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<u>Auteurs</u>

Houda Ghaya

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Faculté des sciences économiques et de gestion

Pôle européen de gestion et d'économie (PEGE) 61 avenue de la Forêt Noire F-67085 Strasbourg Cedex

Secétariat du BETA

Géraldine Manderscheidt Tél.: (33) 03 68 85 20 69 Fax: (33) 03 68 85 20 70 g.manderscheidt@unistra.fr http://cournot2.u-strasbg.fr/beta







Board of Directors' Involvement in Strategic Decision Making Process: Definition and Literature Review

Houda Ghaya^a

^aDoctoral student, BETA – UMR 7522 – Université de Strasbourg ghaya@unistra.fr

Abstract

Over the past few years, research in corporate governance has devoted increased attention to board of directors' involvement in the strategic decision making process. But in spite of its growing interest, the literature provides theoretical pluralism and mixed empirical results. Indeed, the concept has not been well defined by past studies and there is no consensus about its operationalization.

In this paper, we review the literature on board's involvement in the strategic decision making process and question the definitions of this phenomenon and if an operational measure can be proposed for future research.

Keywords: Board of Directors; Strategic Decision Making Process; Board involvement; Corporate Governance.

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INTRODUCTION

Over last years, major events have encouraged academic research in corporate governance to devote increased attention to board of directors' involvement in strategic decision making process.

First, corporate governance scandals and the recent financial crisis generate many critics about various aspects of board functioning as competence, behavior and composition. The uncertainty of major issues as the developing and implementing of strategy require more involved members with appropriate skills and knowledge (Ingley and Van der Walt, 2001). Moreover, the developing of legalistic environment (new laws, numerous reports of good practices in corporate governance) generate a great pressure on Board of Directors (BD) functioning and apply for more transparency and accountability of boards in taking their strategic responsibilities.

Second, recurrent critics of actionnarial approach (dominant framework in corporate governance, Charreaux and Debrières, 1998) have influenced the orientation of literature on BD. The actionnarial approach present many theoretical limits in explaining BD composition (reduced in demographic characteristics) and BD roles (reduced in management monitoring without recognition of its strategic role). However, many scholars as Zahra and Pearce (1989), Pettigrew (1992), Pugliese et al (2009) called for more process studies on board dynamics and involvement in establishing strategy. Moreover, research in corporate governance is characterized by the dominance of empirical investigation of the input/output relation. In other terms, many empirical studies investigate the linkage between corporate governance best practices (especially CEO/Chair duality and insider/outsider composition) and corporate performance. However, research findings have generally failed to support clear cause-effect between the two (Carpenter and Westphal, 2001; Heracleous, 2001; Pye and Camm, 2003). Heracleous propose four explanations. First, it is possible that these factors are irrelevant to corporate performance as argued by Johson, Daily and Ellstrand (1996) i.e. -this relationship does not exist in nature-. Second, researchers are often unable to observe governance actors 'in action', thus, the operationalization of theoretical concepts has a low validity. Third, many studies often seek to correlate board attributes directly to organizational performance, or the process is more complex. Finally, there are a great difference between organizations, thus practices in corporate governance diverge. He explain that mixed results about the relationship between board attributes and performance include conceptual issues such as

ignoring contextual factors and their effects on boards and company performance, the insufficient attention to group dynamics, and the complexity of the process that cannot be well captured by empirical models. Pettigrew (1992) argued, in addition, that the relationship between demographic characteristics (composition) and organizational outcomes such as corporate performance is not direct and the process could not be explained via the direct link.

To answer to this current events and critics, a rich body of theoretical and empirical literature was developed recently and treated the subject of board involvement in strategy under different angles of analysis exploring board strategic activities, behavior, and dynamics (Huse, 2007; Pugliese et al, 2009). Despite the growing literature about the phenomenon, past studies present some limits:

- The lack of conceptual definition of board involvement and consensus about its operationalization: Studying past literature highlight that authors used different terms to refer to 'board involvement' as 'task performance', 'board activities', 'board strategic contribution' etc. without presenting conceptual definition. In consequent, we observe different operationalizations and methodologies in studying this subject. Many scholars focused on board contribution in steps of the strategic process, other group of studies focused on the strategic output of board activity, and a last group focused on the determinants of board involvement.
- The lack of process model about board involvement: The strategic choice and the cognitive perspectives have contributed to develop theoretical analysis of how and why board contributes in strategic process. Some authors developed integrative models based on complementarity between opposite theories (especially agency and stewardship theories) to describe a general set of board tasks. However, it still lacks of analysis of the general process of board involvement which, reflect board dynamics and process, how internal and external contingencies could influence it and the effect on organizational outcomes. Some recent studies as Pye and Pettigrew (2005), Minichilli, Zona and Zattoni, (2009) and Zang (2010) highlight the need of process model that explores variation in board process and effectiveness in different organizational contexts.
- The lack of empirical conclusiveness: the study of empirical researches about board strategic involvement reveal mixed results. There is no convergence about the desirability of board involvement and about its determinants factors. Furthermore, almost empirical researches have simplified the strategic process on two main steps (formulation and

implementation) as Judge and Zeilthaml (1992), Heracleous (2001), Huat Ong and Hoon Lee (2000), Paye and Camm (2003), Minichilli, Zattoni and Zona (2009).

The purpose of the paper is to examine the evolution of literature on board involvement in strategic decision making and to analyze and question the definitions of this concept and if an operational measure can be proposed for future research.

The paper is divided in three sections. In the first section, we present an appraising of definitions of 'involvement' and 'board involvement' and a synthetic definition of the phenomena. In the second section, we present the theoretical and empirical debate about BD involvement in the strategic process. In the last section, we propose a synthesis of determinant factors and effects of BD involvement that could be used in future empirical research.

1. Analysing of definitions of board involvement in the strategic decision making process and suggestion of synthetic definition

In corporate board research, the term involvement was exclusively related to BD participation in strategy. However, it is difficult to attribute a general definition because of the variety of its uses and measures applied in theoretical and empirical studies. In this section, we present, first, a summary of main definitions and interpretations used to describe board involvement in strategy or in the decision making process. Next, we refer to other fields of research where the concept of involvement is well defined as psychology, marketing and organizational behavior. The objective is to look for attributes of this concept and how it could be applied in BD research. Finally, we propose a synthetic definition bases on crossing between these elements and literature on BD involvement in strategy.

1.1 Definitions and operational uses of board involvement in the corporate governance research

To refer to board involvement in the strategic process, different expressions are used as 'board strategic involvement', 'strategic participation/contribution' or 'board task performance'. Because of the theoretical pluralism and the lack of satisfactory theory about BD (Charreaux, 2000), we find a variety of visions and interpretations:

- Which BD roles are concerned? Some authors define the phenomena as the strategic role of the board, like Andrews (1980, 1981a, 1981b) and Demb and Neubauer (1992). It is

considered as "the overall level of participation of board members in making non-routine decisions that affect the long-term performance of an organization" (Judge and Zeitmal, 1992). However, other group of scholars as Minichilli, Zattoni and Zona (2009) and Forbes and Milliken (1999) relate it to both control and service roles. Control tasks include decisions regarding hiring and compensation management. The service tasks include providing experts during major events and generating and analysis strategic alternatives during board meeting (Forbes and Milliken, 1999, p. 492).

- Which strategic steps are concerned? Some authors simplify the strategic process in only two steps and evaluate board involvement by its participation or not in these two steps. We find in this tradition Judge and Zeilthaml (1992), Heracleous (2001), Huat Ong and Hoon Lee (2000), Paye and Camm (2003), Minichilli, Zattoni and Zona (2009). Other group of scholars considers only the step of strategic formulation (Andrews, 1980; Rindova, 1999). Some others consider a large vision of the strategic process containing formulation, implementation, evaluation and control as Demb and Neubauer, (1992) and Huse, (2007).
- Which set of activities? There are a variety of sets of activities proposed by authors depending on their vision of strategy and board roles. For example Minichilli, Zattoni and Zona (2009) propose a set of six tasks related both to service (advice, networking and strategic participation) and control (behavioral output and strategic control) (p. 56)." McNulty and Pettigrew (1999) propose three types of tasks: taking decision', 'shaping decisions' and 'shaping the content, context and conduct of strategy'. For Zhang (2010, p. 474), it covers set of activities such as, the development of the firm's mission and vision, the formulation of business concepts, the evaluation and control of strategic proposals and the implementation of approved strategies.
- *Link with effectiveness?* Some scholars consider the phenomenon as the effectiveness or the performance of BD in assuming its tasks (as Minichilli, Zattoni and Zona, 2009, and Forbes and Milliken, 1999). However, the effectiveness represents an evaluation of board functioning; indeed, do not cover different types and manners of involvement. In other studies, scholars argued that board can be involved to various degrees in each of its areas of activities (Huse, 2007).

The following table resumes definitions and visions adopted by main works on BD involvement in strategic process.

Table 1: Main interpretations (definitions) of board involvement in strategic process

Author	Definition
Andrews (1980)	Andrews (1980) argues that board of directors is in a great position to contribute on the strategic planning and formulation. He associates an effective 'board strategic contribution' to Board involvement in the critical strategic issues as generating alternatives and search for new opportunities [], also, in supporting management imagination, overviewing innovative processes and reviewing CEO propositions".
Rindova (1999)	Rindova (1999), board involvement in strategy is associated to <i>directors' participation in the thinking through of strategy making: environmental scanning and interpretation and strategic formulation.</i>
McNulty and Pettigrew (1999)	McNulty and Pettigrew (1999) have proposed a detailed set of strategic activities that board of directors can insure during the strategic decision making process. They identify choice, change and control as key aspects of corporate strategy and illustrate three level of board involvement in strategy: 'taking decision', 'shaping decisions' and 'shaping the content, context and conduct of strategy'.
Forbes and Milliken (1999)	Forbes and Milliken (1999) defined 'board task performance' as the board's ability to perform its control and service tasks effectively [] control tasks include decisions regarding hiring and compensation management. The service tasks include providing experts during major events and generating and analysis strategic alternatives during board meeting. (p. 492)
Judge and Zeithaml (1992)	Judge and Zeithaml (1992) propose: "the overall level of participation of board members in making non-routine, organization-wide resource allocation decisions that affect the long-term performance of an organization" (P. 771).
Demb and Neubauer (1992)	Demb and Neubauer (1992) consider establishing the strategic direction of the corporation as the most important task of board of directors (P.50). In consequence, a meaningful board involvement, for them, is characterized by the manner <i>in which directors help to define company strategy (p.55)</i> [] <i>it depends on the strategy process (p. 73)</i> .
Stiles and Taylor (2001)	Stiles and Taylor (2001) associate board involvement in strategic decision making in large organizations to "setting the context of strategy" through several activities: reviewing the corporate definition, actively assessing and reviewing strategic proposals and often changing proposals through comment and advice [] encouraging management with good track records in their strategic aims and through the selection of directors".(P. 31)
Huse (2007)	Huse (2007) argued that board strategic involvement is widely related to the content of strategy. He define strategy as "the development, maintenance and monitoring of the firms' core competencies with the purpose of achieving long-term results and survival. Strategic decision-making involves resolving uncertainty, complexity and conflict" (P.239). So, board strategic involvement covers "corporate mission development, strategy conception and formulation, and strategy implementation [] the board can be involved to various degrees in each of these areas." (p. 240)
Karoui (2009)	For Karoui (2009), board involvement represents the effective measurement of the intensity with which board undertakes its strategic activities (P.152). It is related to different forms of board activation. The author defines board activation as "the decision to make a portfolio of activities. This decision can be individual or collective, deliberated or emergent, voluntary or forced. Board activation leads to the expression of a set of expectations and generates either strong or weak level of commitment on boards 'activities." (p. 153)
Minichilli, Zattoni and Zona (2009)	Minichilli, Zattoni and Zona (2009) defined board task performance as "the ability of the board to perform six tasks related both to service (advice, networking and strategic participation) and control (behavioral, output and strategic control) (p. 56)." This empirical definition was inspirited from the theoretical framework of Huse (2005) about board involvement and the model of Zona and Zattoni (2006) of board task effectiveness.
Zhang (2010)	Zhang (2010) have studied empirically the impact of possessing and using diverse information of board members on the quality of board task performance. They define board task performance as "a source of competitiveness, which can protect the firm's long-term health against managerial short-term plans." It covers set of activities such as, the development of the firm's mission and vision, the formulation of business concepts, the evaluation and control of strategic proposals and the implementation of approved strategies. (p. 474)

In short, a review of the literature quickly reveals that one researcher's definition and use of "board involvement" is very different from another's. Most studies never specifically define what they mean by involvement. Perhaps, they simply use the term and assume the reader understands the concept. Indeed, the theoretical ambiguity about the phenomenon generates different visions of treatment in empirical studies.

Moreover, some scholars as Pugliese et al. (2009) and Zona and Zattoni (2006) highlight that it is an emergent concept from the empirical literature and do not has a universal definition. In the next section, we propose to look for definitions of "involvement" and "job involvement" in social psychology and organizational behavior.

1.2 About the concepts of "involvement" and "job involvement"

The concept of involvement viewed by different fields

In social psychology and organizational behavior research, the use of the concept of involvement is more developed than in corporate governance. The concept was defined by many authors; we refer to Antil (1984) study, Barki and Hartwick (1989) and François-Philippe Boisserolles (2005) to deduct attributes of the concept. In the field of psychology, involvement has a meaning of personal importance to the individual (Antil, 1984). It is used to investigate attitudes, with various social issues. There are two key aspects of an issue: its importance and personal relevance (Barki and Hartwick, 1989).

Barki and Hartwick explain that, empirically, this concept is related to the attitude change and its translation into behavior. Positive or negative attitudes are readily translated into appropriate action. Thus, a greater attitude behavior corresponds to high involvement.

The concept of job (or work) involvement

Barki and Hartwick argue that in the organizational behavior fields, the concept of involvement is always associated to job or work. They present three main definitions relevant to different fields of research. In psychology, the job involvement is seemed as *the degree to which a person's work performance affects his or her self-esteem*. In the marketing and consumer behavior field, a highly job involvement person *is one for whom work is a very important part of life*. For the organizational behavior, the job involvement *refers to the degree to participate in the job. Participative job behavior as making important job decisions and contributing to the organization's goals are important indices of job involvement*. We propose to adopt the last definition of involvement because it seems the nearest definition to previous studies on board involvement literature.

To measure the degree of involvement, specific circumstances that exist at the time of measurement must be taken into consideration (Antil, 1984). Barki and Hartwick argue, also, that sacking of conceptual clarity should be associated with antecedent conditions and subsequent effects. Thus, empirical test of the causes and effects of involvement should be carried out to better understand the extent and nature of involvement. In the organizational behavior, authors identify a number of antecedents and consequences of job involvement. For example, it is viewed as a result of early socialization of individuals and current organizational conditions (antecedents), and it may affect individual and organizational performance (results).

Antil present the stimuli (source or cause of involvement) as a key to understand the level of involvement. For him, Involvement must be conceptualized and operationalized as a continuous variable, not as a dichotomous variable. It does not consist of two mutually exclusive states ("high" and "low"). The inappropriate treatment of a continuous variable as dichotomous could cause, for him, problems and explain the divergence between results.

François-Philip Boisserolles (2005, p. 121) present the job involvement as a cognitive and procedural phenomenon depending of level of performance at work and of central criteria as organization, relational quality, competences, etc. For the behavioral approach, it is viewed as a series of deliberate acts and considered as process, it is related to outside interests of the actions in the search for cognitive coherence (Angle and Perry, 1981, in François-Philip Boisserolles, 2005). Many scholars highly recommended to measure involvement with Likert items of behaviors and activities consistent to the job (Antil, 1984, François-Philip Boisserolles, 2005; Barki and Hartwick, 1989).

1.3 A synthetic definition of board Job involvement

The phenomenon of involvement of board of directors is very complex. Neither the strategic nor the contractual approach of corporate governance does in itself explain the entire process (Charreaux, 2000; Minichilli, Zattoni and Zona; 2009). Pugliese et al. (2009) explain that it is a latent construct emerging from the literature, there is no single way to define or interpret it. For Forbes and Milliken (1999), it's very difficult to measure the task performance of boards because of the confidential and highly interpretative nature of board activities. They also consider it as a latent construct. Pettigrew (1992), Rindova (1999) and MacNulty and Pettigrew (1999) argue that the content of board involvement can be only effectively analyzed through its link with the process of strategy. Board involvement is the 'what' and the strategic process is the 'how' (Rindova, 1999).

Bases on these findings about board involvement and definitions of job involvement, we can summarize the criteria of this concept on:

- a) the process vision of the involvement that includes activities and behaviors of board members;
- b) the importance of antecedents (causes) and results (effects) to understand the phenomenon of involvement, its degrees and natures and
- c) the close relationship with the strategic process, area of board job involvement.

Thus, we propose that board involvement in the strategic decision making process is a process of deliberate and anticipative actions. It refers to board formal and informal, individual and collective participation to a set of activities in the strategic process, which fall under their responsibility of strategic support, service and control.

The process depends on external circumstances related to the firm and environment characteristics and on internal factors related to the board demographic, cognitive, relational and functioning characteristics. It affects organizational results as strategic decisions and corporate performance.

Because the strategic process represent the area of BD involvement, it is important to analyse its steps and how BD could participate in each of them. In the next paragraph, we attempt to analyse the articulation between BD roles and strategic process to deduct a set of strategic activities, as measure of BD job involvement.

1.4 General set of board's activities in the process of strategic decision making

The strategic decision making process

The strategy is a complex and ambiguous concept difficult to assign a clear definition. It is implemented by strategic processes brought to finalized actions that allow creating-value and generate sustainable competitive advantages under certain conditions (Lorino and Tarondeau, 2006). Lorino and Tarondeau defined the strategic process as "a set of finalized actions, organized according to objectives or policies to change the conditions for integrating the firm in its environment [...] the processes are identifiable and observable, both in their results in basic activities that constitute them and the links established between them."

Nevertheless, the process of decision making is complex and non-linear, depending on human behavior (Levy, Pliskin and Ravid, 2010). Pettigrew (1992, p. 171) highlight, also, that: "it is

characterized as one of great complexity and uncertainty, with beliefs and experience performing crucial roles in filtering out ambiguity in the choice process". Steps of the process are interactive and iterative rather than structured and sequential (Rindova, 1999). McNulty and Pettigrew (1999) explain that phases such as identification, developing and selection in the choice process are not necessarily following one another.

In general, it includes all management functions from the definition of the general approach to performance measurement (Fayol, 1916 in Karoui, 2009). Thiétart and Xuered (2005) distinguish between four main steps that are in continuous interaction: (1) Identification and selection of problems (and/or opportunities) through analysis of environment and internal resources of the company. (2) Identification and selection of strategic options (by analysis of the competitive position, identifying alternatives and setting goals of the action-plan steps.) (3) Implementation insured essentially by CEO and his collaborators, (4) Control and evaluation. These steps are identified in some research about board of directors, as Huse (2007), Ruigrock et al. (2006) and Demb and Neubauer (1992).

Interaction between Board roles and board activities during the strategic process

Board roles: The contrast between contractual and strategic board theories led to assign different roles at the board of directors. It is widely recognized that it has the following three functions: control, service and strategic support (Zahra and Pearce, 1989; Charreaux, 2000; Johnson et al., 1996). First, based mainly on the agency theory (Jensen and Mekling, 1976 and Fama 1983), the role of control was the subject of an abundant literature. The board of directors appears as an instrument of managers discipline (Charreaux, 2000). It is responsible for reducing agency costs and arbitrating the distribution of the created value. In practice, the Board has the responsibility to appoint and dismiss the CEO. It is responsible for evaluating management performance, organizational performance and corporate accounts as well as control of strategic implementation. Second, the service role consists mainly to help the company to acquire external resources, which are scarce and essential for its business. According to the resource dependency perspective, board of directors facilitates access to these resources and enables the cooptation of the company with its environment (Pfeffer, 1972 and 1973, Pfeffer and Salancik, 1978). In addition, this role is associated with the leadership council at strategic implementation, the resolution of emerging problems and the management of company image. The board, indeed, represents the company in its environment. Finally, the strategic role is the most complex and less explored empirically

(Rouigrok et al., 2006). In the framework of the cognitive approach and strategic choice perspective, board of directors is responsible for the strategic decision making (Andrews, 1980, Forbes and Milliken, 1999). It participates actively in the steps of the strategic process, as analysis, interpretation and choice of strategic options (Rindova, 1999).

Interaction between board roles: The review of literature about board roles reveals its interaction and interdependence during the steps of the strategic process. Lorsch and MacIver (1989, p. 66-67) argued that the role of adviser and counselor is linked to the strategic role of board members. Directors, in the reality, do not distingue between these two functions. They consider them related to the same responsibility of determining the company policy. Rindova (1999) explained that strategic control requires a thorough understanding of corporate strategy and involvement in the formulation step. That may lead to an effective strategic advice on the one hand, and an effective strategic control and aid in problem solving within the strategic implementation, on the other hand. Thus, according to him and to McNulty and Pettigrew (1999), directors are provided with substantial expertise in analyzing and solving problems through their past professional experiences. They can make their cognitive contributions to serve management not only in strategic formulation but also in the strategic implementation. It is through this contribution that they can evaluate CEO performance and therefore intervene when it is necessary.

Set of board activities to measure board involvement in the strategic decision making process

In the next table, we propose a set of board activities that belong to its different roles (strategy, control and service). Board members have the responsibility to participate in these activities during the process of strategic decision making. The degree of its involvement in each activity could be measured by likert scale (Antil, 1984; Barki and Hartwick, 1989).

Table 2 - Set of board activities in the steps of the strategic decision making process

Steps of the	Board activities	Board roles	Main references
strategic process	(Board involvement in)		
	Setting (initiating and discussing) major objectives of the company policy	Strategy + service	Rindova (1999), McNulty and Pettigrew (1999)
Major objectives and	2. Keep watch on competitive, economic, financial and legal corporate environment	Strategy + service	Huse (2007)
analysis of the company and its	3. Analyzing corporate environment	Strategy + service	McNulty and Pettigrew (1999)
environment	4. Analyzing and evaluating the corporate resources (strength / weakness)	Strategy + service	McNulty and Pettigrew (1999)
	5.Identification of opportunities and problems that the company could avail (depending on its human and financial resources)	Strategy + service	Huse (2007), Rindova (1999)
	6.Identification of options (solutions) for retained opportunities and problems	Strategy	Lorsch and MacIver (1989)
	7. Analysis of the competitive position of the company vis-à-vis the retained problem/opportunity	Strategy	McNulty and Pettigrew, 1999
Identification and selection of strategic options	8. Evaluation of management's proposals and/or propositions of alternative options (advantages and disadvantages, etc.)	Strategy	McNulty and Pettigrew, 1999
	9.Evaluation of the financial impact of alternative and retained options	Strategy	Zahra and Pearce (1989)
	10.Consolidating the options (discussion and making final choice)	Strategy	McNulty and Pettigrew (1999)
	11.Review and approve corporate plan of implementation and actions (main steps and setting objectives and indicators to monitor the implementation progress)	Strategy + control	Lorch and MacIver (1989)
Strategic	12.Tracking of the decision implementation	Strategy + control	Huse (2007)
implementation	13.Intermediation with important external actors to facilitate the implementation	Service	Pfeffer (1972,1973)
	14.Council and advice management in the implementation step	Service + control	Lorsch and MacIver (1989),
	15.Identification of solutions for the emergent problems of management	Service	Pettigrew (1992)
	16.Facilitate (intermediation in) acquiring resources (financial, cognitive or technological resources)	Service	Pfeffer and Salancik (1978
	17.Monitoring the achievement of strategic goals	Strategy + control	Huse (2007), Rindova (1999)
	18. Financial monitoring (control by results, accounts, budget, etc.)	Control	Zahra and Pearce (1989)
Control and evaluation	19.Monitoring the performance of the company via financial and strategic measures	Control	Fama and Jensen (1983)
	20.Evaluation of management performance	Control	Fama and Jensen (1983) Lorsch and MacIver (1989)
	21. The process of appointment or revocation of the CEO and controlling compensation	Control	Lorch and MacIver (1989)

2 Literature on board involvement in the strategic decision making process (board job involvement)

In this section, our objective is to discuss theoretical and empirical literature about the phenomena of board job involvement as presented in the past section.

Literature on BD is characterized by theoretical pluralism and empirical lack of conclusiveness. First, we attempt to distinguee theories that has better analysed board involvement in strategic process from others. Second, we analyse different visions adopted by empirical researches to investigate the subject. These elements are important to deduct the determinants factors and effects of BD involvement for an operational model.

2.1 Theoretical debate

The theoretical pluralism on board research is highlighted by several studies since the end of 80s such as Zahra and Pearce (1989), Stiles and Taylor (2001), Hillman and Dalziel (2003), Pugliese et al. (2009) etc. Lorch and MacIver (1989, p. 8) argued that the question of board's activities and decisions compared to those of management was the controversial point between managers and directors. Thus, there is no convergence between the different theoretical conceptions of board functions (Huat Ong and Hoon Lee, 2000). Studying a review of board theories allow one to distinguish between the theories of the contractual approach and theories of the strategic approach (Charreaux, 2000, 2002a, 2002b). Each of these approaches has a different view of board's roles. The contractual approach has a limited vision of board activities and do not recognize its strategic involvement unless the strategic control. The strategic approach argues for more board involvement in service and strategic activities. In this approach, some theories (as dependence and stewardship theories) defend board strategic involvement without description of its activities in the strategic process. Some others (as cognitive and strategic choice perspectives) defend board participation in strategic processes as formulation, planning, etc. Below, we present these three visions.

2.1.1 The contractual approach

The contractual vision perceives the firm as a nexus of contracts based on an agency relationship between top managers and shareholders (the agency theory) or other stakeholders (the stakeholder theory). The similarity between contractual theories is their vision of board functions: all of them recognize its limited involvement in the firm life and in corporate

strategy. We find in this approach agency and transaction costs theories, class hegemony perspective, legalistic perspective and stakeholder theory.

The <u>agency theory</u> is the dominant perspective on the corporate governance research. While managers are wholly responsible for the decisions of the firms, the role of board of directors is limited to the strategic control and managers monitoring (Jensen and Meckling, 1976; Fama and Jensen, 1983) in order to reduce agency costs and to protect shareholders interest by maximizing shareholder's value. The <u>transaction-cost theory</u> is generally associated to the agency theory because of similarities between the two, particularly with regards to the board of directors' role. In fact, the transaction-cost theory considers top managers opportunistic who do not act in the interest of their enterprise. The board of directors is, indeed, an instrument to control managers (Stiles and Taylor, 2001, p.15).

Despite of its recognition of the control function of boards, the <u>theory of managerial</u> <u>hegemony</u> describes board of directors as passive and fictive legal organism because it does not assume its responsibilities. The management takes the entire responsibility for the strategic establishing and the organizational control (Mace, 1971). Both of managerial hegemony and agency theories concentrate on the board's relationship to corporate management. They assume the importance of the corporate control to reduce conflicts of interest between corporate managers and shareholders (Kosnik, 1987).

In the <u>legalistic vision</u>, boards are responsible for executive hiring, dismissal and compensation (Chaganty, Mahajan and Sharma, 1985). This legal measure helps board to monitor the management activities and to protect shareholders interests. Regarding the <u>stakeholder's perspective</u>, a board provides for arbitration of the rent distribution between stakeholders (Charreaux and Debrieres, 1998; Charreaux, 2000). This vision takes into consideration the notion of skills to explain the involvement of stakeholders (including board of directors) in the value creation. However, it does not explain the origin of knowledge and distinctive skills that underpin the strategies for creating value.

Despite to the dominance of these theories in governance research (especially the agency theory), they suffered from several limitations in explaining the board of directors' roles. For example, all of these theories do not recognize the contribution of board in formulating strategic decisions, ignore the influence of board dynamics and reduce its composition to demographic characteristics.

2.1.2 The strategic approach

The strategic and cognitive theories are interested in the strategic dimension of value creation, particularly in the role of the board in creating new strategic opportunities of development (Charreaux, 2002a, 2002b). Thus, the company is considered as a directory of key skills. The analysis of value creation must be understood not only in terms of agency costs but also in terms of organizational learning and developing new opportunities. Board composition and roles are interpreted differently than in the contractual approach. For example, board composition should be based on knowledge and skills diversity and not only on the distinction between internal and external members. Board roles are expanded to participating in strategy by advice, counsel and cognitive contribution (McNulty and Pettigrew, 1999; Rindova, 1999; Charreaux, 2000; Godard, 2006).

In the context of board involvement in the strategic decision making process, strategic theories can be divided in two groups. The first group of stewardship and resources dependence theories defend BD strategic role (service and collaboration). However, they do not focus on board activities and behavior. The second group of strategic choice and cognitive perspectives has analyzed board behavior and participation in a set of strategic activities. This second group with some recent frameworks based on complementarity between BD theories present, in our opinion, a better analysis of BD involvement in the strategic process.

Stewardship and resources dependence theories

<u>Stewardship theory</u> rejects agency assumptions especially about manager's opportunism. For stewardship authors, managers perceive that serving organization interests is also in their own interests. Thus, the duality of functions (combining chairman and chief executive) may have a positive effect on management effectiveness and on organizational returns. In this way, board should assure the stewardship of firm assets (Donaldson and Davis, 1991; Davis and al., 1997).

The <u>resource dependence</u> theory is a strategic contingency theory developed by Pfeffer (1972, 1973). It attributes to the board of directors a strategic role of cooptation with external environment to secure critical resources, to reinforce organizational legitimacy and to preserve the image of the company. To realize these objectives, authors highlight the importance of some demographic characteristics, especially board diversity and size. Board

composition is considered as organizational response to the conditions of the external environment (i.e. the theory is used to explain the importance of 'interlocking directorates' to reduce environmental uncertainty resulting from dependency on external organizations and actors, Stiles and Taylor, 2001, p. 17).

In short, this group of theories focuses on board interlocking, contingencies and service role that might affect board effectiveness and corporate performance. However, they present some limits. In the stewardship vision, the board of directors is the steward of stakeholder's interest, but there is a lack of details about board activities and how they make decisions. The dependence theory focuses on the board service role of linking with external environment but not in its internal process of work and decision making. Moreover, a number of authors argues that these theories can be valid for some board phenomena (situations) but not for others (Charreaux, 2000; Hillman and Dalziel, 2003, Stiles and Taylor, 2001, etc.). They propose, indeed, a pluralistic methodology based on complementarity between agency and stewardship theories.

Strategic choice perspective and cognitive perspective

The <u>strategic choice perspective</u> was developed in the 70s and become the theoretical support of many studies on the corporate governance and board of directors. Child (1972) proposed a theoretical model based on the concept of 'strategic choice'. Depending on environmental complexity and uncertainty, decision-makers follow a prior process of perception, evaluation and analyzing opportunities and constraints before making strategic choices. This process depends on their values, perceptions, skills and on environmental information deposed. Strategy is the first link between the company and its environment; a well planned strategy enhances company performance and organizational outcomes.

To have better strategic decisions, board members can participate actively in many activities related to strategy formulation and evaluation (Zahra, 1990). Huat Ong and Hoon-Lee (2000) present a set of strategic activities undertaken by board: scanning the environment for information, procuring assets, planning, implementing and evaluating strategic measures for divestments, acquisitions, R&D, expenditures and capital expenditures (p. 14). Boards are considered in the best place to contribute effectively in the strategic formulation (Andrews, 1980, 1981a and 1981b) for many reasons. First, they serve the link with the environment; indeed, they have resources to collect information about environmental changes, competitivity

and main external actors. Second, directors who are executives in other organizations have important professional experience in strategic decision making process. Then, the complexity and uncertainty of the strategic process requires the involvement of directors to provide inputs as information, competence and guidance (mentoring) to managers in their strategic actions (Huat Ong and Hoon Lee, 2000). Boards can support management imagination, overview the innovative processes and stimulate creativity. They emphasize and contribute to the search for new opportunities and alternatives (Andrews, 1980). Zahra (1990) proposes a mutual collaboration between board members and the CEO in strategic formulation and implementation, which still under the direct responsibility of CEO. In this way, board members could be involved in taking general analysis of the organizational environment, considering strategic alternatives and checking strategic plans.

An effective participation in the strategic process allows having more effective mangers by board advising, checking and supporting (Hambrick and Mason, 1984), setting better strategies and, in consequence, carrying higher levels of long term corporate performance (Andrews, 1981b – p. 174).

The <u>cognitive perspective</u> was developed by the end of the 90s with three principals studies: Rindova (1999), McNulty and Pettigrew (1999) and Forbes and Milliken (1999).

Rindova (1999) proposed a new theoretical framework studying directors' cognition and its effect on the strategy establishment. It suggests that directors have an important cognitive contribution in the strategic decision making process. This vision controvert past assumptions about the limited contribution of boards in strategy because of their lack of independence and firm specific knowledge. In the cognitive framework, directors are presented as experts with specific knowledge (about the firm and its activities), general knowledge (in strategy, finance, law, etc.), professional experience and expertise in strategic problem solving developed in their past experience. These characteristics represent a crucial cognitive input to strategic and cognitive activities as scanning, interpretation and choice (steps of strategic decision making). They contribute, indeed, to dealing with the complexity and uncertainty of the strategic process (p. 954).

The originality of McNulty and Pettigrew framework is to propose a detailed set of board behaviors in the strategic process not identified in previous studies. They had examined board contribution in strategy and developed a conceptual model illustrating how board members are able to influence strategic process. Strategy, in their framework, can be established via three key aspects (processes): choice, change and control. The board of directors could reach three level of involvement in strategy: 'taking decision', 'shaping decisions' and 'shaping the content, context and conduct of strategy'. The difference between levels is identified by board participation or non-participation in some strategic activities of the process, and also, by dialogue and social interaction between board members. They suggest that strategy is a sphere of activities in which board members can assume many activities. By taking strategic decisions, board members may ratify, reject or ask to modify executive proposals. They consider this lowest level of involvement as exercising control over management (by making strategic choice). The second level of involvement consider directors behavior before taking final decision, especially by discussing and influencing executive strategic thinking before making strategic proposals. Finally, for the last level of involvement, board members could influence the conditions of the strategic process. They attempt to insure the strategic formulation. This level is appropriate to emergent strategy that can be formed in an organization without being consciously intended. Board members could create climate of strategic thinking for developing strategy. Authors mentioned the importance of inner and outer context of the company that may affect the conduct of the board and its level of involvement.

Forbes and Milliken (1999) developed a framework about board process and dynamics to explain the link between board demographic characteristics and corporate performance. They propose a model of strategic decision making effectiveness. They consider board as a decision making group defined as "intact social system that perform one or more tasks within an organizational context" (p. 491). The effectiveness of boards depends on three conditions: (1) the group participation and interaction -i.e. effort norms-, (2) the exchange of information and critical discussion –i.e. cognitive conflict-, (3) the presence and use of knowledge and skills – i.e. functional skills and firm-specific knowledge-.

An effective board can perform two outcomes which contribute to the firm performance: task performance and cohesiveness. Task performance or task effectiveness requires deliberation, communication and engagement and trust in their judgment and expertise. It is important to have high level of expertise, experience and knowledge, and to apply them to its tasks. Cohesiveness (interpersonal-attraction) and cognitive conflict are also important to have an effective participation of board of directors in the decision-making process. However, they explain that high level of cohesiveness can result a group-think phenomenon which can

reduce the critical thinking and have a negative effect on decision making process. Thus, as a response to this risk, authors suggest that the task oriented disagreement; debate and cognitive conflict with a minimum level of cohesiveness are both important for a good functioning of the strategic process.

In a further examination of board's role in strategy, Stiles and Taylor (2001) highlighted the importance of reviewing strategic initiatives as a central feature of board members contribution, and the importance of the presence of non-executive directors for the quality of strategic proposals and the effectiveness of decision-making. To Roberts, McNulty and Stiles (2005), the involvement and engagement of non-executives means that they can both contribute directly to the quality of executive decision-making and ensure that any weakness in the executive will quickly become visible to the non-executives. Carpenter and Westphal (2001) has examined the impact of external network ties on board contribution in the strategic decision making process. They developed the socio-cognitive perspective which suggests "the importance of directors' networks of appointments to other boards in determining whether they have the appropriate strategic knowledge and perspective to monitor and advice management in the strategic decision making process" (p 640). They argue that directors' experience in other boards provides an important source of information about business practices

Emergence of complementary frameworks

Last years are marked by the search for alternative theoretical foundations of the agency theory to explain board effectiveness. Corley (2005) highlights the particularity of some studies as Roberts, McNulty and Stiles (2005), Huse (2005) and Pye and Pettigrew (2005) to propose framework with intermediate strategic steps between board characteristics and corporate performance. These propositions are consistent with cognitive and strategic choice findings. In fact, Huse (2005) proposes a theoretical framework about the accountability of the board of directors via a behavioral perspective. He supports the suggestion of Roberts, McNulty and Stiles (2005) about creating accountability to bridge the difference between board role expectations in theory and real board task performance. This framework is a response for the need to an alternative framework to the input-output model which dominates corporate governance research for more than two decades (example: relation between board characteristics and corporate performance).

Thus, the framework consists to elaborate intermediate steps between board composition and corporate financial performance. He displayed in the framework three factors which may increase board accountability: (1) board's decision-making culture, (2) formal and informal structures and norms, (3) the interaction inside and outside the boardroom (p. 72). As argued by Forbes and Milliken (1999) and Roberts, McNulty and Stiles (2005), Huse consider the board's decision-making culture the most important factor for creating accountability (p. 72). This large notion can be related to cognitive conflicts, commitment, consensus, creativity, etc.

As in the theory of the firm, explaining roles of the Board is not immune from the tendency to use the complementarity between opposing theories to better explain the phenomenon. Some authors consider the complementarity between board theories and highlight the importance of integrative model to explain board activities. For example, Bammens, Voodeckers and Van Gils (2011) identify complementarities between agency theory, stewardship theory and stakeholder theory to analyze board roles (advice and control) in family businesses.

Ravasi and Zattoni (2006) have explored a political perspective of board involvement in strategy based on a mixed conceptual funding (strategic choice and agency theory). They argue that heterogeneity of interest between actors (shareholders, directors and mangers) increase board involvement in strategic activities. In reference to Mintzberg classification of decision making patterns (judgment, analysis and bargaining), they conclude that in the presence of high heterogeneity of interests, board tends to rely more on bargaining. This conclusion is applicable to companies without a majority of shareholders who control.

In the following table, we summarize theoretical findings about board contribution in the corporate governance research.

Table 3 - Synthesis of board of directors' contributions in the corporate governance theories

CONTRAC	TUAL THEORIES	STRATEGIC AND CO	GNITIVE THEORIES
based on an agency remanagers and shareho -Board of directors has		MAIN IDEAS: - the firm is a Knowledge has a capital rol-Board has an important rol corporate strategy.	le in the creating value.
Theory / Discipline	Board contribution	Theory / Discipline	Board contribution
T: Legalistic approach D: Corporate Law (Chaganti et al., 1985, etc.)	Nominating CEO and monitoring his performance; evaluating company performance and representing shareholders' interest	T: Resource dependence theory (& social networks theory) D: Organizational theory & Sociology (Pfeffer, 1972, 1973; Pfeffer and Salansik, 1978)	Board reduces environmental uncertainty and participates to insure critical resources, legitimacy and reputation of the company.
T: Agency theory (and transaction- cost theory) D: Economics & Finance (Fama and Jensen, 1983, etc.)	Board ensures intermediation between managers and owners. It contributes on strategic control and monitoring managers' effectiveness.	T: Stewardship theory D: Theories of organizations (Donaldson and Davis, 1991; Davis and al., 1997)	Managers are not only opportunistic agents. They are also good stewards of company assets. Board should assure the stewardship of firm assets It participates in the discussion of strategic options.
T: Stakeholder theory D: theory of organizations (Charreaux and Debrieres, 1998, etc.)	Board provides the link between managers and other stakeholders (managers, employees, etc.), and insure arbitration of value creation.	T: Class Hegemony D: Sociology (Mills, 1965, in Zahra et Pearce, 1989)	Board represents capitalist elites over social and economic institutions. This theory has not explained board process but only his composition.
T: Managerial hegemony D: theories of organizations (Mace, 1971; Lorsch and McIver, 1989)	Board members don't participate to establish the corporate strategy because of their low availability and low commitment. The real running of the organization is assumed by corporate management.	T: Cognitive perspective (and strategic choice) D: cognitive psychology (Child, 1972; Rindova, 1999, etc.)	Board of directors is a capital actor in the strategy setting. It participate actively in all steps of the strategic decision making process. The knowledge and experience of directors are crucial for board efficiency.

2.2 Empirical debate

The phenomenon of board involvement in the strategic process is complex. An empirical investigation requires analysing antecedent factors that could affect the nature and extent of

BD involvement, and effects that allow evaluating the efficiency of BD involvement. Thus, we propose in this section to distinguish between three empirical visions. The first focuses on the board participation in the strategic process. The second focuses on determinants of board involvement. The third focus on the effect of board job involvement on organizational outputs (especially strategic decisions).

2.2.1 Board involvement in the strategic decision making process

The majority of empirical studies found general support for the cognitive perspective and the strategic choice theory. However, there are some studies that are against board participation in strategy. The next two paragraphs will present empirical findings against and for board involvement.

Against board involvement in the strategic decision making process

In the Managerial hegemony finding, Mace (1971) demonstrated empirically on a sample of US boards, that the board of directors has a minimum participation in the organizational life: it don't participate neither in strategic decision making nor in monitoring managers and organizational performance. It is presented as fictive legal organ. Board, in effect, has a minimum participation in the control of management because directors are selected by executives (CEO), indeed, they are not able to ask him to resign in the case of lack of performance. Also, board does not participate in establishing decisions, objectives or asking discerning questions. In this vision, management has the total responsibility for business running, controlling and establishing (Stiles and Taylor, 2001). In consequence, the managerial domination has greatly limited the role of board of directors, unless undergoing a situation of crisis.

Kosnik (1987) supported the managerial hegemony theories about the fictive role of the board of directors. The purpose of his paper was to identify board characteristics to be more effective on decision making. He defined board's ineffectiveness as the inability of outside directors to prevent management from making decisions that are in conflict with stockholders' interests. Using the "greenmail" as measure of board ineffectiveness, he selected 53 boards identified as having allowed greenmail and a set of 57 boards identified as having resisted paying greenmail under the same circumstances (in the period 1979 – 1983). He found that boards with more outsider directors who have executive experience and contractual interest with the company could be more effective in their decision making.

Moreover, other studies found that if board becomes involved in strategy, it might destroy value. For example, Jensen (1993, p. 850-857) argued that board of directors failed to cause managers to maximize efficiency and value. The job of the board is to hire, fire, and compensate the CEO, and to provide high level counsel. However, board members react too late, and are reluctant to change decision unless in crisis cases. He explained this failure by two reasons: (1) board culture (the CEO has the power to control the board which can reduce the CEO and company's performance) and (2) information problems (The CEO determines the agenda and information given to the board). Fulghieri and Hodrick (2006) analysed the reasons of mergers by investigating synergies and internal agency conflicts. In their model, they supposed board of directors deciding merger of company's divisions. After that, the divisional managers made their entrenchment choice that depends on the specificity of the division's assets. Authors concluded that board of directors' mergers decision doesn't participate to ameliorate the firm value (cash flow). "... It may be possible that by the careful design of incentive contracts, the board of directors may reduce or even completely eliminate enrichment activities (p. 571)".

For more board involvement in the strategic decision making process

Empirical studies defending BD involvement in strategy emerged slowly and still rare until the beginning of the 90s. Remarkable studies in this tradition are Andrews (1980), Tashakori and Boulton (1983), Lorsch and MacIver (1989), Judge and Zeithaml (1992) and Demb and Neubeuer (1992). Almost of them adopted qualitative methods (by conducting interviews or combining interviews and questionnaires addressed to CEOs and directors). Big American companies had the exclusive attention of these studies. All of them apply for more board participation in strategy and justify empirically BD involvement in many strategic activities. Then, the end of 90s was marked by the emergence of the cognitive perspective (Rindova, 1999; Forbes and Milliken, 1999; McNulty and Pettigrew, 1999). After that and because of some events (as corporate governance scandals), the number of empirical studies increased. They focus not only on board activities in the strategic process but also on the determinant factors that influence the degree and efficacy of BD involvement. Samples of companies include different countries (not only US) and some analyses adopt international comparisons. Empirical methods are varied between qualitative quantitative and triangulation.

Empirical results The work of Andrews (1980) was from the first researches that conducted interviews with many US CEO and directors to justify the desirability of more board involvement in strategy development. He found that BD engagement in the design and

execution of corporate strategy could have a good influence in long-term company's performance. Tashakori and Boulton (1983) confirm the idea and found the increasing of board involvement in the planning process of strategy. They conclude that this participation has a positive effect on information availability and on performance evaluation. In 1989, Lorsch and MacIver (1989, p. 66-74) conducted a comprehensive empirical study combining case studies and questionnaire distributed to 1100 directors. They conclude the importance of full-board involvement in the strategic planning and formulation. They argued that the reality of board functioning is different from its legal responsibilities limited to control i.e. - it has other important (but less talked-of) strategic responsibilities. They encouraged to have a strategic committee and to devote more time to review and discuss corporate strategy, also to provide outside directors with more time and information to consider complex matters. As affirmed by the resource dependency perspective, board of directors represents the image of the company in its environment. Thus, they have the responsibility, in making decision, for assuring that the corporation affair are conducted in an ethical, legal and socially responsible fashion (p.70).

Bases on these ideas and the strategic choice perspective, Judge and Zeithaml (1992) considered in their empirical investigation BD members as major actors of decision making and developed an empirical analysis of why and how boards get involved in the strategic decision process (p 767). However, they simplified the representation of the strategic process on two steps formulation and implementation. They explored personal interviews with 114 board members of 42 organizations. Board involvement was measured by the average of the involvement intensity score across the board members responses within each organization. They found that board involvement has a positive effect on financial performance. It is positively correlated to firm size and negatively related to board size and the level of diversification and insiders. In the same year, Demb and Neubeuer (1992) conducted a similar study with more detailed steps of the strategic process and a strong empirical investigation combining interviews and questionnaire. In fact, they interviewed 71 directors of 11 large US companies and explored 137 questionnaires distributed to their board members. They considered five stages of strategy development: initiating and setting vision, analyzing of options, implementation, monitoring and evaluation. Depending on the degree of board participation, they proposed three modes of board involvement: Watchdog, Trustee and Pilot. In the watchdog mode, board members are involved in the monitoring and evaluation stages of the process, in a post factum mode. The Trustee or the 'guardian of assets' is responsible

for enhancing corporate activities and for evaluating the conduct of business. So, it plays a limited role in the initiation and implementation of strategy, but substantially involved in analyzing options, monitoring and evaluating results. The pilot board has an active role on directing the corporate policy and conduct of the company. So, it participates actively in formulating and perhaps initiating strategy (p. 55). To explore the differences between executives and non executives in taking strategic decisions, Hill (1995) conducted interviews with 42 directors of 11 UK companies. He found that non-executives in UK boards are involved in reviewing and refining the strategic decisions of their organizations. Top managers want to be seen as good professionals, indeed, the difference of interests between shareholders and mangers is low. Thus, both executives and non executives have key roles in bringing strategic vision, scanning environment and taking decisions.

Last years are marked by the developing of new frameworks to investigate empirically BD involvement in strategy. From the main works, we find Roberts, McNulty and Stiles (2005) which propose a new framework based in the notion of 'creating accountability'. They interviewed 40 company directors commissioned for the Higgs Review, and concluded the lack understanding of the process and behavior of board of directors in strategy. The classic distinction between control and collaboration do not refer to board activity in their lived experience. Accountability refers to a variety of director's behavior like discussing, informing, testing, exploring and encouraging (p. S6). Both control and strategic aspects of the role can be achieved through strong and rigorous processes of accountability within the board. They suggest three linked sets of behaviors of non-executives: engaged but non-executive; challenging but supportive and independent but involved (p. 12).

In short, BD involvement is a complex phenomenon, indeed, to evaluate its degrees, it is important to analyse the influence of its determinant factors. Pye and Pettigrew (2005) consider board of directors' decision-making as vital to the organization, especially because they meet only few times in the year to discuss for important decisions (p. S33). It is difficult to describe generic characteristics of effective board because there are many contingency factors which influence board process (p. S35). Thus, the complement of many elements from different levels of analysis and factors could reflect board process of creating outcomes (P. 36). It is important, in consequence, to find integrative level of analysis of structure and action links at micro and macro levels simultaneously.

2.2.2 Determinants of board involvement in the decision making process

Literature present different visions of factors that could affect board involvement in strategy. In a cognitive analysis, board involvement in strategy is determined by dynamic interactive effects, indeed, it is difficult to predict the determinants of this involvement (Minichilli, Zattoni and Zona, 2009; Pye and Pettigrew, 2005). Minichilli, Zattoni and Zona (2009) find that board demographic characteristics (board size, independence, duality and shareholding) have a limited power to explain board task performance (a lack of clear relationship between board characteristics and different board tasks, p. 70). However, cognitive factors (commitment and cognitive conflicts) are more powerful to explain board task performance. By commitment, authors refer to board preparation before meetings and board discussion on critical questions (p. 68). Cognitive conflicts refer to cognitive disagreements on the firm goals and debate to reach a strategic consensus. The authors suggest having an active nomination committee, which should select board members in order to secure a balance of skills needed by the company (P. 69). They show also the influence of context (firm size, industry) on board task performance. All these factors can make pressure on board members to perform their tasks.

Pye and Pettigrew (2005) distinguee the inner factors from the outer contextual factors. They propose five important aspects of the external context (regulation, ownership structure, influential stakeholders, potential mergers and acquisitions activity and the overall perceived level of risk to the organization) (p. S31). From inner factors, they propose the commercial requirement of the firm to develop new strategic directions or competencies, the level of perceived trust in the board and life cycle of the company. These factors may influence positively or negatively the conduct and behavior of boards. As a main organizational decision-making group, board effectiveness might be described on a board level way more than individually (p. S32). Moreover, it is important to have suitable knowledge and information to contribute meaningfully to strategy (Carptenter and Westphal, 2001, p. 640). Zona and Zattoni (2006) tested the impact of information diversity (static dimension of board capital) and the using of diverse information (dynamic dimension measured by open discussion, effective leadership and active search) on the quality of strategic decision making behavior of directors. Recently, Balta, Woods and Dickson (2010) have examined the effect of educational level, educational specialty and functional background of board members on two decision making processes (Hierarchical decentralization and financial reporting). They found that educational level affect both of these processes.

Hillman and Dalziel (2003) have developed a framework about 'board capital' referring to Human capital (directors' competences, collective expertises and experiences) and networking capital. Zhang (2010) proposed to extent the analysis of board capital by adding the use of diverse information as a dynamic dimension of board behavior. They examined empirically how these dimensions affect board task performance and found that using diverse information (as discussion, active search) has a stronger influence on the board current strategic task performance than possessing diverse information (p. 474). However, possessing diverse information has a significant influence on both current and future tasks performance. The author considers maintaining diverse information as key for decision making quality. The diversity of information requires information exchange. If exchanging isn't properly managed, it can incur biases and reduce decision making quality (p. 475). So for him, directors are expected to provoke strategically different views and raise discerning questions and it is even recommended that they should engage in task related fight rather than reaching consensus (p. 475). In this way, board are more beneficial to their firm rather than reaching a rapid consensus because it can incur group thinking and reduce the quality of the decision making.

2.2.3 Effects of board job involvement

Since the recommendation of Hambrick and Mason (1984) to focus on top management team characteristics and behavior in future research, many studies have emerged to identify the link between demographic characteristics of top management team and organizational outcomes such as corporate performance, strategic change, innovation, diversification etc. In general, organizational outcomes are considered as *reflection of the values and cognitive bases of top management team of the organization* (Pettigrew, 1992, p. 173).

In the corporate governance research, a particular line of studies has focused on the effect of board in some outcomes of decision processes. It studied the relation between board demographic characteristics and some firms' organizational results (Deutsch, 2005). This line of research characterized by studying the relation Input-Output represents the main orientation of empirical corporate governance research. On the one hand, abundant research has focused in identifying the systematic relationship between board composition and firm corporate performance (Charreaux, 2000; Karoui, 2009; Pugliese et al., 2009; Minichilli, Zattoni and Zona, 2009). On the other hand, some studies have examined the impact of board composition on strategic decisions (Westphal and Frederickson, 2001; Deutsh, 2005; Ravasi and Zattoni, 2006).

The agency theory was the theoretical support of almost these studies. Board members, particularly independent members, are the guarantors of shareholders' interest from opportunistic behavior of executive managers (Fama and Jensen, 1983). Therefore, many studies investigated how board demographic characteristics (composition and structure) are related to the content of corporate strategies (Ravasi and Zattoni, 2006; Pugliese et al., 2009). In a meta-analysis of 38 empirical studies, Deutsch (2005) has identified seven critical corporate decisions (CEOs' total compensation and incentive pay, diversification, R&D expenditure, debt intensity, takeover defenses and CEO turnover). Other studies focused on board composition influence on transmission decision and leadership instability (Alexander et al. 1993), on strategic change (Golden and Zajac, 2001, Westphal and Frederickson, 2001), on innovation (Hoskisson et al., 2002) and on internationalization (Tihanyi et al., 2003). Recently, Cowen and Marcel (2011) tested the effect of board capital (human and social capitals) on critical decisions taken by boards as dismissing reputationnally compromised directors. Using resource dependence theory, they argue that boards with greater dependence on external monitors (board interest in resource provision) are more likely to dismiss compromised directors.

However, the results of these studies are mixed (Pugliese et al., 2009; Ravasi and Zattoni, 2006; Charreaux, 2000; Heracleous, 2001; Pye and Camm, 2003), and provide a little support to agency theory hypotheses about a possible systematic relationship between board composition and critical corporate decisions (Deutsch, 2005). Furthermore, some authors as Pettigrew (1992), explain that this link don't provide a direct evidence on the process and mechanisms which presumably link inputs to outputs. In other terms, the results of the study based on correlation tests do not allow to identify the reasons of the relationship (or the non-relationship) between board characteristics and corporate decisions i.e. - this link is not systematic-. Thus, the process cannot be explained by studying the systematic link between these two dimensions (Schilpzand and Martins, 2010). Therefore, it is recommended to explore not only structural board characteristics but also cognitive and relational characteristics and determine how they act in the development of the strategy (Pettigrew, 1992, p. 171; Forbes and Milliken, 1999, p. 489).

3 Suggestion of operational model about board involvement in the strategic decision making process

3.1 Set of board activities to measure board involvement in the strategic decision making process

In the table 2 (p. 12), we proposed a set of board activities that board members have the responsibility to participate in during the strategic process. In empirical investigation, the degree of its involvement in each activity could be measured by likert scale (Antil, 1984; Barki and Hartwick, 1989).

Barki and Hartwick argue, also, that sacking of conceptual clarity should be associated with antecedent (determinants factors) and effects (results). Thus, empirical test of the causes and effects of involvement should be carried out to better understand the extent and nature of involvement. In consequence, an empirical model of BD involvement in the strategic making process should be associated with determinants factors influencing the degree and nature of involvement and results that allow evaluation of BD involvement efficiency.

3.2 Determinants factors influencing board involvement

There is a general agreement that specific contextual factors have an important effect on board involvement in its activities (Bammens, Voodeckers and Van Gils, 2011; Pugliese et al., 2009; Huse, 2005 and 2007; McNulty and Pettigrew, 1999 etc.).

Based on previous literature presented in section 2.2.2, we can resume the antecedents' factors on two main categories: (1) the external (outer) context (context outside the boardroom i.e. characteristics of the organization and it environment) and (2) the internal (inter) context related to board characteristics.

Board Inter context

We propose to consider not only board demographic characteristics, but also cognitive, relational and functioning characteristics. The following table present details about these inter factors.

Table 4 - Characteristics of the board of directors

Board characteristics	Details	Main references
Demographic characteristics	Size, independence, duality of functions, presence of women, foreign directors, age, directors representing employees, demographic diversity	Jensen and Milliken (1976), Andrews (1981), Fama and Jensen (1983), Pfeffer (1983), Nguyen et Faff (2006), Lefort et Urzua (2008),etc.
Cognitive characteristics	Educational background (specialty and level), functional background, cognitive diversity, specific knowledge on company and its environment, specific expertise (strategy, finance, law, etc.)	Huse (2007), Pugliese (2007) Forbe and Milliken (1999), McNulty and Pettigrew (1999), Rindova (1999), Charreaux (2000), Lazonick et O'Sullivan (1998),etc.
Relational characteristics	Having developed networks (with external actors), being directors in other companies, organizational reputation, negotiation competences with management and external actors	Huse (2007), Charreaux (2003), McNulty and Pettigrew (1999), Rouby (2008), etc.
Functioning characteristics	Meeting preparation, number and length of formal meetings, assiduity, informal meetings, training and procedure of directors' evaluation, consulting extern consultants, committees (meetings, members, etc.)	Lorsch and MacIver (1989), Huse (2007), Godard (2006), Gomez and Moore (2009), etc.

Board outer context

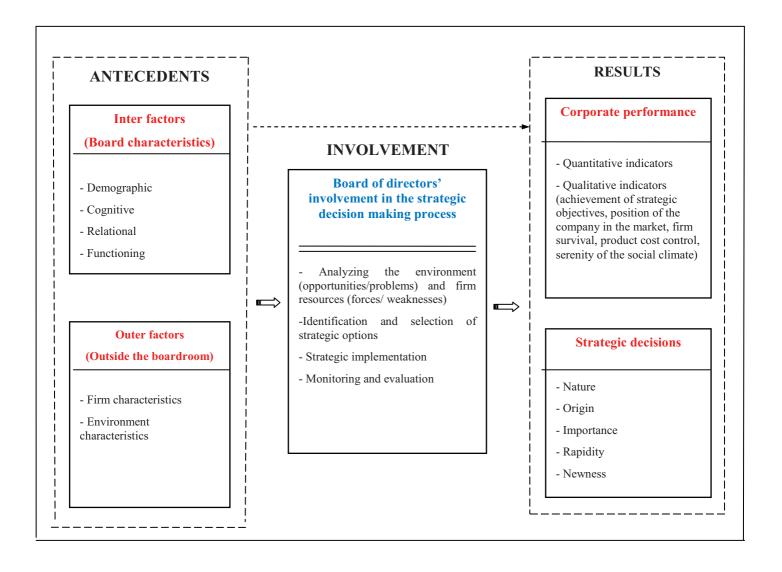
The external factors refer to the general context in which boards work (Huse, 2007). Pye and Pettigrew (2005, p. S33) had noted that contextual contrasts (as economic, regulatory, ownership structure, etc.) are of great interest and relevance in analyzing board process and that occur differences on board behaviors between organizations. In general, theses factors include the characteristics of the organization and its environment, such as firm size, industrial sector, ownership structure and firm life cycle. Environmental characteristics refer to the degree of uncertainty and complexity (Pye and Pettigrew, 2005; Charreaux, 2000) and legalistic environment (Huse, 2007). These characteristics can be analyzed distinctly or together in a systematic representation. For example, in the French context Gomez (2009) propose five systems of governance to describe the representation of different French firms.

3.3 Effects of board involvement

The literature about organizational outcomes in the board of director research (presented in the second section) highlights two main results: Board involvement in the strategic process could affect, on the one hand, corporate performance (Andrews, 1980; Hambrick and Mason, 1984; Huse, 2007). And on the other hand, it affects strategic decisions considered as the last step of choice process (MacNulty and Pettigrew, 1999) and reflecting the efficiency of board's strategic contribution (Deutsch, 2005). We propose to use both financial and strategic

indicators to measure corporate performance. To describe the quality of the strategic decision, we propose characteristics as the nature (transitional or not), origin, degree of importance, rapidity and newness. The next figure summarizes links between board job involvement, its antecedents and effects.

Figure 1: Operational model of board involvement in strategic decision making process



Conclusion

This paper reviews the theoretical and empirical literature about board of directors involvement in the strategic decision making process. Since the last decade, academic interest in this topic has increased. The analysis of the literature revealed that it was mainly those studies with strategic and cognitive perspectives (i.e. with a focus on the board's service and strategic tasks) that advanced the understanding of how and why boards of directors contribute in the strategic decision-making process (Westphal, 1999; Rindova, 1999; McNulty and Pettigrew, 1999; Charreaux, 2000, 2002, and 2005 etc.). In spite of the increasing number of empirical studies, there is no convergence of opinion about the desirability of board involvement in the strategic process. Moreover, the literature reveals that the definition and use of "board involvement" are different from each study to other. We proposed, consequently, to start the paper by an analytical synthesis of definitions of 'involvement' 'and board involvement' in corporate governance and other fields of research. We proposed, also, a set of board activities referring to its roles crossing the steps of the process of strategic decision making. Board involvement is measured by its total or partial participation in these activities and it is influenced by outer and inter factors. These factors are relevant to understand the process of board involvement, its effect on organizational outcomes and to facilitate its empirical measurement. We hope that this proposition could be helpful for future research.

REFERENCES

- Alexander J.A., Fennel M.L., & Halpern M.T. (1993), "Leadership instability in hospitals: The influence of Board-CEO relations and organizational growth and decline", Administrative Science Quarterly, vol. 38, p.74-99.
- Andrews K.R. (1980), « Directors' Responsibility for Corporate Strategy», Harvard Business Review, Nov-Dec 1980.
- Andrews K.R. (1981a), "Replaying the board's role in formulating strategy", Harvard Business Review, May-June 1981.
- Andrews K.R. (1981b), «Corporate Strategy as a Vital Function of the Board», Harvard Business Review, Nov-Dec 1981.
- Antil J.H. (1984), "Conceptualization and Operationalization of Involvement", Advances in Consumer Research, Vol. 11, P. 203-209.
- Balta M.E., Woods A., Dickson K. (2010), "The Influence of Boards of Directors' Characteristics On Strategic Decision-Making: Evidence From Greek Companies", The journal of Applied Business Research, vol. 26, N°3, p. 57-68.
- Bammens Y., Voodeckers W. and Van Gils A. (2011), "Boards of Directors in Family Businesses: A Literature Review and Research Agenda", International Journal of Management Reviews, Vol. 13, p. 134–152.
- Barki H. and Hartwick J. (1989), "Rethinking the Concept of User Involvement", Management Information System Quarterly, vol. 13, N° 1, p. 53-63.
- Carpenter M.A., & Westphal J.D. (2001), "The Strategic Context of External Networks Ties: Examining the Impact of Director Appointments on Board Involvement in Strategic Decision Making", Academy of Management Journal, vol. 4, n° 4, p. 639-660.
- Chaganti, R.S., Mahajan, V. & Sharma, S. (1985), "Corporate board size, composition and corporate failures in retailing industry", Journal of Management Studies, vol. 22, p. 400-417.
- Charreaux G., & Debrieres P., (1998) « Gouvernance des entreprises: valeur actionnariale contre valeur partenariale », Finance Contrôle Stratégie, vol. 1, n° 2, p. 57-88.
- Charreaux G. (2000), « Le conseil d'administration dans les théories de la gouvernance »,
 Revue du Financier, n°127, p. 8-17.
- Charreaux G. (2002a), « Variation sur le thème 'A la recherche de nouvelles fondations pour la finance et la gouvernance d'entreprise », Finance Contrôle Stratégie, vol. 5, n° 3, p. 5-68.
- Charreaux G. (2002b), « L'actionnaire comme apporteur de ressources cognitives », Revue Française de Gestion, vol. 28, n° 141, p. 77-107.
- Child J. (1972), "Organizational Structure, Environment and Performance: The Role of Strategic Choice", Sociology, vol. 6, p. 1-22.
- Corley K.G. (2005), « Examining the Non-Executive Director's Role from a Non-Agency Theory Perspective: Implications Arising from the Higgs Report", British Journal of Management, vol. 16, p. S1-S4.
- Cowen and Marcel (2011), "Damaged Goods: Board Decision to Dismiss Reputationnally Compromised Directors", Academy of Management Journal, vol. 54, n°3, p. 509-527.
- Davis J.H., Schoorman F.D. and Donaldson L. (1997), "Toward a stewardship theory of management", Academy of Management Review, vol. 22, n° 1, p. 20-47.
- Demb A, & Neubauer F.F. (1992), the Corporate Board Oxford University Press.
- Deutsch Y. (2005), "The Impact of Board Composition on Firms' Critical Decisions: A Meta-Analytic Review", Journal of Management, vol. 31, n°3, p. 424-444.
- Donaldson, L., & Davis, J.H. (1991), "Agency theory or stewardship theory: CEO governance and shareholder returns", Australian Journal of Management, vol. 16, p. 49-64.
- Fama E.F., & Jensen M.C. (1983), « Separation of Ownership and Control », Journal of Law and Economics, vol.26, p. 301-325.

- Forbes D.P., Milliken F.J. (1999), «Cognition And Corporate Governance: Understanding Boards of Directors as Strategic Decision-Making Groups», Academy of Management Review, vol.24, n°3, p. 489-505.
- Fulghieri P., & Hodrick L.S. (2006), "Synergies and Internal Agency Conflicts: The Double-Edged Sword of Mergers", Journal of Economics & Management Strategy, vol.15, n°3, p. 549–576.
- François-Philippe Boisserolles D. (2005), « Les survivants: vers une gestion différentiée des ressources humaines », edition. L'harmattan.
- Godard L. (2006), "Les spécificités des comités stratégiques et de leurs membres: le cas de la France", Gestion 2000, vol. 3, p. 165-190.
- Golden B.R., & Zajac E.J. (2001), "When will boards influence strategy? Inclination x power = strategic change", Strategic Management Journal, vol. 22, p. 1087–1111.
- Gomez P-Y, & Moore R. (2009), « Board Members and Management Consultants: Redefining the Boundaries of Consulting and Corporate Governance", IAP- Information Age Publishing.
- Gomez P-Y (2009), "Référentiel pour une gouvernance raisonnable des entreprises françaises", rapport au conseil d'administration de MiddleNext, Cahier n°2, MiddleNext.
- Hambrick D.C., & Mason P.A. (1984), « Upper Echelons: The Organization as a Reflection of Its Top Managers», Academy of Management Review, vol. 9, n° 2, p. 193-206.
- Heracleous L. (2001), "What is the Impact of Corporate Governance on Organisational Performance", Corporate Governance, vol. 9, n°3, p. 165-173.
- Hill S. (1995), "The Social Organization of Boards of Directors', British Journal of Sociology, vol. 46, p. 245-278.
- Hillman A. J., & Dalziel T. (2003), « Boards of directors and firm performance: integrating agency and resource dependence perspectives», Academy of Management Review, vol. 28, n° 3, p. 383-396.
- Hoskisson R.E., Hitt M.A., Johnson R.A., Grossman W. (2002), "Conflicting voices: The effects of institutional ownership heterogeneity and internal governance on corporate innovation strategies", Academy of Management Journal, vol. 45, p. 697–716.
- Huat Ong C., & Hoon Lee S. (2000), "Board Functions and Firm Performance: A Review and Directions for Future Research", Journal of Comparative International Management, vol. 31, n°1.
- Huse M. (2005), "Accountability and Creating Accountability: a Framework for Exploring Behavioural Perspectives of Corporate Governance", British Journal of Management, vol. 16, p. S65-S79.
- Huse M. (2007), "Boards, Governance and Value Creation", Cambridge University Press.
- Ingley C.B. & Van der Walt N.T. (2001), "The Strategic Board: the changing role of directors in developing and maintaining corporate capability, Corporate Governance, Vol. 9, n°3, p. 174-185.
- Jensen M.C. (1993), "The Modern Industrial Revolution, Exit, and the Failure of Internal Control Systems", The Journal of Finance, vol. 48, n°3, p. 831-880.
- Jensen, M.C., Meckling, W.H. (1976), "Theory of the firm: Managerial behaviour, agency costs and ownership structure", Journal of Financial Economics, vol.3, P. 305-360.
- Johnson J.L., Daily C.M., Ellstrand A.E. (1996), "Boards of directors: A review and research agenda", Journal of Management, vol. 22, p. 409–38.
- Judge W.Q., & Zeithaml C.P. (1992), "Institutional and Strategic Choice Perspectives on Board Involvement in the Strategic Decision Process", vol. 35, n°4, p. 766-794.
- Karoui L. (2009), "Le conseil d'administration dans les PME: ses rôles, son implication et ses forms d'activation", Thèse, Université Dauphine.
- Kelly J., & Gennard J. (2007), "Business Strategic Decision Making: The Role and Influence of Directors", Human Resource Management Journal, vol. 17, n°2, p. 99-117.

- Kosnik, R.D. (1987), "Greenmail: A study of board performance in corporate governance",
 Administrative Science Quarterly, vol.32, p.163-185.
- Levy M., Pliskin N., & Ravid G. (2010), "Studying decision processes via a knowledge management lens: The Columbia space shuttle case", Decision Support Systems, vol. 48, p.559–567.
- Lorino P., & Tarondeau J.C. (2006), "De la stratégie aux processus stratégiques", la revue Française de Gestion, vol. 160, p. 307-328.
- Lorsch J.W., & MacIver E. (1989), "Pawns or Potentates, The Reality of America's Corporate Boards", Harvard Business School Press.
- Mace M. (1971), "Directors: Myth and Reality", Boston, Harvard Business School Press.
- McNulty T., & Pettigrew A. (1999), « Strategists on the Board», Organization Studies, vol. 20, Issue 1, p. 47-74.
- Minichilli A., Zattoni A., & Zona F. (2009), "Making Boards Effective: An Empirical Examination of Board Task Performance", British Journal of Management, vol. 20, p. 55-74.
- Pettigrew (1992), « On Studying Managerial Elites », Strategic Management Journal, Vol. 13,
 Special Issue (winter, 1992), pp. 163-182.
- Pfeffer J. (1972), "Size and composition of corporate boards of directors: The organization and its environment", Administrative Science Quarterly, vol. 17, p. 218-228.
- Pfeffer J. (1973), "Size, Composition and Function of Hospital Boards of Directors: A Study of Organization-Environment Linkage", Administrative Science Quarterly, vol. 18, n° 3, p. 349-364.
- Pfeffer J., & Salancik, 1978, "The External Control of Organizations: A Resource Dependence Perspective", New York, Harper and Row.
- Pye A., & Camm G. (2003), "Non-Executive Directors: Moving Beyond the One-Size-Fits-All View", Journal of General Management, vol. 28, n°3, p. 52-70.
- Pye A., & Pettigrew A. (2005), "Studying Board Context, Process and Dynamics: Some Challenges for the Future, British Journal of Management, vol. 16, p. S27-S38.
- Pugliese A., & Wenstop P.Z. (2007), « Board Members' Contribution to Strategic Decision-Making in Small firms », J Manage Governance, n° 11, p. 383-404.
- Pugliese A., Bezemer P-J, Zattoni A., Huse M., Van den Bosch F.A.J. and Volberda W.H. (2009),
 "Boards of Directors' Contribution to Strategy: A Literature Review and Research Agenda",
 Corporate Governance: An International Review, vol.17, n°3, p. 292–306.
- Ravasi D., & Zattoni A. (2006), "Exploring the Political Side of Board Involvement in Strategy:

 Study of Mixed-Ownership Institutions", Journal of Management Studies, vol. 43, n°8,
 p.1672-1702.
- Rindova V. (1999), «What Corporate Boards Have to Do with Strategy: A Cognitive Perspective », Journal of Management Studies, vol. 36, n°7, p. 953-975.
- Roberts J., McNulty T.,& Stiles P. (2005), "Beyond Agency Conceptions of the Work of the Non-Executive Director: Creating Accountability in the Boardroom", British Journal of Management, vol. 16, p. S5–S26.
- Rouby E. (2008), «Le lien composition/rôle du conseil d'administration : une analyse en termes de capital social », Finance Contrôle Stratégie, vol. 11, n° 2, p. 29-50.
- Ruigrok W., Peck S., & Keller P. (2006), "Board characteristics and Involvement in the Strategic Decision Making: Evidence from Swiss Companies", Journal of Management Studies, vol. 43, p. 1201-1226.
- Schhilpzand M.C., & Martins L.L. (2010), « Cognitive Diversity and Team Performance: The Roles of Team Mental Models and Information Processing », Academy of Management Annual Meeting Proceedings, p. 1-6.
- Stiles P. & Taylor B. (2001), « Boards at Work, How Directors View Their Roles and Responsibilities", Oxford University press, New York.

- Tashakori A., & Boulton W. (1983), "A Look at the Board's Role in Planning", Journal of Business Strategy, Vol. 3 Issue 3, p. 64-71.
- Thiétart R.A., & Xuereb, J.M. (2005), "Stratégies, concepts et methods mises en oeuvre, 2ème edition, Paris: Dunod.
- Tihanyi L., Johnson R. A., Hoskisson R. E., & Hitt M. A. (2003), "Institutional ownership differences and international diversification: The effects of boards of directors and technological opportunity, Academy of Management Journal, vol. 46, p. 195–211.
- Westphal J.D. (1999), "Collaboration in the Boardroom: Behavioral and Performance Consequences of CEO-Board social ties", Academy of Management Journal, vol. 42, n°1, p. 7-24.
- Westphal J.D., & Frederickson J. W. (2001), "Who directs strategic change? Director experience, the election of new CEOs, and change in corporate strategy, Strategic Management Journal, vol. 22, p. 1113–1137.
- Zahra S.A., & Pearce J.A. (1989), « Board of Directors and Corporate Financial Performance: A Review and Integrative Model», Journal of Management, vol. 15, n° 2, p.291-334.
- Zahra, S.A. (1990), "Increasing the board's involvement in strategy", Long Range Planning, vol. 23, n°6, p. 109-117.
- Zhang P. (2010), "Board Information Advantage: A Study of Board Capital and Absorptive Capacity", Corporate Governance: An International Review, vol. 18, n°5, p. 473-487.

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