oikos Foundation
for Economy and Ecology

oikos Ph.D. Summer Academy 2009
Sustainability-Driven Business Models

Dimensions of social capital and business model choices, a path to attain organizational sustainability

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Silvia Rodriguez-Donaire
Doctoral Candidate of Business Administration and Management Program
Department of Management
UPC – Universitat Politècnica de Catalunya
Terrassa, Barcelona 08222
silvia.rodriguez-donaire@upc.edu

Department of Strategic Management Information Systems
Research assistant at Carl Schrøder of Strategic Management Chair
IESE Business School – University of Navarra
Barcelona 08034
srodriguez@iese.edu

Abstract

In this paper we study the link between business model set of choices and the way these choices and the resulting business model configuration influence its behaviour, including the consequences. In particular, we study social capital formation as a potential outcome of the business model configuration. Social capital is an important resource that might contribute to the firm sustainability. A conceptual framework is developed. In this preliminary study we have applied it to a real situation and developed an exploratory case study. By focusing on social capital and by building on prior work we introduce a innovative way to interpret managerial choices, and try to explain how managerial choices can represent path to attain sustainable competitive advantage in the organization.

The author would like to thank Lorenzo Massa and Joan Enric Ricart for their useful comments.

Introduction: Background and Objectives

The field of strategic management has widely evolved in the mid of 1990's. Firms have learned to analyze and diagnose the causes that underlying their competitive environment, define their strategic position, develop competitive advantage, and understand the changes and governmental factors that face the threats in their competitive environment, moreover, to sustain their competitive advantage in front of that turbulences.

We live in a competitive, rapidly changing and increasingly uncertain economic environment that makes business decisions complex and difficult. Companies are confronted with new information and communication technologies, shorter product life cycles, global markets and tougher competition. In this hostile business environment firms should be able to manage their relationships by increasingly using groups as their fundamental unit of organizational structure in an effort to decentralize decision making and respond more flexibly to their environments (Manz and Sims, 1993; Mohrman, Cohen, and Mohrman, 1995).

The business model concept has become popular; today's managers' set of strategic choices of firm's activities spans the boundaries of the organization (Amit and Zott, 2001). Managers are required to look outsides the walls of the organization when they engage in activities such as value proposition, configuring their value network, choosing their partners, looking for ways to reach the customer and many other similar decisions. Despite the fact that the business model concept still suffers from lack of conceptual clarity (e.g., Shafer *et al.*, 2005; Casadesus-Masanell and Ricart, 2009), scholars seem to argue on some basic properties of the business model construct. One of this is that business models are a set of choices and their consequences (Casadesus-Masanell and Ricart, 2009). Using a metaphor from the system dynamics literature (Forrester, 1968; Sternman, 2000) and concepts of system theory (e.g.,Gharajedaghi, 1999) these consequences can be envisioned as emergent properties, that is, properties that emerges from the particular structure of the system that comprises the business model. One of this could be Social Capital (Coleman, 1988). Therefore, this preliminary project attempts to explore if business model choices could generate the emergent property of social capital in the firm system.

Social capital can represent an important strategic resource for the firm sustainability in the long run. Firms' sustainability could be achieved through combination and exchange of resources through the 'right' social interaction in the organization. Indeed, according to Sharma and Ruud (2003), social organizations among others are needed if we would like to stay on the path to sustainability. However, as of today, there are no studies that has attempted to link business model choices with dimensions of social capital. Social capital is not a unidimensional concept and explores the ways in which each of its dimensions facilitates the combination and exchange of knowledge. These dimensions may help to identify and measure the social structure of an organization's network (Koka and Prescott, 2002), to characterize these relationships, and finally, to analyse the actor's resources (knowledge, information, emotions, opportunities, etcetera) that integrate the network and mobilize them through that networks (Koka and Prescott, 2002; Bourdieu and Wacquant, 1992).

Additionally, studying social capital can provide interesting insights for improving our understanding of phenomena that are likely to be influenced by social interactions. For example, business model literature is mainly dominated by economic theories and some relationships between choices and consequences, or backwards, cannot be easily explained with economic theories. This is the case, for instance, of certain dynamic of innovation. The design of organizational structure has long presented a good solution to this issue, such as specific R&D departments (Duncan, 1976). The return investment of that solution can be perfectly fulfilled by economic theory. By contrast, the continuous firm's innovation in which all the members of the organization freely participate in the process of knowledge creation is a new capacity that structures are not likely to fulfil. So, in order to understand the social interactions in the organization – interactions between actors in order to achieve their goals – and cover the economic theory limitation, another theory should be incorporated into the analysis, and I would suggest social capital.

In order to observe how social capital theory can feed business model literature. I would suggest, according to business model lexicon, that it can be interpreted as a consequence rather than a management decision (Pastoriza and Ricart, 2008), because we can observe that business model's choices can create social capital benefits, such as value added to the customer, motivated employees, socialized innovation, etcetera. Indeed, both concepts show a similar meaning in terms of courses of action. This association brings the opportunity to see the social capital as a consequence that not only shows the level of successful relationships among different units, actors, even organization, but also helps to understand how the organization can achieve its goals through the conceptual relation between choices and social capital dimensions and sources.

The aim of this project is to fill this gap in the literature studying how business model choices can foster social capital intended as a resource for attainment of sustained competitive advantage in order to do that we developed a preliminary model (Figure 1). The model attempts to relate the types of business model choices with dimensions and sources of social capital. So, if each managerial choice derives a consequence, as in the physical world a cause has an effect, the attempted model result will predict consequences that are likely related with the emergent social capital generation, like value added to the customer, motivated employees, socialized innovation, reputation, etcetera.

At the end of the project a case study will illustrate the relationship between business model's choices and dimensions/sources of social capital, moreover, the ability to create and capture value in the organization through its informal ties generating social capital benefits, which can help us to interpret how the organization can achieve not only sustainability, but also lower interdependence among competitors.

1 Theoretical Framework

The strategy literature provides two different theoretical perspectives. One is related to the internal aspects of the firm, whereas the second one is related to the industry context. This two theoretical perspective are based on two main schools of thought, the ‘content’ and the ‘process’ view. Some authors seek to integrate both strategic views in order to develop a more dynamic approach. This dynamic framework attempts to give information about how firms adapt to the environment and select its own resources to interact with the rest of the industry systems. Business model concept accomplishes this integration, since it was defined as “*how an enterprise operates*” by Magretta (2002: 87). This definition is so broad, but it includes internal process that enables the firm to create value, and external process that enable the sustainability over the time, such as firm’s market position, interactions with environment, networks and alliances, etc.

At 1980s the content view was focused on RBV of the firm. Some relevant authors were Penrose (1959), Wernerfelt (1984), Prahalad and Hamel (1990) and Barney (1991). A major criticism of this view of strategy is, however, that it adopts a static approach, regards competition as a zero-sum game, and neglects the context within which, and the processes whereby, strategies are generated, selected and implemented. Another point of criticism is the protectionist nature of the RBV, since it is mostly concerned with how to protect existing resources and rent sources, avoiding imitation or substitution, rather than generating, exchanging and combining resources in order to create new competencies and capabilities (e.g., Dagnino, 1999).

On the other hand, the process view is concerned mainly with the process of managing change and, from an external perspective, on how companies compete. Henry Mintzberg was one of the leading advocates of the process view as he argued that markets were moving too fast for content-based analysis due to the information technology and that strategy needed to be more action-oriented. It is also within these stream themes of game theory and network theory (e.g., Jarillo, 1988; Gulati, 1998) can be found. Indeed, this view emphasizes the cooperative elements of alliances and suggests that networks evolve into multiple webs of technical, financial and social interactions. The main criticism of the process approach is its lack of attention to the talent of resources and capabilities by the network partners (e.g., Dagnino, 1999).

Recognizing the boundaries of both strategic views, some authors have recently attempted to integrate both parts in order to develop a more holistic and dynamic approach. As the result new theories emerge, such as dynamic capabilities and evolutionary theory. They view the firm as dynamic and shift the focus to the enhancement of the firm's organizational competencies through its responsiveness to change and its ability to learn and adapt to the context.

Recovering Magretta (2002) business model definition and how Peter Drucker (1954) defines '*a good business model*'[1], both definitions attempt to link both strategic approaches getting a holistic approach. According to their definition, the construct is built upon the pieces of the business fit together; moreover, according to Amit and Zott (2001), it offers a framework to understand how the firm can create value through the interchange of information and resources, the relationships between players, and the legal form to execute the transactions. Although there is a degree of ambiguity about what business model are, they all refer to the management choices for creating and capturing value, as well as the consequences of those choices in the organization. Consistent with this idea of management choices and organization consequences, Casadesus-Masanell and Ricart (2009) refined the concept of business model, by stating that it results from a set of choices (physical assets[2], policies[3], and governance structure[4] of these assets and policies) made by managers and a set of consequences that yield on these choices. According to these authors, the consequences can be defined as rigid and flexible ones depending on their underlying nature. Rigid consequences are like stocks and they accumulate over time, like intangible assets such as brand equity or reputation. In addition, a rigid consequence does not change rapidly with the choices that generate it. In contrast, flexible consequences may vary from one period to the next, as is the case with the level of revenues or costs.

Additionally, as a result of choices yielding consequences and consequences enabling choices generate feedback loops. These causal relationships between choices and consequences generate loops (Baum and Signh, 1994) which could be explained through a third element in Casadesus-Masanell and Ricart (2009) paper called '*theories*'. Theories are suppositions on how choices and consequences are related. For example, a '*theory*' may be that as social capital generation, products with innovative features are brought to market. By decomposing the business model in its different elements and internal dynamics, these authors provide an inclusive framework that permits a better comprehension of several organization concerns, such as exchange and combination of resources in the organization. In addition, they suggest that the process of making strategic choices and adjusting the consequences is iterative, so the design of the business model is an ongoing process.

In short, the consistence of the feedback loops (Casadesus-Masanell and Ricart, 2009) and the positive complementary assets of these loops are likely to provide competitive advantage and generate rents. Moreover, the firm needs an ability to persist its effectiveness in

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[1] Drucker defined 'a good business model' as the one that provides "*answer to age old questions: Who is the customer? And what does the costumer value? […] How do we make money in this business? What is the underlying economic logic that explains how we can deliver value to customers at an appropriate cost?*" (2002:87).

[2] Physical assets refer to a bundle of tangible resources or capabilities of the organization, such as competitive prices, manufacturing management model, etcetera.

[3] Policies refer how the organization adopts the different courses of action depending on the operative facets. For instance: commercial activities, power incentive (profits sharing), etcetera.

[4] Governance structure of assets and policies refers to forms of exchanging information or resources, in addition, how they are controlled by the interested relevant parties in the exchange. For instance, open communication, continuous cost improvement, continuous innovation, etc.

the environment economically as well as the 'right' social interactions in order to attain sustainable competitive advantage in the long run.

Business model literature is mainly dominated by economic theories that explain the relationships between a set of management choices and its consequences – e.g., external relationships that allow acquiring new market knowledge could lead a higher added value to the client. However, how can feature of social organization such as norms, trust, cognitive structures, etc be explained? Economic theories are not capable to explain how managers can embed their choices in their social organization. Hence, I would suggest to broad the spectrum of theories that feed the business model literature incorporating the social capital theory into the analysis.

Although, there is no consensus about definition or limits of the social capital (Nahapiet and Ghoshal, 1998), it is roughly understood as the *goodwill*[5] that is engendered by the fabric of social relations and that can be mobilized to facilitate action. Authors have a broad consensus that social capital is a relational resource, but they vary depending on whether their focus is primarily on: (1) the relations an actor maintains with other actors, (2) the structure of relations among actors within a collectivity (internal characteristics), or (3) both types of linkages. Indeed, social capital theory provides a sound basis for explaining the creation and exchange of resources and tacit knowledge in the firm by their external or internal ties. This exchange is more likely to occur when the interacting parties trust each other, maintain frequent interactions, and are committed to the same corporate goals (Nahapiet and Ghoshal, 1998; Tsai and Ghoshal, 1998). So, it is important to understand not only how social capital is a powerful factor explaining actors' interaction, but also how managerial choices can generate emergent properties of social capital in the firm.

One of the aims of this project is to show how managers' choices could be related with the dimensions and sources of social capital in order to create social capital. The organization, in order to effectively manages its internal processes and exchange resources (information, opportunities, abilities, and other capital forms), establishes informal connections.

Informal ties are a type of interfirm relationships. Interfirm relationships represent social capital for two reasons. First, they are ties of information. Possession of key information and control of information flow create opportunities (Burt, 1992, 1997b). Second, interactions between firms establish a pattern of obligations and expectations that are based on norms of reciprocity and equity. Informal ties can increase the level of trust between the members of the relationship and give them greater time, opportunity, and motivation to strengthen and broaden their relationship. For instance, Mehra, Kilduff, and Brass found that employees in a U.S. high-technology company who had greater numbers of informal socializing ties with fellow employees (defined as "*people with whom you like to spend*

[5] "Goodwill" is referred to the sympathy, trust, and forgiveness offered by friends and acquaintances (e.g., Dore (1983) on goodwill; Adler (2001) on trust; and Williamson (1985) on forgiveness).

your free time" (Mehra et al., 2001: 130)) had higher performance ratings than those who had fewer numbers of such ties. However, Oh, Chung and Labianca (2004b) findings suggest that excessive group closure may negatively affect group social capital, and ultimately, group effectiveness, so, a moderate level of group closure will maximize the group effectiveness diminishing the probability of opportunism, reducing the need for costly monitoring, reducing transaction costs, and resulting in benefits for all group members (Seers, 1989; Uzzi, 1997). Adler and Kwon definition of social capital reinforces the informal ties concept, since they define social capital as '*the goodwill available to individuals or groups. Its source lies in the structure and content of the actor's social relations. Its effects flow from the information, influence, and solidarity it makes available to the actor*' (2002: 23).

Indeed, according to Nan Lin (1999), the notion of social capital contains three elements: (1) resources embedded in a social structure; (2) accessibility to such social resources by individuals; and (3) use or mobilization of such social resources by individuals in purposive actions. This elements lie in the structure and content of the actor's social ties, which are firm's capabilities for creating and sharing knowledge (Kogut and Zander, 1992). Indeed, those capabilities are seen as organizational advantages. For strategy theory, the implications of this emerging perspective lie in a shift of focus from the historically dominant theme of value appropriation to one of value creation (Moran and Ghoshal, 1996). Nahapiet and Ghoshal (1997) paper attempts to formally link it to the concept of social capital. According to them and Koka and Prescott (2002), social capital is not a unidimensional concept. They define social capital in terms of three distinct dimensions (structural, relational, and cognitive) and explores the ways in which each of these dimensions facilitates the combination and exchange of knowledge. Although they analytically separate the three dimensions, but they recognize that they are highly interrelated.

The structural dimension includes social interaction. It refers to pattern of connections between actors. For instance, people can use their personal contacts to obtain information or to access specific resources. In order to achieve that, three features are needed: (1) network ties (resources access); (2) network configuration (flexibility in the information exchange through members accessibility); and (3) appropriability[6]. The latter one will be the key to understand the social capital as a resource that generates competitive advantage (Tsai and Ghoshal, 1998). Nahapiet and Ghoshal (1998) and Tsai and Ghoshal (1998), among others, theoretically suggest that in addition to structural dimensions, social capital should include a relational dimension that is a function of repeated relationship dynamics between the partners. It emphasizes the variety and to a somewhat lesser extent quantity of information that a firm can access, create and influence through its relationships. The focus of this dimension is not only on the number of actors but also on the characteristics

[6] Coleman (1988) refers to appropriable in the sense that an actor's network of, say, friendship ties can be used for other purposes, such as information gathering or advice.

of the actors and their relationships, such as trust and trustworthiness[7], norms and sanctions, and obligations and expectations[8] (Gulati et al., 2000). For instance, trust can act as a governance mechanism for embedded relationships (Uzzi, 1996). The cognitive dimension refers to those resources that represent shared understanding, interpretations and systems of meanings between parties achieved through shared language, code and narratives (Moran, 2005). It arises because they have differential effects on firm performance depending on the firm's context. A few researchers have agreed with this dimension terminology.

In sum, the three heterogeneity dimensions constitute the dimensions of social capital, which produce differences in regard to the organization performance (Batjargal, 2003). The social capital resource cannot be obtained overnight, rather than the reasoned and consistent investment in management resource configuration that fosters it. Adler and Kwon (2002) distinguished three factors (opportunity, motivation, and ability) that will limit the social capital generation. They are closely related to the three dimensions of social capital, since (1) the structural dimension refers to the network actors' opportunity created through two generic processes: combination[9] and exchange[10]; (2) the motivation to exchange resources relies on the relational dimension since social capital resource lies not only in networks but also in norms and trust; and (3) the ability to access and use actors' resources and competences of the network relies on the cognitive dimension since it represents the shared understanding among actors (Nan Lin, 1999; Gabbay and Zuckerman, 1998).

For instance, if an actor of an intra- or inter-organizational network doesn't hold the 'right' ties that relate him with other parties (opportunities), moreover, if he is not motivated to exchange and/or combine resources (motivation), and in addition, he doesn't dispose specific resources or capabilities to share (ability), the actor will not be a network source of social capital. Hence, the organizational relationships will be sources of social capital whenever they fulfil the three dimensions and sources. Going back to the business model lexicon, I suggest that social capital is not a management choice, but a consequence (Pastoriza and Ricart, 2008).

[7] Trust is an attribute of relationships and refers to goal alignment, i.e., in relationships with high trust, people are more willing to engage in social exchange, to take risks in such exchange, but they have to be aware about external diffusions. In addition, it can act as a governance mechanism for embedded relationships (Uzzi, 1996). But trustworthiness is an attribute of an individual actor involved in the relationship (Barney and Hansen, 1994).

[8] Obligation and expectations represent a commitment or duty to undertake some activity in the future.

[9] Combination is the process viewed by Schumpeter as the foundation for economic development and this perspective has become the starting point for much current work on organizations as knowledge systems (e.g., Kogut and Zander, 1992)

[10] Exchange is a pre-requisite for resource combination. It is when resources are held by different parties.

1.1 Managers' choices related to dimensions and sources of social capital

Social capital sources and dimensions allow interpreting how manager's choices facilitate sharing information and spreading their knowledge through the whole organization as the following preliminary matrix model attempts to show (figure 1). This preliminary study provides an example in each quadrant. Obviously, the three choices are closely interrelated with each dimension/source.

[**Figure 1.** Examples of the conceptual relation between business model choices with dimensions and sources of social capital (see annex 1)]

Organizations with closure groups that interact and exchange information on a regular basis, committed with the overall purpose of the firm objectives, and sharing a mutual trusting relationship are likely to create a great stock of social capital benefit such as value added to the customer, proud to belong to the organization, etcetera. Some of these examples could be seen at the preliminary matrix model.

So, how can emergent social capital consequence be a path to attain sustainability in the firm's business model? Firstly, business model is continuously evolving and its sustainability depends on how its resources and capabilities, behaviour, and goal achievement are aligned and adapted with the environmental factors through their social interactions. The illustrative example attempts to show how developing trusting social interactions inside firms channels for exchanging information and resources can be generated (Coleman, 1988). These relationships become helpful, since the actors become more willing to share their resources without worrying that they will be taken advantage of by the other party (Bradach and Eccles, 1989). For example, a firm that is continuously innovating requires a social organizations in order to update its knowledge base through the exchange of information and resources among actors, and a trusting inter- and intra-networks in order to attain its installed base of clients that provide information about market changes. This evolution leads to increase or decrease the performance of the business model and its sustainability. Secondly, business model attempts to explain how firms obtain competitive advantage in order to be sustainable in a long run. Indeed, competitive advantage is a powerful driver for organizations that move toward sustainable networks and partnerships. According to Sharma and Ruud (2003), radical changes in technology, social organizations among others are needed if we would like to stay on the path to sustainability. So, social capital could be considered as a potential source of firm competitive advantage and can help explain the differential of success of firms in competitive rivalry (Nahapiet and Ghoshal, 1998; Pennings and Lee, 1999). The illustrative example attempts to show how social capital interactions attempts to influence the drivers of sustainability by distributing firm's value creation to customers through goods and services - innovative, quality, and global solutions -, to shareholders through dividends and equity – high profits, big installed based of clients and products -, and to employees through salaries – incentive and RRHH practices. Another example could be Tsai and Ghoshal (1998) study that examines the way in which social capital affects the internal functioning of firms and, more specifically, how social capital contributed to a firm's ability to create value in the form of innovations. For some analysts, social capital determines the rate of return on investments in the other forms of capital that is the opportunities to transform financial and human capital into profits.

2 Methodology

Ros Roca s.a., a Catalan company, was founded in 1953 and has concentrated its activities in the environmental sector with specialization in waste collection and waste processing systems being the market leader in the world of the environment sector with 1.100 employees and exporting environmental technologies to more than 70 countries. The evolution of Ros Roca s.a. during its 50 years of existence is divided by four different phases.

In the first fifteen years (1953-1966) the main firm's activity evolve from the wood manufacturing to specialization in mechanical carriages for waste collection. The inauguration of a new plant in Tàrrega allows an important growth in its activity. In those years, Ros Roca develops several waste collector vehicle models with a high acceptance into the Spanish market. As the result of that it offers the opportunity to consolidate the service line in the street cleaning machines and vacuum systems. In the growing and consolidation phase (1968-1979), Ros Roca begins the export activity, with special relevancy in South America. At the end of 80s and beginnings of 90s, the company starts a new phase to cover definitively the whole waste processing system. In order to do that the company has to develop an environmental division that designs and deploys waste treatment technology plants. At the same time, the company acquires France and Germany factories (Eurovoire and Schörling, respectively). These factories will increase highly the size and size production, offering the possibility of a rapid expansion in Europa. The first years in 20s century, the company has done high advance in: (1) European environment activity; (2) design capacities development; (3) new specialized plants construction in waste treatment technology; and (4) a new pneumatic waste collection system development, which is successfully established in several Spanish municipalities with a high growth. Looking at the future, the company will keep on providing global environmental solutions. Moreover, it will address technologies and solutions that allow to maintain its leadership and to contribute for the environment improvement.

Ros Roca is a company with an innovation culture. From this culture have to be highlighted several features that help its innovation: (1) client and market proximity – it brings the possibility of anticipation and give complete adaptative solution –; (2) continuous search of growth by diversification and international expansion; (3) investment in new products and technologies; and finally (4) error acceptance where Ros Roca learns from them.

During the history of Ros Roca, more than 50 years, has succeeded different leaders, which contribute to develop this culture. They stand out for their business vocation, their market anticipation, such as environmental demand, global market necessities, demand of global solutions, etcetera.

During the last years, Ros Roca has made several changes in its organizational structure to give more prominence to the people of the organization. The organization thinks that given more freedom and responsibility to the people, the organization will become more competitive in the market. So, Ros Roca has made some structural changes in the organization to help an open communication and transparency of information in the organization. These changes allow to the people of the organization develops new capacities: autonomy and decision making. Thus, Ros Roca obtains that the whole organization thinks continuously in innovation.

One way to achieve this high commitment by the people of the organization, making decisions and managing the organization, is by incentive practices. For instance, in one of its divisions Ros Roca shares within its workers 30% of its additional profits each year.

The external relationships, such as strategic alliances and collaborations with universities or other stakeholder firms, are based in dealing with innovation processes. For instance, Ros Roca mechanical-biological waste treatment systems combining sorting, digestion and composting systems has been completed with the contractual agreement of University of Vigo, Vic, and l'Autonoma of Barcelona.

In addition, Ros Roca has been working in a new organizational structure and management model. Its principles are based on Koldo Saratxaga model (Irizar)[11]. The model attempts to divide the organization in autonomous multidisciplinary and auto managed groups with assigned responsibilities. It is based on shared responsibilities and commitment within all the organization to offer a high service to the client. The model attempts to give a continuous cost improvement.

This organizational structural change affects also to the innovation group. The members of this innovation group have been also integrated in different working groups of the organization. This phenomenon wants to promote the communication between the different divisions and a bigger versatility of the people to develop different tasks.

The table 1 summarizes the main strategic business model choices of Ros Roca Company. This table does not try to explain all of these choices, but some of the most representative ones. Additionally, those choices are generated from several choices. Consequently, they are aggregated choices.

[Table 1. Major choices of Ros Roca business model (see annex 2)]

[11] "Un nuevo estilo de relaciones. Para el cambio organizacional pendiente" Koldo Saratxaga. Ed. Prentice Hall, 2007.

2.1 How are these choices related with the different dimensions and sources of social capital?

As the social capital review literature section said, social capital is constituted by three dimensions, which are closely related to the three principal sources of social capital, moreover, this phenomena is attempted to be shown at the figure 1 (annex 1). Indeed, the business model choices of Ros Roca (table 1) result difficult to relate univocally to one choice because they are the aggregation of different small choices. Nevertheless, I relate only to one choice, according to my knowledge, to make easier the analysis.

— **Continuously innovation** can be associated to governance structure of assets and policies choice, since Ros Roca has to adopt different innovation strategies in its products and technologies depending on the type of client connection tie in order to achieve a high value added to its clients.

— **Sharing profit** can be associated to policy choice, since Ros Roca thinks that this kind of incentive practice reinforces and awards the high commitment of its employees in order to allow the organizational structural change and a continuous cost improvement.

— **External relationships** can be associated to governance of assets and policies, since Ros Roca obtains new opportunities in the market, shares and acquires knowledge and information with other parties, and develops the ability to mobilize the resources to its favour in order to be trusted by the other parts of the organization and increase the client added value.

— **Organizational structure and management model** can be associated to policy, since Ros Roca can promote the participation and the implication of all the workers in order to reduce the cost continuously. In addition, it can facilitate the open communication and transparency between and within the groups/teams of the organization making easy the creation of informal ties in order to increase the employee proud to belong to the organization.

— **Competitive price** can be associated to assets, since Ros Roca gives a competitive market response due to its good margins, high volume, and customer willingness to pay.

The **figure 2a** interprets how Ros Roca business model choices can be related with the social capital dimensions/sources (annex 3). As a result of the first column of figure 2a, I could suggest that Ros Roca organization opens new opportunities by: (1) reducing the cost production and improving the operative efficiency; (2) anticipating client needs; (3) generating new competitive market responses due to its good margins, high volumes, and client willingness to pay; and (4) adding value to the offered clients products and services. From the second column, I could suggest that Ros Roca develops trusting ties by: (1) flexible strategies that allow client adaptation; (2) creating high installed base clients and network externalities; (3) its reputation and employee commitment; (4) facilitating the open communication channels and transparency in its results; and (5) developing innovative and differentiated product front its competitors. And finally, from the third column, I could suggest that Ros Roca stimulates the exchange of resources by: (1) pondering the employees as the most important firm's resource; (2) promoting the share of information and knowledge among multidisciplinary groups in order to achieve a high performance; and (3) giving an economic transaction response due to innovative product. Additionally, figure 2b attempts to include their consequences in the preliminary model quadrant justifying social capital resource emergence.

[**Figure 2b**. Ros Roca business model choices inside the preliminary model (see annex 3)]

2.2 Arguments of the study

From the discussed theoretical background I could suggest the following propositions, which some are argued with the illustrative case study. Moreover, they have to be defined in more detail.

P1: From managerial choices emerges social capital as a resource.

Figure 2b could help us to justify that **business model choices emerges social capital properties**, since the three choices contribute into the generation of new opportunities, establishing trusting connections, and sharing information inside the firm.

Just as I suggest, social capital can be seen as a consequence rather than a management choice as the figure 2b shows. The different choices of Ros Roca business model points out several consequences like generating new competitive market responses due to its good margins, high volumes, and client willingness to pay; flexible strategies that allow client adaptation and open communication channels inside the firm in order to achieve continuous innovation; and promoting the share of information and knowledge among multidisciplinary groups since it ponders the employees as the most important resource in the company in order to achieve firm's high performance. All of these consequences can be interpreted as not only interactions effects of the social networks, but also information flux such as emotions, opportunities and other capital forms between network actors. So, they contribute to generate social capital as a resource. Pastoriza et al. (2008) found empirical evidence on how supportive management practices help to create social capital. According to them, firms that invest in supportive employment practices obtain relatively higher stocks of social capital. In addition, Pastoriza and Ricart (2008) argue that the ability of firms to implement supportive employment practices will influence the creation of social capital.

P2: The relationship between informal ties and performance is positive when the level of interaction is moderate and negative when the level is it too low or too high.

The configuration of group members' social ties within and outside an organization group affect the extent to which the members connect to individuals who can convey needed resources, have the opportunity to exchange information and support, have the motivation to treat each other in positive ways, and have the time to develop trusting relationships that might improve the group's effectiveness (Krackhardt, 1992). Greater numbers of informal socializing ties with people with whom you like to spend your free time had higher performance ratings than those who had fewer numbers of such ties (Hongseok Oh, Myung-Ho Chung and Labianca, 2004a). In addition, informal ties refer to the type of ties which carry a wide variety of resources that can improve performance and potentially assist in coordinating across groups in an organization. However, to understand how the goals in the organization are achieved is necessary the study the influence of this informal ties role in the courses of action adopted by the managers, when they are designing the strategic design process of the organization, such as external relationships or continuously innovation.

For instance, Hongseok Oh, Myung-Ho Chung and Labianca (2004) results suggest that team building that is focused on bringing a team with very low internal cohesion to a moderate level will likely improve effectiveness, but that trying to create a highly closed team is counterproductive. According to Ros Roca case study, it illustrates this result, since the organization is structured by 60 groups that are constituted by multidisciplinary and autonomous persons and they look at the same goal. We can consider that the level of cohesion among the groups are moderate, since innovation group members are integrated in other organization groups promoting the communication between different divisions and developing higher versatility in order to develop different tasks. According to that, Hongseok Oh, Myung-Ho Chung and Labianca (2004) suggest that these types of groups generate a superior performance achieving an inimitable competitive advantage. Moreover, Cialdini (1984) argues that the representative groups in those close ties had positive and favourable influences on critical decisions made in respect of the group that offers consistent pattern of environmental practices. According to Christmann (2000), firms that have greater capabilities in product innovation and process implementation, as the case illustrates, are better positioned to reap the benefits accruing from the adoption of environmental best practices, such as developing the whole waste processing system.

P3: Social capital as a resource is a path to attain sustainable competitive advantage

As I conclude in the P2 according to Tsai and Ghoshal (1998), social capital is considered as a resource that can generate a competitive advantage for organizations. In addition, Hart (1995) argues that a firm's competitive strategies and performance depend significantly upon firm-specific organizational resources and capabilities. So, competitive advantage is a powerful driver for organizations that move toward sustainable networks and partnerships. As the case illustrates, employees, the most valuable resource in the organization, are aligned with the strategic challenge of the organization (innovation, cost reduction, added value, etc.) developing the company's human capital as a sustainable competitive advantage through building, linking and bonding tasks (Bartlett and Ghoshal, 2002) within the interfirm ties. This literature reinforces a previous sentence that said 'business model sustainability depends on how its resources and capabilities, behaviour, and goal achievement are aligned and adapted with the environmental factors through their social interactions'. In other words, if social capital is considered as a consequence of managerial choices (Pastoriza and Ricart, 2008) and in turn social capital is considered as a resource that can generate competitive advantage (Tsai and Ghoshal, 1998) through the exchange and combination of resources and capabilities in its social relationships, I will suggest that social capital could be a path to attain sustainable competitive advantage, since social relationship (as the case illustrate) are likely to create a great stock of social capital benefit such as reputation, continuous cost improvement, proud to belong to the organization, socialized innovation, etc.

3 Conclusions

In the competitive business environment firms should possess the ability to manage their relationships in an effort to respond more flexible to their environments. The existent business model literature is dominated by economic theories but they are not capable to explain how managerial choices are embedded in their social interactions. Hence, I propose the incorporation of social capital theory since it is understood as the goodwill that is produced by the levels of successful relationships among different parties and can be exchanged to facilitate action. So, social capital is considered as a resource that generates competitive advantage through the social ties, which are seen as organizational advantages since they are reflected on firm's capabilities for creating and sharing knowledge. So, if each manager-selected choice depends on the type of social connection, I will suggest that manager's choices can be related positive with dimensions and sources of social capital. In turn this dimensions and sources contribute to create the social capital property which can be considered as a consequence because each managerial choice derives a consequence as Casadesus-Masanell and Ricart (2009) points out. Moreover, business model is continuously evolving because choices yield consequences and consequences enable choices, at the end they generate feedback loops. The spin of these loops leads to increase or decrease the performance of business models and its sustainability through the social interactions since they are needed if we would like to stay on the path to sustainability (Sharma and Ruud, 2003).

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Annex 1:

Figure 1. Examples of the conceptual relation between business model choices with dimensions and sources of social capital

Types of Business Model's Choices

Dimensions of Social Capital	Policies	Assets	Governance structure of assets and policies	Sources of Social Capital
Structural	For instance, practices or policies adapted in different networks meetings inside firms in order to enhance new opp., such as brain storming	For instance, Corporate Social Responsibility (CSR), investment in information systems to enhance better communication between parties.	For instance, monitor the innovation exchange resources among groups through information systems.	Opportunity
Relational	For instance, incentive practices, RRHH policies, which reinforce the trust and committed of employees.	For instance, investment in internal facilities of R+D, such as logistic systems.	For instance, flexible innovation strategies in order to adapt to client necessities, such as strategic alliances.	Motivation
Cognition	For instance, gather information from inside and outside of the company in order to provide a benchmarking and know which are the market needs.	For instance, invest a percentage of R+D profits in new products and/or services of the company.	For instance, open communication and information transparency reinforcing the ability to access and mobilize the firm's resources.	Ability

Annex 2:

Table 1. Major choices of Ros Roca business model

Choices	Description
Continuously innovation	Ros Roca suggests technological solutions. This solutions have to adapts to the client necessities. Thus, its products have to be environmentally sustainable. In order to do that, it has to be less costly, more efficient in its production, and with less energy consumption.
Sharing profits	The established incentive practices around the company is based on sharing within its workers the additional 30% of the organization profits due to the high commitment of them.
External relationships	Through alliances and collaboration agreements with other companies, universities, and technologists Ros Roca acquires new market knowledge based on products and solutions
Organizational structure and management model	The headquarters of Ros Roca promote the stable production, as well as the participation and the implication of the whole organization in the projects. In the same way, they facilitate the open communication and the transparency among groups (multidisciplinary, autonomous, and with shared responsibilities).
Competitive prices	The company fixes a price higher than its competitors due to its innovation, quality, and differentiated offered service with its global solutions.

Annex 3:

Figure 2a. Ros Roca business model choices associated with dimensions/sources of social capital

Dimensions Sources / Choices	Structural - Opportunity	Relational - Motivation	Cognitive - Ability
Continuously innovation	Due to installed base and knowledge base achievement, it brings the opportunity to continuously innovate in order to added value to the client products or services opening new opportunities.	The innovation allows flexible strategies. These strategies promote trust and trustworthiness between and within the different parties of the organization. In addition, their flexibility allows adaptation to client necessities.	Employees are the most important value, which bring a reputation of competitiveness in the market and continuously innovate.
Sharing profits	The incentive practice makes easier the organizational structure change bringing new opportunities in order to reduce the cost production and improve the operative efficiency.	The incentive practice reinforces and awards people high commitment in order to improve the reduction of cost production and favour the trust relationships. This choice reinforces the key drivers: (1) continuous innovation culture; and (2) client attention creating high installed base clients and network externalities.	The commitment consequence generates a continuous cost improvement and a high service in the hot line. All of these consequences are achieved sharing information between groups and project results
External relationships	Agreements with other parties give to Ros Roca the possibility to obtain new opportunities in the market in order to anticipate and be closer to client needs, develop error acceptances, etcetera.	This choice develops the ability to mobilize the embedded resources in its structure to its favour. In addition, through its reputation and committed employees develop trusting parties agreements.	Agreements give the opportunity to share and acquire knowledge and information from other parties of the agreement.
Organizational structure and management model	Organizational structure choice allow to have a organization composed by autonomous and auto decision making groups. Those groups generate informal ties due to its proud to belong to the company allowing a high value added to the customer opening new opportunities since it increases their knowledge base and installed base of clients promoting a continuous innovation culture.	The new model promotes the participation and implication of all the employees. In addition, it facilitates the open communication and transparency of results facilitating the informal ties creation. As the result of that, it contributes to the cost reduction and the proud to belong to the organization.	The organizational structure promote multidisciplinary groups that share information helping the continuous innovation.
Competitive prices	Competitive price bring new competitive market response in front of the competitors due to its good margins, high volume, and client willingness to pay.	The competitive prices are fixed through their product offering. The innovation, quality, and differentiated offered solutions develop trust and trustworthiness from their clients. This fact is showed through the high willingness to pay.	This choice can be related to one embedded resource in the cost structure. In addition, the price is valued by the innovation of the product, the quality, the acceptance, etc. giving a response economic transaction due to its competitive advantages.

Figure 2b. Ros Roca business model choices associated inside the preliminary model

Types of Business Model Choices of Ros Roca

Dimensions/Sources of Social Capital	**Policies**	**Assets**	**Governance structure of assets and policies**
	Incentive practice and Organizational structure change	Competitive prices	Continuous innovation External relationships
Structural/ Opportunity	- Reduce cost production - Improve operative efficiency - Anticipating client needs	- Generate new competitive market response	- Installed base and knowledge base - Added value to products and services
Relational/ Motivation	- Reinforce and award people high commitment - Continuous innovation culture - High installed base clients - Network externalities - Participation and implication of all the employees - Open communication - Transparency of results	- Innovation, quality, and differentiated offered solutions front its competitors	- Flexible strategies that allows adaptation to client necessities - company reputation and committed employees
Cognition/ Ability	- Sharing information between groups and project results - Multidisciplinary groups	- Embedded resource in the cost structure - Economic transaction response	- Employees are the most important value - Agreements with other parties