Chapter 14
Examining the Implications of Process and Choice for Strategic Decision Making Effectiveness

Paul L. Drnevich
The University of Alabama, USA

Thomas H. Brush
Purdue University, USA

Alok Chaturvedi
Purdue University, USA

ABSTRACT

Most strategic decision-making (SDM) approaches advocate the importance of decision-making processes and response choices for obtaining effective outcomes. Modern decision-making support system (DMSS) technology is often also needed for complex SDM, with recent research calling for more integrative DMSS approaches. However, scholars tend to take disintegrated approaches and disagree on whether rational or political decision-making processes result in more effective decision outcomes. In this study, the authors examine these issues by first exploring some of the competing theoretical arguments for the process-choice-effectiveness relationship, and then test these relationships empirically using data from a crisis response training exercise using an intelligent agent-based DMSS. In contrast to prior research, findings indicate that rational decision processes are not effective in crisis contexts, and that political decision processes may negatively influence both response choice and decision effectiveness. These results offer empirical evidence to confirm prior unsupported arguments that response choice is an important mediating factor between the decision-making process and its effectiveness. The authors conclude with a discussion of the implications of these findings and the application of agent-based simulation DMSS technologies for academic research and practice.

INTRODUCTION

Strategic decision-making (SDM) involves the methods and practices organizations use to interpret opportunities and threats in the environment and then make response decisions (Shrivastava & Grant, 1985). Modern decision-making support system (DMSS) technology is often also needed for complex SDM, with recent research calling for more integrative DMSS approaches (Mora, Forgionne, Cervantes, Garrido, Gupta, & Gelman, 2005; Phillips-Wren, Mora, Forgionne, & Gupta, 2009). Such DMSS technologies offer the type of rich and powerful research technology platforms with a high degree of external and internal validity as well as reliability required for integrated decision support (Mora et al., 2005; Liu, Duffy, Whitfield, Boyle, & McKenna, 2009; Linebarger, De Spain, McDonald, Spencer, & Cloutier, 2009; Mostashari & Sussman, 2009; Phillips-Wren et al., 2009).

Conditions of uncertainty in highly turbulent environments (e.g., crisis response), by nature, further complicate the SDM process, and may limit decision making effectiveness (Ramirez-Marquez & Farr, 2009). At issue is the presumed need for speed of response where logic dictates that a satisfactory decision that is made quickly is superior to an optimal decision made too late. Two of the most commonly accepted, and widely employed decision making processes in these contexts are political behavior and procedural rationality (Fredrickson & Mitchell, 1984; Hart, 1992; Eisenhardt & Zbaracki, 1992; Dean & Sharfman, 1993; Hart & Banbury, 1994; Radner, 2000; Hough & White, 2003; Elbana & Child, 2007). Prior research advocates that 'political' processes will be more effective in these contexts, and that 'rational' decision processes will be less effective in unstable environments (Fredrickson & Mitchell, 1984). Subsequent research considered the effectiveness of processes in 'high velocity' environments and advocated that rational decision-making processes will allow for faster response

and will be more effective than political decision-making processes in these contexts (Bourgeois & Eisenhardt, 1988; Eisenhardt, 1989). Hart (1992) later expanded on these arguments to develop a framework for decision-making processes involving a variety of forms stemming from political or rational bases, and also argued that 'rational' approaches should relate positively to effectiveness, while more 'political' approaches should not.

Collectively, the literature on the effectiveness of these SDM processes across a variety of settings is in conflict as some studies suggest that rational decision-making processes will be positively related to effectiveness (Bourgeois & Eisenhardt, 1988; Eisenhardt, 1989; Hart, 1992) and political decision-making processes will not be effective (Hart, 1992), while others advocate for political decision-making processes and against rational decision-making processes (Fredrickson & Mitchell, 1984). Given this conflict, and the fact that these differences are largely unresolved empirically, one contribution of this study is that we examine the effectiveness implications of political and rational SDM processes. Through doing so, we offer some clarification and resolution of the conflicting predictions and findings of Fredrickson and Mitchell (1984), Bourgeois and Eisenhardt (1988), and Hart (1992). Further, while the inclusion of a mediating role for response choice is well theorized, it is also largely untested empirically in prior work. Therefore a further contribution of this study is that we also seek to take into account this mediating role of choice on decision effectiveness.

In this study we address several specific research questions:

- Does variation in the decision-making process result in variation in response choice;
- Does variation in response choice result in variation in decision effectiveness; and
- Can we also trace the effectiveness of different SDM processes as mediated through particular response choices?

Related Content

Web-Based Multi-User Distributed and Collaborative Environment Supporting Emergency and Relief Activities
Maki K. Habib (2014). *Crisis Management: Concepts, Methodologies, Tools, and Applications (pp. 425-445).*
www.irma-international.org/chapter/web-based-multi-user-distributed-and-collaborative-environment-supporting-emergency-and-relief-activities/90729

Catching Learners Early in Humanitarian and Sustainable Principles Through Chemistry Education
Ruby Hansonand Charles Hanson (2022). *Modern Challenges and Approaches to Humanitarian Engineering (pp. 213-233).*
www.irma-international.org/chapter/catching-learners-early-in-humanitarian-and-sustainable-principles-through-chemistry-education/298498

Exploring Socio-Technical Design of Crisis Management Information Systems
Dan Harneskand John Lindström (2014). *Crisis Management: Concepts, Methodologies, Tools, and Applications (pp. 514-530).*
www.irma-international.org/chapter/exploring-socio-technical-design-of-crisis-management-information-systems/90733

Crowdsourcing the Disaster Management Cycle
Sara E. Harrisonand Peter A. Johnson (2016). *International Journal of Information Systems for Crisis Response and Management (pp. 17-40).*
www.irma-international.org/article/crowdsourcing-the-disaster-management-cycle/185638

Simulation and Analysis of Mass Casualty Mission Tactics: Context of Use, Interaction Concept, Agent-Based Model and Evaluation
Johannes Sautter, Denis Havlik, Lars Böspflug, Matthias Max, Kalev Rannat, Marc Erlichand Wolf Engelbach (2015). *International Journal of Information Systems for Crisis Response and Management (pp. 16-39).*
www.irma-international.org/article/simulation-and-analysis-of-mass-casualty-mission-tactics/144347