ABSTRACT

Does complexity affect the strategic decision making (SDM) processes? If it does, then in what way are the decisions that are taken by managers affected by the increasing complexity? Inspired by these questions, we embarked on our research to explore the linkages between complexity, the decision making processes and the decision effectiveness.

Researchers in management have been studying the processes of strategic decision making for several decades from various perspectives. In the recent decades, the rapid increase in technology, competition, deregulation and globalization has fundamentally altered the business landscape that firms face. While these have made possible new ways of doing business, the associated complexity has gone up many folds. Therefore, it has become more difficult for the business managers to comprehend a business situation and act accordingly. This complexity, therefore, has been affecting the SDM process of firms. A review of the literature on strategic decision making reveals the deficiency of research on the effects of increasing complexity on the strategic decision making processes.

Extant literature identified three dominant types of strategic decision making processes (SDMP), i.e. the rational, political and intuitive. The major components comprising the strategy of a firm are generally related to its products, its markets and the technology that the firm uses. We define the complexity related to these as the strategic problem complexity. How does the strategic problem complexity affect the rational decision making (RDM), political decision making (PDM) and intuitive decision making (IDM) processes? How does the problem complexity affect decision making effectiveness (DME)? How do RDM, PDM, and IDM affect DME?

Other than the decision problem, the complexity due to the team composition, arising out of the size of the team, has been a major source of influence on strategic decisions. How does the team complexity affect SDM processes and outcomes? Are the SDMPs and DME influenced more by problem complexity or team complexity? Finally, how does the experience of the team and the type of their industry experience affect the DMPs and the DME? These were the key research questions that we examined in this

dissertation to address an urgent need in SDM process research and draw managerial implications in a business environment that is characterized by increasing complexity.

Numerous researchers in strategy have investigated the SDMPs. A prominent feature of past research on this topic has been the heterogeneity and the apparent contradictions of the findings on the characteristics and outcomes of these processes. We observe that the research methodologies adopted in SDMP has been one of the primary contributors to these contradictions in the findings of SDMP literature. This is because the methods used in SDMP research over the last couple of decades has not been quite in step with the complexity of strategic contexts in which the decisions were taken.

The strategic decision making process has generally been researched through case studies or large sample survey methods. The case study based analysis has not been adequate in terms of generalizing, and quantitative analysis which is based on survey data, has tended to generalize in a very limited way. Increase in statistical sophistication has also not been providing better understanding of the DMPs. Having noticed that the strategic context plays a significant role on the DMPs, we opted for a novel quasi-experimental approach to by-pass the problem of the strategic context being a deterrent for generalizing findings in strategic decision process research. Other than addressing the research questions, which are extremely relevant in a business environment of increasing complexity, we aimed to reconcile a few major findings in the vast and fragmented research outcomes of this field through our research methodology.

Building on the theories of RDM, PDM, IDM and DME, we developed a number of hypotheses linking the factors causing complexity and influencing the decision making processes with the decision making processes and the DME. In an experimental set up, 414 executives participated in ninety strategic decision making sessions where the business complexity was adjusted by simulation software and the complexity due to the team composition was varied. Each of the sessions was video recorded and content analyses of these sessions were later carried out to study the variables of DMPs and DME. Thus, where the context other than the ones we imposed on the participants was of no significance, we tested out these hypotheses. The theoretical gap that we identified was the absence of the linkages of complexity, SDMPs and SDME in the SDMP

literature. This theoretical gap was addressed methodologically through a quasi-experimental method using simulation.

We summarize the key findings of our research below:

- Though the occurrence of RDM shows significant effects for changes in complexity, its qualitative character remains largely resistant to change. Complexity affects the PDM and IDM processes greatly and the team complexity has much greater effect compared to the decision problem complexity on these processes. DME variables seem greatly resistant to change when subjected to complexity. Overall, the complexity due to the team composition influences the DMPs and the quality of DME more compared to the complexity arising from the decision problem. Moreover, the acceptability of the decision in the team goes down for increase in the characteristics of any type of decision making process and also any increase in complexity.
- We generally observed that the person dominating the sessions came up with the most intuitive ideas. Thus, strong political and intuitive linkages were evident in almost all the sessions. In the strategy making sessions it was usually observed that the teams that showed the most intuitive characteristics in their decision making were also the most rational, as well as the most political ones.
- We found that experience of managers play an important role in their handling of complexity. Teams with greater experience exhibited stronger qualitative characteristics of RDM, IDM and DME compared to younger teams. PDM is influenced to a great extent by the industry specific experience. Experience in manufacturing industry seems to affect PDM more compared to IT&ITES industry.
- Interesting and contrasting effects were exhibited by the managers from manufacturing and IT&ITES industry backgrounds on the rational, political and intuitive DMPs and also the DME, which is the outcome. Manufacturing industry background seems to enhance the characteristics of the rational, political and intuitive DMPs and promote DME.
- We observed that DME measures show contradiction in terms of its substantive and behavioural components. This has the implication that with an increase in the quality

of the DME, there is a marked decrease in the acceptance of the decision within the team.

Some major implications of our study are as follows:

- We find that the occurrence of a few characteristics of the rationality construct go down with increasing complexity, while there is qualitative improvement in a few other variables constituting the construct of rationality. We show that rationality should be viewed in a multifarious way as greater visible rational characteristics of the team do not translate into better quality of decisions and vice-versa. This resolves a long standing debate in decision making literature about the contradictory findings on the effectiveness of rational decision making in different environments.
- Our study indicates that judging the quality of decisions of a firm by merely economic outcome measures might be inappropriate, as many factors other than just the decision quality ultimately translates into economic returns. Though the quality of DME remains stable in complex environment, other contextual issues could well decide the economic performance parameters of a firm.
- Our study contributes towards understanding how experience in the different industry sectors as manufacturing and IT&ITES affects the DMP characteristics of the team. The findings of this very pertinent but less researched area clearly point out that experience in the manufacturing sector helps the managers to make better decisions. Moreover, as anticipated, our results show that greater experience is positively related with strategic understanding, and managers with lesser experience are perhaps not quite capable to handle complexity equally well while making decisions.
- We note that larger teams[1] tend to make better decisions in complex situations in spite of the greater resistance within the team. The resistance refines the decision making process and perhaps the lack of resistance in smaller teams affects the decision quality in an adverse way. The finding that team size is a moderator between the problem complexity and the extent of DMPs exhibited by the team points towards the need of larger teams for strategic decision making.

[1] *Within the scope of the present research a large team constitutes of six or more executives*

- We observe that the three DMPs namely rational, political and intuitive decision making processes are not working on an either-or basis. This suggests that a team exhibiting strong intuitive decision making will be a rational as well as a political one. Moreover, judging a team decision as being a purely rational, political or intuitive one might be fallacious.

Overall, there has been a general apathy among strategy researchers to study SDMP over the past two decades, despite having many vexing issues unresolved in this field of inquiry. Unlike scholars from other fields such as marketing and behavioral sciences, strategic management scholars have missed out an opportunity to implement newer methodological approaches to study SDM. We have tried to fill this void by revisiting the issues on SDMP by adopting a quasi-experimental method using simulation, a more modern methodological approach. The findings from our study indicate that there is significant scope for fundamental work through innovative research methodologies to integrate the theoretical and empirical findings that are present in the strategy literature and make them more relevant for today's complex business world.

We conclude with a discussion of the limitations of the study and directions for further research.

Key words*: Decision problem complexity, team composition related complexity, strategic decision making processes; rational, political and intuitive decision making, decision making effectiveness, quasi-experiment.*