

Paper accepted for the SMS Special Conference
Strategy Challenges in the 21st Century: Innovation, Entrepreneurship and Coopetition
Rome, June 5-7, 2016

THE DYNAMICS OF STRATEGIC DECISION-MAKING: USING UPDATED INFORMATION FROM THE FRONTLINE

TORBEN J. ANDERSEN

Copenhagen Business School

Department of International Economics and Management

Center for Global Strategic Responsiveness

Porcelænshaven 24A, #3.78

DK-2000 Frederiksberg

Denmark

Phone: +45 3815-2572

Email: tja.int@cbs.dk

RUDI K. F. BRESSER

Free University of Berlin

School of Business and Economics

Department of Management

Garystrasse 21

D-14195 Berlin

Germany

Phone: +49 30-8385-4055

Email: rudi.bresser@fu-berlin.de

CARINA A. HALLIN

Copenhagen Business School

Department of International Economics and Management

Center for Global Strategic Responsiveness

Porcelænshaven 24A, #3.86

DK-2000 Frederiksberg

Denmark

Phone: +45 3815-3460

Email: cah.int@cbs.dk

THE DYNAMICS OF STRATEGIC DECISION-MAKING: USING UPDATED INFORMATION FROM THE FRONTLINE

Abstract

Effective strategy-making in turbulent industries needs current insights that can inform ongoing decisions around adaptive strategic moves. Frontline employees involved in the daily business transactions are the first to see the subtle changes not otherwise observed by top managers. Top management with dominant logics anchored in previous business contexts usually receive updated information from performance reports for prior periods. All the while, we discern a human inclination linked to the position of power where managers subconsciously discard updated information from frontline employees. We present an experiment to investigate these effects and discuss the implications for strategic response capabilities among firms.

Keywords: dominant logics, dynamic responses, frontline information, power biases, strategic adaptation, strategic response capabilities,

INTRODUCTION

Strategic management is often conceived as a systematic analytical approach to understand dynamic changes in the business environment and planning adaptive moves to the changing context (e.g., Andrews, 1984; Ansoff, 1988; Lorange, 1982; Richards, 1986; Schendel and Hofer, 1979). Strategic adaptation can also arise from dispersed decisions (e.g., Bower, 1970; Cyert and March, 1963; Lindblom, 1959) as autonomous actions respond to new opportunities (e.g., Bower and Gilbert, 2005; Burgelman, 1982, 1991; Mintzberg, 1973, 1994). So, effective strategy-making arguably derives from a combination of central and decentralized responses (e.g., Andersen, 2004, 2013; Burgelman and Grove, 1996, 2007; Mintzberg, 1978; Mintzberg and Waters, 1985). The related response capabilities require that emerging changes can be foreseen to consider initiatives that will create a better fit with the evolving context (e.g., Adner and Helfat, 2003; Andersen, Denrell and Bettis, 2007; Bettis and Hitt, 1995; Teece, Pisano and Shuen, 1997; Teece, 2007). While these sensing capabilities are a prerequisite for strategic adaptation (Teece, 2007), important updated information is typically not collected for ongoing strategic decision-making.

Emerging environmental changes are typically sensed by a firm's frontline employees first. Thus, the interplay between executives at the corporate center and dispersed managers and employees can elicit new insights and update the knowledge for strategic decision-making (e.g., Ansoff, 1980; Dutton and Duncan, 1987; Dutton, 1993; Goold and Quinn, 1990; Simons, 1990, 1991, 1994). Hence, we propose that the frontline employees are an important source of information for adaptive strategic decisions (Hallin, 2015; Hallin, Tveterås and Andersen, 2012; Hallin, Andersen and Tveterås, 2013). However, we also discern an unwillingness among executives to use the frontline information due to cognitive rigidities (e.g., Dutton, 1993) and power related biases (e.g., Blader and Chen, 2012; Tost, Gino and Larrick, 2013).

In the following, we first position the issue of information updating in the strategic decision-making literature and consider the implications for timely use of updated frontline information. We theorize about the importance of the subjective experience of power among executive decision-makers and their inability to learn from updated insights from frontline employees. We introduce an experiment with business students in a classroom setting to examine these effects and discuss the implications for effective strategic adaptation.

BACKGROUND

Strategic decision-making

Strategy-making can be seen as a string of resource-committing decisions and actions taken over time at the strategic apex of the organization (Bower, 1986; Bower and Gilbert, 2005, 2007; Mintzberg, 1978). The making of strategic decisions has been a central focus in strategy research for decades although characterized as “a ‘crazy quilt’ of perspectives” with “mature paradigms and incomplete assumptions” (Eisenhardt and Zbaracki, 1992). In this context, we want to focus on the important information acquisition process as a necessary prerequisite to understand the decision situation and develop valid alternative initiatives to deal with fast turbulent changes. Strategic decisions are ideally made on the basis of comprehensive analyses and plans for adaptive initiatives informed by insights on emerging developments gathered from decentralized operations. This process is often conceived around annual planning and budgeting cycles with periodic management reports for monthly/quarterly review meetings in conventional diagnostic control processes. However, the process is informed by accounting information whereas updated insights about emerging developments typically are missing from the analyses. Studies on strategic issue selling and interactive controls have considered how this information updating can occur (Dutton, 1993?).

An ideal decision-making process is informed to define the (real) problem and determine boundary conditions for possible solutions (Drucker, 1967). However, the attempt at rational decision-making is subsumed by bounded rationality, political power, psychological factors, cognitive heuristics and biases, etc. (Kahneman and Tversky, 1982; Pfeffer and Salancik, 1974, 1977; Schwenck, 1984, 1995; Simon, 1959, 1979). Executives develop a ‘dominant logic’ representing experiences from specific business contexts (Bettis and Prahalad, 1995) that exposes them to common biases of availability, retrievability, representativeness, anchoring, confirmation traps, etc. (Bazerman and Moore, 2009). Hence, we know that executive decisions are influenced by judgmental errors (Campbell, Whitehead and Finkelstein, 2009).

The literature on such errors is unequivocal. In a study of strategic decision-making processes Shrivastava and Grant (1985) identify adaptive planning as an important precursor to adaptive strategy-making. However, it is shown that executive cognition influences adaptive decisions and how they are made (Papadakis, Lioukas and Chambers, 1998). Strategic issue diagnosis (SID) favor change decisions when they

are framed as urgent and resolvable (Dutton, Fahey and Narayanan, 1983; Dutton and Duncan, 1987). So, treatment of strategic issues depends on the way they are labeled and categorized (Dutton and Jackson, 1987). Dutton (1993) argues that executives generally are driven towards unreflective/automatic SID with quick diagnosis, rapid decisions, and poor responses due to lack of updated information. We know that internal politics will slow down and obscure the decision-making process and reduce the quality of outcomes (Bourgeois and Eisenhardt, 1988; Eisenhardt and Bourgeois, 1988). Conversely, effective and fast strategic decision-making involves multiple actors and views based on comprehensive analysis of updated information (Eisenhardt, 1989). Hence, managers that collect broad information make more effective decisions whereas managers that use power and push hidden agendas are less effective (Dean and Sharfman, 1996). That is, decision-makers that serve their own ends are associated with negative organizational outcomes (Child, 1997).

Collecting updated information

The strategy field has long acknowledged the need for faster monitoring of strategic performance in turbulent environments. Ansoff (1980) outlined a formal process of strategic issue management (SIM) for early detection of environmental events that could affect the organizational outcomes. Goold and Quinn (1990) identified the strategic control dilemmas caused by uncertainty about competitive developments and means-ends effects, which suggests use of multiple qualitative indicators rather than a few quantitative measures. These strategic control aspects have largely been subdued in subsequent strategy research (Simons, 1994) where the dominant depiction of management controls remains a central diagnostic approach. The crucial question is what information top management will use in their adaptive planning analyses. While much important knowledge and insights can be, and is, transferred to corporate executives from outside contacts with other executives and industry specialists, they should also consider the current experiential insights at the operational level. This information can follow informal channels directly to top management facilitated by middle and line managers, but this is probably the exception rather than the norm.

Environmental uncertainty increases the demands for current insights and timely information processing involving dispersed employees that are closer to the relevant information and operational expertise (e.g., Child and McGrath, 2001). The decentralized experiential insights of managers operating locally have

updated insights about ongoing changes in the business environment and these insights constitute important information that can update the knowledge held by top management. The experiential insights of operational managers and employees can be collected systematically (Hallin, 2015; Hallin, Andersen and Tveterås, 2013) and considered in the adaptive planning discussions at the corporate center. This provides an opportunity to obtain unique updated information about subtle environmental changes that otherwise is unavailable to top management and that most of the time go unnoticed. Top managers often obtain essential information from colleagues and peers in the industry as well as direct reports and contacts within the organization, which tends to reinforce preconceived perceptions (Mintzberg, 2009). When top managers have a limited number of real business encounters with direct experiences, the information updating becomes increasingly skewed and reinforces an outdated conceptual understanding based on personal historical experiences. Hence, cognitive biases develop among executives as they distance themselves from the daily operations (e.g., Andersen and Fredens, 2013; Bazerman and Moore, 2009; Bettis and Prahalad, 1995).

Therefore, we argue that it is essential for top management to take account of experiential learning from operational actions taken within the organization and consider those insights to avoid being blindsided by confirmation biases. That is, the adaptive planning process should be informed by current insights obtained from decentralized operational actors or frontline employees (Hallin, 2015; Hallin et al, 2012, 2013). Hence, the strategic thinking of the top management team should be connected to the actions taken by employees and operational managers working closely together with various stakeholders of the firm in their daily business transactions and learn first-hand from their reactions to events as they evolve.

Information filters and biases

In turbulent environments organizations must deal with a large amount of information to understand complex situations that involve a multiplicity of competence-based knowledge among individuals (Child and McGrath, 2001). This must involve the operational insights and managerial expertise that reside within the organization. However, there are good reasons to collect the frontline information directly from the individual sources of experiential insights because middle and line managers tend to filter the information that is passed on to top management influenced by conscious or subconscious biases (Dutton, 1993).

Accordingly, Reitzig and Sorenson (2013) identify the existence of in-group biases where middle managers identify psychologically with certain parts of the organization and (unconsciously) favor projects from those particular subgroups. This means that mid-level managers liaising between the frontline and top management in many cases communicate biased information skewed in favor of their own subunit focus. Furthermore, Reitzig and Maciejovsky (2014) find evidence that information brought forward and passed up to top management is influenced by the management approach adopted by the organization. Hence, more hierarchically decentralized decision structures tend to reduce the amount of information that is passed on to top management because lower-level managers and employees “believe that their inputs are not taken seriously or are perceived as inappropriate, or that they would be sanctioned for speaking up” (Reitzig and Maciejovsky, 2014, p. 4).

The frontline information is typically not collected on a systematic basis among the employees and used to analyze strategic decisions because top management normally relies on reports developed by the strategic planning staff incorporating all sorts of data, but not information collected regularly from the frontline. However, the frontline information is important for strategizing for a number of reasons:

- 1) It reflects current adjustments and decisions made by frontline employees when they deal with important external constituents, e.g., customers, suppliers, partners, etc.
- 2) When aggregated, these frontline adjusting acts and experiences with them are likely to reveal where the strategy works and where it needs to be modified.
- 3) Top management decision-makers tend to think around their ‘dominant logic’ and often use information from management reports as opposed to hands-on insights from operations.
- 4) Due to their elevated hierarchical position top management is typically motivated by exercising power when making decisions, where frontline employees are building their status as reliable counterparts to core stakeholders.

Thus the top management team and the frontline employees are likely to think and act differently where top managers are more influenced by their powerful position whereas the employees are motivated by their status towards other internal and external stakeholders (Blader and Chen, 2012) . Since the frontline employees tend to build status and trusting relationships with peers, collaborators, customers, etc., they are

more likely to obtain unbiased feedback that is more accurate and more updated, which makes it highly relevant to consider for fast decision-making and strategizing.

THE ROLE OF POWER

A number of studies have demonstrated how performance evaluations are linked to the power position of the person who makes the evaluation. Hence, people that hold institutional power tend to decrease the performance evaluation of less powerful individuals (Kipnis, 1977). That is, as the level of an individual's power increases, his/her evaluations of other people become increasingly negative and self-evaluations increasingly positive (Georges and Harris, 1998). While individuals in positions of power show a greater proclivity to act than those without power, it does not necessarily lead to better decision outcomes (Galinsky and Magee, 2003). Hence, an experience of power is associated with a lower weighting and regard for the advice provided by other people (Tost, Gina and Larrick, 2012). The subjective experience of power increases the amount of talking in various decision fora as feelings of power devalue the perspectives and opinions of other people, which reduces diversity of alternative views and reduces the quality of decisions and performance (Tost, Gino and Larrick, 2013). Individuals that are sensitive to the power of their hierarchical position are more likely to make decisions irrespective of what others think and they tend to allocate more resources towards themselves (Dunbar and Bresser, 2014). That is, if individuals believe in their power position they tend to prioritize their own interests and criteria when making decisions at the expense of other peoples' concerns (Blader and Chen, 2012). In short, power seems to be an important factor influencing the way executives and strategic decision-makers process information and their willingness to consider updated information from frontline employees. To assess these influences further, we devising a little experiment.

A POWERFUL EXPERIMENT

To assess the role of power when accepting and using information from frontline employees, we set up an classroom experiment with undergraduate students where one group of students was primed as powerful executives, another group of students posed as frontline operators, and a third control group where respondents consisted of 'smart' students. The priming of the groups was performed in accordance with the way power was manipulated by prior research (e.g., Galinsky and Magee, 2003). Only the students that were

assigned to the formal executive position received the power manipulation priming them into a high-power organizational decision-making position, which was designed to elicit a high level of subjective feeling of power. The formal executives group members were asked a number of questions about prior experiences in powerful decision situations and they received this priming manipulation before they engaged into the ensuing exercise in line with the notion that individuals encode and evaluate information selectively in accordance with their formal role (Babcock and Loewenstein, 1997). For the exercise, we used the following instructions: “You are the Chief Financial Officer of “ABC A/S” and an important member of the five-person corporate executive team responsible only to the Board of Directors. The internal audit and the risk management committees report directly to you and submit regular reports often with confidential information. You have been summoned by the Chairman of the Board to provide her with your best estimate for the full 1st quarter results.” (See Appendix for the three group manipulations).

To reinforce the priming of power, we presented a personal questionnaire to each of the student a week before the exercise where they briefly described their background and prior work experiences. We pretended to use this material to preselect students for the executive position by handing out the sheets with their names printed on them. However, we did not use any of the material but assigned the roles across the student population purely at random.

The class exercise asked the students to fill out a one-page questionnaire and thereafter provide their best estimate of the first quarter earnings of ABC Company based on unaudited results for January and lists of comparable estimates made by top management, division heads, and various groups among frontline employees in the company. (See Appendix for description of the exercise and data)

On average, the executive forecasts were more optimistic than the frontline employees operating in services. It was not apparent to the students, but the questionnaire referred to three different groups selected at random: (1) the CFO as a member of top management, (2) a service employee in the company, (3) a CBS student. The questionnaire for group 1 ‘primed’ the respondents as powerful people, group 2 was primed as co-workers, and group 3 primed as good students.

The results suggest that people in powerful positions appear to have a positive performance bias, overconfidence, and tend to disregard information from the frontline compared to the people engaged in

operations. These findings confirm prior research that suggests that experts tend to produce overconfidence in judgments (Kahneman and Klein, 2009; Kahneman and Tversky, 1982). Surprisingly, the ‘neutral’ control group of students is even more inclined towards executive opinions than are the executives themselves (see table below).

- RESULTS -

In-Class Forecasting Exercise/Experiment

	Leaders	Services	Students
1.	294	284	329
2.	321	294	309
3.	273	290	299
4.	310	200	294
5.	294	294	294
6.	294	285	294 *
7.	294	299	321 *
8.	312	-	320 *
9.	315	-	294 *
10.	-	-	315 *
11.	-	-	310 *
12.	-	-	321 *
13.	-	-	308 *
Average	300,8	278,0	308,3
s.d.	14,05	32,22	11,90
<i>N</i>	8	6	13
No show	6	8	2
New show	-	-	8 *

DISCUSSION AND CONCLUSION

Individuals in the organization and other close stakeholders like customers, suppliers, and partners observe environmental changes and gain new insights from the responsive actions taken by the firm, and when this information is considered in the adaptive planning process the diverse insights can help interpret the emerging conditions and develop more versatile and viable strategic and operational alternatives.

Effective strategic adaptation in volatile environments depends on discussions informed by updated insights from responsive actions in different operating entities to emerging changes and demands. Uncovering and analyzing these insights can greatly benefit a firm's planning efforts. This knowledge can be collected, communicated, and openly exchanged with individuals in other parts of the organization. Hence, it is important to enable connections between specialized local knowledge communities and the central planning function when dealing with complex organizational issues.

APPENDIX

BACKGROUND

Information Sheet

Kindly provide basic information about your personal profile by completing short statements in the indicated blocks below!

Name (print first and family name):

Age (years):

Gender (M/F):

1. Have you completed other studies before entering CBS? (Y/N – if yes then briefly explain):
2. Do you have prior work experience? (Y/N – if yes then briefly explain your experience):
3. Do you like to make important decisions? (Y/N – if yes briefly explain why that is so):
4. Have you been in charge of other people? (Y/N – if yes briefly explain how that worked):
5. Are you good at organizing activities? (Y/N – if yes briefly explain how this is so):
6. Can you analyze a situation rationally? (Y/N – if yes briefly explain how you do so):

By signing this questionnaire, I authorize the use of the provided information for educational and research purposes only and with the understanding that my individual information will remain confidential and that no reporting will reveal my personal identity and that results are solely communicated in aggregated form.

Signature: _____

Group 1 (Top executives):

PRIMING

Performance Sheet

Name: _____

You have been pre-selected for a leadership position as part of the executive management team in a firm based on your personal credentials – on this basis please respond diligently to the following questions!

1. Think about a prior situation where you have been team leader with decisive power and briefly explain how you experienced this role:
2. In what way do you think you can best influence things as a leader? (briefly explain):
3. What do you do with a person that refuses to follow orders? (briefly explain):
4. How do you manage the people in your charge? (briefly explain):
5. How do you make the team/organization follow your decisions? (briefly explain):
6. How does it feel to have a major influence on decisions? (briefly explain):

Thanks for your valuable answers – now please turn to the next page to perform your assessment.

EXERCISE

You are the Chief Financial Officer of “ABC A/S” and an important member of the five-person corporate executive team responsible only to the Board of Directors. The internal audit and the risk management committees report directly to you and submit regular reports often with confidential information.

You have been summoned by the Chairman of the Board to provide her with your best estimate for the full 1st quarter results. You have the indicative (unaudited) results for the month of January stand around DKK 105 million and you also have data on various internal bets on the full quarter result (see below).

Please provide your best estimate for the 1st quarter result: DKK _____ million (full number)

Briefly explain the reasoning behind your estimate:

Group 2 (Field operators)

PRIMING

Performance Sheet

Name: _____

You have been chosen to represent a field position as a local expert in a functional area of the corporation – on this basis please respond to the following questions!

1. Think about a prior situation where you have been in a team and briefly explain how it worked:
2. In what way do you feel the team worked the best? (briefly explain):
3. What did you do when a team member failed to collaborate? (briefly explain):
4. How do you think a team should be managed? (briefly explain):
5. How would you contribute to the team? (briefly explain):
6. How does it feel to exchange views among team members? (briefly explain):

Thanks for your responses – now kindly turn to the next page to complete a little exercise.

EXERCISE

You are one of the field operators in company “ABC A/S” with responsibility for customer services for all products sold by ABC in your regional area. With your direct involvement in daily field operations and regular customer contacts, you have a lot of insights about how things are evolving.

The HR Department has sent you a request – together with your other colleagues – to provide an individual (confidential) estimate on the ABC Company’s full 1st quarter results. The indicative (unaudited) results for the month of January are reported at DKK 105 million, but the number is rather uncertain.

Various people in the organization have already made their bets on the expected result (see below).

Please provide your best estimate for the 1st quarter result: DKK _____ million (full number)

Briefly explain the reasoning behind your estimate:

Group 3 (Students)

PRIMING

Performance Sheet

Name: _____

You participation in this exercise is solely for educational purposes. Before we begin please respond to the following questions.

1. What do you think about your current studies? (briefly explain):
2. How do you think your studies will be useful for you? (briefly explain):
3. In what way do you want to focus your studies? (briefly explain):
4. How do you manage your studies effectively? (briefly explain)
5. How do you arrange your own study preparations? (briefly explain):
6. What does your ideal study program look like? (briefly explain):

Thanks for completing the answers – now please go to the next page and run the exercise.

EXERCISE

Company “ABC A/S” is a producer of multiple (related) products that are sold across different but adjacent geographical regions. As a business student you are called to provide an assessment of current results in the company applying your analytical skills.

Hence, you are requested to provide your own individual (and confidential) estimate on the ABC Company’s full 1st quarter results. The indicative (unaudited) results for the month of January are reported at DKK 105 million, but the number is rather uncertain at the moment.

Various people in the organization have already made their bets on the expected result (see below).

Please provide your best estimate for the 1st quarter result: DKK _____ million (full number)

Briefly explain the reasoning behind your estimate:

DATA

Best estimates by:

Chief Executive Officer: DKK 324 million

Chief Operating Officer: DKK 295 million

Chief Marketing Officer: DKK 348 million

Chief Risk Officer: DKK 317 million

Head of Product 1: DKK 276 million

Head of Product 2: DKK 355 million

Head of Product 3: DKK 304 million

Head HR Department: DKK 345 million

Head of Engineering: DKK 324 million

Head of R&D: DKK 295 million

Head of Region 1: DKK 263 million

Head of Region 2: DKK 305 million

Head of Region 3: DKK 284 million

Floor managers (1-16): 325, 256, 224, 357, 276, 354, 243, 341, 229, 246, 239, 248, 286, 325, 276, 328 (DKK million)

Customer handling (1-24): 341, 229, 246, 239, 248, 286, 325, 276, 328, 341, 229, 246, 339, 248, 286, 325, 276, 328, 341, 229, 246, 239, 348, 289 (DKK million)

Servicing agents (1-22): 256, 224, 357, 376, 274, 254, 243, 341, 229, 357, 376, 254, 243, 341, 256, 224, 357, 276, 254, 243, 341, 356 (DKK million)

Field operators (1-38): 276, 254, 243, 376, 254, 243, 341, 229, 254, 243, 341, 229, 246, 239, 248, 278, 354, 243, 341, 229, 246, 239, 248, 276, 254, 243, 341, 229, 339, 248, 276, 254, 343, 276, 254, 243, 378, 341 (DKK million)

1 st Quarter performance predictions - Summary statistics						
Observation #	EMT	DIV	Fkt 1	Fkt 2	Fkt 3	Fkt 4
1	324	276	325	341	256	276
2	295	355	256	229	224	254
3	348	304	224	246	357	243
<u>4</u>	<u>317</u>	345	357	239	376	376
5		324	276	248	274	254
6		295	354	286	254	243
7		263	243	325	243	341
8		305	341	276	341	229
<u>9</u>		<u>284</u>	229	328	229	254
10			246	341	357	243
11			239	229	376	341
12			248	246	254	229
13			286	339	243	246
14			325	248	341	239
15			276	286	256	248
<u>16</u>			<u>328</u>	325	224	278
17				276	357	354
18				328	276	243
19				341	254	341
20				229	243	229
21				246	341	246
<u>22</u>				239	<u>356</u>	239
23				348		248
<u>24</u>				<u>289</u>		276
25						254
26						243
27						341
28						229
29						339
30						248
31						276
32						254
33						343
34						276
35						254
36						243
37						378
<u>38</u>						<u>341</u>
Mean value	321	306	285	285	292	276
<i>Standard deviation</i>	22	31	47	44	56	47
Minimum value	295	263	224	229	224	229
Maximum value	348	355	357	348	376	378
Max. - Min. (range)	53	92	133	119	152	149
	EMT = Executive management team			Fkt 1 = Funktional team members 1		
	DIV = Division heads			Fkt 2 = Funktional team members 2		
				Fkt 3 = Funktional team members 3		
				Fkt 4 = Funktional team members 4		

References

- Adner R, Helfat CE (2003). Corporate effects and dynamic managerial capabilities. *Strategic Management Journal* **24**(10): 1011-1025.
- Andersen TJ (2013). *Short Introduction to Strategic Management*. Cambridge University Press: Cambridge.
- Andersen TJ (2004). Integrating decentralized strategy making and strategic planning processes in dynamic environments. *Journal of Management Studies* **41**: 1271-1299.
- Andersen TJ, Fredens K (2013). The responsive organization. CGRS Working Paper Series No. 1, Copenhagen Business School.
- Andersen TJ, Denrell J, Bettis RA (2007). Strategic responsiveness and Bowman's risk–return paradox. *Strategic Management Journal* **28**(4): 407-429.
- Andrews KR (1987). *The Concept of Corporate Strategy*. Irwin: Homewood, IL.
- Ansoff HI (1965). *Corporate Strategy*. Wiley: New York, NY.
- Ansoff HI (1980). Strategic issue management. *Strategic Management Journal* **1**(2): 131–148.
- Ansoff HI (1987). The emerging paradigm of strategic behavior. *Strategic Management Journal* **8**(6): 501-515.
- Anthony RN (1965). *Planning and control systems; a framework for analysis*. Graduate School of Business Administration, Harvard University: Boston, MA.
- Bazerman MH, Moore D (2009). *The Managerial Decision Making Process* (5th ed.). Wiley: Hoboken, NJ.
- Bettis RA, Prahalad CK (1995). The dominant logic: retrospective and extension. *Strategic Management Journal* **16**(1): 5-14.
- Bigley GA, Roberts KH (2001). The incident command system: High-reliability organizing for complex and volatile task environments. *Academy of Management Journal* **44**: 1281-1299.
- Blader S, Chen Y (2012). Differentiating the effects of status and power: A justice perspective. *Journal of Personality and Social Psychology* **102**: 994-1014.
- Bourgeois LJ, Eisenhardt KM (1988). Strategy decision processes in high velocity environments: Four cases in the microcomputer industry. *Management Science* **34**: 816-835.
- Bower JL (1970). *Managing the Resource Allocation Process: A Study of Corporate Planning*. Division of Research, Harvard Business School: Boston, MA.
- Bower JL (1998). Process research on strategic decisions: A personal perspective. In Papadakis, V. and Barwise, P. (eds.). *Strategic decisions*. Springer: New York, NY.
- Bower JL (2005). Modeling the resource allocation process. In Bower J.L., Gilbert C.G. (eds.) *From Resource Allocation to Strategy*. Oxford University Press: Oxford.
- Bower JL, Gilbert CG (2007). How managers' everyday decisions create—or destroy—your company's strategy. *Harvard Business Review* **85**(2): 2-8.
- Boyd BK, Reunning-Elliott E (1998). A measurement model of strategic planning. *Strategic Management Journal* **19**: 181-192.
- Brews PJ, Hunt MR (1999). Learning to plan and planning to learn: Resolving the planning school/learning school debate. *Strategic Management Journal* **20**: 889-913.
- Burgelman RA (1991). Intraorganizational ecology of strategy making and organizational adaptation: Theory and field research. *Organization Research* **2**: 239-262.
- Burgelman RA (1996). A process model of strategic business exit: Implications for an evolutionary perspective on strategy. *Strategic Management Journal* **17**: 193-214.

- Burgelman RA, Grove AS (1996). Strategic dissonance. *California Management Review* **38**(2): 8-28.
- Burgelman RA, Grove AS (2007). Let chaos reign, then rein in chaos – repeatedly: Managing strategy dynamics for corporate longevity. *Strategic Management Journal* **28**(10): 965-979.
- Camillus J C (1982). Reconciling logical incrementalism and synoptic formalism—an integrated approach to designing strategic planning processes. *Strategic Management Journal* **3**(3): 277-283.
- Campbell A, Whitehead J, Finkelstein S (2009). Why good leaders make bad decisions. *Harvard Business Review* **87**(2): 60-68.
- Chakravarthy BS (1982). Adaptation: A promising metaphor for strategic management. *Academy of Management Review*, **7**(1), 35-44.
- Child J (1997). Strategic choice in the analysis of action, structure, organizations and environment: Retrospect and prospect. *Organization Studies* **18**: 43-76.
- Child J, McGrath RG (2001). Organizations unfettered: Organizational form in an information-intensive economy. *Academy of Management Journal* **44**: 1135-1148.
- Christakis NA, Fowler JH (2009). *Connected: The Surprising Power of Our Social Networks and How They Shape Our Lives*. Little, Brown and Company: New York, NY.
- Crossan MM, Berdrow I (2003). Organizational learning and strategic renewal. *Strategic management journal* **24**(11): 1087-1105.
- Csikszentmihayi M (1996). *Creativity: Flow and the Psychology of Discovery and Invention*. Harper Perennial: New York, NY.
- Dean JW, Sharfman MP (1996). Does decision process matter? A study of strategic decision-making effectiveness. *Academy of Management Journal* **39**(2): 368-396.
- Dunbar RLM, Bresser RKF (2014). Knowledge generation and governance in management research. *Journal of Business Economics* **84**(1): 129-144.
- Drucker P (1967). The effective decision. *Harvard Business Review* **45**(1): 92-98.
- Dutton JE (1993). Interpretations on automatic: A different view of strategic issue diagnosis. *Journal of Management Studies* **30**(3): 339-357.
- Dutton JE, Ashford SJ, O'Neill RM, Lawrence KA (2001). Moves that matter: Issue selling and organizational change. *Academy of Management Journal* **44**(4): 716-736.
- Dutton JE, Duncan RB (1987). The creation of momentum for change through the process of strategic issue diagnosis. *Strategic Management Journal* **8**: 279-295.
- Dutton JE, Fahey L, Narayanan VK (1983). Towards understanding strategic issue diagnosis. *Strategic Management Journal* **7**: 307-323.
- Dutton JE, Jackson SE (1987). Categorizing strategic issues: Links to organizational action. *Academy of Management Review* **12**(1): 76-90.
- Dutton JE, Ottensmeyer E (1987). Strategic issue management systems: Forms, functions, and contexts. *Academy of Management Review* **12**(2): 355-365.
- Dutton JE, Duncan RB (1987). The creation of momentum for change through the process of strategic issue diagnosis. *Strategic Management Journal* **8**(3): 279-295.
- Eisenhardt KM (1989). Making fast strategic decisions in high-velocity environments. *Academy of Management Journal* **32** (3): 543-576.
- Eisenhardt KM, Bourgeois LJ (1988). Politics of strategic decision making in high-velocity environments: Towards a midrange theory. *Academy of Management Journal* **31**: 737-770.

- Eisenhardt KM (1989). Building theories from case study research. *Academy of Management Review* **14** (4): 532-550.
- Eisenhardt KM, Zbaracki MJ (1992). Strategic decision making. *Strategic Management Journal* **13**: 17-37.
- Goold M (1992). Research notes and communications design, learning and planning: a further observation on the design school debate. *Strategic Management Journal* **13**(2): 169-170.
- Goold M, Quinn JJ (1990). The paradox of strategic controls. *Strategic Management Journal* **11**(1): 43-57.
- Grove AS (1996). *Only the paranoid survive: How to exploit the crisis points that challenge every company*. Random House: New York, NY.
- Hallin CA, Andersen TJ, Tveterås S (2012). The sensing of operational capabilities by frontline employees against executive judgments, International Conference on Business Performance Measurement and Management: Lima, Peru.
- Hallin CA (2015) *Aggregating Predictions of Operational Uncertainties from the Frontline: A New Proactive Risk Management Practice*, in Andersen TJ (eds.) *The Routledge Companion to Strategic Risk Management*.
- Hallin CA, Tveterås S, Andersen, TJ (2012) Judgmental forecasting of operational capabilities: exploring a new indicator to predict financial performance. Working paper, Department of International Economics and Management, Copenhagen Business School.
- Hallin CA, Andersen TJ, Tveterås S (2013). Who are the better predictors: Frontline employees or executive managers? SMS 33rd Annual International Conference, Pamela Barr and Frank T. Rothaermel (Eds.). Atlanta: Strategic Management Society.
- Helfat CE, Peteraf MA (2015). Managerial cognitive capabilities and the microfoundations of dynamic capabilities. *Strategic Management Journal* **36**(6): 831-850.
- Hendry J (2000). Strategic decision making, discourse and strategy as a social practice. *Journal of Management Studies* **37**(7): 955-977.
- Hill S, Martin R, Harris M (2000). Decentralization, integration and the post-bureaucratic organization: The case of R&D. *Journal of Management Studies* **37**: 563-585.
- Kahneman D, Slovic P, Tversky A (1982). *Judgment Under Uncertainty: Heuristics and Biases*. Cambridge University Press: New York.
- Kahneman D, Klein G (2009). Conditions for intuitive expertise: a failure to disagree. *American Psychologist* **64**(6): 515–526.
- McGrath RG (2013). *The End of Competitive Advantage*. Harvard Business School Press: Boston, MA.
- Mintzberg H (1973). Strategy-making in three modes. *California Management Review* **16**(2): 44-58.
- Mintzberg H (1978). Patterns in strategy formation. *Management Science* **24**(9): 934–948.
- Mintzberg H (1990). The design school: reconsidering the basic premises of strategic management. *Strategic management.Journal* **11**(3): 171-195.
- Mintzberg H (1991). Research notes and communications learning 1, planning 0 reply to Igor Ansoff. *Strategic Management Journal* **12**(6): 463-466.
- Mintzberg H (1994). *The Rise and Fall of Strategic Planning*. Prentice Hall International: Hertfordshire, UK.
- Mintzberg H (2009). *Managing*. Berett-Koehler Publishing: San Francisco, CA.
- Mintzberg H, Waters JA (1985). Of strategies, deliberate and emergent, *Strategic Management Journal* **6**(3):257-272.

- Page SE (2007). *The Difference: How the Power of Diversity Creates Better Groups, Firms, Schools, and Societies*. Princeton University Press: Princeton, NJ.
- Papadakis VM, Lioukas S, Chambers D (1998). Strategic decision-making processes: The role of management and context. *Strategic Management Journal* **19**(2): 115-147.
- Pfeffer J, Salancik GR (1974). Organizational decision making as a political process: The case of the university budget. *Administrative Science Quarterly* **19**(2): 135-151.
- Reitzig M, Sorenson O (2013). Biases in the selection stage of bottom-up strategy formulation. *Strategic Management Journal* **34**: 782-799.
- Reitzig M, Maciejovsky B (2014). Corporate hierarchy and vertical information flow inside the firm – a behavioral view. *Strategic Management Journal* **36**(13): 1979–1999.
- Richards MD (1986). *Setting Strategic Goals and Objectives* (2nd ed.). West Publishing: St. Paul, MN.
- Salancik GR, Pfeffer J (1977). Who gets power – and how they hold on to it. *Organizational Dynamics* **5**(3): 3-21.
- Schendel DE, Hofer CW (1979). *Strategic Management: A New View of Business Policy and Planning*. Little, Brown: Boston, MA.
- Schwenck CR (1984). Cognitive simplification processes in strategic decision-making. *Strategic Management Journal* **5**: 111-128.
- Schwenck CR (1995). Strategic decision making. *Journal of Management* **21**(3): 471-493.
- Shrivastava P, Grant JH (1985). Empirically derived models of strategic decision-making processes. *Strategic Management Journal* **6**: 97-113.
- Simon HA (1959). Theories of decision-making in economics and behavioral science. *American Economic Review* **49**(3): 253-283.
- Simon HA (1979). Rational decision making in business organizations. *American Economic Review* **69**(4): 493-513.
- Simon HA (1991). Bounded rationality and organizational learning. *Organization Science* **2**(1): 125-134.
- Simons R (1990). The role of management control systems in creating competitive advantage: New perspectives. *Accounting Organizations and Society* **15**: 127-143.
- Simons R (1991). Strategic orientation and top management attention to control systems. *Strategic Management Journal* **12**(1): 49-62.
- Simons R (1994). How new top managers use control systems as levers of strategic renewal. *Strategic Management Journal* **15**: 169-189.
- Simons R (2000). *Performance Measurement & Control Systems for Implementing Strategy*. Prentice-Hall: Upper Saddle River, NJ.
- Teece DJ, Pisano G, Shuen A (1997). Dynamic capabilities and strategic management. *Strategic Management Journal* **18**(7): 509–533.
- Teece DJ (2007). Explicating dynamic capabilities: The nature and microfoundations of (sustainable) enterprise performance. *Strategic Management Journal* **28**: 1319-1350.
- Teece DJ (2009). *Dynamic Capabilities and Strategic Management: Organizing for Innovation and Growth*. Oxford University Press: New York, NY.
- Teece DJ (2012). Dynamic capabilities: Routines versus entrepreneurial action. *Journal of Management Studies* **49**(8): 1395-1401.