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## **Linking the division of labour to entrepreneurial orientation of firms: a theoretical proposal**

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**Abstract:** The goal of this theoretical paper is to provide a framework that can support firms involved in social networks to improve their entrepreneurial orientation by adopting a simple basic principle (division of labour). Entrepreneurship does not depend only on tangible resources (such as physical assets or the financial resources of an entrepreneur) but it is widely related to the availability of individual and social (intangible) factors also. Assuming such an 'intangible view' of entrepreneurship, this theoretical proposal suggests that the division of labour implemented by a firm both internally and externally increases its human and social capital. These two factors are considered key elements in order to address and increase the entrepreneurial orientation of the firm. In the course of the paper, evidence supporting these ideas is briefly explored. This study therefore, embraces crucial ideas from the economic, sociological and industrial district theory (as division of labour and social ties to foster entrepreneurship within the network) and applies them to explain concepts of strategic management and business administration.

**Keywords:** division of labour; social networks; human capital; social capital; entrepreneurial orientation.

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## 1 Introduction

Entrepreneurship is defined as “a context-dependent process, through which individuals and teams create wealth by bringing together unique packages of resources to exploit marketplace opportunities” (Lyon *et al.*, 2000; Hitt *et al.*, 2001; Brush *et al.*, 2001; Groen, 2005). Literature on entrepreneurship widely accepts that the success of this process strongly depends on personal capabilities and social connections established by one entrepreneur (an individual performing a project in order to exploit new market opportunities). Both of them are therefore essential in order to create new firms, new products or new projects.

Social networks are defined in a generic way by a set of nodes or actors (individuals or organisations) connected by a set of social relationships or ties of a specified type (Brass, 1992). One family, one football team, one university department, one cluster of firms are common examples of social networks.

During the 1980s and 1990s, indeed the academic community often stressed the crucial role of these social networks for creating new ventures, for developing new products or projects, for fostering entrepreneurial interest and orientation of individuals (*e.g.*, Birley, 1985; Aldrich and Zimmer, 1986; Foss, 1993; Johannisson, 1996). In brief, social networks enable exchanges of information and resources among net operators; they become, therefore, crucial media of communication allowing entrepreneurs and their firms to benefit from a wide range of competitive advantages. Furthermore, social networks substantially influence entrepreneurial projects of firms too, because of that genetic ‘social embeddedness’ (Granovetter, 1985) involving organisations and its individuals.

The main assumption of this paper therefore is that entrepreneurship does not depend only on tangible resources (as physical assets or financial resources of an entrepreneur) but it is also widely subordinate to the availability of individual and network (intangible) factors. Adopting this idea to lead the present analysis, concepts as human capital and social capital (as argued below) are likely to be relevant drivers in addressing entrepreneurial processes of one company.

Shifting from a theoretical to a practical perspective, this topic is a relevant subject as well, if one considers the present economic phase; indeed, presently many European firms are evidently suffering from an inability to recognise new managerial strategies both for contrasting emerging competition of ventures coming from Southeast Asia and interacting with the new coordinates of worldwide economy. In this ‘entrepreneurial-based’ perspective, the capability of these firms to recognise new modalities for creating value and wealth has been crucially downsized by these radical external mutations. In other words, these firms necessarily have to increase their entrepreneurial orientation and innovation strategies in order to become competitive again as they were 20 or 10 years ago.

The goal of this paper is therefore to propose a theoretical proposal that can support firms that are greatly involved in social networks to become ‘entrepreneurial’<sup>1</sup> again. In particular, the research question of this paper is: how can firms increase their entrepreneurial orientation? The contribution of this paper to the present entrepreneurial debate refers to the variable proposed in order to achieve this goal; in fact, it is argued that firms implementing division of labour within and outside their organisational boundaries can dramatically improve their entrepreneurial orientation.

The paper is organised as follows: after this preliminary section, the four concepts composing the theoretical proposal (division of labour, human capital, social capital, and entrepreneurial orientation) are described in the next paragraphs. Afterwards, the theoretical framework and its propositions are explained and described to the audience. Finally, the conclusive paragraph stresses some potential managerial strategies for firms willing to develop such a framework and its further scientific developments through field research.

## **2 Division of labour**

Division of labour is a method of working described by Adam Smith in Chapters 1, 2 and 3 of his book, *The Wealth of Nations* (1776). Such a principle is based on the split of a broad task into many subtasks, each of which is assigned afterwards to a specific worker who specialises in performing that subtask.

Smith argued that the production of every good (also simple as a pin or a nail) is decomposable in unlimited subtasks, each one of them increasing the specialisation of those workers performing it. The degree of division of labour in this process depends on the extent of the market; the larger the market is, the more division of labour and specialisation are required. In Smith's thinking, division of labour moreover tremendously improves firm performances:

“The greatest improvement in the productive powers of labor, and the greater part of the skill, dexterity, and judgement with which it is anywhere directed or applied, seem to have been the effects of the division of labor.” (p.11)

In general, a specialised worker therefore achieves better performances than a generic worker within one firm because he/she acquires a deep knowledge about his/her subtask. Moreover, such a deep knowledge allows the firm to enhance its productivity and quality standards. More deeply, Smith argued that division of labour within a firm produces three main consequences:

- 1 increase of dexterity for every worker
- 2 time saved in passing from one type of work to another
- 3 the invention of a great number of machines resulting in easier and shorter labour.

These assumptions find widely empirical confirmations; *e.g.*, in a football team, all the 11 players are distinguishable by their specific roles (goalkeeper, midfielder, forwarder, left defender and so on). Every one of them, since he has played that specific role and has acquired a considerable knowledge about the tasks related to that specific game position or game tactic, has a greater dexterity than the other team members to perform those specific activities. Besides, if the entire team is organised to maximally exploit the specialisation skills of all its 11 players, it easily achieves better performances and results than an unorganised and unspecialised team.

Nevertheless, in our view, the classical concept of specialisation emerges from a restricted perspective of division of labour. In fact, the latter can also produce many disadvantages in organising corporate activities. For instance, on the one hand, one business is likely to notably increase its costs of training workers; furthermore, workers risk decreasing their skills and attention by developing the same tasks in the long term.

Smith's insights indeed have been pointed out more than two centuries ago, when ideas as inter-firm partnerships, outsourcing or networks were inconceivable. The reason being that the British economist underlined essentially an 'internal' division of labour (active only within one firm or team) and did not care deeply about the potential linkages between more organisations. In the present economic context, division of labour instead does not only work through an internal specialisation of corporate workers but also 'externally' affects management and innovation of firms. For instance, it is one of the main conditions allowing the rise of many industrial networks and clusters (Arora *et al.*, 2001).

Nowadays, firms also adopt an 'external' division of labour when they want to develop only some productive activities that they consider their core businesses. Those other activities comprising their production process are instead assigned to external organisational partners. Such an inclination comes from the spread of the so-called 'lean philosophy' in managing firms (Golinelli and Dezi, 1997). It predicates the maximum organisational flexibility through the development of several managerial tactics (as Just in Time, kanban and so on) that allow firms to concentrate only on their more strategic assets. Moreover, this managerial behaviour could generate an industrial demand within the networks of these 'lean firms', since it creates profitable conditions for creating new ventures that perform those externalised activities.

Summarising, such an extended conceptualisation of 'division of labour' underlines two critical dimensions in order to analyse entrepreneurial phenomena in social networks:

- 1 Internal division of labour, producing 'specialisation' within one firm (and its individuals) for developing certain specific tasks
- 2 External division of labour, producing 'social networking' of this company and its employees in their external environment.

In particular, specialisation is a dimension of organisation structure and it is concerned with 'the division of labour within the organisation, the distribution of official duties among a number of positions' (Pugh *et al.*, 1968). On the other hand, external division of labour allows firms to considerably extend linkages in their social networks; in other words, it determinates the 'social networking' of one company. This concept refers to the amount of external connections that one network actor has to establish to perform its activities and internal processes (Groen, 2005).

### **3 Human capital**

The concept of human capital refers to that resource composed of the set of skills that an employee acquires on the job, through training and experience, and which increases his value in the marketplace. Moreover, it is "created by changes in persons that bring about skills and capabilities that make them able to act in new ways" (Coleman, 1988). There are two different types of human capital (Florin and Schultze, 2000):

- 1 General human capital, which refers to the knowledge and skills useful to perform a wide range of activities and tasks.
- 2 Specific human capital, which refers to the capability of an employee to properly exploit his skills by working in a certain context, in an industry, a firm or a geographical area.

The latter includes knowledge necessary to launch a new venture and clearly finds its roots in the division of labour principle; indeed, the previous assumption about the enhancement of workers' skills because of specialisation and internal division of labour is strongly linked with the human capital theory (Becker, 1964). Such a theory basically argues that when workers have a specialised competence (achieved through training and learning) they have a higher quality of human capital as well. The specific 'version' of this intangible resource is surely more proximal to the specialisation principle than the generic view of human capital; therefore, it seems also more suitable in order to understand and analyse the entrepreneurial activity of firms.

Nevertheless, connections between the human capital theory and entrepreneurial studies are surely deeper. These connections substantially refer to the capability of potential entrepreneurs to convert their skills and various forms of capital in economic activities and resources exploitable to launch their new venture or entrepreneurial projects (Bourdieu, 1986).

Several studies confirm these ideas; if there are interesting opportunities to create new economic activities, high skills and knowledge (or, in other words, a deep and developed human capital) support firm employees to exit from their original firm, to engage in entrepreneurial processes and, probably, to exploit them in suitable ways (Davidsson and Honig, 2003). Another recent empirical analysis of De Clercq and Arenius (2003) confirms this view; it shows that the likelihood to begin an entrepreneurial activity is higher for those individuals having specific skills in the start-up process and some previous relations with an existing entrepreneur.

The double nature of division of labour, therefore, evidently arises thanks to these empirical findings. They confirm that division of labour is not just a crucial condition that increases human capital of one firm (and consequently facilitates some specialised firm workers to begin an entrepreneurial project); moreover, it also facilitates the exploitation of an entrepreneurial design since it gives potential entrepreneurs the capability, for instance, to obtain information and industrial demand, thanks to their social relations with other existing entrepreneurs and/or firms.

In such a perspective, Kim *et al.* (2003) stressed the relevance of human capital for creating new ventures. They used data from the Panel Study of Entrepreneurial Dynamics (PSED) to examine if financial resources (*e.g.*, household income and wealth) and human capital (*e.g.*, education, prior work and entrepreneurial experience, and influence from family/friends) affect decisions of individuals to become entrepreneurs.

The empirical findings arising out of this analysis have two-fold relevance for the present proposal; on the one hand, the authors found that several variables of human capital, including education, full-time work experience, previous start-up experience, current self-employment, and percentage of relatives who are entrepreneurs were significantly associated with being a nascent entrepreneur. On the other hand, the results stress a critical assumption of the study about the minor role played by financial resources in entrepreneurs' mindsets for launching new businesses. Indeed, authors also found that financial resources do not have a significant association with the decision of becoming a nascent entrepreneur.

Moreover, human capital (the profile of knowledge held) influences the capability of individuals to recognise entrepreneurial opportunities. For instance, Shane (2000) considered how technological change affects this capability, assuming that prior knowledge can address entrepreneurial behaviours of individuals both before and after

the opportunity recognition moment. Adopting a multiple-case study technique, the author argued that entrepreneurs discover opportunities related to information that they already possess. In particular, three relevant findings for entrepreneurship come from this study:

- 1 Cognitive limits and the specialisation of knowledge preclude entrepreneurs from identifying the complete set of entrepreneurial opportunities in a given technology.
- 2 The source of entrepreneurship lies in differences in information about opportunities.
- 3 Individual differences influence the opportunities that people discover and how their entrepreneurial efforts are organised and developed.

#### **4 Social capital**

The main effect for an actor of a social network probably is its capability to have access to that resource called 'social capital' embedded in that specific social structure. This one is a productive resource available to network nodes; it comes about through changes in the relations among persons and it allows these actors to exploit actions easily within their social structure (Coleman, 1988; Adler and Kwon, 2000). It is a kind of public good that refers "to features of social organisation, such as network, norms and trust, that facilitate coordination and cooperation for mutual benefit" (Putnam, 1993).

The scientific research on social capital developed mainly three perspectives (Belussi, 2002): the macro interpretation of this concept (Putnam) stresses the economic impact of interpersonal relationships; the micro view of social capital (proposed by Coleman) focuses on those actions of single individuals that create intangible resources in networks through their interactions; finally, the managerial perspective underlines the impact of trust and networks of cooperation on economic performances, where social capital is a variable dependent on the activation of a relational process (Nooteboom, 2002).

Following the mainstream of Coleman, this study assumes therefore that social capital is "a resource embedded in a social structure, which is accessed and/or mobilised in purposive actions" (Lin, 2001). Coleman describes three relevant forms of social capital:

- 1 Obligations and expectations – if one actor does something for another one, he will expect to receive back that thing from the other actor. The latter now has an obligation towards his creditor. This form of social capital depends on the trust that obligation will be repaired and the extent of obligations held.
- 2 Information channels – these forms provide information that makes actions easier for individuals involved in one social relation.
- 3 Norms and effective sanctions – they direct actions of individuals, censoring some incorrect behaviour in one social relation.

In studies on entrepreneurship, the concept of social capital has been widely adopted in the last 20 years. Even though there is a body of literature underlining the potential negative effects of social capital for entrepreneurship (see for instance, Westlund and Bolton, 2003), such an intangible resource arising out of social networks seems crucial in order to develop an entrepreneurial process; for example, Coleman (1990) considers critical the role played by relatives and friends when someone wants to open a new

venture. In the initial phase of an entrepreneurial action, this individual therefore exploits social capital by following advice and suggestions of these persons; it emerges from his familiar and personal networks to optimise his choices and obtain strategic information related to his entrepreneurial project.

Aldrich and Zimmer (1986) were precursors in stressing how social relations of individuals influence their entrepreneurial projects; in particular, these scholars highlighted three critical dimensions of networks having clear linkages with entrepreneurship:

- 1 density of one network, referring to the extensiveness of ties among persons in one network
- 2 reachability of one network, referring to the presence of a path between two persons, of whatever distance
- 3 centrality of a person in one network, referring to the position of this individual in one network.

These three dimensions evidently stress how valuable social capital is for nascent entrepreneurs involved within some networks; for instance, several studies accepted the positive correlation between the salience of group identity (density of one network) and the likelihood of entrepreneurial attempts of its members. A notable example of these statements analysing entrepreneurial experiences of Indian and Chinese immigrants in Silicon Valley has been recognised; in this US cluster, indeed these ethnic communities gave notable support to their members in launching new hi-tech ventures (Saxenian, 1999).

About the reachability of one network, brokers as venture capitalists or public organisations have been considered relevant figures in order to spread information and resources in one network, because of their central position within it (*e.g.*, Burt, 1992). In this view, they become a social force increasing and stimulating entrepreneurship in one network. In other words, they become key elements of social capital.

An empirical study of Birley (1985) widely confirmed these statements as well. In particular, she focused on how entrepreneurs use their social networks to get assistance for launching and managing their businesses; the British scholar developed a study in St. Joseph County (Indiana, USA) about start-up firms launched in the early 1980s. One of the main outcomes of the study was that in that small community, social networks established by local people have a crucial role in stimulating entrepreneurship in that US region.

Birley divided in two subcategories (formal and informal) the various types of help sources that an entrepreneur starting up a company should contact (see Table 1). In particular, she found that informal contacts (as family, friends, business contacts and so on) have been pointed out as primary sources of support in launching new businesses, whereas formal sources were used by entrepreneurs when their companies are already started and financial growth becomes their main goal. In other words, this study confirmed how social connections within a local community can address its entrepreneurial activities and how they can affect the start-up phase of these firms, as widely demonstrated by the cases of IDs as well.

**Table 1** Potential sources of help

<i>Formal sources</i>	<i>Informal sources</i>
Bank	Business contacts
Accountant	Other contacts
Lawyer	Family
Local government	Personal friends
Chamber of commerce	
Realtor	
Small business administration	

Source: Birley (1985)

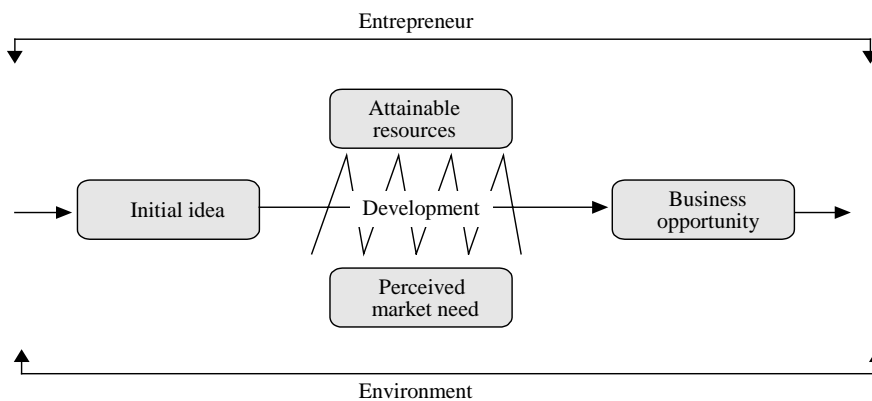
If internal division of labour, therefore, contributes to enhance individuals’ skills and to create favourable conditions for an entrepreneurial project (corporate human capital and industrial demand), social networks embedding potential entrepreneurs provide that common good influencing their performances and strategic behaviours (Greve, 1995). In our view, external division of labour is one key strategy to allow entrepreneurs to achieve social capital.

### 5 Entrepreneurial orientation

Every actor of one social network differs from other members of that social structure for his capability to develop an entrepreneurial process. As suggested in literature and above-described introduction of the concepts of social capital and human capital, these two types of intangible resources are likely to considerably lead entrepreneurs in this process and to influence his ‘entrepreneurial search’ as well.

The opportunity recognition (see Figure 1) is “the initial phase of the process through which the entrepreneur finds and develops an initial idea into a viable business opportunity by matching attainable resources and perceived market needs” (van der Veen and Wakkee, 2004).

**Figure 1** The phase of opportunity recognition



Source: van der Veen and Wakkee (2004)

Entrepreneurial orientation is commonly defined as “the processes, practices, and decision-making activities that lead to new entry” (Dess and Lumpkin, 1996). This construct therefore includes the set of personal psychological traits, values, attributes, and attitudes that are strongly associated with a motivation to engage in entrepreneurial activity. In particular, Miller (1983) considered firms orientated to entrepreneurship those organisations “that engage in product-market innovation, undertake somewhat risky ventures, and are first to come up with ‘proactive’ innovations, beating competitors to the punch”. Dess and Lumpkin consider five key dimensions of this concept:

- 1 Autonomy – it refers to “the independent action of an individual or a team in bringing forth an idea or a vision and carrying it through the completion” (Dess and Lumpkin, 1996).
- 2 Innovativeness – the relevance of innovation for entrepreneurial processes has been widely stressed by scholars; for instance, Schumpeter (1934) stated that the centre of economic activity relies in entrepreneurship, since it allows the entry of innovative ‘combinations’ of resources for regenerating markets and economy. In this perspective, innovativeness is ‘a firm’s tendency to engage in and support new ideas, novelty, experimentation, and creative processes that may result in new products, services, or technological processes’.
- 3 Risk taking – this dimension is evidently endogenous of entrepreneurial studies. It is defined as “the perceived probability of receiving rewards associated with the success of a situation that is required by the individual before he will subject himself to the consequences associated with failure, the alternative situation providing less reward as well as less severe consequences than the proposed situation” (Brockhaus, 1980).
- 4 Proactiveness – it stresses the ability to detect new market opportunities. It suggests a forward-looking perspective characteristic of a marketplace leader that has the foresight to act in anticipation of future demand (Dess and Lumpkin, 1997). Venkatraman (1989) defined it as “seeking new opportunities, which may or may not be related to the present line of operations, introduction of new products and brands ahead of competition, strategically eliminating operations, which are in the mature or declining stages of life cycle”.
- 5 Competitive aggressiveness – it is a dimension with two opposing poles of having an ‘undo-the-competitors’ or having a ‘live-and-let live’ orientation (Covin and Covin, 1990). Competitive aggressiveness refers to the intensity of a firm’s efforts to outperform industry rivals. Highly competitive aggressive owners attempt to keep competitors from entering the same market and try to outperform rivals. This helps to secure a higher market share and should, thereby, lead to success (Dess and Lumpkin, 1997).

These dimensions moreover circumscribe what academics usually define as ‘entrepreneurial firm’. Indeed, it refers to an organisation “that engages in product-market innovation, undertakes somewhat risky ventures, and is first to come up with proactive innovations, beating competitors to the punch” (Miller, 1983).

## **6 A theoretical proposal to increase entrepreneurial orientation of firms in social networks**

The previous paragraphs introduced the principles considered here as theoretical roots of entrepreneurial process and orientation within one social network; they described the economic and social foundations that affect an entrepreneur when he is going to plan a new entry, to launch a new product or project. Moreover, these assumptions stressed that intangible resources downing one company and its workers (as human capital and social capital) give a more realistic view for understanding these entrepreneurial processes.

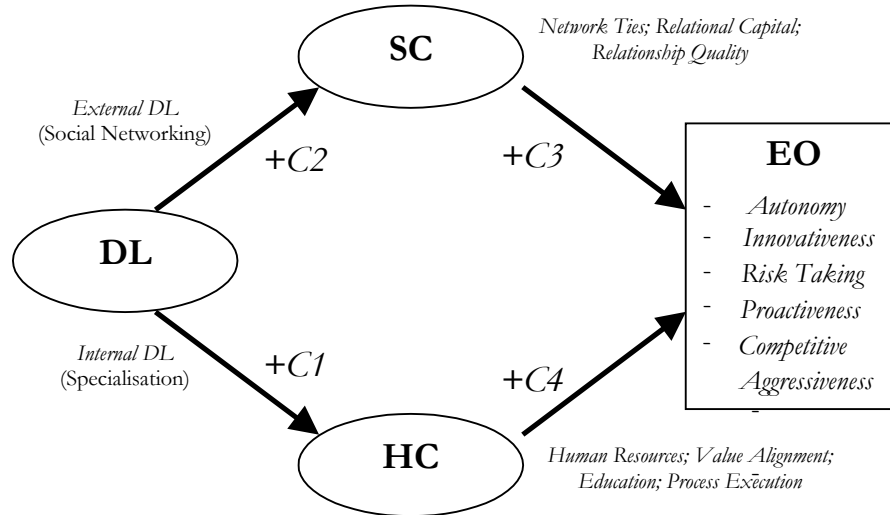
It has been argued that material resources (as physical assets or financial lever) essentially depend on intangible assets of one entrepreneur (and his firm); indeed material resources take from intangible assets critical inputs in order to work properly. For example, one entrepreneur might also rely on his own financial investments to open a new business or to buy all the machines required to properly develop a production process. Nevertheless, these material resources cannot be used efficiently if, within his firm, there is no human capital adequate to develop that entrepreneurial project or a social context embedding his firm to exchange outputs, knowledge and resources. Human and social capitals therefore seem to be unavoidable background conditions allowing both creation and successful strategic management of one firm; they are the coordination mechanisms allowing these material factors to work correctly.

Given this assumption, the logic process connecting these four concepts described above and composing the theoretical proposal of this study is summarised in Figure 2. Among the four concepts supposedly exist four positive correlations, which are stated as follows:

- C1 There is a positive correlation between internal division of labour implemented by an organisation (specialisation of its employees) and the value of its human capital.*
- C2 There is a positive correlation between external division of labour implemented by an organisation (its social networking in its local environment) and its access to social capital of its network.*
- C3 There is a positive correlation between social capital accessible to an organisation within a social network and its entrepreneurial orientation.*
- C4 There is a positive correlation between human capital of an organisation within a social network and its entrepreneurial orientation.*

In this conceptualisation, division of labour is supposed to be the basic principle that allows one firm to recognise, seize and start up new entrepreneurial processes.

**Figure 2** Theoretical framework of the study



On the one hand, internal division of labour is crucial to that. For example, Henry Ford was a great developer of internal division of labour among his workers, implementing that vertical integration defined below as the essence of the Fordist paradigm (Golinelli and Dezi, 1997; Romano and Rullani, 1998). Thanks to internal division of labour, Ford therefore became a leader entrepreneur in the worldwide car industry for many decades. This example shows a strong tie connecting the internal division of labour of one firm and the increase of specific human capital within such a firm. Through specialisation, these workers indeed acquire a deep distinctive competence that increases the value of the entire firm as well.

On the other hand, the external division of labour of one firm (implemented through outsourcing and externalisation) increases social networking of that company within its network. It therefore also increases its capability to receive those immaterial benefits present in its network, such as access to information, receipt of trust by other network members and so on. For example, observing the case of industrial districts<sup>2</sup> (Bagnasco, 1977; Becattini, 1991; Brusco and Paba, 1997), external division of labour creates trust among the network nodes, which is a key factor for optimising their economic performances and relations by reducing transactions costs. Furthermore, it supports local firms in finding within their district material and non-material resources, such as information, relations, financial aid, business contacts, and managerial suggestions and so on. These facilitations are the main outcomes of the common good defined as social capital that enriches their networks.

The second phase of this theoretical framework instead refers to those supposed links between these two intangible capitals (increased by division of labour) and entrepreneurial orientation of a social actor of one network; as described above, human capital makes firm employees (and therefore the firm itself) more dexterous and sensitive (for example) to seize new business opportunities and to take risks. It happens because it gives the firm a better understanding of its market and possible further evolutions. Obviously, the relevance of human capital for improving and optimising the firms' new

entries is widely accepted in literature (*e.g.*, Kim *et al.*, Lyon *et al.*). In particular, the most of knowledge of one firm is in its human capital; it is therefore one of the main internal factors of firms for exploiting strategic entrepreneurship and wealth creation (Hitt *et al.*, 2001).

Social capital is likely to affect entrepreneurial orientation of a company as well; indeed, as stated above, the corporate capability of having access to those various elements composing social capital (as the relation quality, information, knowledge or ties developed), should considerably help the entire organisation to properly perform its entrepreneurial processes. These intangible benefits give the firms more knowledge about their markets and therefore they make it easier for one entrepreneurial firm to seize and recognise emerging business opportunities. The more social capital one firm has, the more likely will it be interested and able to search new business opportunities, since it already knows that it will not be (formally and informally) 'alone' in developing those entrepreneurial processes.

Moreover, several studies show how entrepreneurial orientation of individuals and firms is strongly affected by their external environment (*e.g.*, Lee and Peterson, 2000). For instance, it was proved that a hostile social environment can dissuade the entrepreneurial spirit in certain national cultures (McClelland, 1976). Social forces therefore play a fundamental role in organising one firm and improving (or decreasing) its entrepreneurial orientation (Covin and Slevin, 1991).

## **7 Conclusions**

This theoretical proposal enriches the academic debate on entrepreneurship because it mixes such a field of research with elements typical of other topics of social sciences; in particular, this study embraces crucial ideas coming from the economic sociology and industrial district theory (as division of labour and social ties to foster entrepreneurship within the network) and applies them to properly explain a concept (entrepreneurial orientation) for strategic management and business administration studies.

This model accepts an 'extended' point of view to those existing theoretical assumptions that are currently available about entrepreneurial orientation in social networks. Moreover, this work stresses the increasing role in entrepreneurial studies of such concepts as human capital (in this research considered as a result of internal specialisation of the firm) and social capital (result of external social connections of the firms). These two concepts are indeed the mediating variables that explain the relation between division of labour and entrepreneurial orientation of firms.

Referring to the research question of this study (how can firms increase their entrepreneurial orientation?), the answer suggested by this work states that within a social network, the division of labour implemented by a member of this network positively affects its entrepreneurial orientation. Indeed, on the one hand, division of labour within this company increases specialisation of its employees, and consequently, the value of its human capital; on the other hand, the division of labour outside this company increases its social capital and related benefits. Human capital and social capital therefore influence the corporate capability of recognising and seizing new entrepreneurial opportunities.

The implications for managers and firms in social networks accepting such a proposal are various. In this perspective, those firms having scarce results in innovating and creating wealth should seriously consider:

- To redesign their internal organisational structures. In particular, a critical step for such a reorganisation should be the recognition of those internal functions more strategic for one specific entrepreneurial process. In fact, these internal areas of firms are likely to be the real 'places' where entrepreneurial orientation rises and becomes effective. For instance, managers willing to revitalise an old corporate product should specialise their firms (*e.g.*, by employing more workers) in such functions as customer relationship marketing or trade marketing. These activities can give relevant information about such a revitalisation process and furthermore, they can encourage developments for other new corporate products (*e.g.*, to market a more targeted niche product for those segments of audited costumers).
- To plan and decide in a 'strategic' way; *i.e.*, the external inter-firm relations more advantageous to implement. For instance, managers should improve, as much as possible, collaborative strategies with their focal partners for those corporate functions or activities for which they felt problems in performing organisational innovation. In this perspective, inter-firm partnerships are not only means to achieve resources of partners in order to develop a specific 'present' entrepreneurial process; they are also (and mainly) tools for firms in order to land cognitive and social inputs for future entrepreneurial projects.

The interaction of internal and external strategies of division of labour should lead firms both to minimise their troubles in developing entrepreneurial processes and to optimise their capabilities in discovering entrepreneurial opportunities in those activities/functions.

Several theoretical and practical developments of this framework still have to be implemented. First, there is a lack of empirical works testing it that inevitably gives less power to this mix of theories. Second, it is reasonable to argue that entrepreneurial orientation of firms can also be affected by many other intangible elements (*e.g.*, path and history dependency, corporate reputation by costumers and so on).

To answer such a doubt, the type of environment involving the firms theoretically analysed here (social networks) justifies this 'restricted' conceptualisation. It is surely crucial for researchers to also consider other variables in order to understand entrepreneurial phenomena and orientations of organisations working in less developed social structures. Individuals studying and/or exploiting entrepreneurial behaviours within one effective social network (*e.g.*, researchers, managers, entrepreneurs, policymakers and so on) in our view, instead have to consider mainly those personal capabilities and social relations occurring and evolving there. In other words, human capital and social capital are the real 'invisible hands' for strategic management and entrepreneurship of these firms in networking.

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## Notes

- 1 For the definition of 'entrepreneurial firm', see Reference (Miller, 1983).
- 2 An Industrial District (ID) is "the result of the relation among various factors: social and cultural traits of a community, historical and natural features of a geographic area and some technical features of the productive process. At the same time, the ID is the outcome of a dynamic integration process among division of labour in the district and the market enlargement of its products" (Becattini, 1991).