

Strategic flexibility and change: The impact of social networks

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Abstract

This paper examines how the characteristics of CEOs' social networks, such as the size of the network and the strength of the ties, influence strategic flexibility from a strategic change perspective. External social networks can affect strategic flexibility positively. Previous experience with strategic change will influence external social networks differently, in ways that have repercussions for strategic flexibility. The data were gathered from surveys completed by the CEOs of 203 Spanish firms. The methodology used is regression analysis. We observe that external social networks affect strategic flexibility positively, primarily through the greater size of the networks. We also find that the effects vary if previously the organization is involved in a process of strategic change.

Keywords: external social networks, strategic flexibility, strategic change, CEO, Spain

Today's environments are increasingly turbulent. One way in which organizations respond to uncertain environments is by increasing their strategic flexibility (Abbott & Banerji, 2003). Strategic flexibility is the organization's ability to respond to the changing conditions of the environment and to develop or maintain competitive advantage (Hitt, Keats, & DeMarie, 1998; Sánchez, 1995). This dynamic capacity is highly dependent on obtaining and analyzing information and knowledge from the environment.

Managers' relationships with other people are widely recognized as a crucial determinant of their access to information (Anderson, 2008). Managers make the determining strategic decisions for the organization (McDonald & Westphal, 2003; Zaheer & Bell, 2005), using the resources that reach them through their social networks (Geletkanycz & Hambrick, 1997; Ruey-Kei & Jason, 2005). A social network refers to 'the pattern of ties linking a defined set of persons or social actors' (Seibert, Kraimer, & Liden, 2001, p. 220). Research on social networks suggests that social network ties enable collaborative work and allow the sharing of ideas, information and knowledge between members (Fliaster & Spiess, 2008). So, social networks can play a key role in enhancing strategic flexibility and other organizational capabilities (Liebeskind, Oliver,

Zucker, & Brewer, 1996). They provide an informative link between the environment and the organization, which could condition the firm's strategic flexibility. Managers' social network will be able to undertake new initiatives to react faster to changing market conditions and possibly make higher-quality decisions because decisions are made closer to the relevant information and knowledge (Andersen, 2004). For example, fostering extensive social networks helped firms in the pharmaceutical industry identify relevant external knowledge and adapt successfully (Henderson, 1994). Characteristics of social networks, such as the size of the network and the strength of the ties, provide different benefits resulting from the social structure that can be mobilized to facilitate action (Adler & Kwon, 2002) in ways that have repercussions for strategic flexibility. In short, in this paper, we examine the influence of size and strength of the ties of social networks on strategic flexibility. Few studies have dealt with the effect of social structure on strategic flexibility (Liebeskind et al., 1996, is an exception).

Finally, we analyze whether in special contexts, such as that of a strategic change, the relation described above could be significantly different. The literature on strategic change considers strategic flexibility to be one of the dynamic capabilities through which firms confront change

(Nadkarni & Narayanan, 2007; Zajac, Kraatz, & Shortell, 2000). Therefore, situations of strategic change require higher levels of this capacity, and CEOs may attempt to exploit social structures to a greater extent to obtain more information and knowledge that permits them to act rapidly and flexibly.

This paper performs a literature review of managerial social networks and strategic flexibility. It then analyzes the connection between social networks and the organizational strategic flexible response of firms, expanding and generalizing from the conclusions of prior studies (e.g., Liebeskind et al., 1996). It also studies whether this relationship could vary in the process of strategic change, since such changes require higher levels of strategic flexibility, for which managers can use intensively their social networks. The findings contribute to the literature on social networks in organizational behaviour by supporting and extending our understanding of how social network structure is linked to the ongoing process of strategic action. The paper's final section presents the results, discussion, conclusions and applications of our study.

CONCEPTUAL DEVELOPMENT

Strategic flexibility

Strategic flexibility refers to the ability to precipitate intentional changes and adapt to environmental change through continuous changes in current strategic actions, asset deployment, and investment strategies (Aaker & Mascarenhas, 1984; Evans, 1991; Hitt et al., 1998; Sánchez, 1995). Firms achieve strategic flexibility through their strategic actions (Evans, 1991; Volberda, 1998), and flexible firms exhibit both diversity in strategic response and rapid shifts from one strategy to another (Sánchez, 1995).

The literature on strategy has discussed two main aspects of strategic flexibility: resource deployment and competitive actions (D'Aveni, 1994; Eisenhardt & Martin, 2000; Miller, Lant, Milliken, & Korn, 1996). Because organizations are internalized structures for allocating resources (Williamson, 1975), the diversity and frequency of shifts in patterns of resource deployment (Fombrun & Ginsberg,

1990) are critical to strategic flexibility. Indeed, flexibility in exploiting and controlling resources may explain why some firms move more quickly into new niches (Eisenhardt & Martin, 2000; Fombrun & Ginsberg, 1990). Similarly, competitive actions are the means through which firms not only establish and protect their own advantage but also erode competitors' advantages (Ferrier, 2001; Ferrier, Smith, & Grimm, 1999; Young, Smith, & Grimm, 1996). The frequency of new and diverse sets of competitive actions (action complexity) that firms undertake determines their ability to change competitive posture and respond quickly (Young et al., 1996). In this study, we focus on the role of social networks as a source of intangible resources that may influence managers' decisions and actions in relation with firm' strategic flexibility.

Social networks

The external social networks of the CEOs, defined as the systems of relationships that CEOs have with other actors outside their organization, are widely recognized as a crucial determinant of their access to information and knowledge (Gulati, Nohria, & Zaheer, 2000). We focus on networks of CEOs because they are in a particularly favorable position to collect and manage the information that enables organizations to act (Mintzberg, 1973). CEOs with greater access to timely and relevant information are better able to make sense of equivocal events in their environment, notice emerging trends and problems, and achieve higher performance (Burt, 2000; Thomas, Clark, & Gioia, 1993).

Two important characteristics of the structure of social networks are the size of the network and the strength of the ties (Anderson, 2008; Cross & Cummings, 2004; Gabbay & Leenders, 2001). Network size is important because each connection that a person has represents an information channel. When a person takes into account the opinions of different audiences, he or she is better prepared to anticipate different contingencies (Burt, 2004; McDonald, Khanna, & Westphal, 2008; Reagans & Zuckerman, 2001). This can favour the emergence, combination or

recombination of good new ideas and actions (Obstfeld, 2005). Thus, executives who use more information sources have greater access to competitive ideas and opportunities and better results (Dussauge, Garrette, & Mitchell, 2000; McEvily & Zaheer, 1999; Zaheer & Bell, 2005; Zaheer & Zaheer, 1997).

Another key aspect of networks that affects information flows is the strength of the ties. Strong ties facilitate the exchange of detailed information (Krackhardt, 1992; Uzzi, 1996), due to the fact that they are characterized by frequent interaction, a common history and mutual trust (Anand & Khanna, 2000; Granovetter, 1982, 2005). However, such networks require more maintenance, which implies that the volume of information will be smaller and probably redundant.

External managerial social networks and strategic flexibility

The literature supports positive linkages between access to CEOs' information and knowledge and the repercussions of it for the corporate outcomes (Baum, Calabrese, & Silverman, 2000; Dyer & Singh, 1998; Gulati, 1999). Managerial social networks are sources of information and knowledge, which affect managers' perceptions and strategic decisions. It condition organizations' performance (Borgatti & Cross, 2003; Geletkanycz & Hambrick, 1997; Halebian & Rajagopalan, 2005; Peng & Lou, 2000; Uhl-Bien, 2006) and capabilities (Cross, Parler, Prusak, & Borgatti, 2001; Lee, Lee, & Pennings, 2001; Lessard & Zaheer, 1996; Li, Liu, Duan, & Li, 2008). In this context, we propose that different characteristics of social networks like size and strength of ties may have different implications for strategic flexibility. The network literature suggests that large networks will foster strategic flexibility through broad scanning, speedy diagnosis, and simultaneous consideration of strategic alternatives. They thus generate a greater variety of perspectives and stimulate criticism, since they have more access to new and diverse information and knowledge (Burt, 1992). In fast-changing industries, greater networks allow managers to notice and respond to

more stimuli (Campbell-Kelly, Garcia-Swartz, & Layne-Farrar, 2008), reducing the gap between real and actual adaptation to the environment. Managers who fail to notice important environmental changes are unlikely to adjust the firm's strategic actions (Lant, Milliken, & Batra, 1992). This promotes more extensive discussion of strategic choices (Lant et al., 1992), reducing the likelihood of cognitive inertia (Hodgkinson, 1997; Reger & Palmer, 1996) and status quo behavior (Miller & Chen, 1996) that inhibit strategic flexibility. Large networks enable firms to develop a comprehensive awareness of new opportunities and thus to develop new resources and to change their competitive posture quickly by promoting better inference of continuously shifting competitor moves.

The duality of strong ties has been demonstrated (Ahuja, 2000). Strong ties are negative with respect to some organizational capabilities and output, particularly to innovation (Ahuja & Lampert, 2001), but they can lead to better results (Lorenzoni & Lipparini, 1999; Zaheer, McEvily, & Perrone, 1998) and competitive capacities (McEvily & Marcus, 2005) in other occasions. The quality, trust, and exclusivity that may characterize information and knowledge derived from these ties makes them valuable and positive in helping the organization to respond to certain contexts (Dyer & Nobeoka, 2000; Geletkanycz & Hambrick, 1997; Kraatz, 1998).

This leads us to articulate the following hypotheses (see Figure 1):

Hypothesis 1a: In external social networks of CEOs, greater network size will be positively related to somewhat higher levels of strategic flexibility.

Hypothesis 1b: In external social networks of CEOs, greater strength of ties will be positively related to somewhat higher levels of strategic flexibility.

Strategic change, strategic flexibility and external social networks

Strategic change can be defined as a difference in the form, quality, or state over time (Van de Ven & Poole, 1995) in an organization's alignment

with its external environment. Such change has been recognized as an important phenomenon because it represents the means through which organizations maintain coalignment with shifting competitive, technological, and social environments (Bloodgood & Morrow, 2003; Ginsberg, 1988; Haleblian & Rajagopalan, 2005).

One of the most widely shared and enduring assumptions in the strategy formulation literature is that the appropriateness of a firm's strategy can be defined in terms of its fit, match, or congruence with the environmental or organizational contingencies facing the firm (Ginsberg & Venkatraman, 1985; Miles & Snow, 1984). However, historically, in the strategy literature the concept of matching and alignment has been of a multidimensional and ambiguous nature (Zajac et al., 2000). Thus, if the conditions of the environment change, it is not necessarily evident that an organization should change its strategy to achieve a good fit, since these changes could imply a 'misfit' with the established organizational forces. Zajac et al. (2000) offer an approximation to strategic change in which the comparison of actual and necessary strategic change determines the degree of dynamic strategic fit, which should then influence subsequent performance. The challenge of strategic management is to confront change using flexibility and constant adaptation in order to reach a fit between the firm and its environment (Miles & Snow, 1984).

An important stream of research has discussed the importance of organizational flexibility for strategic change (e.g., Aaker & Mascarenhas, 1984). Organizational resources and competences can act as critical factors for organizations contemplating and implementing strategic change. Strategic change requires firms to take a flexible approach so that they can adapt and improvise to put their best foot forward (Moorman & Miner, 1998). Required strategic flexibility concentrates on the perceptions CEOs have regarding the flexibility the environment demands. In processes of strategic change, these CEOs' perceptions will be accentuated. In stable conditions, investments in flexible resources and strategic options are not so urgent, because an organization is less likely to face circumstances

that require the use of these resources. In contrast, in strategic change context, strategic flexibility is a valuable asset. In this context, CEOs could encourage to develop and use their social networks to obtain greater information and knowledge, which enable the handling of strategic options that can respond reactively or proactively to the demands of the environment, i.e., improve strategic flexibility. The favourable outcomes of greater network size are attributed to the information benefits of access, timing and referrals (Burt, 1997). The benefits of strong ties should be achieved through a network of trusting, supportive, mutually reinforcing relationships that facilitate efforts to change (Goleman, Boyatzis, & McKee, 2002). In short, when firms are involved in a strategic change, the relationship between managerial networks and strategic flexibility could be higher than not changing firms.

This leads us to propose the following hypotheses:

Hypothesis 2a: The size of CEOs' social networks will have a greater positive effect on strategic flexibility in a strategic change context than in a non-strategic change context.

Hypothesis 2b: The strength of ties of CEOs' social networks will have a greater positive effect on strategic flexibility in a strategic change context than in a non-strategic change context.

RESEARCH METHODS

Sample and data collection

The context chosen to test these hypotheses is the geographical region of Spain. We selected this area to minimize the impact of variables that we cannot control in the empirical research. The literature recommends selecting a sample of firms located in a relatively homogeneous geographical, cultural, legal and political space (Adler, 1983; Hofstede, 1980).

We conducted systematic random sampling of 900 companies from a mailing list of *Dun and Bradstreet España*. The search criterion was medium-sized and large manufacturing and services firms, as defined by the guidelines

of the Fourth European Directive (2009).¹ Because our research focuses on strategic flexible actions – that is, on decisions that depend on the CEOs of the companies – we chose CEOs as the key informants.

A questionnaire was sent to the CEOs. After two rounds of follow-up reminders, 203 useful questionnaires were received. The response rate was 22.6%. Incomplete questionnaires and outlier cases were ignored. According to the previous guidelines of the Fourth European Directive (2009), companies were categorized in the group in which achieve at least two of the three criteria of the Directive. The result showed that 43.3% were medium-sized companies and the 56.7% were large companies.

Using the same database, we checked for non-response bias. This source also provided the archival data concerning the annual sales incomes and number of employees of the responding firms and a sample of non-responding firms. The mean differences between the responding and non-responding companies concerning these variables were tested using an unpaired *t*-test. The results demonstrated that all *t*-statistics were non-significant at the level of 0.05. Since the questionnaire was answered by a single informant, we also checked for common method bias using Harman's one-factor test. A principal factor analysis of all measurement items yielded seven factors with eigenvalues larger than one. These factors accounted for 52% of the variance. Since the first factor accounts for 21% of variance (less than half of the variance explained by the set of factors with eigenvalues greater than one), common method variance is unlikely to be a serious problem in the data (Podsakoff & Organ, 1986).

¹ 'Small' companies are companies which do not exceed the limits of two of the following three criteria (in millions EUR): (a) balance sheet total: <5; (b) annual sales: <7; and (c) number of employees: <50. 'Medium-sized' companies are companies which achieve at least two of the following three criteria: (a) balance sheet total: 5–27; (b) annual sales: 7–40; and (c) number of employees: 51–250. 'Large' companies are companies which achieve at least two of the following three criteria: (a) balance sheet total: >27; (b) annual sales: >40; and (c) number of employees: >250.

Definition of the variables

Dependent variable

Strategic flexibility: A scale develop by Verdú-Jover, Lloréns-Montes, and García-Morales (2004) has been used, which is a synthesis of the contributions of Volberda (1996, 1998), since the perspectives of the studies were similar (see Appendix A). Our research is based on a large number of firms and performs cross-sectional analysis. Finally, CEOs had to indicate their level of agreement or disagreement with the statements, using a seven-point Likert-type scale (Cronbach's alpha = 0.865).

Independent variable

External social networks of managers: External social networks of managers were measured observing the size of the networks and strength of the ties that they maintain with their contacts (Anderson, 2008; Collins & Clark, 2003) in seven categories: board directors same industry, board directors other industries, suppliers, clients, financial institutions, competitors and other companies' partners. The size of the network refers to the number of the director's contacts that give him/her relevant information and knowledge (see Appendix A). To measure this rate, we asked directors to identify the number of their relevant contacts for each of the seven external categories (Collins & Clark, 2003; E. L. Hansen, 1995), using a Likert-type scale of 7 points where 1 indicates 'none', 2 'few (1–3)' and 7 'many (>25)' to respond to the following question: 'On average, how many people are important sources of information and knowledge regarding important business or industry trends and issues?' (Cronbach's alpha = 0.841). Tie strength was operationalized as an index measuring frequency of communication or interaction and intensity of trust in the relationship (Burt, 1997; Fischer, 1982; M. T. Hansen, 1999; Marsden & Campbell, 1984; Reagans & McEvily, 2003). The frequency of the relationship was provided through the responses to the question: 'On average, how often do you communicate with the people in each category?' Trust was measured through the response to the question: 'On average, how would you characterize your relationship to each category?' For these cases,

we provided a seven-point Likert scale to which the top managers could respond. For frequency, 1 indicated 'very infrequently' and 7 'very often'. For trust, 1 indicated 'distant' and 7 'trustworthy'. Strength was measured jointly as the average of the standardized values of frequency of the relationship and emotional intensity (Collins & Clark, 2003; Granovetter, 1973; Cronbach's $\alpha = 0.71$).

Classification variable

Strategic change: The CEOs classified their firms like 'involved in a strategic change' or 'not involved in it' based on the subjective perception they had of their organizations. Additionally, the respondents were then asked to express their view across five categories: market penetration, new market development, product/service refinement, and new product/service development (Zajac & Shortell, 1989) and entrepreneur orientation (I + D, technology and innovation; Knight, 1997). CEOs had to indicate their degree of emphasis in relation with the previous categories, using a seven-point Likert-type scale (Cronbach's $\alpha = 0.865$).

To differentiate between groups, we carried out a cluster analysis,² which differentiated clearly between two groups of firms. The first group was composed by organizations concentrate on current products/services, markets and technologies. These firms were identified as organizations not involved in a process of change. The other group collected firms considered to be involved in a process of change. CEOs described them in process of development of new markets, products/services and/or technologies (Zajac & Shortell, 1989). The data in

the analysis coincided with the categories chosen previously by the CEOs.

Control variables

Large companies have a greater number of advantages due to their resources (Barney, 1991). We therefore include size as a control variable. To make organizational size operational, we used the number of employees and annual sales incomes simultaneously as proxy variables.

DATA ANALYSIS

We proceed to study the relations of the variables amongst themselves. To do this, we perform a regression analysis. Named, linearity, homoscedasticity and normality of variables were observed. We used partial regression plots, residual plots and Levene's test and normal probability plots, respectively, to confirm these assumptions. The results show that all assumptions can be confirmed. Finally, the correlations that appear between the dependent and independent variables show that the aggregation grouping of the variables performed is appropriate (see Table 1). The main effects correlate significantly with the dependent variable, as is to be expected when one uses this type of social data (Collins & Clark, 2003; Wincent, Anokhin, & Örtqvist, 2010).

To demonstrate the research hypotheses, we performed a regression analysis to observe the different effects of social networks on strategic flexibility. The regression analysis (Cohen & Cohen, 1983; Stone & Hollenbeck, 1984) analyzed the whole group and the two different sub-groups detected. To analyze the subgroups, we divided

TABLE 1: MEANS, STANDARD DEVIATIONS AND CORRELATIONS

Variable	Mean	SD	1	2	3	4	5	6
1 Strategic flexibility	4.43	1.08						
2 Annual sales incomes	3.07	1.50						
3 No. of workers	5.78	1.97	.511**					
4 Firm age	25.62	9.66	-.104	.047				
5 Uncertainty	4.93	1.21	.104	.079	-.242			
6 Network size	4.02	1.70	.172*	.015	-.197	.446**		
7 Network strength	3.85	0.77	.179*	-.129	.067	.212**	.471**	

* $p < 0.05$, ** $p < 0.01$, $N = 203$.

the sample into two groups: organizations involved (Group 1) and not involved (Group 0) in a strategic change process.

Table 2 shows the results of the full sample. We test the effects of the independent variables, size and strength, on the dependent variable, strategic flexibility. As we can see, only the variable size of network was significant and positive ($\beta = 0.477$, $p < 0.001$). Strength of ties may not have direct effects on strategic flexibility. It shows a curious neutral effect. Therefore, Hypothesis 1a was supported, but Hypothesis 1b was not.

TABLE 2: THE EFFECT OF EXTERNAL SOCIAL NETWORKS ON STRATEGIC FLEXIBILITY

Variables	Total Group		
	Strategic flexibility		
	Model 1	Model 2	Model 3
Constant	1.394 *** (3.397)	1.141*** (2.867)	1.050*** (2.610)
Firm age	-0.093 (-1.845)	-0.077 (-1.590)	-0.093 (-1.867)
Uncertainty	0.708 *** (14.102)	0.615*** (11.589)	0.613*** (11.568)
Incomes	0.115 * (2.035)	0.078 (1.420)	0.059 (1.032)
Workers	0.008 (0.140)	0.024 (0.437)	0.045 (0.799)
Size		0.219*** (4.124)	0.184*** (3.157)
Strength			0.077 (1.400)
R ²	0.492	0.559	0.595
Adjusted R ²	0.469	0.533	0.566
F	21.099***	21.782***	20.809***

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

TABLE 3: THE EFFECT OF EXTERNAL SOCIAL NETWORKS ON STRATEGIC FLEXIBILITY BY GROUP (YES/NO STRATEGIC CHANGE)

Group 0 NO Strategic Change		Group 1 YES Strategic Change	
Variables	Strategic flexibility Model	Variables	Strategic flexibility Model
Constant	1.124** (2.282)	Constant	0.294 (0.445)
Firm age	-0.079 (-1.250)	Firm age	-0.051 (-0.691)
Uncertainty	0.651*** (10.075)	Uncertainty	0.489*** (5.965)
Incomes	0.111 (1.568) 0.023	Incomes	-0.030 (-0.337) 0.160
Workers	(0.347) 0.185*** (2.629)	Workers	(1.759) 0.193** (2.171)
Size		Size	
Strength	0.003 (0.001)	Strength	0.240*** (2.756)
R ²	0.640	R ²	0.595
Adjusted R ²	0.620	Adjusted R ²	0.566
F	32.015***	F	20.809***

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table 3 and Figure 2 show the results of the regression analysis for each of the groups analyzed. The determination coefficient (R^2) was 0.268 ($F = 11.078$, $p < 0.001$) in Group 0 and 0.415 ($F = 16.838$, $p < 0.001$) in Group 1. As we can see, the variable size was included as a significant variable in both groups (Group 0 $\beta = 0.463$, Group 1 $\beta = 0.364$, $p < 0.001$). However, the other variable, strength of ties, shows differences. Only for Group 1, strength of ties exercise a positive and significant influence on strategic flexibility ($\beta = 0.367$, $p < 0.001$). The control variable, number of workers, was also significant ($\beta = 0.263$, $p < 0.01$). In short, the results show us that, in a process of strategic change, the relationship between CEOs' social networks and strategic flexibility is reinforced. It could be explained because CEOs will be motivated to undertake efforts to improve their strategic flexibility; paying more attention to the resources that their social networks provide them. In the same way, the enterprise size becomes important. Large firms have a greater number of advantages due to their resources to implement strategic actions and changes.

We evaluate Hypotheses 2a and 2b by comparing the estimates of relevant coefficients using a two sample t -test. The hypotheses are supported at the level of $p < 0.05$, indicating greater effects of the variables size and strength of ties on strategic flexibility when the companies are immersed in a strategic change.

DISCUSSION

Our research demonstrates the relationship between CEOs' social networks and strategic flexibility. This result agrees

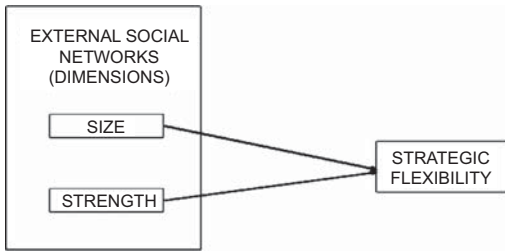


FIGURE 1: THE EFFECT OF EXTERNAL SOCIAL NETWORKS ON STRATEGIC FLEXIBILITY

with the conclusions of a few similar prior studies (Liebeskind et al., 1996), but our study increases the size and diversity of the sample. The results of our empirical analysis show that size has a positive, direct and significant effect on strategic flexibility as we wanted to show in our hypothesis. On the contrary, strength of ties is not significant. These findings could be explained because to generate strategic flexibility, variety of information and knowledge is very important, as it enables monitoring of the environment and provides access to more opportunities and ideas (Burt, 1992; Obstfeld, 2005), such information and knowledge provided by wide networks can be a determining factor *a priori*. However, strength of ties shows an interesting neutral effect on strategic flexibility. Previous studies in relation with other capabilities (for example, learning, innovation ...) strong ties have shown clear positive or negative effects (Ahuja & Lampert, 2001; Dyer & Nobeoka, 2000). In this case, we are proving that this characteristic does not have any special relationship with respect to strategic flexibility. The resources provided by them usually are redundant or need long time to internalize and/or exploit them. In short, at general level, greater size ensures excellent opportunities to take advantage of information obtained for flexible actions (Acquaah, 2007; De Clercq & Dimov, 2008) and to establish a better position in the industry (Gulati et al., 2000; Moran, 2005).

In comparing the two groups created, we first find that the level of strategic flexibility developed is different in each case. Comparison shows that strategic flexibility is greater for firms involved in strategic change than for non changing firms (Monteiro, Arvidsson, &

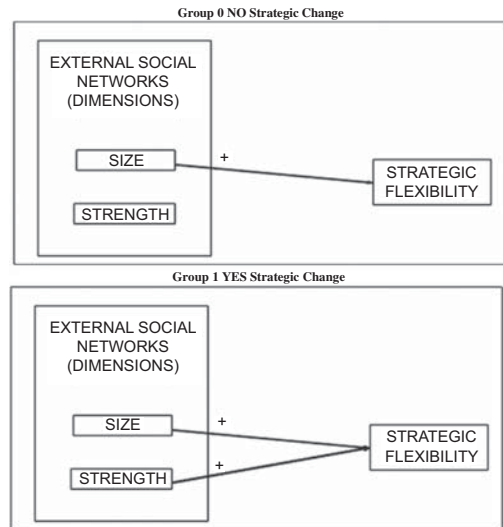


FIGURE 2: THE EFFECT OF EXTERNAL SOCIAL NETWORKS ON STRATEGIC FLEXIBILITY DEPENDS ON WHETHER THE ORGANIZATION IS UNDERGOING A STRATEGIC CHANGE PROCESS OR NOT

Birkinshaw, 2008). According to the theoretical reasoning followed, it seems logical that a higher degree of change an organization faces requires firms to take a flexible approach so that they can adapt and improvise.

If we analyze the hypothesis for two groups individually (see Table 3), we can observe that Group 0 (non changing) follow the line of the total sample. For them, investments in flexible resources and strategic options are not critic. They will normally take advantage of the resources which are easier to obtain and with the lowest cost. In contrast, for firms in strategic change context, Group 1, the use of greater size and tie strength enables firms to enjoy exhaustive control of the environment and translates it into higher levels of strategic flexibility (Table 3). A higher number of contacts generates a higher number of points of view, which contributes to knowing more new ideas and opportunities (Burt, 1992; Obstfeld, 2005). Besides, strength of ties is significant and positive (Krackhardt, 1992). These companies have special need of flexibility to do implement required strategic movements. In addition, the number of workers is significant, i.e., the organization's size becomes important. Larger

firms with extensive social networks may access more information and knowledge and exploit it, transforming social capital to react quickly through strategic actions.

Our study provides important prescriptions for practice concerning the importance of relationships between social relationships, strategic change and strategic flexibility. First, firms could develop social networks, especially greater in size, which could promote strategic flexibility. However, CEOs and firms need to develop social networks adequate to their competitive interests, needs or strategic orientation, remaining conscious of the fact that social networks have different potential benefits but also significant costs (time, resources ...; Adler & Kwon, 2002). CEOs' networks could be significant for the choice, training or retribution of CEOs (Collins & Clark, 2003; Geletkanycz, Boyd, & Finkelstein, 2001; Jensen & Roy, 2008; Sumelius, 2009). The adequate level of strategic flexibility can be implemented through selection of the 'right' CEO with 'right' social networks by the board of directors.

Second, CEOs should make adaptation to the environment a central element of strategic intention by investing in it (Verdú-Jover et al., 2004) and speaking publicly about it, eliminating negative group dynamics that might impede needed strategic changes and establishing positive dynamics to inspire collaborative actions. A firm's lack of flexible practices can be the major impediment to organizational adaptation as an integral element of organizational change, and altering these practices could become the first step in changing an organization (Verdú & Gómez-Gras, 2009). Strong commitment is needed to manage and disseminate the strategic changes and process on all levels of the firm.

LIMITATIONS AND FUTURE LINES OF RESEARCH

Among the main limitations of our research, we would highlight the subjective character of the CEOs' answers which may affect the result. However, most company decisions are based on the managers' perceptions, and managers always have limited information, not only about the environment but sometimes even about their own companies (Simon, 1947). CEOs manage the adaptation

of their organizations based on their perceptions of the environment, perceptions that are influenced by environment, organizational structure and personal characteristics (Yasai-Ardekani, 1986).

In addition, we must take into account the fact that the sample of firms is not distributed uniformly according to the number of employees and the annual sales incomes. This factor and the cross-sectional character of the research somewhat limits generalization from our results. Thus, longitudinal research that analyses a greater number of cases and observes effects on different kinds of organizations could enrich the literature on external social networks and strategic change.

Finally, this research has opened another possible research line to observe whether there are significant differences between the factors that influence strategic flexibility, based on the kind of QM initiative, absorptive capacity and internal cooperation in the organizations. Complex constructs like social networks require a great deal of study to grasp the different perspectives from which to enrich researchers' and managers' knowledge. Future research should analyze the dimensions of social networks in greater depth to guide decision making for managers. We add to the existing literature the idea that we must integrate social networks into analysis of strategic flexibility, as this integration suggests a new way to determine organizational responsiveness through the measurement of strategic flexibility.

CONCLUSION

The conclusions of this research verify the effect of external social networks on the strategic flexibility, as do other previous studies (Gilsing & Duysters, 2008; Lee et al., 2001; Shimizu & Hitt, 2004). However, this study contributes new results, since it distinguishes between the effect of the two characteristics of networks, size and strength of ties, in strategic flexibility. Further, it shows that the structure of social networks has a more important influence on strategic flexibility in more complex organizational situations, such as those of strategic change. Strategic flexibility is a dynamic capacity that detects and activates the process of strategic changes, simultaneously encouraging the successful carrying out of this process. The

challenge of strategic management is to manage change using strategic flexibility and constant adaptation to achieve a fit between the firm and its environment (Venkatraman, 1989). Managers can use more their social structures to take advantage of the benefits of information and knowledge that could optimize the results (Burt, 2000, 2005; Edelman, Bresnen, Newell, Searbrough, & Swan, 2008; Gilsing & Duysters, 2008).

In conclusion, the study contributes to several concerns associated with previous research on social networks. First, the broader view of social networks operationalized here provides the focus for a more comprehensive and fine-grained analysis of their effect on strategic flexibility. Second, although many studies have investigated the more interesting issues of how social networks matter, under what circumstances, to what extent, and in what way, they have neglected the gap filled here of recognizing heterogeneous strategic orientation, which may influence the way social networks affect organizational output.

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APPENDIX

A. Scales

EXTERNAL SOCIAL NETWORKS: SIZE AND STRENGTH

Categories of external connections	On average, how many people are important sources of information regarding important business or industry trends and issues? None = (0) (1-3) (4-5) (6-10) (11-15) (16-25) (>25) = Many 1 2 3 4 5 6 7
Board directors same industry	1 2 3 4 5 6 7
Board directors other industry	1 2 3 4 5 6 7
Suppliers	1 2 3 4 5 6 7
Clients	1 2 3 4 5 6 7
Financial institutions	1 2 3 4 5 6 7
Competitors	1 2 3 4 5 6 7
Other companies' partners	1 2 3 4 5 6 7

Categories of external connections	On average, how would you qualify your relationship with each category? Distant = 1 2 3 4 5 6 7 = Trustworthy	On average, how often do you communicate with each category? Very infrequently = 1 2 3 4 5 6 7 = Very often
Board directors same industry	1 2 3 4 5 6 7	1 2 3 4 5 6 7
Board directors other industry	1 2 3 4 5 6 7	1 2 3 4 5 6 7
Suppliers	1 2 3 4 5 6 7	1 2 3 4 5 6 7
Clients	1 2 3 4 5 6 7	1 2 3 4 5 6 7
Financial institutions	1 2 3 4 5 6 7	1 2 3 4 5 6 7
Competitors	1 2 3 4 5 6 7	1 2 3 4 5 6 7
Other companies' partners	1 2 3 4 5 6 7	1 2 3 4 5 6 7

Strategic flexibility

1. In our company we reformulate strategies very quickly when it is required by market conditions or the strength of competitors.
2. When the environment conditions change, we have a range of strategic measures at our disposal to face the change.
3. Our position in the market allows us to control the competition and make it difficult for new entrants to the market.
4. In our company we can influence certain political actions which tend to modify commerce regulations.

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