregations and individual enterprises (83 interventions, accounting for 47% of total interventions).

In this context, the Veneto region allocated 3.6 million euros for calls reserved for networks, whereas Sicily had no funds allocated in this category. Although, until 2016, the number of funded projects between the two regions remained equal at 2 (Veneto) and 1 (Sicily) respectively, recent years have witnessed a shift in the Veneto region's strategy. It appears that the region has implemented initiatives to encourage business aggregation through private initiatives described in the following paragraph.

### **3.4 The two regional policies compared**

This section describes the policies pursued for the two regions with particular reference to business clustering.

Among the policies and strategies adopted by the Veneto region, two significant initiatives have gained prominence in recent years. One involves a collaborative effort with Confindustria Venezia, an associational initiative, while the other is a public-regional initiative known as the "Regional Innovative Networks" project. Furthermore, the historical presence of Venetian districts and their widespread influence in the area has undeniably contributed to the Veneto region's advantage in fostering a culture of entrepreneurship and collaboration to achieve common goals. However, this was not always the case; the gap between the Northeast and the South widened in the post-World War II period and solidified during the economic boom of the 1980s. The upcoming section (3.5) will delve into the reasons behind the widening gap and explore the positive consequences that the region continues to enjoy today.

#### ○ **VENETO**

- **CRESCERE IN RETE - Confindustria Venezia Area Metropolitana di Venezia e Rovigo**  
In 2019, the Confindustria Venezia association launched the "Crescere in rete", initiative to give people a chance to learn more about the network contract tool and the benefits of aggregation to help companies-particularly small and medium-

sized ones-develop synergies and cooperation. As highlighted in paragraph 2.3, the actions of business associations also make a difference in spreading the tool.

At the same time, the service company Punto Confindustria Srl will open a desk to assist in a structured way those who wish to evaluate or propose the creation of new networks.

Entrepreneurs will receive specific training, thanks to the series of seminars dedicated to innovation, the figure of the network animator manager and regional funding.

To promote the emergence of aggregations, the Association will involve potential partners, including international ones, and form sectoral clubs, dedicated to automotive, wood furniture and glass, food industry, circular economy, construction and tourism.

Within the project, the initiative "**+ Manager X PMI= Successo**" was also promoted, which allowed companies in the area to benefit for a period - and free of charge - from the professional skills of a manager, who supports them in the development of specific areas such as innovation, digitalization internationalization, sustainability and communication. Propelling the codatoriality tool that would be available soon in 2022.

Thanks to the call for 4. Manager, which Confindustria Venezia joined in collaboration with Federmanager, 7 Temporary Managers are made available to companies. The professionals will form the aggregations and animate them for a period of 11 months, at no cost to companies.

A study conducted and published in 2017 by the Centro Studi Confindustria, ISTAT and Retimpresa, on the other hand, showed that entities adhering to a network contract show an improvement in employment dynamics. After one year, in fact, it shows an increase of 5.2 percent, after two of 8.1 percent and at the end of the three-year period of 11.2 percent. The impact of aggregation on turnover is even more significant, standing at +7.4% after one year and +14.4% after three years. In the wake of this data, the Confindustria's initiative was born.

- **RETI INNOVATIVE REGIONALI LG.** Project from "Strategia di specializzazione Intelligente (S3) della Regione del Veneto 2021- 2027

This is a second example aimed at stimulating the creation of network enterprises and public-private collaboration, in this case for research and innovation, The Regional Innovative Networks represent a system of enterprises and public and private entities brought together in a single legal entity for the development of programs having as their object interventions aimed at research, innovation and the transfer of knowledge and skills, including technical ones (DGR No. 583/2015).

The vision of the project is geared toward promoting a culture in the Veneto region that is oriented toward the SDGs 2030 to ensure sustainable and inclusive development, capable of combining competitiveness with social and environmental sustainability.

With the Regional Innovative Network (RIR), the Veneto Region has put in place a new policy tool for innovation with the aim of intergrading the world of research with the productive fabric for a synergistic use of resources and exploitation of results for the market and business pursuing regional objectives.

Specifically, that of RIR is an aggregative form that involves the creation of a structured system of companies and public and private entities spread throughout the region, also operating on a multisectoral scale, and with the active involvement of knowledge institutions. Collaborations should help disseminate best practices related to the management of innovation processes and incentivize strategic choices through data driven. Support for networks arises to stimulate the development of the regional innovation ecosystem with actions in favour of the emergence of innovation clusters strengthen energies between various industries, facilitate a connection and interactions between different areas, particularly on research projects such as The European Horizon. This is to attract investment and

talent for the strategic repositioning of the regional production system in the international context (18.9 % companies funded RIR, Aida and Veneto Cluster).

- **“Bando per lo sviluppo e consolidamento delle reti d’impresa e/o club di prodotto - Strategia d’area dell’Area Interna Contratto di Foce - Delta del Po”**  
Regione del Veneto – Programma Operativo Complementare (POC) al POR FESR 2014-2020.

Entities that are admissible are "Networks of micro, small, medium-sized enterprises that, at the time of submitting the application, are constituted with the legal form of a "network contract". This call for proposals was created to promote and support the start-up, development and consolidation of "product clubs" in the form of Networks of Enterprises with a "network contract", in order to favour the differentiated repositioning of the member enterprises and - consequently - of the tourist destination or territories in which they operate, as well as the development of new products and new services, taking into account the changing needs of the tourist demand on the basis of specific market analyses. Furthermore, it contributes to achieving the objectives of the EUSAIR1 strategy.

- **SICILY**

The search among the various funding notices issued by the Region of Sicily for enterprise networks focused on the [euroinfosicilia.it](http://euroinfosicilia.it) site, which contains all the measures financed by the PO FESR in recent years but from which it is sometimes difficult to download the various files.

Funding measures targeted exclusively at business networks are:

- PO FESR 2014/2020 - **Azione 3.3.3** “Sostegno a processi di aggregazione e integrazione tra imprese (reti di imprese) nella costruzione di un prodotto integrato nelle destinazioni turistiche” - Public call 6 March 2018

The objective of the funding is to support micro, small and medium-sized enterprises operating in aggregate form (Enterprise Networks) for the purpose of building an integrated product in tourist destinations (also by experimenting with

innovative models, such as dynamic packaging, marketing networking, tourism information system, customer relationship management). Networks of enterprises with legal personality or without legal personality, made up of at least 3 enterprises constituted and in a state of activity, can apply.

- PO FESR 2014/2020 – **Azione 1.1.3** “Sostegno alla valorizzazione economica dell’innovazione attraverso la sperimentazione e l’adozione di soluzioni innovative nei processi, nei prodotti e nelle formule organizzative, nonché attraverso il finanziamento dell’industrializzazione dei risultati della ricerca”  
Public call 23 June 2017

The call intends to finance projects implemented in partnership between enterprises for the strengthening of innovative capacity with reference to the technological advancement of products and production diversification. Particular attention is paid to the promotion and consolidation of enterprise networks, as well as to the inclusion of researchers with high technical-scientific profiles in the projects presented. The fields of intervention of the projects must relate to one of the thematic areas of the Regional Innovation Strategy for Intelligent Specialisation (S3).

Beneficiaries are SMEs and large enterprises in associated form, set up as temporary groupings or through network contracts including at least three enterprises of any size (also to be set up) for the experimentation and adoption of innovative solutions in processes, products and organisational formulas, as well as the industrialisation of research results.

There are also calls for proposals that ALSO included enterprise networks and aggregated forms among the recipients:

- PO FESR 2014/2020 – **Azione 1.1.2** “Sostegno per l’acquisto di servizi per l’innovazione tecnologica, strategica, organizzativa e commerciale delle imprese”  
del 23 June 2017

The call supports the development of investment projects aimed at supporting the acquisition of skills by businesses to enable them to start up and consolidate a path to innovation, through investment projects in product/service, process, organisational and commercial innovation, financing the costs of patenting innovative ideas, costs related to prototyping, costs related to the development of digital skills (e-skills).

Proposals must fall within one of the thematic areas of the Regional Innovation Strategy for Smart Specialisation (S3). Applications may be submitted by Micro, Small and Medium Enterprises, as they are defined in Annex 1 of Reg. 651/2014, individually or in association with other enterprises regardless of their size class, Enterprise Networks with legal personality (Network-Subject) or Enterprise Networks without legal personality (Network-Contract).

- PO FESR 2014/2020 – **Azione 1.1.5** “Sostegno all’avanzamento tecnologico delle imprese attraverso il finanziamento di linee pilota e azioni di validazione precoce dei prodotti e di dimostrazione su larga scala” public call 23 June 2017

This provides funding for "lines, pilot projects and early validation actions for large-scale products", carried out in partnership between enterprises and research bodies and structures for the development of prototypes and demonstrators, with industrial application of key enabling technologies.

Applications may be submitted by enterprises individually or associated in ATS, ATI, enterprise networks (also to be set up), in partnership with universities, public and private research centres, and regional technological districts.

It finances projects carried out in partnership between enterprises and research bodies and structures for the development of prototypes and demonstrators, with industrial application of key enabling technologies.

Finally, in the analysis of the Regional Innovation Strategy for Intelligent Specialisation (S3 Sicily), emphasis is placed on networks to create conditions conducive to fostering innovation within the production system, aligning with sustainable development objectives. This involves supporting the enhancement of research and development capacity by promoting and consolidating business aggregations/networks. Additionally,

the strategy focuses on fostering collaborations with research bodies for the economic valorisation of research results and/or the adoption of technologies that enhance productivity. This approach also encompasses internationalization efforts aimed at strengthening enterprises' positions in global value chains.

In the realm of network research, there are no initiatives by trade associations, as seen in the case of Confindustria Venezia. While the Region of Sicily has dedicated resources and attention to the issue through calls for tenders, the disparity in the numbers of networks between the two regions persists, with a notable 1:3 ratio (Retimpresa - Reti e dati, 2023). In this context, it appears that the information and awareness actions undertaken by policies extend beyond the mere issuance of calls for proposals. A more widespread understanding of the instrument and its potential, contributing to the growth of business culture, may prove decisive in the broader dissemination of the network contract.

### **3.5 Spending capacity and efficient use of resources: where does the problem arise?**

Calls and resources are more available for the region of Sicily, but how these are spent still reveals regional differences. Competence of public administration personnel and the north-south gap in state transfers emphasise contribute in no small measure to the actual results on the territory.

In this analysis, it is imperative to consider the spending capacities of the regions, and in this context, the study conducted by Martinelli, F. (2022) proves insightful. Martinelli (2022) scrutinizes the policies of southern Italy spanning from the post-war period to the present day, elucidating the reasons behind the apparent discrepancy. Despite the ostensibly increased availability of resources from European programming cycles, southern regions face challenges in realizing their planned objectives.

Examining the past two decades since the 1990s reveals a notable trend towards regionalization in public policies, culminating in what is colloquially termed the 'third regionalization' at the turn of the new millennium. The constitutional reform of Title V in 2001 delineated several areas of intervention as exclusive regional competence.

Concurrently, the regionalization of public policies was reinforced with the establishment of Regional Operational Programmes (POR) by Europe, positioned as the primary instrument for European Cohesion Policy targeting 'Objective 1' regions. This shift entrusted regions as direct beneficiaries, mandating them to formulate, coordinate, and implement their individual regional development programs.

To provide a condensed evaluation of the three programming cycles spanning from 2000 to 2020 in Southern Italy, one can refer to periodic assessments conducted by SVIMEZ, alongside pertinent national and European monitoring documents.

Since the inaugural 2000-2006 programming cycle, discernible disparities have surfaced. Despite the expeditious approval times, evaluations conducted at the cycle's conclusion (SVIMEZ, 2010) point out marked distinctions between regions. These distinctions manifest in commitment and expenditure capacity, as well as in configuration and implementation. The funds allocated through Cohesion Policies exhibit a substitution effect, wherein, instead of augmenting public spending, they serve to replace state expenditures. Examining data from 2000 to 2008 reveals that the total public investment per inhabitant in the Mezzogiorno consistently remains lower (ranging between 86% and 95%) than in the Centre-North (SVIMEZ, 2010). Simultaneously, the Mezzogiorno's socio-economic indicators depict a noteworthy recovery, particularly evidenced by a reduction in the unemployment rate from 21% in 2000 to 12% in 2009.

The subsequent 2007-2013 programming cycle faced procedural complexities proving from both external and internal political factors. These included the economic recession, subsequent global fiscal crisis, and the imposition of new austerity policies by the European Union, extremely affecting Mediterranean states, particularly the southern regions of Italy. In 2011, confronted with difficulties and substantial delays in the implementation of Regional Operational Programmes (POR), uncommitted resources from European programming were centralized in the PAC-Action and Cohesion Plan. To meet reporting deadlines, there was an increased dependence on 'sponda' projects (SVIMEZ, 2016). These projects, funded by alternative sources, undermine programming efforts, hinder the accomplishment of established objectives, and offer nominal assistance in narrowing the gap, contributing to suboptimal expenditure quality and fund dispersion. Despite the absence of any legal provision prohibiting retrospective support, as stated in the Cocof note of 29 March 2012 on retrospective projects, the Commission explicitly



discourages this practice. The concern raised is the potential loss of the 'additional value' that projects utilizing EU structural funds should inherently bring, particularly in terms of launching new construction sites, as reported by Il Sole24ore on 5 February 2015.

In the 2014-2020 programming cycle, instigated during the European Central Bank's expansionary policy under the leadership of Draghi, the European Cohesion Policy underwent reforms. Objectives were refined, focusing not only on competitiveness but also on sustainability and social inclusion. The territorial strategy was operationalized at the regional level through the implementation of 3S documents, specifically the Smart Specialisation Strategy. Although new selective conditionality and bonus mechanisms were introduced to enhance efficiency, they paradoxically imposed additional penalties on the 'weaker' actors. Considerable variations in financial and staffing conditions among institutions persisted. The Southern regions consistently exhibited a limited ability to expend European resources, trailing behind the Centre-North and other less developed regions in Europe (MEF, 2021). The utilization of 'bank' projects significantly diminished the strategic scope of the programming frameworks. Concurrently, there persisted a regressive trend in ordinary expenditure; in 2018, per capita expenditure by the public administration in the Mezzogiorno was only 77% of that observed in the Centre-North. Seventy years since the initiation of the Intervention for the South, the SVIMEZ 2020 Report paints a disconcerting picture of Italy, depicting a country once again grappling with profound inequality. Despite initial efforts in the post-war period to modernize the Mezzogiorno's production system, infrastructure, and public services, recent years have witnessed a stagnation. Keynesian public intervention, aimed at mitigating the influence of the entrenched particularistic and clientelist mechanisms perpetuated by the southern ruling classes, achieved only partial success. Adding to these challenges is the sad reality that between 2002 and 2018, 2.1 million residents departed from the Mezzogiorno. More than half of these migrants (51%) fall within the age group of 15 to 34 years, and over a quarter (26%) hold university degrees. Emigration from the Mezzogiorno has taken a new form, involving highly educated young individuals unable to find opportunities in their native region.

The evolution of public intervention from a centralized coordination system to a decentralized governance system has heightened the complexity of resource

management. Regional governments have now assumed the responsibility for formulating strategies, coordinating, planning, and reporting on interventions, while various local actors, be they public or private, individual or associated, are entrusted with the design and implementation of interventions. The shift from analysing the territory's needs to executing bottom-up projects further exacerbates existing imbalances. The programming process has become more difficult, prioritizing processes over results, thereby dissuading local and private operators. Moreover, the reporting requirements for interventions demand increased attention, leaving limited space for effective planning and implementation to ensure the quality and socio-economic impact of projects.

Undoubtedly, there has been a qualitative improvement in the technical capacities of regional apparatuses (methods and vocabulary) concerning the formal preparation of programming and reporting documents. However, it remains unclear to what extent these programs reflect grassroots concerns, address the needs of the territories, and genuinely contribute to supporting economic, social, and institutional growth in the region while ensuring consensus reproduction.

Municipalities play a pivotal role in the design and implementation of interventions. The local public administration, hampered by a shortage of personnel possessing suitable knowledge and often constrained by insufficient financial resources, faces challenges in staff turnover. The spending capacity of southern municipalities, on average, lags behind that of municipalities in the Centre-North. Unfortunately, a substantial number of southern municipalities are mired in instability, with many under investigation for mafia infiltration (Evangelista et al., 2020; Avviso Pubblico, 2022). To compensate for the lack of internal technical skills, reliance on external technical knowledge occasionally deviates from the public interest.

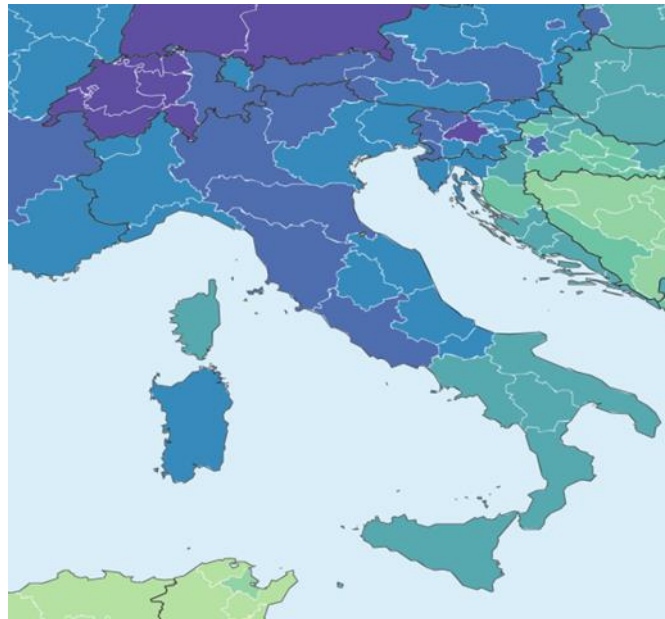
Regionalization has exacerbated the gap between the South and the North of the country. The deficiency in capacity and quality of local governments, coupled with weak planning skills, has undoubtedly had repercussions. However, the central state has fallen short in achieving the goal of narrowing the gap between the two regions, neglecting the crucial role of territorial equalization.

The PNRR once again signifies a new opportunity for Southern Italy, as the Commission had stipulated directing 40% of its resources to the region. Despite the European spending constraint of allocating 40% of resources to the South, Svimez, in a hearing before the Senate's EU Policies and Budget committees on 19 September 2023, emphasized that the 'new' NRP proposed by the government should also adhere to this constraint. Almost half of the measures the government has proposed to defund from the NRP are located in the South. More precisely, investments totalling 7.6 billion, equivalent to 48% of the 15.89 billion eliminated from the Plan in the Italian revision sent to Brussels on 7 August (of which 16 billion, 12.3 billion have already been awarded for 42,786 projects) (Manuela Perrone, *Il Sole 24 ore*, 6 October 2023). There is hope for these projects; the positive news is that the purposes of the defined measures align with the strategic objectives of the ERDF. However, the procedure for amending national and regional programs to ensure coverage of the defunded measures is complex.

### **3.6 The social capital factor makes the difference: when was the gap born?**

As regards the Veneto region, the development owes little to state-decided industrialization interventions. Its persistence is intertwined with both the robust networks and connections of enterprises with the local territory and its early projection onto international markets. The efficacy of growth mechanisms was facilitated by an abundant endowment of social capital, enabling the overcoming of critical phases towards new structural arrangements.

In 1999, Giancarlo Coró attempted to explore the reasons behind the increasing divergence in economic and social indicators between the two macro-areas, North-East and South. Despite historical similarities, the disparities have become more pronounced over the years. Marked differences in indicators such as unemployment, exports, and investments persist. While the gap has, to some extent, narrowed, the two areas still exhibit distinct human development indexes, with North-Eastern regions surpassing the national average (e.g., Veneto ranking 8th) and Southern regions falling below 0.880 (e.g., Sicily ranking 21st, the last position) (Global Data Lab, 2021).



**Figure 12** Subnational Human Development Index, 2021



The differences between the two regions do not appear to be solely attributable to the disparity in resources but rather to a distinct cultural context and entrepreneurial culture. According to Corò (1999), although the Veneto region started from a situation of (under)development similar to that of the Mezzogiorno, the North-East initiated a trajectory of indigenous growth. This growth was spurred by factors that drew minimally from specific territorial development policies formulated at the national level.

The question arises: could it be beneficial to replicate the economic model of the North-East in the South?

From the analysed data and reviewed reports, the solution appears to lie in cultivating a different business culture and a stronger commitment to establishing and sustaining the social capital, which is regrettably lacking in the South, as evidenced by the significant number of educated individuals leaving the region. The profile of emigrants from the South has shifted from the historical pattern of laborers seeking economic improvement to university graduates with greater economic means. These individuals leave the economically challenged regions in pursuit of employment matching the skills acquired during their studies. The SVIMEZ 2023 report highlights that, despite 18,000 graduates from the Centre-North going abroad, the North manages to offset the gap by attracting

young graduates from the South. This exacerbates the situation, severely compromising the mechanisms of economic growth for the Southern region.

The development of social and institutional systems should not merely support the small business economy but also propel the creation of networks fostering complementarity and relationships—be they productive, technological, or social.

Corò (1999) further supports the Veneto economic system by noting how the significant economic weight of small and medium-sized enterprises is evident, reflected in industrial employment levels comparable to the Lombardy region. This trend persisted and even strengthened during the 1980s and 1990s, countering the general decline witnessed throughout Italy. Corò continues by outlining interpretative lines that elucidate the competitive success up to the 2000s, offering insights relevant to the current economic situation in the North-East, identifying reasons such as:

### **1) geo-economic location in the axes of European development.**

It is situated in close proximity to the most industrialized regions of Germany and Northern Europe, generating a demand for supply aimed at capitalizing on the combined advantages of cost and quality within high value-added production networks. This macro-region stands out as one of the wealthiest and most dynamic in Europe, a status confirmed by economic indicators spanning from 2001 to 2023 (Eurostat, 2001-2023). Occupying a central position in this geo-economic system brings undeniable advantages, providing direct access to the affluent European market area and facilitating the engagement of industrial enterprises in extensive networks of technical and social division of labour. The Veneto region's economic resilience is underscored by its consistent ranking, securing a prominent position after Lombardy and Emilia-Romagna in recent years, as evidenced by export-driven influences (Istat, 2022).

### **2) the impact on the regional economy of the effects of national macroeconomic policies, and in particular the relationship between inflation differentials and exchange rate manoeuvres.**

The repeated devaluations undertaken in the 1970s played a pivotal role in bolstering exports by adapting to shifting demand and penetrating foreign markets. This devaluation

subsequently influenced domestic costs through the inflationary cycle, which was halted in the first half of the 1980s when Italy entered a fixed exchange rate regime.

Following this, companies that had embarked on the export path turned their focus to productivity growth. However, by the end of the 1980s, the interplay between inflation and productivity concluded, and in 1991, Italy embraced the Maastricht path. Industrial enterprises situated close to foreign markets found themselves in an advantageous position: fortified by the productivity gains accumulated in the 1980s and no longer subject to a detrimental inflationary differential, they could effectively reap the benefits of competitive devaluation.

The growth is substantiated by various economic indices, with the most indicative measure of industrial, employment, and quality of life improvement being the average per capita income. This metric escalated from below the national average in the early 1960s to well over 20% above the national average by the end of the century. The GDP per capita still positions the region among the wealthiest in Europe, as per Eurostat data from 2021.

### **3) the change in the structural conditions of international competition, with the emergence of a differentiated demand for personal and household goods, as well as with the affirmation of entrepreneurial formulas and technological platforms that reward the flexible organisation of production**

The decline of mass production and the limited impact of Fordism in favour of a model of social organization of production, centered on the territory rather than the factory organization, establishes an infrastructure of economic, cognitive, and institutional integration. This infrastructure now stands as one of the fundamental factors for creating value in the global economy. The economic and technological potential of the traditional model of work organization, exemplified by the large integrated factory, has diminished. The growth of variability and indeterminateness in end markets, coupled with the artisanal culture's inclination towards product customization, has positioned small and medium-sized enterprises (SMEs) as beneficiaries.

Moreover, the shift from the mechanical paradigm to new information technologies supports the technical breakdown of the production cycle. This transformation makes it not only possible but increasingly advantageous to reorganize into decentralized networks and autonomous business units.

With globalization, certain economies of contiguity vanish, paradoxically favouring the 'peripheral' local systems. These systems can liberate themselves from the geographic marginality imposed by the rigid spatial structure of Fordism and gain more unrestricted access to international trade networks and the division of labour.

The success of the industrial sector in Veneto is intricately linked to the organization of production within small enterprises clustered in specific territories, often centred around small towns with robust craft traditions. A substantial portion of production occurs within local small business systems and districts. The production organization's flexibility, the diversification of products, the refinement of individual customized, non-mass-produced items—especially within certain consumer goods—the fragmented nature of the national distribution system, with limited reliance on large-scale distribution, all contribute to the districts' success. These elements, combined with a continuous capacity for innovation and upgrading, prove to be decisive in dynamic competition processes, elucidating their achievements.

The decline of the large historical factory, prevalent in our region, has often served as a catalyst for the creation of spin-off small companies. Former employees, often former factory managers, transition into small entrepreneurs who, relying heavily on family labour and their networks of acquaintances and relatives, initiate small enterprises. Initially, these enterprises frequently benefit from their ties with the original company, activating subcontracting relations or acting as intermediaries with the market. Di Pini (2017) supports this notion, arguing how territorial and social capital can effectively contribute to economic development.

First Marshall (1919) and later Beccattini attempted to analyse the concept of 'industrial atmosphere' in industrial districts, where solidarity, trust, identity, and civic life contributed to enhancing productive qualities and harmonious socio-economic development. Indeed, it was only in the 20th century that an unparalleled aspect such as social capital became a crucial economic variable, irreplicable and determining the competitiveness of small and medium-sized Italian companies. Geographical proximity and shared backgrounds emerge as resources generating economic value. The third generation of districts (Bellandi) precisely represents the Networks that have been

emerging in recent years to address new market needs driven by the imperative for flexibility on an interregional and international scale.

The territory effect on the international competitiveness performance of companies and with respect to the characteristics of the social dimension of the economy was estimated by means of the following probit model:

$$P(Y_i = 1 | T_i, S_i) = U(b_0 + b_1 T_i + b_2 S_i)$$

The obtained results underscore how the territory, with its knowledge and traditions, serves as a competitive advantage for companies, acting as a catalyst for increased foreign sales.

A second crucial aspect involves the significance of expansive networks, comprising formal, multipurpose collaborations and partnerships (in logistics, distribution, R&D, innovation development, etc.). These networks can extend beyond the local territory, involving actors capable of: i) positively influencing the likelihood of increased exports; ii) enriching the area's knowledge base, aiding companies reliant on local production culture in selling their products in foreign markets.

On the other hand, the third aspect pertains to the social dimension of the territory factor. Businesses that enhance the local production tradition demonstrate a commitment to the socio-economic well-being of the community and the protection of the common good. This commitment is also evident in their relationships with the nonprofit sector.

The fourth aspect highlights the role of Italian family capitalism behind the territorial productive culture. Many businesses, constituting Italian family capitalism, regard the local community as the breeding ground for a unique know-how that cannot be replicated elsewhere. Simultaneously, there are risks associated with inter-generational transmission, which is characteristic of family businesses.

Finally, the fifth aspect emphasizes the pivotal role of the relationships with the banking system operating in the area in supporting the competitiveness of businesses. Additionally,



two more general and well-known considerations, related to the absolute importance of innovation and digitalization, can be added.

In conclusion, the economic success of the Veneto region stems from the intrinsic characteristics of its industrial landscape rather than state-led interventions. Giancarlo Coró's analysis reveals that the North-East's trajectory of indigenous growth, distinct from national policies, underscores the importance of cultivating a unique business culture and robust social capital. While contemplating the potential replication of the North-Eastern economic model in the South, it becomes evident that fostering social and institutional systems, supporting small business networks, and adapting to global economic shifts are essential for sustainable development. The success of Veneto's industrial sector lies in its flexible organization, the resilience of small enterprises, and the profound impact of social capital, emphasizing the need for a holistic approach to economic growth.

### **3.7 A possible solution: policies to create social capital and promote the network**

The positive economic performance of Veneto, as illustrated in the previous section, underlines the imperative to pay greater attention to the social dynamics of the region when designing policies for economic progress.

A revaluation of the role of social capital is imperative. Public institutions should encourage local actors to mobilize from grassroots levels to generate and deploy social capital, a pivotal tool for fostering the development of knowledge, infrastructure, services, and business integration. The strategy should actively involve local actors, and political actions must contribute to ensuring autonomy while pursuing collective goals.

The concept of '**embedded autonomy**' (Evans, 1995) underscores the socially and locally rooted autonomy of political action, capable of innovatively and effectively contributing to local development in the era of globalization. Establishing local actors who recognize their potential to generate outputs and impact development initiates transformative changes in the organizational structure of the business fabric. Enlightened policies should take charge of these processes, encouraging and supporting them to significantly

influence actors' ability to cooperate, thus affirming the importance of the social dimension in addressing economic development challenges.

The networking among individuals may pose risks in forming closed and rigid ties, but it also carries the potential for creating communities that demonstrate loyalty. Collaboration extends beyond individuals employed by the same company and proves instrumental in disseminating knowledge within the system, fostering collaborative projects in a competitive environment.

An effective blend of competition and collaboration is also evident in industrial districts and business networks. Entrepreneurs, facing an unstable environment, seek stability in interpersonal ties.

To address international competition, the Italian entrepreneurial landscape should prioritize strategic planning and central state intervention to support innovation, high-tech companies, and infrastructure investments. Additionally, policies for local development must be actively implemented. These policies are not merely spontaneous mechanisms but are processes of social interaction guided by development objectives. Regions with networks of illegality in their social context require targeted action to eradicate them, promoting instances of efficient entrepreneurship. Conversely, intelligent and bold policies can combat the social logic of clientelism, often prevalent in southern Italian territories.

Bagnasco (2006), in 'Imprenditorialità e capitale sociale: il tema dello sviluppo locale,' aptly explains how development is shaped by the context in which a firm originates. It involves a combination of factors, with social capital derived from local relationships and actors considered a public asset. Informal interactions aimed at cooperation, orchestrated by public and private institutions, create a conducive environment. Establishing networks of diverse local public and private actors becomes crucial for generating social capital that lays the foundation for developmental conditions.

In the opening chapter, we delved into how the scientific approach asserts that the success of an enterprise is not solely attributable to economic factors. Placement in a specific context determines specific effects with a social impact. Sabatini's analysis in 'Il capitale

sociale nelle regioni italiane: un'analisi comparata' provides insights into how social capital plays a decisive role in development.

Various types of ties, such as strong family bonds (bonding social capital), ties with friends and acquaintances (bridging social capital), and ties between members of civil society associations (linking social capital), were examined. Principal component analysis (PCA) was conducted for each type, revealing correlations with indicators of social and economic well-being. Social capital, defined by Putnam (1995) as the set of features fostering collective action and the pursuit of shared goals, is influenced by welfare state institutions, as noted by Rothstein (1998).

The QUARS index, measuring Regional Quality of Development, considers human development, social and environmental quality, and public spending. Regions in the south typically rank lower in social cohesion indicators, according to the International Observatory for Social Cohesion and Inclusion (OCIS) report.

The discussed results highlight a clear link between social capital composition and the social cohesion index, underscoring its significance for area development. Policies aimed at networking must be complemented by efforts to build a social context promoting equitable growth, free from the constraints of bonding social capital.

Examining the use of European funds reveals that, despite Sicily receiving the largest amount of funds, they were poorly utilized. Incentives for network creation often prioritize economic factors over the motivational aspect of cooperation. Constructing policies promoting business network formation requires a preliminary increase in linking social capital, facilitated by trade associations and chambers of commerce.

Our analysis concludes that the social factor is a key determinant in the economic development of a territory, aligning with academic literature. Granovetter's concept of embeddedness, underlying Predictive Social Cohesion (PSC) theory, emphasizes the role of cohesion in networks for fostering trust and reciprocity.

Economic-business studies must incorporate the sociological component, which influences performance and profit. Powell's network theory, encapsulating know-how, demand for speed, and trust, explains the aggregation observed in contexts like the EHT in Catania and the HFR project.

Emerging policies to stimulate business aggregation should prioritize creating a social capital base prepared to face collaborative challenges. The coordinated action of public and private institutions becomes crucial in reshaping economic thinking to harmonize economic aspects, social development, and environmental sustainability. Networks emerge as a valuable tool for promoting a new business paradigm: the social enterprise.

An analysis of spending capacity and resource utilization in Veneto and Sicily over the past decade reveals persistent challenges despite European funding. Ongoing disparities in commitment and spending capacity raise concerns about the efficacy of existing policies. The transition from centralized to decentralized governance exacerbates pre-existing imbalances, with regionalization further widening the gap between the North and the South. While the PNRR presents an opportunity, apprehensions about its effectiveness are evident.

The examination of social capital's role in regional development underscores its significance, with historical factors contributing to the economic success of the North-East. The imperative to cultivate an entrepreneurial culture and enhance social capital in the South emerges as a viable solution. The rise of small businesses within local networks highlights the pivotal roles of social and institutional systems.

Policies aimed at fostering social capital and promoting networks are deemed essential. Encouraging cooperation and emphasizing the role of social capital at the regional level emerge as key developmental strategies. Bold policies and state intervention are crucial in the South to counteract clientelism and foster efficient entrepreneurship.

Basically, a holistic approach that integrates economic, social, and environmental factors is essential for sustainable regional development, recognizing the pivotal roles of social capital and effective networking.

## **CHAPTER IV**

### **ETNA VALLEY, EHT and HFR PROJECT**

Etna Valley is one of the few and largest districts in Sicily and was also created in line with the European Small Business Act.

The academic literature does not present many articles and publications on the unique Sicilian phenomenon, and except for few cases, much of the present documentation is difficult to consult.

The 'Distretto Produttivo Etna Valley' initiative is promoted by the Pact for Development and managed and coordinated by Investiacatania S.C.p.A., a Development Agency whose sole partner is the Municipality of Catania. This is recognised under Article 56 of Regional Law 17 of 28.12.2004 and outlined according to the criteria dictated by the decree (152 of 1.12.05) of the Regional Department of Cooperation, Trade and Crafts and Fisheries.

At the same time, the Sicilian Region and the MIUR also support the creation of an officially recognised high-tech district in Sicily specialising in micro- and nano-systems. In order to draw further funding, the district has been added to the Regional Programme for Internationalisation (PRINT), it will be able to draw on the European Structural Funds 2007-2013 (Objective 1), and it has been included in the Regional Strategic Document ('DSR') and the Regional Strategic Framework ('QSN') for cohesion policies 2007-2013.

In this chapter, we will first attempt to analyse the district by referring to the policies adopted and the socio-economic context. The initial impetus was undoubtedly due to the stabilisation of a multinational company such as STMicroelectronics in the industrial area of Catania in the 1980s, but in a subsequent moment of crisis, about 30 SMEs decided that they could no longer depend solely on STmicroelectronic and in 2005 they founded the consortium company Etna Hi-tech (today EHT). The focus of the district thus shifted from electronics alone to the ICT sector.

Today, the consortium includes 71 companies at the national level, including Proteo Control Technologies S.R.L., which, also thanks to the consortium's support, has carried out the HFR - Hydrogen from Renewable project aimed at the production of green hydrogen, which fits perfectly into the strategy of creating a centre of reference in the district area in terms of technological innovation and, in particular, in the production of

alternative energies (Porto ,2012). From a 2010 agreement, a joint venture between ST Microelectronics, Sharp and Enel Green Power by which Catania will become the Italian capital of photovoltaics thanks to the construction of an innovative photovoltaic panel factory (3Sun).

#### **4.1 Why Catania?**

Etna Valley in Catania stands out as the most significant industrial cluster concerning the number of companies, employees, turnover, and added value. These companies form an interconnected production chain, transcending territorial constraints through extensive networks of firms aligned on technological, organizational, and functional grounds.

The Etna Valley technology hub, giving rise to the 2007-2010 DP Etna Valley Development Pact, emerged from a strategic partnership between ST Microelectronics and the University of Catania. The DP Etna Valley distinguishes itself by incorporating numerous small enterprises, extending its spatial reach beyond the province to involve neighbouring provinces such as Ragusa, Syracuse, Messina, Enna, and Palermo, adopting a polycentric model (Porto et al., 2012).

This district exhibits a notable level of internationalization, with companies often well-positioned in foreign markets. The DP Etna Valley closely resembles the meta-district model due to its strong emphasis on innovation, robust business-university ties, multi-sectoral nature, and organization around a leading company (ST Microelectronic).

Studies on the presence of ST and large multinationals in the area have yielded conflicting results. While some research (Vacca and Cozzi, 2002) demonstrates propulsive effects and increased competitiveness, others (Cantwell, 1980) suggest that the presence of such giants may hinder local entrepreneurial development.

The contribution of public administration and local universities has been pivotal for the region's development. The former stimulates investment and job creation through various initiatives, while the latter collaborates with ST, creating significant R&D laboratories as early as 1987, with a catalytic effect on successful developments in ST's laboratories.

The robust presence of ST, the involvement of universities and research centres in territorial economic development, the establishment of branches of multinational companies within the microelectronic supply chain, the vibrancy of the local

entrepreneurial context, and the implementation of territorial marketing policies by local administrators have collectively fostered a social climate receptive to innovation and knowledge production, meeting the challenges of development.

An analysis of the districts' experience from 2007-2010 (Schilirò and Timpanaro, 2010) reveals that, despite regional regulatory efforts, districts are not formed solely by decrees. Instead, they require a fabric of economic and social networks collaborating with institutions to create the necessary infrastructures for development. In contexts with limited strategic vision, networks can serve as a gentle means for aggregation and dimensional growth, relying on human and social capital. Development pacts, at times, have overlooked the cooperative aspect of district participation due to a lack of social capital, focusing primarily on financial incentives.

## **4.2 The development of Information and Communication Technologies (ICT) and ETNA HI-TECH**

Research on online archives yielded limited results, providing only fragmented information regarding the establishment of the consortium company ETNA HI-TECH and the local policy strategies adopted. To reconstruct the events, the press reviews from those years were initially consulted. Additionally, insights were gathered from an interview with Eng. Mandarano, who, as the president, directly witnessed the consortium's inception (refer to Appendix A), offering a partial retrospective of its formative moments.

The high-tech sector, extending beyond microelectronics, has seen significant growth potential and diversified development trajectories. Entrepreneurs have explored various sectors within the ICT technological paradigm, with a close connection to scientific and technological research. Since 2000, over a hundred entrepreneurial initiatives have emerged in the region, grounded in the dynamics of the 'net economy.' These companies operate across different ICT sectors.

While the cluster holds considerable potential for development and internationalization, a strategic shift is imperative to gradually achieve autonomy from the leading subcontracting enterprise, ST. This transformation aims to broaden the area's potential, reduce dependence on a single enterprise's decisions, and foster innovative capacity beyond geographical advantages.

Following an initial embryonic phase (1987-94) and a subsequent growth phase (1994-2004) marked by strengthened relations with research institutions, including the university, the cluster faced challenges during the last phase (2004-2012). Intensifying international competition, the crisis in the microprocessor sector, and the global financial crisis led to ST's partial disengagement. The municipality's accounting collapse further weakened the local administration, limiting its ability to provide collective goods and resorting to day-to-day emergency management. The crisis illuminated limitations like excessive dependence on the parent company, dwarfism of ancillary companies, difficulty attracting capital and talent, and a reduced urban system capacity (Camagni, 2006).

Despite these challenges, signs of a potential cluster revival emerged during this period. Several medium-sized and small local enterprises began pursuing independent paths. In 2005, a second technological key actor, 'Consorzio Etna Hi-Tech,' was established, comprising around thirty local enterprises. This marked the first instance of countering ST's hegemony as a single network coordinator, creating favourable conditions for cluster revitalization and exploring new trajectories.

The ongoing process also highlights the growing role of civil society, which recognizes ICT as a valuable tool for supporting active and creative urbanism initiatives. By integrating technological and social innovation, civil society can experiment with alternative models of innovative cities and urban development.

It is within this context that ETNA HI-TECH was founded—a consortium of small and medium-sized enterprises seeking to break free from excessive dependence on the ST sector and foster autonomy.

From the “PATTO PER LO SVILUPPO DEL DISTRETTO PRODUTTIVO ETNA VALLEY CATANIA” arise programmes that aim to disrupt the structural weakness of over-dependence of SMEs on the ST Microelectronics company to which a significant percentage of companies in the Etna Valley provide services.

The implementing measures of the pact can be summarised as:

- Measure 1 Venture capital fund
- Measure 2 Guarantee Fund
- Measure 3 Research Vouchers
- Measure 4 Innovation Incentives
- Measure 5 Circle of knowledge



- Measure 6 Internationalisation and territorial marketing

The consortium company Etna Hi-Tech participates in some of the above-mentioned measures, including MEASURE 6 - INTERNATIONALISATION AND TERRITORIAL MARKETING

The initiative encompasses the implementation of internationalization and economic cooperation strategies aimed at enhancing external visibility, bolstering the competitiveness of the entire district, and fostering a growth trajectory for companies to penetrate the global market. This integrated strategy focuses on innovation, internationalization, training, and access to credit. Despite a highly qualified workforce, the district faces challenges such as limited competitiveness outside the region, particularly among enterprises for which STMicroelectronics (StM) is a primary client.

Even businesses not in a subordinate position to STM encounter obstacles like generational turnover or the difficulty of sustaining independent operations in their local geographical area due to regional domestic demand weaknesses. Developing an internationalization strategy is identified as a solution to address these sector-specific challenges, allowing companies in the Etna Valley district to autonomously enter foreign markets while capitalizing on the advantages associated with the district model.

Additional benefits of district aggregation encompass expanding the pool of suppliers, heightening market attractiveness for interconnected SMEs, and securing more orders for SMEs through partnerships. The proposal involves initiating internationalization endeavours that explore neighbouring markets (Maghreb and the Balkans) as potential future markets, traditional and avant-garde markets (USA, Europe) as outlets, and collaborations with other Italian and European districts in emerging markets (Brazil, China, and India) to increase critical mass.

Assia La Rosa, in the article "Lo Sportello 'Sprint Sicilia' accelera il passo per Il Consorzio Etna Hi-tech volando negli Usa" published in 'La Sicilia' on August 6, 2007, reports on the activities of Proteo, one of the founding companies of the consortium. The article highlights their efforts to promote "Made in Sicily" in the USA, emphasizing quality and cost advantages. The Etna Hi-tech Consortium has also been involved in institutional missions to Tunisia and Romania, fostering meetings between economic operators for collaboration on innovation and research.

One notable project, Dedalo, implemented between 2006 and 2008, aimed to facilitate communication and cooperation among networked companies. Continuing its growth

trajectory, ETNA HI-TECH has achieved significant milestones, currently operating as a joint-stock consortium with a mission to aggregate innovative SMEs, attract private and public investment funds, and foster growth. As of 2022, the consortium's turnover stands at EUR 395 million, involving 71 companies and 3,000 employees. In 2023, EHT establishes a holding to attract equity investments, contributing to the growth of Proteo and other founding companies, including the development of the HFR project for green hydrogen production from sustainable sources.

### **4.3 Hydrogen from renewable [HFR]**

The reference sources were made available through the cooperation of Proteo Control Technologies S.R.L, which provided access to the project documentation. This enabled the extraction of crucial steps from the project's conception to its submission for the call issued by the Sicilian region on December 30, 2022. Additionally, Engineer Patti, a member of the project team, provided an interview to complement the narrative, offering insights into the steps leading to the project's submission.

The HFR project, conceived by Green Wave S.R.L, emerged from the collaboration of four entities, including Proteo Control Technologies and ETNA HI-TECH. This initiative seeks to shift away from the use of fossil fuels and instead leverage renewable energy sources (FER) in industrial processes. As highlighted in section 2.2, the emerging challenges of the green economy are prompting companies to unite in addressing them.

The project involves the use of electrolyzers in the gasification process of biomass derived from forest and agricultural waste. Coupled with solar energy production during daylight hours and the implementation of planned vegetation planting, the plant aims to be a carbon-neutral project. Simultaneously, an in-house research and development laboratory is in the works for recording and studying data to create prototypes that further diminish the reliance on fossil energy sources, subsequently reducing costs and enhancing the well-being of the local environment.

The main results are:

- CULTIVATION AND RECOVERY OF BIOMASS
- PRODUCTION OF ELECTRICAL AND THERMAL ENERGY
- PRODUCTION OF HYDROGEN FROM FER
- CARBON DIOXIDE RECOVERY FROM GENERATED SYNGAS
- R&D LABORATORY

### **4.3.1 The need to get involved in a team**

The consortium company EHT functions as a group of entities engaged in public and private procurement, with the overarching goal of fostering research and development across diverse application areas through multiple projects. EHT is also involved in the design and implementation of digital systems and solutions, leveraging the collective skills and production capacity of its executing partners.

Green Wave S.r.l. holds the intellectual property know-how concession developed in collaboration with the creators of the HFR project. The current company structure, seeking funding sources for projects, is moving towards integration with a financial-industrial group to enhance the sustainability of the project idea, of which Green Wave retains the rights.

Within the production cycle, a crucial step involves the recovery of biomass, identified as a weakness in the SWOT analysis. Locating waste from the agri-food chain necessitates establishing partnerships for biomass supply from agricultural sources. Collaborating with additional agricultural consortia and farmer networks could streamline the supply process. This aligns with the advantages highlighted in section 1.6, emphasizing the reasons and benefits of participating in a network. In this context, involving these groups transforms collaboration into a strategic tool for implementing problem-solving strategies.

Network advantages extend to innovation and competitiveness. The ability to join forces helps overcome limitations in R&D, particularly in the high-tech sector, as elucidated by Powell, aiming to "avoid doubling expenses, exploit complementary assets, and secure financial investment." Additionally, participation in financial measures and market positioning improvement become feasible. The project, directed towards establishing an R&D laboratory and realizing initiatives contributing to CO<sub>2</sub> emission reduction and product quality optimization, aligns with the broader goal of social-level industrial production reconversion, emphasizing replicability and energy conversion in the region. Achieving this vision necessitates synergies among various stakeholders.

On the 30<sup>th</sup> December 2022, the Sicilian Region issued a call for proposals to select projects aimed at the realization of renewable hydrogen production plants in dismiss industrial areas.

Beneficiaries may include enterprises, which may also submit projects jointly with each other, up to a maximum number of five entities, including the lead entity and subject to its indication. Joint projects must be carried out using the network contract instrument or other forms of collaboration, such as, by way of example, the consortium and the partnership agreement. The network contract or the other contractual forms of collaboration must configure a concrete collaboration that is stable and consistent with respect to the articulation of the activities, expressly aimed at the realisation of the proposed project.

The ETNA GREEN ATI introduces a project that has evolved in recent years through the collaboration of various entities, specifically stemming from the merger of ETNA HI-TECH and Green Wave S.R.L.

The project is currently the recipient of €20,000,000.00 (twenty million) based on the ranking list associated with the aforementioned call for proposals. However, uncertainty surrounding the interpretation of European law in the realm of renewable energies, especially concerning their promotion and increased share in the Union's energy mix, has led to an appeal procedure, delaying the final awarding of funds.

An interview with Mr. Patti (Appendix B), a member of the project team, reveals that the development of relationships and connections leading to the inception of a new project is influenced by factors well elucidated by Powell (1990) in his conceptualization of the network paradigm in an economic context.

It can be concluded that the reduction of uncertainty, access to information, and reliability are driving forces for participants to engage in networks. Powell's theory is founded on three key factors: know-how, the demand for speed, and trust.

The project team's know-how has been accumulated over years of experience and study. Once shared, organized, and applied, this knowledge has facilitated the formulation of an innovative project requiring a high degree of knowledge integration. In a field as highly innovative as hydrogen production, fast information exchange (demand for speed) is crucial for companies to stay competitive and apply this knowledge industrially. This aspect is particularly evident in the swift application of knowledge to design an industrial plant. Additionally, the presence of European and regional tenders on the subject has significantly accelerated the project's realization. Trust is also a critical factor, as the team comprises individuals with pre-existing relationships, fostering collaboration in a cohesive environment.

Moreover, the impact of policies at various institutional levels is evident as a driving force in the formulation of innovative ideas and projects that bring together multiple companies, both at the European and regional levels. The European call has also provided technical support to the project by highlighting critical financial issues, further encouraging collaboration with the partner EHT.

The social capital project has the potential to generate new jobs, addressing the shortage of this component in the regions of southern Italy, especially in Sicily, through the planned research laboratory.

From an environmental standpoint, the project aligns with market demands for increased social responsibility and sustainability from companies. The production of energy from renewable sources and the circularity of the process enables the involved companies and EHT to embark on the decarbonization process to remain competitive in the market.

The Etna Valley district in Catania has undergone significant evolution, transitioning from its roots in electronics to a thriving Information and Communication Technologies (ICT) sector. This development has been characterized by collaborations among multinational companies like ST Microelectronics, local SMEs, and academic institutions. Despite facing challenges such as the crisis in the microprocessor sector and global financial issues, the district has demonstrated resilience. The establishment of the consortium Etna Hi-Tech played a crucial role in fostering autonomy and diversification.

The chapter explores the district's internationalization efforts, with a focus on the Etna Hi-Tech Consortium's involvement in various measures, including internationalization and territorial marketing. The narrative then turns to the innovative HFR project for green hydrogen production, showcasing collaboration between Proteo Control Technologies, Etna Hi-Tech, and Green Wave S.R.L. The potential impact of the project on regional development, job creation, and environmental sustainability is emphasized.

The Etna Hi-Tech consortium (EHT) serves as the industrial and economic partner for the development of the Hydrogen from Renewables (HFR) project within the Etna Valley district. This project not only signifies a strategic shift towards diversification and innovation but also underscores the importance of collaborative networks in optimizing sustainable development strategies. By leveraging its network of small and medium-sized enterprises (SMEs) and forging partnerships with key stakeholders like Green Wave

S.R.L., EHT facilitates the exchange of knowledge, sharing of resources, and collective action necessary to tackle complex challenges such as renewable energy production.

Furthermore, the ability to 'networking' extends beyond immediate objectives, influencing the broader socio-economic landscape of the region. Collaborative initiatives such as the HFR project support technological innovation while also stimulating job creation, promoting environmental sustainability, and enhancing the competitiveness of the Etna Valley district on a national and global scale. The success of the HFR project underscores the critical role of networks in optimizing economic development and innovation strategies. By bringing together diverse skills, resources, and perspectives, collaborative initiatives have the potential to amplify impact, promote resilience, and unlock new growth opportunities in high-tech sectors such as renewable energy.

In essence, the multi-stakeholder involvement in the HFR project highlights the transformative power of collaborative networks in promoting sustainable development and economic prosperity within the Etna Valley district and beyond. The ability to cultivate and harness networks will remain essential to realize its full potential and move towards a more prosperous and sustainable future.

Overall, the Etna Valley district serves as an example of successful collaboration, adaptation, and innovation in response to economic challenges, emphasizing the importance of dynamic networks, strategic partnerships, and a focus on sustainability for regional development.

## CONCLUSION

Business networks continue to be identified as a burgeoning trend, even as of 2023 (Retimprese, 2023). Building upon existing literature reveals that entrepreneurial development no longer hinges solely on the attention to the costs and revenues of individual companies. Rather, new determinants have surfaced, which, in conjunction with other market stakeholders, can exert significant influence. Powell's 'third way,' an alternative to the conventional notions of market and hierarchy, posits that the relational aspect and the ability to cultivate qualitative relationships are pivotal for devising an economic model that aligns more closely with reality. Additionally, the endeavours of the Osservatorio nazionale sulle reti d'impresa have yielded favourable outcomes in terms of economic and financial performance indicators.

Through scrutinizing European, Italian national, and regional policies, it becomes evident that the issue of business networks remains current and continues to evolve both legislatively and in terms of economic assistance. The significance of this tool in contributing to the growth of the economic landscape, particularly comprised of SMEs, has already been acknowledged. To formulate effective policies, it is imperative to heed guidelines advocating for the reduction of legislative ambiguity on the subject and for the integration of business network mechanisms into regional and national economic policies. Generalized tax incentives prove inadequate in fostering the formation of such contracts. Instead, emphasis should be placed on small-scale enterprises, endeavouring to instil within them an understanding, aided by trade associations, that aggregation serves as a beneficial means of enhancing performance across domains such as R&D, internationalization, and managerial capacity building, facilitated in part by legal frameworks like co-datoriality.

A socio-economic analysis of the Veneto and Sicily regions reveals a markedly disparate scenario. Despite Sicily's greater available funds, its limited spending capacity undermines the potential positive outcomes for the region. This issue appears attributable to the long-standing North-South divide on the peninsula. Consequently, the solution does not lie in augmenting resources allocated for fostering new enterprises but rather in orchestrating a series of initiatives aimed at bolstering social capital, which ranks lowest in Sicily among all Italian regions. Moreover, this predicament is

compounded by the emigration of young Sicilian graduates. Reflective consideration and targeted interventions are imperative to position the region to retain this human capital. In the empirical context of the Etna Valley, specifically with reference to the EHT and HFR project, it is evidenced how the formulation of policies geared towards financing innovative ventures facilitates the establishment of business aggregations. The provision of such support expedites project development and knowledge sharing, thereby aiding in achieving set objectives. Furthermore, as illustrated in the case of Confindustria Venezia, involvement in associative frameworks such as trade associations can serve as a catalyst for forging new collaborations with positive territorial impacts, fostering the consolidation of competitive entrepreneurial entities in the realms of research and innovation (EHT). Nevertheless, it is pertinent to acknowledge that the findings and sources utilized in this empirical instance present limitations. The paucity of academic literature concerning the Etna Valley's context and the factors underpinning its inception and recent evolution, including the establishment of the EHT consortium, poses a challenge. There exists a dearth of data collection and reconstruction within the academic domain concerning the circumstances that led to its establishment. Furthermore, the absence of these elements constitutes an impediment to the region's development; the decision to establish a business and invest within a particular context, such as Catania, is also contingent on these factors.



## BIBLIOGRAPHY

Alderson, W. (1958) 'The Analytical Framework for Marketing', in D. J. Duncan (ed.) Proceedings of the Conference of Marketing Teachers from Far Western States, pp.15-25. Berkeley, CA: University of California Press.

Alderson, W., & Cox, R. (1948). Towards a theory of marketing. *Journal of Marketing*, 13(2), 137-152.

Bagnasco, A. (2006). Imprenditorialità e capitale sociale: il tema dello sviluppo locale. *Stato e mercato*, 26(3), 403-426.

Banca D'Italia (2023). Economie regionali - L'economia delle regioni italiane dinamiche recenti e aspetti strutturali. Numero 22, novembre 2023.

Banfield, E. C. (1967). The moral basis of a backward society.

Bentivogli, C., Quintiliani, F., & Sabbatini, D. (2013). Il contratto di rete: limiti e opportunità. *L'industria*, 34(2), 347-382.

Cabigiosu, A., & Moretti, A. (2020). Osservatorio Nazionale sulle reti d'impresa 2020.

Cafaggi, F., & Iamiceli, P. (2007). Le reti di imprese per la fornitura di servizi alle Pmi tra innovazione e crescita imprenditoriale. A. Lopes, F. Macario, P. Mastroberardino (a cura di), *Reti di imprese. Scenari economici e giuridici*, Giappichelli.

Camagni, R. (2006). Società della conoscenza, funzioni urbane e i fondamenti di una politica europea per le città. In *La città nell'era della conoscenza e dell'innovazione* (pp. 37-60). Franco Angeli.

Cantwell, J. (1989). Technological innovation and multinational corporations. (*No Title*).

Cappellani, L., & Servidio, G. (2017). Indirizzi recenti di politica industriale e Mezzogiorno: un quadro d'insieme. *Rivista economica del Mezzogiorno*, 31(1-2), 19-74.

Carradore, M. Il capitale sociale nelle regioni italiane: un confronto temporale. *Volume 8-Numero 6-Novembre 2018*, 201.

Coase, R. H. (1988). 3. The nature of the firm: Influence. *The Journal of Law, Economics, and Organization*, 4(1), 33-47.

Corò, G. (1999). Nord-Est e Mezzogiorno: i sentieri incrociati dello sviluppo italiano. *Meridiana*, 97-131.

Costa, S., Luchetti, F., & Romano, L. (2017). Reti d'Impresa—Gli effetti del contratto di Rete sulla performance delle imprese.

Esposito, M. (2012). Esperto in modelli normativi di governance dei rapporti tra imprese interdipendenti, fra distretti e reti.

Eurostat, (2021), Income of households by NUTS 2 regions

Evangelista A., Porcelli F., Zanardi A. (2020), Criticità finanziarie e insufficienza di risorse nei Comuni italiani, in Degni M. (a cura di), *Rapporto Cà Foscari sui Comuni 2020*, Roma, LIT Edizioni.

Evans, P. B. (1995). *Embedded autonomy: States and industrial transformation*. Princeton University Press.

Il Sole 24 ore(1 febbraio 2015), Progetti sponda e miniopere per salvare il 2015, Il Sole 24 Ore  
Imbruglia, R., & Quarto, A. (2018). Distretti industriali e reti di impresa. *Rivista di Scienze del Turismo- Ambiente Cultura Diritto Economia*, 5(2), 35-66.  
International Monetary Fund. 2023. World Economic Outlook: Navigating Global Divergences. Washington, DC. October.

ISTAT (2023). *IL BENESSERE EQUO E SOSTENIBILE DEI TERRITORI LA REGIONE SICILIA*.

Kossyva, D., Sarri, K., & Georgopoulos, N. (2014). Co-opetition: A business strategy for SMEs in times of economic crisis. *South-Eastern Europe Journal of Economics*, 12(1).

La Rosa Assia (6 agosto, 2007), Lo sportello "Sprint Sicilia" accelera il passo-Il consorzio Etna Hi-Tech vola negli USA, La Sicilia, 38.

La Rotonda, C. (2022). 6 La codatorialità: quadro regolamentare e prospettive applicative. *Osservatorio Nazionale sulle reti d'impresa 2022*, 110.

Lombardi, R., & Onorato, M. (Eds.). (2023). *Le reti d'impresa nell'economia locale* (Vol. 93). Sapienza Università Editrice.

Manuela Perrone (6 ottobre 2023), Pnrr, al Sud metà degli investimenti tagliati, Il Sole 24 Ore

Marco Bortoli, & Elisa Rizzi (2017). Le Regioni a favore delle Reti d'impresa - Studio sui finanziamenti per le aggregazioni

Martinelli, F. (2022). Le politiche per il Mezzogiorno dal dopoguerra ad oggi e la convergenza «interrotta». Due paradigmi di policy a confronto. *Rivista economica del Mezzogiorno*, 36(1-2), 15-72.

Mauriello, D., & Unioncamere, R. C. S. (2013). Le reti d'impresa come strumento di poli-tica industriale per lo sviluppo economico territoriale. *Volume 3-Numero 3-Maggio 2013*, 58.

MEF-Ministero Economia e Finanze (2021), Monitoraggio politiche di coesione al 30 giugno 2021, accessibile su [https://www.rgs.mef.gov.it/\\_Documenti/VERSIONE-I/attivita\\_istituzionali/monitoraggio/rapporti\\_finanziari\\_ue/monitoraggio\\_politiche\\_di\\_coesione\\_2014-2020/2021-06-30/Monitoraggio-Politiche-di-Coesione30-giugno-2021.pdf](https://www.rgs.mef.gov.it/_Documenti/VERSIONE-I/attivita_istituzionali/monitoraggio/rapporti_finanziari_ue/monitoraggio_politiche_di_coesione_2014-2020/2021-06-30/Monitoraggio-Politiche-di-Coesione30-giugno-2021.pdf) (consultato dicembre 2021).

Migrantes, F. (2023). *Rapporto Italiani nel mondo 2023*. Centro Studi e Ricerche Idos.

Owen-Smith, J., & Powell, W. W. (2008). Networks and institutions. *The Sage handbook of organizational institutionalism*, 596-623.

PATTO PER LO SVILUPPO DEL DISTRETTO PRODUTTIVO ETNA VALLEY CATANIA. Decreto n.152 dell'1/12/2005 (GURS n. 57 del 30 dicembre 2005). Regione Siciliana - Assessorato Regionale della Cooperazione, Commercio, Artigianato e Pesca.

Pini, M. (2017). L'effetto territorio sulla competitività internazionale e sulla sostenibilità sociale dell'economia: un'analisi sulle piccole e medie imprese manifatturiere italiane. *L'industria*, 38(2), 171-200.

Pira, S. L., & Moretti, A. (2022). 2 I contratti di rete: una lettura dei risultati economico-finanziari per macroarea geografica. *Osservatorio Nazionale sulle reti d'impresa 2022*, 26.

Pitingaro, S., & Corsini, S. (2022). 1 I contratti di rete: una lettura per macroarea geografica. *Osservatorio Nazionale sulle reti d'impresa 2022*, 8.

Porto, C. A. R. M. E. L. O., & Pulvirenti, T. (2012). Clusters tecnologici e competitività territoriale nei sistemi urbani meridionali. L'esperienza dell'Etna Valley a Catania. *Bollettino della Società Geografica Italiana*, 587-614.

- Powell, W. (2003). Neither market nor hierarchy. *The sociology of organizations: classic, contemporary, and critical readings*, 315, 104-117.
- Prenkert, F., & Hallén, L. (2006). Conceptualising, delineating and analysing business networks. *European Journal of Marketing*, 40(3/4), 384-407.
- Provan, K. G., & Kenis, P. (2008). Modes of network governance: Structure, management, and effectiveness. *Journal of public administration research and theory*, 18(2), 229-252.
- Provan, K. G., & Milward, H. B. (2001). Do networks really work? A framework for evaluating public-sector organizational networks. *Public administration review*, 61(4), 414-423.
- Putnam, H. (1995). Pragmatism and moral objectivity. *Women, Culture and Development*, 199-224.
- Putnam, R. D., Leonardi, R., & Nanetti, R. Y. (1993). Social capital and institutional success. *Making democracy work: Civic traditions in modern Italy*, 163, 185.
- Rapporto Svimez 2023. L'economia e la società del Mezzogiorno. Cittadinanza, lavoro, imprese: l'inclusione fa crescere
- Regione Sicilia (2023). Strategia Regionale dell'Innovazione per la Specializzazione Intelligente S3 Sicilia 2023, programmazione 2021-2027
- Regione Veneto (2023). *RAPPORTO STATISTICO 2023*.
- Regione Veneto, Strategia di specializzazione Intelligente (S3) della Regione del Veneto 2021- 2027.
- Sabatini, F. (2009). Il capitale sociale nelle regioni italiane: un'analisi comparata. *Rivista di Politica Economica*, 99(2), 167-220.
- Schiliro, D., & Timpanaro, G. (2012). The productive districts in Sicily: the experience of the years 2007-2010.
- Stefano Costa, & Francesca Luchetti, & Livio Romano (2017). Effetti del contratto di Rete, G. Reti d'Impresa.
- SVIMEZ (2010), Rapporto 2010 sull'economia del Mezzogiorno, Bologna, Il Mulino
- Triglia, C. (1999). Capitale sociale e sviluppo locale. *Stato e mercato*, 19(3), 419-440.
- Ufficio Studi CGIA Mestre (2023). *DENATALITA': POCHI GIOVANI E LONTANI DAL LAVORO*. 2, Settembre 2023.
- Vaccà, S., & Cozzi, G. (2002). Le imprese transnazionali come possibili veicoli di sviluppo economico nell'era della globalizzazione. *Economia e politica industriale*, (2002/113).
- Venturini, G., & Graziano, P. (2022). Terzo rapporto sulla coesione sociale nelle regioni italiane. *Social Cohesion Papers*, (1), 3-21.
- White, D. R., Owen-Smith, J., Moody, J., & Powell, W. W. (2004). Networks, fields and organizations: micro-dynamics, scale and cohesive embeddings. *Computational & mathematical organization theory*, 10, 95-117.
- Williamson, O. E. (1981). The economics of organization: The transaction cost approach. *American journal of sociology*, 87(3), 548-577.
- Williamson, O. E. (1993). Transaction cost economics and organization theory. *Industrial and corporate change*, 2(2), 107-156.

## SITOGRAPHY

<https://www.confindustria.venezia.it/comunicato/confindustria-venezia-punta-sulle-reti-dimpresa-per-innescare-processi-di-crescita/>

<https://www.confindustria.venezia.it/comunicato/aggregazioni-dimpresa-il-futuro-del-territorio-confindustria-lancia-il-progetto-crescereinrete/>

<https://www.confindustria.venezia.it/confindustria-venezia-lancia-il-progetto-crescereinrete/>

<https://www.confindustria.venezia.it/inpresa/confindustria-venezia-lancia-il-progetto-manager-x-pmi-successo/>

<https://www.regione.veneto.it/web/programmi-comunitari/bando-334-abc-contratto-di-foce-po>

<https://www.euroinfocilia.it/>

## **APPENDIX A.**

### **INTERVIEW TO ENG. MANDARANO**

The engineer. Mandarano is a graduate in hydraulic engineering and founder of Proteo. In her work experience, she has held management and administrative positions at Proteo S.P.A. first and Proteo control technologies S.R.L. later, with a parenthesis from 2013 to 2016 at Proxima S.R.L. for research tasks in the design and implementation of remote-control systems for water systems.

Her work experience has led her to hold numerous association positions throughout her life including: General Director of the "Consorzio Catania Ricerche", Councillor and President of the "Comitato per lo sviluppo dell'imprenditoria femminile" of the Catania Chamber of Commerce, Councillor and President of the Board of Directors of Etna Hi-Tech, President of the Hi-Tech & ICT section of Confindustria Catania and Vice-President of Confindustria Catania, Councillor of the Board of Directors of the transport subsidiary A.M.T. of the Catania municipality and lastly osservatorio idrogeno

#### **1-Quali sono stati i motivi che hanno portato secondo lei alla creazione della rete con sede a Catania? Che ruolo hanno avuto i contributi pubblici nella realizzazione?**

La necessità nasce principalmente dal contesto siciliano che presentava all'epoca un tessuto imprenditoriale con imprese di piccole dimensioni, bisognava innalzare il potere contrattuale. Molti si erano convinti negli anni '90 e '10 che "piccolo è meglio". Non è sempre così.

Ci si rende conto in quegli anni dei problemi relativi alle fonti di finanziamento che risultavano eccessivamente onerosi. Le imprese che nascono nel contesto catanese hanno una forte propensione all'innovazione che le porta ad affrontare sempre più spesso il problema degli investimenti per la ricerca. Per restare innovativi era sicuramente necessario rinforzare il comparto della ricerca.

Il secondo problema principale nasce dalla necessità di voler partecipare a gare di livello maggiore per raggiungere volumi d'affari maggiori.

La soluzione per rispondere a queste problematiche sembra essere un consorzio che sommi la forza di tutti per riuscire a partecipare a gare di livelli superiori.

Una volta formato il consorzio Etna Hi-Tech comincia a partecipare a bandi di finanziamento sulla ricerca su aspetti inerenti agli impatti collaborativi, nasce DEDALO come piattaforma per la cooperazione e comunicazione delle imprese in rete.

In un primo momento vi erano nella stessa stanza 7 / 8 aziende che si confrontavano in poco tempo per sviluppare insieme tutti gli aspetti del progetto. Si aveva poco tempo a disposizione per la presentazione del progetto e la collaborazione tra i soggetti ha facilitato la partecipazione al bando. Se ognuno avesse fatto per sé non avrebbe raggiunto lo stesso risultato.

I contributi pubblici hanno avuto il loro ruolo nello sviluppo del consorzio. Buona parte del lavoro consisteva nella strutturazione di progetti di ricerca per rendere i risultati ottenuti applicabili a livello industriale (industrializzati), così da vendere i prodotti in unica forma, in maniera coordinata o anche ognuno il suo. I progetti però erano vasti e ogni risultato della ricerca veniva sviluppato da ogni altro e i risultati ottenuti venivano sfruttati grazie ai bandi che ci consentivano di aggregare i vari progetti.

Perché a Catania?

Catania ha da sempre una vocazione imprenditoriale più predominante rispetto agli altri capoluoghi di provincia, sicuramente la componente universitaria e l'impatto dato negli anni da ST ha contribuito a creare un ecosistema favorevole

In Prima battuta c'è stato anche il sostegno di "Investi a Catania", un progetto sostenuto da una società partecipata del comune per un progetto di marketing territoriale che ha favorito l'incontro delle aziende e lo sviluppo di progettualità di rete.

Sono passati 20 anni dall'iniziativa che ha dato vita al Consorzio (2005). Devo dire che c'è stato un momento di crisi e tutti volevano andare via e ho provato a tenerla unita nel momento in cui sono stata Presidente. Una volta andata via, l'ing. Spampinato, attuale

presidente del gruppo, l'ha sviluppata e portata dove è adesso. Se non ci fosse stato questo progetto non tutte le aziende si sarebbero conosciute perché non tutte si conoscevano e non avevano collaborato; il progetto è stata l'“abbrivio” per la creazione di un sistema; Chi si conosceva sapeva chi era l'altro ma il progetto ha dato via ad un sistema finalizzato a degli obiettivi.

Si sono sviluppati al contempo fenomeni di assimilazione di tecniche di collaborazione che hanno portato anche alla collaborazione con Confindustria. Io (Mandarano) e Spampinato eravamo contemporaneamente all'interno della sezione hi-tech di Confindustria nel consiglio d'amministrazione del consorzio ETH; molto importante per arrivare all'interlocuzione con la Regione portando istanze del loro territorio e del tessuto imprenditoriale,

Anche l'azione della regione è stata determinante così da indirizzare le azioni verso un sistema di rete in generale. Il clima e il contesto catanese hanno condotto l'organizzazione verso un certo tipo di atteggiamento proattivo in cui le aziende hanno fatto la differenza, fattore determinante rispetto al capoluogo Palermo.

## **2-Quali sono stati i benefici tangibili dell'adesione per le imprese? Tenendo conto degli aspetti di Ricerca e sviluppo e internazionalizzazione quali sono stati gli evidenti miglioramenti?**

Tutte le aziende hanno contribuito alla partecipazione e allo sviluppo di progetti di nuova ricerca, anche se per piccole parti, finalizzata alla partecipazione alle gare. In un primo momento è stata curata la dimensione delle imprese.

Qui veniamo al perché piccolo non è sempre bello. La percentuale che generalmente un'impresa può investire in ricerca si aggira attorno al 5-6% del fatturato se sei di grandi dimensioni. Se sei piccolo per raggiungere somme adeguate dovresti arrivare ad investire circa il 25/30% e non puoi farcela. Rischi di chiudere perché ci sono spese fisse troppo alte.

L'internazionalizzazione è stata perseguita dall'inizio ma le azioni finalizzate a questo arrivano dopo, è stata curata prima la dimensione e poi successivamente l'entrata nel mercato estero.

Per l'internazionalizzazione è necessaria una struttura forte. Il consorzio non poteva investire senza gli strumenti come la conoscenza dei mercati e delle competenze. Ogni mercato ha le sue individualità. Era importante prima conoscere l'ambito e poi creare dei prodotti per colmare lo spazio rimasto libero nel mercato.

L'internazionalizzazione arriva grazie alla partecipazione del consorzio ad azioni che aveva sviluppato la Regione con il patto per lo sviluppo che propone generalmente programmi di visiting e di scambi tra aziende più o meno della stessa dimensione. Gli scambi commerciali proposti erano ad: esempio con la Romania per andare a vedere degli incubatori e trovare affini che sviluppassero gli stessi o complementari progetti nello stesso campo business. A quel punto si poteva valutare di collaborare per sviluppare business complementari.

Il programma "Sprint Sicily" ha portato alla visita di INDIA; ROMANIA; e AMERICA per attivare collaborazioni internazionali.

In quel momento la sezione informatica (software, app) si è sviluppata separandosi del settore hi-tech legato maggiormente a ST e al mondo dei microprocessori. LA forte dipendenza e concorrenza del comparto con ST ha portato alla disintegrazione dell'area in EHT. La parte informatica invece ha continuato.

Non c'è stato un grande risultato dalle visite perché anche dall'altra parte erano comunque tutte imprese piccole ma è stato così appresso come le dimensioni fossero un fattore limitante. La spinta del programma di "INVESTI A CATANIA" e l'azione della regione ha comunque centrato l'obiettivo che era alla base dell'azione: l'aggregazione.

In un contesto in cui stavano crescendo le big tech, il consorzio cercava di colmare lo spazio lasciato vuoto dalle big tech. Una delle strategie risultate vantaggiose fu ad esempio lo sviluppo della parte informatica destinata alle pubbliche amministrazioni nell'ambito dell'Information and Communication Technologies (ICT).

**3-Le prime aziende che hanno deciso di riunirsi in un gruppo avevano sicuramente dubbi e perplessità sui benefici che avrebbe dato loro una rete: quali sono stati i fattori e le motivazioni che hanno determinato, secondo lei, la partecipazione di un'azienda piuttosto che un'altra?**



Le aziende ICT hanno l'istinto di unirsi, non tutti hanno avuto benefici immediati all'inizio. Ad esempio, Proteo ha partecipato solo a R&S per i primi anni mentre le altre aziende hanno partecipato a gare avendo anche un riscontro economico. Il settore dell'acqua non ha avuto molta spinta all'inizio. Negli ultimi anni si sta occupando di acqua perché è diventato argomento di avvisi pubblici e di investimenti pubblici.

Nonostante all'inizio Proteo non avesse beneficiato in modo tangibile, ha capito comunque l'importanza del consorzio e siamo rimasti dentro. Fare parte di aggregazioni innovative ha comunque aiutato.

A parte l'hi-tech per problemi di concorrenza quasi nessuno è andato via. Sono solo aumentati. Le difficoltà che all'inizio si sono presentate nella creazione del consorzio non ne hanno però ostacolato lo sviluppo. La resistenza si è comunque presentata ma il fatto che eravamo tutti giovani con una grande voglia di costruire a Catania portava la discussione su un piano di dialogo dove eravamo spinti a trovare la soluzione migliore.

Siamo usciti indenni dalla crisi del 2008. Ho guidato la rete dimostrando la volontà di voler portare avanti il consorzio, questo ha fatto la differenza. Inoltre, il Livello culturale era alto. Tutti avevano avuto un'alta formazione con laurea magistrale. Si è diffuso così il concetto della cooptation come strumento di forza. Ogni azienda cerca di dare il contributo, senza cercare di primeggiare.

In ogni caso ST e la sua dimensione internazionale hanno dato un grosso contributo nello sviluppo della mentalità perché ha forzato l'università verso lo sviluppo di competenze mirate e a fornire agli studenti una formazione indirizzata verso un certo tipo di conoscenza modificando piani di studi per consentire alle persone di lavorare in quel contesto.

## **APPENDIX B**

### **INTERVIEW TO ENG. PATTI**

The engineer. Patti is a graduate in hydraulic engineering and founder of Proteo. He is involved in the design and implementation of operating and management systems for the supervision, control, and remote operation of water supply and treatment plants for various projects on behalf of companies such as Hydrocontrol S.r.l. based in Rome, and for Proteo in several Italian regions, initially including Sicily and Campania, as well as in international contexts such as Germany and Russia later.

Since 2010, employed by Proteo Control technologies as the main technician, but also collaborating with Proxima and SWS Consulting Engineering S.r.l., he has assumed the role of technical director for the development of District Metering Areas projects aimed at optimizing water and energy consumption.

Moreover, he has been involved in projects in emerging countries focusing on NRW (non-revenue water) activities in nations such as Vietnam, Azerbaijan, Ethiopia, and Algeria.

### **Quali elementi e aspetti del contesto in cui opera Proteo hanno portato alla decisione di collaborare per la realizzazione e la presentazione del progetto all'avviso pubblico?**

Proteo opera nell'ambito dell'innovazione e in settori legati all'ambiente da sempre. La predisposizione dell'azienda e dell'ing. Mandano è sempre stata quella di applicare i risultati di ricerca in azioni con ricadute concrete e applicate in ottica di sviluppo industriale. La ricerca, inoltre, si è sempre svolta nei settori dei gas e dei fluidi. Nel progetto HFR in particolar modo si tratta di gas come l'idrogeno principalmente e di azoto e ossigeno in maniera secondaria. Si tratta di una combinazione di produzione di energia pulita da più fonti come la biomassa e il solare che sarà regolata in funzione alla richiesta esterna.

Proteo possiede anche un'esperienza nell'automazione nell'ambito idro informatico e il know-how sulla gestione di impianti acquisito negli anni ha condotto alla partecipazione al bando. L'obiettivo è quello di contrastare e limitare il cambiamento climatico con la progettazione rivolta alla decarbonizzazione. L'esperienza è stata applicata nell'utilizzo dell'idrogeno in un settore diverso dall'acqua che era stata il core principale dell'azienda.

La collaborazione però è risultata necessaria con diversi ingegneri che fossero maggiormente esperti nel settore della gassificazione e dell'automazione con la comune volontà di sviluppare e ricercare nel settore dell'idrogeno e nel suo sistema di produzione. Dal punto di vista tecnico si sono uniti più specialisti per sviluppare il progetto insieme ad un soggetto che ha dato un supporto nell'area finanziaria e amministrativa del progetto. L'ing. Clerici e l'ing. Mandarano sono i principali esponenti del progetto a cui successivamente si sono uniti altri soggetti.

Anche se l'incontro tra i professionisti può sembrare casuale in realtà le conoscenze personale legate al mondo dei gas e delle utilities dei vecchi lavori e incontri in settori come quella della distribuzione del gas ha fatto la differenza. Proteo possedeva un bagaglio di relazioni e rapporti costruite negli anni che ha determinato l'incontro dei promotori del progetto

**Quali sono state le difficoltà affrontate nel mettere insieme il gruppo? E cosa invece secondo lei ha facilitato l'incontro delle posizioni delle diverse aziende?**

Inizialmente non si sono riscontrate difficoltà tra i soci componenti di Green Wave. Inizialmente si è lavorato con focus sull'aspetto tecnico del progetto e solo successivamente l'aspetto finanziario. Dopo alcuni si è fatta una valutazione e si è riscontrato che dal punto di vista economico poteva essere interessante.

La presentazione del progetto come Green Wave a livello europeo è stata fatta al programma INNOVATION FUND per la richiesta di fondi destinati a questa tipologia di progetti ma non è stato finanziato. È stato comunque utile per le risposte e i punteggi attribuiti con annesse spiegazioni. Queste sono state funzionali al miglioramento del progetto. Quelle che più sono risultate critiche e deboli come punteggio sono state le

garanzie finanziarie e in misura minore le debolezze tecniche e organizzative. I punteggi di qualità tecnica e innovazione invece hanno spinto e convinto a proseguire.

La mancanza di fondi richiedeva la ricerca di un partner che potesse finanziare il progetto. C'è stato un momento in cui la possibilità di condividere il know-how acquisito con un soggetto "esterno" come EHT ha destato difficoltà in un primo momento. Quando si lavora ad un progetto e si investe in ricerca la condivisione dei risultati ottenuti necessita sicuramente di garanzie legali che debbano tutelare il capitale investito.

### **Qual è stato o qual è il ruolo del Consorzio EHT nel progetto?**

Il consorzio EHT ha sicuramente il ruolo di garantire economicamente e assumere il ruolo di partner industriale lasciando Greenwave come detentore del know-how. Si tratta di un soggetto che ha le Dimensioni e il capitale adeguato da poter garantire la realizzabilità dell'investimento.

Proteo, inoltre, è stata tra i soci fondatori e ha supportato e partecipato da sempre le iniziative del consorzio.

Dal momento in cui è uscito il bando europeo il processo di collaborazione si è velocizzato e il bando regionale ha accelerato ancora di più l'unione. Si è presentata un'occasione per presentare un progetto ed è stata colta da EHT come anche possibile opportunità per la diversificazione.

Principalmente le attività svolte dalle aziende aderenti al consorzio sono legate alla ricerca, la realizzazione di un impianto industriale consente la materializzazione industriale del lavoro svolto in questi anni.

### **Se non ci fosse stata l'uscita dell'avviso destinato al finanziamento di impianti destinati alla produzione di idrogeno sarebbe andato comunque avanti?**

Si sarebbe andato avanti perché nel frattempo è stato richiesto al gruppo anche di fare delle offerte per realizzare la progettazione di uno stesso impianto a Torino o in Arabia Saudita. Si è scelto di cogliere anche le opportunità che si presenteranno e nei prossimi anni per non disperdere il know-how costruito negli anni.

## **Le aziende dell'Etna Valley potranno beneficiare dalla realizzazione di questo progetto?**

Sicuramente. I benefici riguarderanno principalmente EHT perché il progetto risponde alle esigenze di innovazione richieste alle imprese per i prossimi anni come la sostenibilità ambientale. Questo consentirebbe alle aziende del gruppo di seguire un processo di decarbonizzazione a costi più bassi perché l'eventuale importazione avrebbe costi sicuramente maggiori o l'approvvigionamento da altre fonti di energie. Inoltre, è stato seguito un percorso che coinvolge l'Università di Pavia nell'ambito della ricerca per lo sviluppo di brevetti.

## **Qual è stato il ruolo del capitale sociale nel progetto?**

Il capitale sociale ha assunto un ruolo fondamentale. L'insieme di legami e relazioni creato negli anni precedenti con il gruppo di aziende e imprenditori ha consentito di imparare a lavorare insieme e a comprendere come fare impresa in un modo da renderci più "forti" sul mercato.

Le persone e le relazioni create sono state decisive nello sviluppo del prodotto insieme alle relazioni delle due imprese (Eht, Proteo) nel mondo di Confindustria, Confcommercio e Camera di Commercio possa essere stato decisivo.

## **Che ruolo hanno avuto anche se in precedenza. Il coinvolgimento dell'ing. Mandarano all'interno del mondo dell'associazionismo di categoria come Confindustria? è stato determinante nella creazione del Consorzio?**

Sì, C'era stato un momento in cui qualcuno aveva tentato di fare un piccolo consorzio con altre due/tre aziende provando ad andare in questa direzione ma non era riuscito a fare molto perché era un'idea un po' confusa. Si trattava di imprenditori che si conoscevano ma non era mai maturata l'idea tanto da riuscire a metterla in pratica. Avevano la visione ma non la capacità pratica

LA differenza l'ha fatta la capacità organizzativa e relazionali delle persone che si sono uniti in EHT. L'ingresso di Proteo in Confindustria con Mandarano AD ha generato un progetto più organizzato. Ha stretto una serie di rapporti con persone che non conoscevamo, interessati però a fare qualcosa di nuovo per mettere in pratica azioni di ricerca e sviluppo.

