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Trends in Contemporary Business Decision-making: A review of literature and suggestions for further research

Decision-making has been considered as a prominent function of executives ever since C.I. Barnard's 1930s classic work on management [Barnard 1968; Bazerman 1998]; yet recently it has gained an added significance in light of the risky market conditions [Hammond, Keeney and Raiffa 1998], and the technological innovations characterizing the contemporary economic reality [Mullins 2002]. These conditions make the sustaining of the competitive edge and the attainment of the position of "the leader of the pack" [Cook 1998] a complex task indeed for all industries, from banking [Crone 1995] to hi-tech [Frick & Torres 2002].

INTRODUCTION

Consequently, managers as decision makers are required to possess adequate personality traits, acquire an extensive body of updated information, effectively deal with its implications, and even foresee the impending change, and not just react to it [Mullins 2002]. Management in this information-rich world, argues Simon [1997], have become a unique challenge. Top managers are "the principle 'interfaces' of the company with the outside world, discovering the needs for change and innovation that arise from external opportunities and threats" [Simon 1997, p.177]. They are also advised to consider the larger social context [Turnbull 1997] and encourage all stakeholders / constituents to participate in the decision making process. In view of the changing face of corporate governance, says Rubach [1999], all its major participants – owners, board of directors and senior management – actually influence the decision making process.

THE NATURE AND LIMITATIONS OF MANAGERIAL DECISION-MAKING

Decision-making primarily involves the evaluation of alternatives and the choosing of the one venue considered to be the most productive for achieving a certain goal [Simon 1997]. Contrary to the traditional utility theory and to mathematical paradigms, even a calculated, rational choice is influenced by the cognitive limitations of the decision maker – limitations of both knowledge and computational capacity [Simon 1997, p.291] – and is prone to inconsistencies. Whereas Cyret and Hendrick [1977], for instance, regarded the maximization principle to be the main factor in the decision making processes of the firm as a competitive economic system, Simon termed his model *bounded rationality* and since the 1950s sought to theorize and find evidence for behavioural procedures of making choices that take into account the actual operations, capacities and limitations of the human mind.

Theoretically, normative DM process can be summarized in a linear 6-step model [Bazerman 1998]:

"People in general, and executives as well, attempt to make rational decisions, but rationality is bounded by intellectual and perceptual limitations, which narrow their ability to process and calculate the optimal choice. Therefore decision makers should not strive for optimal solutions, but rather for the ones that are sufficiently satisfying."

a) defining the problem;
b) + c) identifying and weighting the relevant criteria;
d) generating alternatives;
e) matching alternatives and criteria;
f) computing the solution with the highest expected value.

Yet this kind of model is, in essence, too abstract, and it was Simon's pioneer work, first composed in the 1950s, which shed light on the intricacies of the actual decision making process. He argued that inductive judgement is bounded in its rationality, and that DM can be better understood by analyzing real decision situations in a descriptive manner rather than by postulating hypothetical models in a prescriptive manner. People in general, and executives as well, attempt to make rational decisions, but rationality is bounded by intellectual and perceptual limitations, which narrow their ability to process and calculate the optimal choice. Therefore decision makers should not strive for optimal solutions, but rather for the ones that are sufficiently satisfying.

Decades after Simon's conceptualization of bounded rationality, Kahneman and Tversky [1982, 2000], in a series of studies, conducted a diagnosis of the biases that affect judgement, managerial and otherwise. They suggested that our decision making rely on several simple strategies termed *heuristics*, which direct our judgement mechanisms, especially in complex environments. These heuristics are helpful managerial devices, save time and simplify decision making, but might also lead to judgement errors when adopted without the users' awareness of their implications. The *availability* heuristic is evident when managers assess the probability of an event by the degree to which it is accessible in their memory. The similarity of an assessed event to a stereotype of a similar event constitutes the *representative* heuristic. *Anchoring and adjustment* heuristics can be detected when managers make assessments starting from an initial standard/value (anchor) and then adjust it to fit their final decision.

Kahneman and Tversky's contribution to decision making theory and practice gave rise to many studies. For example, Russo and Schoemaker [1989] investigated the same issue in a field research that analyzed the DM patterns of about thousand executives in major USA firms. Summarizing their findings, they formulated ten *decision traps* which hamper efficient decision making, from hasty rushing into the process and choosing the wrong problem to start with, to over self-confidence or its opposite, over-reliance on group judgement.

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PERSONALITY ASPECTS OF DECISION MAKING: EMOTIONAL INTELLIGENCE, RISK TAKING, INTUITION AND CREATIVITY

While managerial decision-making is, or supposed to be, mainly a cognitive process, albeit its limitations as described above, still it has been recognized that non-cognitive components, too, take a significant part in it and influence its outcome. In contrast with the mathematical-rational model, contemporary trends in management studies do not assume that these components hamper managerial effectiveness but quite the reverse, e.g. that they assist in the decision making process and improve the executive's job performance.

Various personality traits have been repeatedly investigated in connection to managerial performance and decision-making, for example, emotional intelligence as defined by Goleman [1998b] and Mayer & Salovey [1997]. Kelly & Caplan [1993], in a study conducted at the Bell Laboratories, found that emotional intelligence could distinguish between good and poor managerial performance. Dulewicz & Higgs [2000] came out with a similar conclusion. The career progress of 100 general managers was tracked during seven years and proved to relate to personal attributes differentiating between average and outstanding managerial performance. Kotter [1990] distinguishes between management and leadership, and argues that the latter is related to long-term vision and to decision-making abilities necessary for conducting major changes. In a similar vein, Harrison [1995] defined three personality patterns influencing managerial decision-making:

a) a preference for a certain level of risk vs. a preference for avoiding risk;
b) a preference for locating problems and keeping control of the situation vs. a tendency to give up control and to wait instead for the problems to be sorted out by others or vanish;
c) a preference for innovative methods vs. an inclination to use proven solutions.

All the three dimensions discussed by Harrison can be linked to the theory and research of managerial styles. For instance, Dulewicz & Higgs [2000] reported that three sub-categories in the personal competencies inventory used in their research were highly correlated to job advancement of star managers: strategic perspective, risk taking and creativity.

The role of creativity in managing organizational change has been investigated in many studies [Locke & Kirkpatrick 1995, Amabile 1998, Cook 1998, Andriopoulos 2001]. In the current business environment and global competition, maintains Andriopoulos [2001], companies aspire to become more creative and capitalize on the benefits of creativity not only on the individual level, but on the organizational level as well. Whereas creativity is often regarded on the individual level, Andriopoulos identified five factors, which foster creativity on the organizational level:

Alongside creativity, the study of managerial decision making in relation to intuition [Agor 1989; Andersen 2000], and especially to Jung's four-type thinking-intuition and feeling-sensing dichotomies, has also become quite prevalent in the last two decades. Novicevic, Hench & Wren [2002] reviewed the conceptual development of this line of research and ascribed special significance to the historic contribution of C.I. Barnard's seven-step decision-making model and to his subsequent work. Barnard, one of the founding fathers of decision making analysis in management theory and an experienced executive in his own right, suggested that there are two parallel, complementary courses in decision making: the logical one based on information gathering and reasoning, and non-logical mental processes. Decades later, this notion has regained the attention of researchers, as is evident in abundant studies [Burke and Miller 1999].

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TEAM DECISION-MAKING

Although decision-making is often considered as one of the main responsibilities of the individual manager, teamwork and team decisions are recommended as well in order to enhance the organization's effectiveness. This style of management was already discussed by C.I. Barnard in the 1930s, yet the renewed interest in it, supported by subsequent contributions to modern management theory, stems from the realization that the concept of a single decision maker at the apex of the firm has outlived it utility, says Klenke [2003], and that alternatives should be adopted.

Barnard [1968], among other topics, analyzed the means by which executives gain the cooperation of their employees [Parayitam, White & Hough 2002]. For that purpose, he suggested to employ three kinds of incentives: material (money), non-material (prestige) and *associational,* implying that a certain amount of sharing in the decision making process can motivate workers and increases their willingness to comply with managerial decisions and to contribute to the success of the organization.

Likert [1961] also formulated a model of management styles and decision making patterns in which one of the four dimension comes close to Barnard's associational notion. The model, applying to the organisation as a whole, was based on the answers to a questionnaire filled out by executives in over 200 organizations and on the analysis of performance characteristics of various types of organisations. Likert's model distinguishes four styles: a) exploitive-authoritative; b) benevolent-authoritative; c) consultative; and d) participative. Following Likert, Reddin [1970, 1971] proposed a team decision making model along the participation continuum, differentiating between five methods:

a) one-only method- the top member makes the decision and announces it;
b) one-one method- the top member bases his decision on suggestions received from another team member;
c) one-team method – the top member encourages all members of the team to put forward suggestions on the basis of which he decides;
d) majority method – the decision is put to a vote by all members of the team;
e) consensus method – the team is regarded as one unit, there is a sharing of ideas and suggestions, and the decision is reached only by consensus.

A support to teamwork approach has been suggested by a number of many researchers. A more democratic, collaborative style of management is conductive to promoting employees creativity, says Nystrom [1979] and is of special importance when managing novelty effectively [Bowen & Fry 1988, Vroom & Jago 1988]. A participative style of managerial decision making encourages creativity within the working environment [Kimberley & Evanisko 1981], and is more likely to help the organization recruit and maintain its staffing resources in an effective way [Blake & Mouton 1985, McGregor 1987]. Participating in organizational decision making and influencing its results, argues Pfeffer [1981], is one way of acquiring power by individuals and groups; but it might also be beneficial for the good of the organization, claim Goldsmith & Clutterbuck [cited in Mullins 2002, pp.780-1]. Employees are more willing to contribute innovative ideas, share the responsibilities resulting from managerial decisions, and even risk making their own decisions and abide by them, when less control is exerted by the top management. From a gendered point of view, several studies, summarized by Voelck [2000], investigated gender differences in DM and management styles in academic settings, but the results were not conclusive. Yet in her own qualitative and quantitative study of 28 academic library managers, Voelck found that female managers significantly tend to adopt a more connective style characterized by participatory decision making, team work and consensus building. The directive styles typical of the male managers participating in this research was distinguished by more competitive orientation, self reliance and power seeking and less sharing in the decision making process.

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Still, group decision-making is not without blemishes and its success is not guaranteed. In the cohesive teams studied by Janis [Bazerman 1998], consensus gradually becomes objective, social pressures and conflict avoidance overtake DM process, and group thinking interferes with a rational debate. Judgement biases can occur in groups too, and Bazerman cites, for example, Stone's claim that groups are more risk seeking than single decision makers in tasks with higher levels of uncertainty.

ENHANCING PARTICIPATIVE DECISION-MAKING

The maintaining of a high level of managerial skills within an organization can be achieved in two ways: by recruiting those candidates who already possess the desirable competencies and by cultivating managerial skills as an ongoing on-the-job learning process [Mullins 2002]. This maxim, says Mullins, applies to all dimensions of managerial performance, be they technical oriented or people oriented, and holds true for the enhancement of decision-making skills in the corporate context as well.

Vroom [2003], for instance, conducted a three-decade research on the development of decision-making styles and sought to investigate to what extent managers should involve team members in the DM process. On the basis of this research Vroom compiled a DM model, distinguishing between 5 levels of participation and analyzing 11 situational factors, which influence the effects of participation on the quality and implementation of the decisions, as well as on team development. The model, claims Vroom, can serve as a training tool and is effective for producing behaviour change when accompanied by experiential activities which enable managers to examine their tacit assumptions concerning the sharing of their decision making power.

Another proposal for enhancing decision-making capabilities is the mental model devised by Benson & Dresdow [2003]. The model consists of 6 components: a) self awareness; b) development orientation; c) systems perspectives; d) emotional orientation; e) complexity dynamics; and f) generative conversation. By using this model, suggest Benson and Dresdow, it is possible to change the attitudes and broaden the perceptions involved in the decision making process.

CONCLUSIONS AND SUGGESTIONS

Theory and research alike, reviewed in this article, show that managerial decision-making, on both individual and organisational level is a multi-faceted process involving cognitive and non-cognitive aspects [Mullins 2002]. The recent trend in managerial studies emphasizes the latter and advocates the use of a participative managerial style and of team work, relying on two main reasons: a) for maximizing the organization's resources of knowledge and skills during the DM process; and b) for attaining the cooperation of employees and securing the implementation in the post-DM phase.

Characteristics of the organisation, dimensions of the task and personal styles and traits of the management all play a part in the decision making process and influence its outcome. The literature surveyed indicates that a dual individual vs. team decision-making approach is by far too simplistic and might be misleading in view of the complexity of both the process itself and the economic and organizational environment in which it is carried out. In order to elucidate this complexity and make DM studies more applicable in corporate settings, what seems to be needed is further research: a) of various industries; b) in connection with management styles: and c) as it applies to job performance. In this context, of certain methodological and theoretical advantages might be the use of the 5-stage teamwork model by Reddin [1970, 1971] and analysis of participative decision-making and its situational factors by Vroom [2003].

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