INNOVATION NETWORKS AND SOCIAL ENTERPRISES. A SOCIAL NETWORK ANALYSIS OF THE THIRD SECTOR IN ITALY

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1. Introduction

Nowadays economic growth primarily based on innovation has become one of the most widely debated issues, from an academic, political and market point of view, able to potentially improve corporate competitiveness (von der Gracht and Stillings, 2013). In this context, innovation network represents an integrative ongoing process which identifies the linkages between organisations, in terms of input, characteristics and output (Kohl *et al*., 2015), in order to create, capture and integrate many different skills and knowledge needed to manage new requests of the market (Calia *et al*., 2007).

Innovation network approach can be also considered as the main driver for economic vitality of social enterprises, whose role is particularly relevant, as supported by numerous studies which indicate the subject as an emerging issue of academic investigation, since the theoretical underpinning of these concepts has not yet been adequately developed (Hoque *et al*., 2015).

Hence, the present study analyzes, both from a theoretical and an empirical perspective, factors favoring the creation of innovation networks in the third sector, which today represents a growing segment for the Italian economy. In actual fact, it is considered as a cultural perspective of interpretation of the economy as a whole, providing a vision of the market complementary to the capitalist economy (Musella and Santoro, 2012). The latter in effect has generated prosperity but also unbalanced environmental, social and economic performances. Indeed 'for-benefit' enterprises approach (that comprise both nonprofit and for-profit firms) represents "organisations that create earned income but give top priority to an explicit social mission" (Sabeti, 2011). It refers to a hybrid declination of organisations blended between enterprises strictly for-profit ornonprofit. Thus, an in-depth analysis of the social 'for-benefit' enterprises is fundamental, in terms of innovation and its inclination in putting knowledge and skills 'on the network'.

So, focusing attention on a National Association set up in Italy in the third sector the study aims to verify whether relational attitudes and coop-

eration of the members influence their propensity for innovation, from an 'innovation network' perspective. The paper is structured as follows: firstly the main studies on the topic are evaluated, highlighting the constructs underlying the research objectives. The research examines the relevance of social enterprises for the national growth and innovation in the social economy, representing a shift from 'self-governing innovation' to 'cooperation in network'. Thereafter the methodology adopted for the exploratory research is illustrated and the main findings presented. Managerial implications together with suggestions for further research conclude the paper.

2. The innovation perspective

Innovation can be defined as «a process of transforming the technology frontier into commercial product/process innovation in a competitive market» (Wonglimpiyarat, 2012, p. 90). It is the result of learning processes by which new knowledge, or new combinations of consolidated knowledge are triggered (van Burg *et al.*, 2014) to achieve new productive processes and to create value for stakeholders. The concept of innovation has been redefined across the time, going beyond the confines of technology (i.e. new products/processes), since changes originate from all the elements comprising the business model. The evolution of the concept of innovation synthesizes five generations of innovation processes starting from the second postwar (Second World War) to nowadays (see Tab. 1).

Tab. 1 – Phases of the innovation process

Period		Premise	innovation process	Authors
1st generation	Post war (II World War) 20 year period	Science and technology as 'solutions to the ills of society'	*Technology push* linear path	Schumpeter,1952; Freeman *et al.*, 1992; Rothwell, 1994
2nd Generation	Late1960s	Market based needs	*Market-pull* process	Rothwell, Soete, 1983; Rothwell, 1992; Brem, Voigt, 2009
3rd generation	Early 1970s to early 1980s	Oil crisis, high inflation, saturated demand, high unemployment	*Coupling*, complex network of interfunctional, corporate communication paths with the outside	Brusoni *et al.*, 2001; Lombardi *et al.*, 2003; Basile, 2011
4th generation	Late 1980s	*Time-based* strategies and *total quality* processes	*Integration* between project and production and parallel development	Porter, Parker, 1993; Rothwell, 1994
5th generation	1990s	Attention addressed to internal organization, strategic integration and productive *networks*, use of electronic *toolkits*	Systems Integration and *Networking*	Dodgson, 2002

Source: elaborated by the authors

The effects of innovation have repercussions that go way beyond corporate boundaries (Bonti *et al*., 2012; Pencarelli *et al*., 2015), benefiting from a series of external factors such as investments in research, juridical norms, tax relief, as well as a collective perspective of society. They also affect corporate relations, since «what really matters to innovation is the capacity to run cooperative relationships and to be integrated into a dynamic network of (local or regional) inventive actors» (Hussler and Rondé, 2009, p. 2). The management of the integrated knowledge flux is one of the priorities implicit a successful network innovation (Rusanen *et al*., 2014). Effectively, the preliminary function of the economic network approach (Oerlemans *et al*., 2001 a) consists of enhancing of corporate innovation (also) by resorting to external resources (Oerlemans *et al*., 2001 b, p. 346; Freel, 2005).

More punctually, an innovation network refers to a network of knowledge that is established officially or unofficially between organizations and enables innovation to be created (Gubbins and Dooley, 2014; Cioppi and Buratti, 2014). Hence, acquiring innovation capability is primarily based on knowledge transmission, linked to the closer and tighter connections among the actors within the innovation network (Tseng *et al*., 2016).

Above all, it can be envisaged as tool for coordination, supporting the exchange of inter-enterprise knowledge, accelerating the diffusion of knowledge. Academic literature and corporate practice have highlighted the potential advantages (i.e. reducing/sharing costs of the innovation process) as well as the potential risks (i.e. technological spillover) of starting corporate innovation processes (Song *et al*., 2016).

The relational behaviour of the players involved is consequently interlinked with knowledge resources (Hayter, 2013), from mere access to partners' knowledge platform to the transfer of information and knowhow to the co-production of new knowledge, requiring organizations that are ever more complex (Klerkx and Aarts, 2013).

Furthermore, through such a network it becomes possible to exploit complementary factors for mastering modern technology, characterized by the multidimensionality of knowledge involved (Olaru and Purchase, 2015).

Thus, the attention to innovation networking in for profit and nonprofit organizations is deeply growing.

3. Innovation in social enterprises

Social enterprise refers to all those private sector organizations carrying out productive action in conformity with entrepreneurial criteria, but which pursue explicit social aims, which can be translated in terms of direct benefits in favor of a community or the disadvantaged (Iris Netwok, 2012). Although the concept of social enterprise itself has not gained the same recognition in all EU countries, the 'ideal-type' of social enterprises are 'not-for-profit private organizations providing goods or services directly related to their explicit aim to benefit the community. They rely on a collective dynamics involving various types of stakeholders in their governing bodies, they place a high value on their autonomy and they bear economic risks linked to their activity' (Defourny and Nyssens, 2008, p. 203). Even not having the goal of maximizing profit, as it happens in profit enterprises, social enterprise can make it, unlike the non-profit organizations whose aim is to maximize the output and social satisfaction.

Other scholars highlight the collective nature of social enterprises, that comprise organizations or groups of individuals characterized by ideals in common (Short *et al*., 2009). Their social nature is also underlined by numbers: only less of 20% of social enterprises is governed by a sole entrepreneur.

In particular, a more specific segment within the social enterprise sector, the so called social for benefit firm, can be identified. It represents a mixed reality between profit and non-profit, evolving in a twofold direction: economic-entrepreneurial and social (Borgaza and Zandonai, 2009; Sabeti, 2011). In this connection , it should be pointed out that our legal system introduced by the Finance Act 2016 the for benefit companies. Therefore it would be very interesting to focus our attention on this segment , however, the lack of data did not allow the analysis in such direction.

Generally speaking sure enough, it appears that what creates innovation in the social sector is the people pressure of social needs for improving the quality of people's lives. So, social dissatisfaction becomes a relevant driver for social innovation.

In this context, three aspects in which innovation in social enterprise is evident are related to:

(1) product offer: the focus of social enterprise is the production of relational goods of collective interest, exploiting different resources (market, endowment, etc.) and extending redistribution (e.g. by means of pocket sensitive pricing policies);
(2) processes involving the way where social enterprise has created efficient systems of governance: governance involving various stakeholders (Fazzi, 2012), coherently with their mission of pursuing general interest, together with the forms of accumulated human capital;
(3) the political agenda: it presents a strongly innovative character, con-

> tributing to overcoming not only segmentation within the sector, i.e. social policies, labour, health, etc., but linking welfare with wider policies of economic and social growth, above all in local contexts, in a cross-cutting process of linking social organizations with other public and private sector institutions (Aiccon and Iris Network, 2009).

The most significant driver of innovation, however, concerns internal corporate organization (Pavlov, 2012) and the aptitude to 'create networks' is evident in external trends (Euricse, 2011). Their collective nature allows social enterprises to count on a mix of resources different for origin: public and private, internal and external to the enterprise.

This positive social collaboration is linked to the concept that the capacity for innovation is not exclusively within corporate contexts using a firm's own resources, but nourished by external relationships the emphasis being on cooperation (Katzy *et al*., 2013) in the innovative process (Sisodiya *et al*., 2013; Salter *et al*., 2014; Rubera *et al*., 2015).

In social enterprises, a close relational network with an emphasis on cooperation, care and maintenance are highlighted by values and mission in common. Networks induce organizations to build sense making pathways together with others, designing their development in relation to peer organizations' growth. Thus, social enterprise becomes a 'node' of the network in order to carry on community development, by means of their capacity to interpret local factors from a wider perspective and to build strategies of change and development of the context as a whole.

In short, the innovation network approach becomes a way of analyzing the forms of potential relations within social enterprise. If organizations can improve their innovation processes using external resources and acquire new knowledge through economic relations with the others in the system, an 'agile network' is created that benefits from flexibility of thought and vivacious debate, difference of opinion and shared know-how. Nowadays collaborative innovation network is increasingly considered as an effective framework to enable firms' knowledge transfer (Xie *et al*., 2016).

At the same time, in innovative projects the revised knowledge presupposes a blurred overlapping rather than clearly delineated borders. However, the ability for system integration is a fundamental priority for innovation management in a successful network. Thus governing innovation network should be cultivated for competitiveness through the integration of knowledge.

4. Research hypotheses, methodology and the sample

Adopting a collaborative business model, innovation value is generated by a combination of complementary resources (Cantù *et al*., 2015). Notwithstanding the above, collaboration among social enterprises represents a requirement to make them able to work, because of their disadvantaged size or contained ability, rather than a strategic choice, constraining innovation.

In the paper perspective, instead, collaboration can positively affect new approaches to problem solving or market offers by social enterprises. In other words, it can be found a bi-directional relation between social enterprises' inclination for innovation and well established cooperation, by means of network. Hence, it can be affirmed that social enterprises with higher cooperative behaviour in network have more propensity for innovation.

In this context, the research hypotheses are the following:

HP1: The cooperation in network affects social enterprises' innovation performance.
HP2: Social enterprises with higher innovation results have more propensity for cooperation.

To verify the previous hypotheses, an exploratory field analysis was carried out (Barile *et al*., 2002). Therefore the empirical study focused on the definition of a *potential innovation network* at national scale in non-profit sector. The extent of its formal structure, internal and external, has been analyzed in terms of collective strengths, extent of divergence relative to references, interests and partnership, conditions under which benefits from mutual partnership derive, in order to propose a feasible integration model. The Italian social sector is characterized mainly by small and medium enterprises and micro-enterprises distributed in the juridical form of social cooperative, association, social enterprise, foundation (Iris Network, 2012).

The research hypotheses were tested on social enterprise members of the most relevant no profit Association in Italy, which has 910 members on the national territory (as evaluated by deleting from the association's database all the organizations closed down or winding up at December 2014). The enterprises participating in the survey were at least 200, selected by means of a random sampling. In short, the sample was composed as shown in Tab. 2:

Tab. 2 – Main characteristics of the sample

Typology		
Social cooperatives	Associations	Social enterprises
80.5%	10.5%	7.5%
Localization – Italy		
Northern	Centre	Southern
47%	16.5%	16.5%
Starting age of business		
1990/2000	After 2000	From 2010 on
40%	33%	5.5%
Context of intervention		
Local	Provincial	Regional,
14%	57.5%,	22%
Participation in association		
≤ 1 year	≤ 5 years	> 5 years
24%	52.5%	21%
Activity		
Cultural goods management		14%
Social services for the disadvantaged		12%
Policies for social cohesion		8.5%
Re-inclusion in the work system		8.5%
Solidarity schemes and assistance		5%
Enhancing public spaces		5%
Social tourism		5%

As concerns the analysis of the management in terms of gender, 45% of the respondents defined themselves as social service entrepreneurs: they were female, well-educated and boasting a quite long term working relations in the organization they represent (on average 6.5 years). The female figure in corporate (profit) sector remains marginal in terms of peaking the hierarchical organizational pyramid (only 14.5% of the top managers are women) and this is interpreted from data in terms of 'diverse' social and civil sensitivity, and the growing importance of equal opportunities in corporate governance, indicated by the respondents as a democratic and economic necessity.

Each social enterprise was examined in terms of: market in common, competitive positioning and resources, while physical proximity was considered a proactive factor for knowledge transfer (i.e. corporate clusters) together with relational, cultural and organizational proximity.

Data were collected by means of a questionnaire submitted by email to

the sample described above, preliminarily contacted by phone. The data gathering obtained accurate information, avoiding potential non sampling errors (i.e. inaccurate transcriptions, omissions etc.).

The indicators selected included:

- strong link with the network: frequency and type of relation;
- cooperative attitude: agreements in place between social enterprise network members and other stakeholders;
- propensity for innovation: incremental (i.e. improvement in praxis and consolidated models), expansive (extension of services to new territories or subjects), radical innovation (of service or product or organization of services and innovative methods of operating to satisfy new needs).

Mapping and measuring relations and interaction between the sample participants was carried out using the Social Network Analysis (SNA), facilitating an inter-organizational approach (Dandi and Sammarra, 2009). SNA was adopted because it provides the leverage to determine if there are regular pattern in the relations among the actors of a network and how these patterns may be related to attributes or behaviours. The mapping and measuring the connection and interaction between organizations and or other entities are very significant. SNA tries to explain, at last in part, the behaviour of these elements of the network - social enterprises in the present analysis - by studying specific properties of the relations between the elements and examining the ties among the members of the Association (Scott, 2013; Dey and Roy, 2016). The relations and their impact on information exchange dynamics were measured using the software UCINET (Hanneman and Riddle, 2005), that is more useful instead of standard software packages. Thus, their databases are not focused on analyzing attributes of the actors, but to examine the relationships between them often represented in matrixes, with different format, capturing relations between nodes.

Finally, in order to deepen the results and understand better opinion and point of view of the social enterprises interviewed about relations, the study has been supported by the Sentiment Analysis (using open questions in the survey and the subsequent statistical analysis and textual semantic analysis) and the Organizational Network Analysis (Tichy *et al*., 1979; Maxel and Carboni, 2014), a development of the SNA, which allows to identify the networks of informal relationships existing within an organization and to represent and evaluate the informative and collaborative flow within organizations.

The representation of these informal links - increasingly important asset and of great impact on company performance - allows to display items not otherwise identified.

5. Main findings

As mentioned above, the objective of the survey is to verify whether an innovation network, whose nodes are linked together on the basis of relational, collaborative and innovative capabilities, can be defined, even in potential (Gerli et al., 2012). Thus, relationships between nodes are represented graphically, while interactions between actors are represented as paths between nodes.

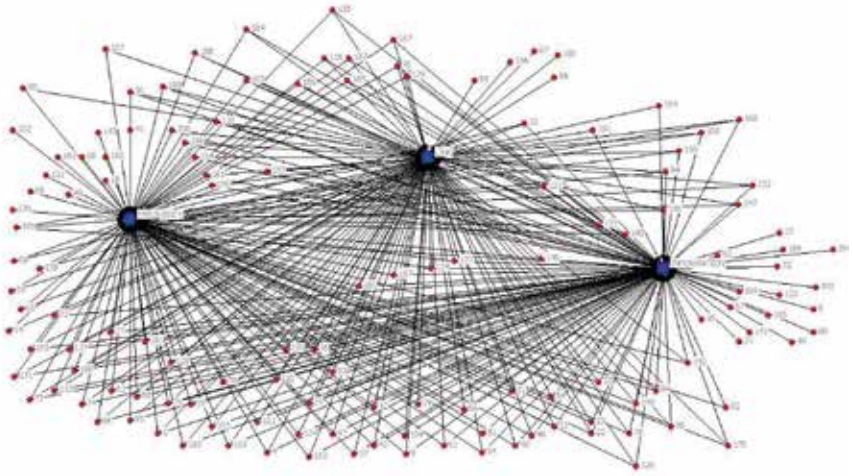
Firstly, the awareness of the importance of collaboration in shared knowledge and competence benefiting the network is widely spread in the cluster: i.e. for 79% of the sample relational capability is pivotal for identifying new products/markets. Despite, the analysis of the state of the art of social enterprises in general does not confirm a strong and proactive sense of reciprocal collaboration on the part of network member organizations.

To investigate the elements that define networks from a qualitative perspective, the following factors were assessed:

- interaction: frequency (participation at events; periodicity; information exchanges);
- intensity (strength of information exchanges); communication tools used;
- aptitude in collaboration: nature, relational frequency and trust.

Highlighting the relations that the social enterprises interviewed established with their Association of reference, by means of a SNA, intertwined with other methodologies (Sentiment Analysis and ONA), it is possible to reproduce a preliminary network (Fig. 1).

Fig. 1 – The relations in the network



The nodes in graph 1 correspond to the social enterprises (indicated by a number to guarantee their *privacy*) that regularly or periodically establish relations within the Association, while do not appear the organizations (95, just shy of 50%) that do not privilege interactions and that consequently are in a marginal position.

Distribution evidences how links are put in place with the aggregative core nucleuses.

According to the typology of interaction three sub-groups can be defined. The first network refers to a connection established by participating to events organized by the Association; the second network is constituted by social enterprises which share information and the third, less close than the others, combines organizations that have generic links with the Association and its members. Obviously the enterprises can participate to several aggregations, giving the network a more complex display. However the extent of involvement is quite limited given that 47.5% of the organizations does not participate in any initiative/event, 9% participate in events regarding the territory and 8% are involved in initiatives linked to the specific field of activity.

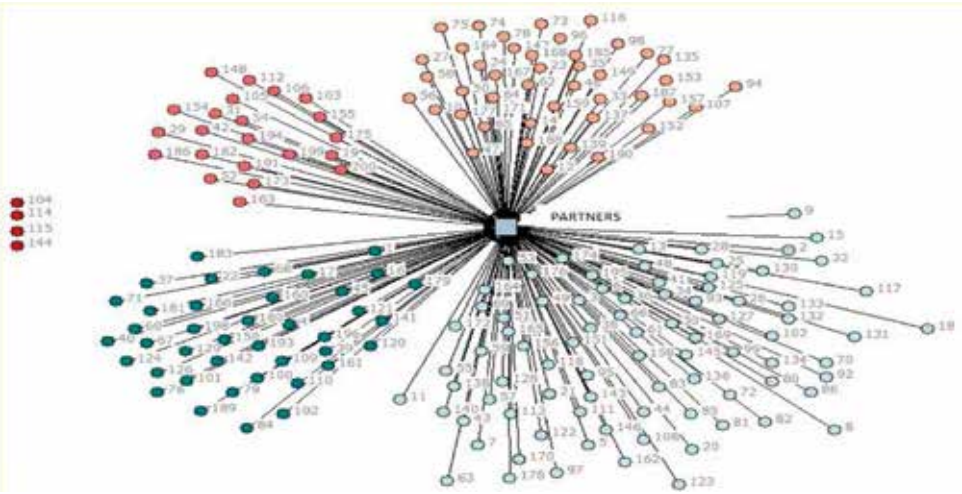
Only 71 organizations showed a greater level of involvement, privileging: training events (35%), official meetings (22%) and information initiatives on incentives and financing (20%). Thus, the potential network does not express its full capacity.

As expected, most communication is mediated through emails (62.5% of responses) and by telephone (27%) or organized meetings (6.5%). In inter-corporate relations, main interactions are informal and not necessarily linked to the membership, since a great number of the interviewed declares not to know if others subjects in relation with them belong to the Association. Despite a potential collaborative space crowded with interactions, in actual fact, information exchange and commercial news underpins about 34% of inter-corporate relations.

Four types of relations can be identified: mainly informal/amicable relations (light blue nodes); exchange of information with the other players in the network (orange nodes); commercial/economic type relations with other institutions (red nodes); occasional interactions (dark green nodes). In just four cases is not mentioned a form of collaboration (node number 104, 114, 115, 144).

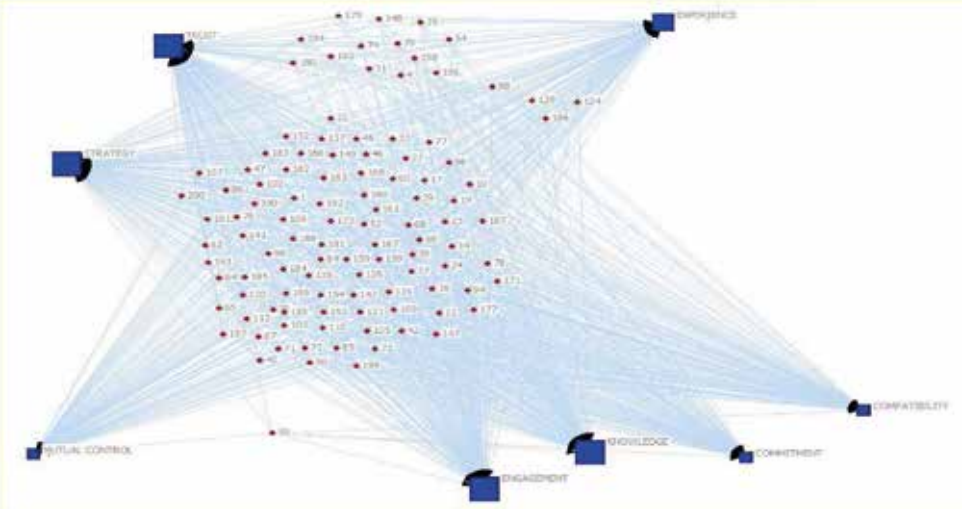
Clearly, relations are mostly of an informal kind (Fig. 2).

Fig. 2 – Type of relations



Anyway, as drawn in graph 3, social enterprises show inclination in potential cooperation with other organizations, strengthened by regular contacts. As indicated by the blue squares with a more important weight, greater inter-corporate trust, sharing knowledge, engagement, and a common strategic orientation are the key factors taken into consideration to choose partners. As resulting by the Organizational Network Analysis, the majority of social enterprises are collocated at the intersection of the these arrows (Fig. 3).

Fig. 3 – Key factors to choose partners



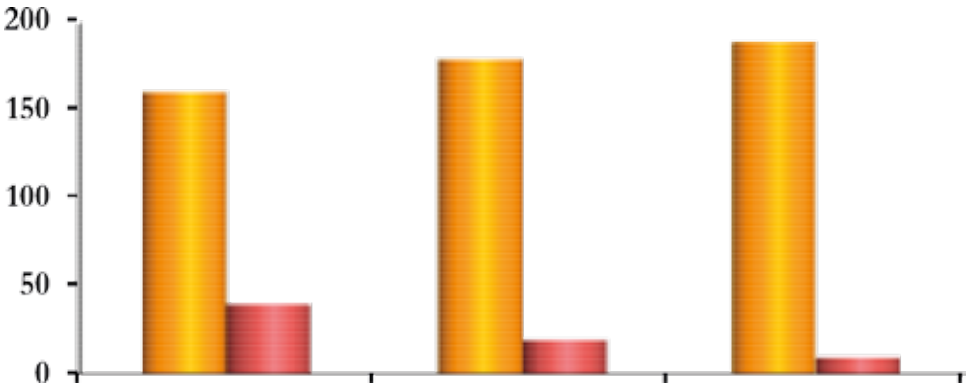
In particular, trust is considered the bases for taking up a co-operation, both in general and for the collaborations formally established.

The organizations participating in the survey declare greater inter-corporate cooperation over the last year (52%), with evident satisfaction. No organization on the contrary recorded a decline in more or less formal ongoing collaborations. Most of the social enterprises responding to the question (108/200) predict an increase inter-corporate cooperative initiatives (91%) not only in terms of business opportunities, or creating/exploiting competitive advantage, but relations at all levels. In other words, inter-corporate cooperation more or less formal constitutes a plus, giving concrete advantages for enterprises involved in. So it would be very useful a stronger push by the Association to promote and support these collaborations.

Finally, validating the hypothesis 1 concerned the linking between a more cooperative attitude and a innovation performance.

Most of the organizations in the cluster recognized a significant role to innovation (quite significant – very significant 85% of the respondents, sufficiently significant 12.5%), especially organizational innovation (95% of social enterprise), in order to adapt to competitive change or in the market of reference, and innovative processes (90%) for improving efficiency, cutting costs or quality of services. Product innovation for maintaining competitive advantage was obviously important, but less privileged (80.5%). The belief is the growth in nonprofit organizations is achieved through more efficient governance (Fig. 4).

Fig. 4 – Innovation introduced in social enterprises over the last three years



Social enterprises privileging organizational innovation combine such propensity with product and process innovation in most cases (60% and 55% respectively). The most widespread type of inter-corporate innovation is incremental, i.e. improvement of consolidated models and praxis (90%), trend innovation, both in products and in the organization of ser-

vices (80.5%), extending services to new territories or subjects (73.5%). In only 50% of cases, innovation maintains a total carrying capacity, introducing new working models that respond to needs previously not intercepted. Together with buying tools and machinery (27.5%), staff training accounts for the first item of expenditure for funding innovation (24%), confirming the importance of intellectual capital, fundamental for corporate survival and prosperity. Intra (19%) and inter-organizational R&D (20%) are also allotting adequate funding.

Mainly, *innovation is considered the result of synergic action within individual nodes making up the system* (i.e. knowledge and competence sharing qualifying the *network* itself). Data indicated potential innovation network in act between enterprises and stakeholders (56%). This cluster attributes most of the innovation achieved (from 20% to 50%) and 18.5% more than half of the innovative initiatives put in place to cooperation with internal and external partners. Only 3 social enterprises declare their whole innovative activity conducted in partnership while 6 do not practice any form of cooperation.

Thus, hypothesis 1 seems to be confirmed.

The dynamics behind widespread innovation in potential networks depends on strategic decision making in relation to competitiveness and objectives of innovation. This argument is significant to verify hypothesis 2.

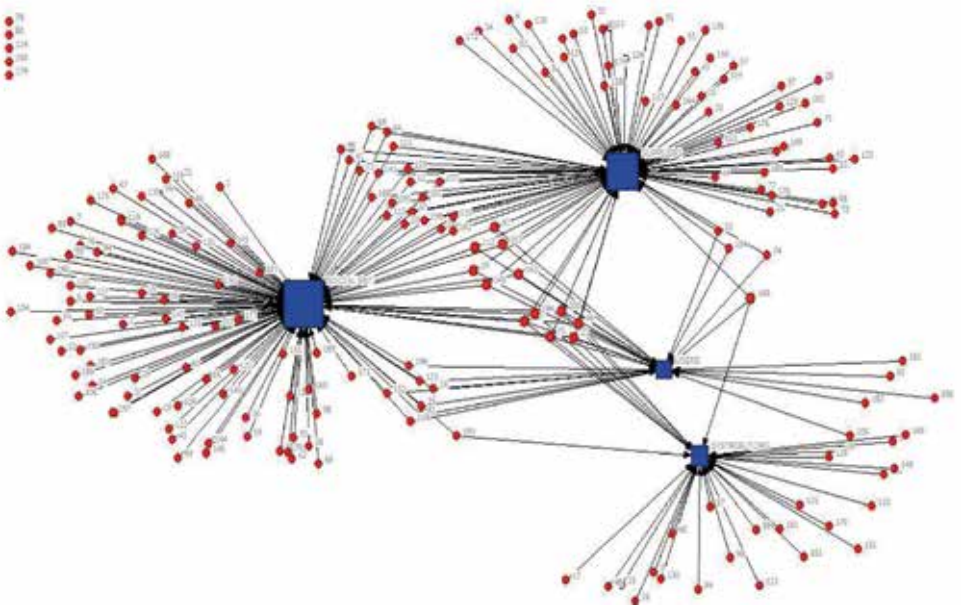
The network structure changes over time, depending on the number and positioning of the players comprising the nucleus, not to mention the number and type of links put in place. Consequently, networks confines are constantly reshaped with creating new links and dissolving of existing links. By means of cooperational networks, social enterprises can obtain access to information, resources, markets and technologies of fundamental importance.

Hence, the morphology of an innovation network can be illustrated in diagram form (Fig. 5).

Fig. 5 shows the network between the organizations taking part in the survey. The red nodes represent the enterprises, while the arrows evidence the links with partners. On the contrary the five nodes not linked to the network (node number 78, 80, 114, 150, 179) indicate the organizations that do not participate in any form of cooperation for innovation.

Analyzing the diagram, the central role of suppliers and social enterprises in the innovation process clearly emerges in terms of both top down and horizontal alliances.

Fig. 5 – The innovation network



The position of the critical nodes (social enterprises and suppliers) is confirmed also by analyzing centrality, i.e. the position within the network in relation to the other positions. Obviously such positioning can impact on the performance of the whole network. The dimension of Network Centrality depends on the number of choices that a node has received: consequently, as graphically shown, social enterprises represent the node with the highest number of choices, followed by suppliers. Instead, distributors and users are less involved in cooperation for innovation, as shown by their marginal position. On the contrary, for non-profit organizations customer satisfaction, i.e. guaranteeing a general level of collective wellbeing with clients involvement would be fundamental.

However, only 32.5% of the cooperative activities for innovation are realized among members of the Association, while the other relations are created outside the cluster.

Consequently, at least *in fieri*, if an innovation network can be configured it is also necessary to extend its borders. This suggests the creating of an innovation network that goes beyond the limits of Association and activates corporate cooperation at the same level of the chain. In addition, market push seeking original solutions to social problems should also be taken into account. To qualify the *network* the valuation of *Network Cohesion* is fundamental. The *Log file* of *output* reports a density value equal to 0.3212; this indicates that 32% of all possible links are present in the

network, i.e. a not high level of cohesion. Instead, on a regional level the density value is higher than at national (i.e., 0.4375 for Campania), suggesting that territorial proximity of the organizations could support innovative collaborations. Low-density networks are usually loosely coordinated while high density networks are characterized by strong and lasting links between the various components. On this basis open mode networks and closed mode networks can be distinguished where the former are characterized by the possibility for external subjects to become part of (or vice versa, to leave the network) while the latter are characterized by maximum density and stability, leaving few margins for entry and exit. The value of standard deviation equal to 0.4670 indicates the presence of a fairly high quantity of variability in the links. The type of *network* is consequently of open mode. This is confirmed if we analyze the trust link whereby 75.5% of cooperation described is based on extremely strong links, quite solid (9%), destined to continue over time with (74%) intending to increment innovation within the next two years, despite the current precarious financial/ economic scenario. About 25% of future innovation will depend on joint initiatives highlighting the relevance of cooperation. In particular, innovation concerns the following areas: improvement in the quality of products and services, 32%; extension of the range of products and services, 28%; reduction in labor costs, 23%; access to new markets, 14%; increase in production flexibility, 5%.

In sum, the hypothesis 2 is not fully confirmed.

However, long term survival for nonprofit organizations has to rest on a consolidated relational fabric, i.e. innovation, for social enterprise has to result from cooperation, particularly market innovation. With regard to the current recession, it is not technology but its implementation in terms of ability for increasing demand and for satisfying new social needs that is key to development and growth.

5. Discussion and future perspectives of research

Albeit with the limitations mentioned previously, a kind of network open to innovation emerges in the cluster analyzed, although this is not always evident and rarely formalized.

Consequently, the model can be termed *in fieri network centric innovation*, based on four decisive principles, i.e. common objectives, common vision of the world, creation of social knowledge, architecture of participation. The nucleus endowed with aggregative strength is an easily accessible basic knowledge. On the contrary the aggregative ability of users is underestimated, not permitting to take advantage of the push of cooperative innovation. This is a deep limit of these organizations.

Finally, range for innovation is evident, i.e. a platform of network resources providing identity and distinctive competences; a viable system to foster knowledge and growth.

The changes recorded over the last thirty years in the economic-productive system show how the creation of value on the part of profit and non-profit enterprises depends less and less on traditional corporate assets i.e. financial resources and more and more on the governance of intangible assets i.e. relational capital (Moodysson and Zukauskaite, 2014; Hidalgo and D'Alvano, 2014). Notwithstanding, both public and private sector investments remain linked exclusively to tangible elements for development, insisting on the dimensional variable, without enhancing the production and transfer of knowledge.

Nowadays social enterprise is no longer an emerging part but an integral component of the National economic system (Farmer *et al*., 2016). However, instead of a dimensional growth, recovering a structured and formalized relational approach is essential together with the necessary appropriate legislative instruments for its prosperity in the future. The trust element is an aggregating and fundamental element for a solid and lasting relation (Shazi *et al.*, 2015). At the same time, it should be accompanied by a series of formal tools, capable of defining mutual duties and responsibilities. Consequently, network contracts could be efficacious tools for helping social enterprises to participate to global dynamics, especially in terms of knowledge acquisition, assimilation, transformation and exploitation (Romano, 2014; Massari *et al.*, 2015; Aureli and Del Baldo, 2016).

As previously highlighted, the propensity to share common experiences is inscribed in the genetic composition of social enterprise. To complete the picture however, by means of SNA and ONA the relevance of 'weak links' (Granovetter, 1973) has been highlighted for innovation, from which to launch 'bridges' towards the external environment, favouring the circulation of information and non-redundant knowledge. To include them as an integral part of the generating devices of innovation, such links should be investigated and analyzed in order to foster innovation systematically rather than in a random manner.

In short, as knowledge is crucial in order to create innovation, the problematic issue in terms of its diffusion throughout the network has to constitute a priority in its development policies. The communicative elements thus become critical factors in constituting and maintaining alliances, given that the prospects of development of individual social enterprise (but not exclusively) depend on the relations ever more articulate and complex of integration with other organizations, or more generally, with the various stakeholders (Atouba, 2016).

In the sum, social enterprises need to invest to create more competitive and long-term innovation networks.

The paper suggests a new interpretative key for enhancing the knowledge of the social enterprise phenomenon. It underlines the requirement to deeply enphasize a strategic orientation of social enterprises innovation networks, that nowadays is not adequately taken into consideration both from public policy makers and actors. The findings are significant for understanding the growth orientation and the latent potential that exists in the networks of social enterprises to create extra-value. However it cannot longer be only based on a spontaneous synthesis of the relational capabilities among social enterprises, mostly SMEs, in a collaborative viewpoint of sharing resources for innovation. On the contrary, this perspective needs to be supported by normative or policy tools that improve cooperation among the actors of open innovation networks, sustaining contamination among different actors (integration between profit and nonprofit organizations). A future agenda of research pointed in this direction is strongly suggested.

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Riassunto

Recentemente letteratura scientifica e pratiche manageriali hanno indicato la cooperazione nei processi innovativi quale fattore rilevante in ambito non-profit. Da ciò, lo studio intende evidenziare il legame tra atteggiamento collaborativo delle imprese sociali, in specie se 'for-benefit', e pratiche di innovation networking. Utilizzando la Social Network Analysis, combinata con la Organizational Network Analysis e Sentiment Analysis, la ricerca ricostruisce il 'comportamento innovativo' di un cluster di 200 imprese sociali italiane (estratte da una popolazione di 910 membri di una primaria Associazione Nazionale), sottolineando come, a fronte di un emergente *in fieri centric innovation network*, l'elemento critico per il suo compimento risulti essere non già il livello di conoscenza detenuto, quanto la sua diffusione.

Abstract

In recent years both studies and corporate practice highlight the relevance of innovation networking enabling social enterprises to create knowledge, skills and technology sharing systems for innovation. In particular, paying attention to the third sector, the aim of the research is to verify whether in social enterprises relational attitudes and cooperation influence the propensity for innovation, from an 'innovation network' perspective. By means of a Social Network Analysis, combined with an Organizational Network Analysis and a Sentiment Analysis the survey is based on a sample of 200 italian social enterprises, out of 910 members of a really relevant non-profit Association in Italy. Preliminary findings show an emerging model, termed *in fieri centric innovation network* where the diffusion of knowledge throughout the network – crucial in order to create innovation – has to constitute a priority in its development policies.

JEL Classification: M

Parole chiave (Key words): reti di innovazione, impresa sociale (innovation, networks, social enterprises, social for-benefit economy)

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