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Abstract

Purpose – While the strategic management literature extols the virtues of engaging in strategic planning for superior performance, how a dynamic strategic planning capability can be developed remains underexplored; a knowledge void addressed by the paper through applying knowledge-based theory.

Design/methodology/approach – A mail survey was sent to high technology firms randomly sampled from the Kompass Directory of UK businesses. Firms were sampled at the SBU level, given the focus on strategic planning capability.

Findings – An organization's strategic planning capability derives from extensive information distribution and organizational memory. While learning values is non-significant, symbolic information use degrades the development of a strategic planning capability.

Research implications – By investigating the contributory activities that lead to strategic planning capability development, the findings establish how strategic planning materializes in organizations. Further, the differential effects found for knowledge management activities on strategic planning capability development extends empirical studies that suggest knowledge is always a central tenet of strategic planning.

Practical implications – A set of key knowledge activities are identified that managers must address for strategic planning capability development: strategic planning routines and values of search, analysis, and assessment should be appropriately informed by investments in knowledge dissemination and memory on a continual basis. Meanwhile, information misuse compromises strategic planning capabilities and managers must protect against out-of-context or manipulated information from infiltrating into organizational memory.

Originality/value – Despite the advent of the Knowledge-Based Theory and its core premise that capabilities derive from knowledge management activities, little research has been conducted into demonstrating the knowledge-based antecedents of a strategic planning capability.

Keywords Knowledge-based theory, Knowledge management, Strategic planning, Planning capability, Decision-making.

Paper Type Research Paper

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Introduction

The strategy literature extols the virtues of engaging in strategic planning, which remains one of the most commonly used tools in business practice (Thomas and Ambrosini, 2015). This has led studies of planning to concentrate on its performance consequences without due consideration to its development (Hughes *et al.*, 2018; Sarkar and Osiyevskyy, 2017). Consequently, the theoretical and conceptual development of strategic planning has been 'left behind' in the strategic management literature (Wolf and Floyd, 2017), limiting knowledge on how strategy materializes in organizations (Dameron *et al.*, 2015; Thomas and Ambrosini, 2015). More recently, however, strategic planning has been conceptualized and empirically validated as an essential capability for success (Hughes *et al.*, 2019). Such developments raise an important strategic dilemma: how can organizations develop a strategic planning capability?

Past research into strategic planning has identified a number of antecedents to it across different theoretical perspectives. For example: Fredrickson (1984) identifies centralization, formalization, and complexity as structural antecedents to strategic planning (decision processes) while Hart and Banbury (1994) posit that strategic planning capabilities can evolve through purposeful design; Menon *et al.* (1999) expand on both and introduce innovative culture as antecedents to strategy-making; Grant (2003) discusses externalities (e.g., changing environmental conditions; varying reference points) as foundations; Atuahene-Gima and Murray (2004) view process rewards, conflict, and extra-industry relationships as antecedents to comprehensive strategic planning; Whittington *et al.* (2011) find societal, cultural, technological, and organizational factors that influence strategic planning; Thomas and Ambrosini (2015) provide guidance as to how formal and informal controls are salient antecedents to materializing strategy through comprehensive strategic planning; while Hughes *et al.* (2018) identify cognitive

(managerial reasoning) antecedents to strategic planning. In this paper, the development of the

strategic planning capability through the knowledge-based theory (KBT) is examined.

How organizations build on and apply knowledge is an important topic to pursue in the

examination of capability development (Marsh and Stock, 2006). There is agreement in the

dynamic capabilities literature that knowledge management—the creation, deployment, and

storage of knowledge (Grant, 1996a)—facilitates capability development (Friesl, 2012; Grant,

1996a; Marsh and Stock, 2006; Teece, 2014). For instance, new knowledge, existing knowledge

stocks and management team learning have been observed to shape firms' strategic goals and

actions in pursuit of these goals (Crick and Crick, 2014). Similarly, through the knowledge-based

activities of creating, deploying and storing knowledge, it would be expected that a strategic

planning capability can be developed. This study thus examines a set of knowledge activities that

may impact strategic planning capability development: information distribution, learning values,

organizational memory, and symbolic information use.

A knowledge-based perspective on the antecedents to a dynamic strategic planning

capability is adopted as an appropriate theoretical lens as strategic planning is typically seen in

terms of reliance on systematic analysis, evaluation, strategic option creation, and purposeful

reliance on information for comprehensiveness in the aforementioned elements of the strategic

planning process (e.g., Menon *et al.*, 1999; Bailey *et al.*, 2000). These elements, then, would

seem to rely on knowledge as the building blocks for success in strategic planning. What is

relatively absent, still, for both practitioners and scholars, is an understanding of the knowledge-

based antecedents to strategic planning beyond normative assumptions that there must be

significant effects given the previous assumptions regarding the nature of the strategic planning

process. Two contributions to the strategic management and planning literatures are offered.

First, by investigating the contributory activities that lead to strategic planning capability

development, new insight on how planning and strategy materializes in organizations is

presented (Thomas and Ambrosini, 2015). Second, building on our first contribution and

drawing on the KBT, the findings reveal different effects on strategic planning capability by

knowledge management activities and in so doing extend empirical studies that suggest

knowledge is always a central tenet of strategic planning (e.g., Atuahene-Gima and Li, 2004;

Atuahene-Gima and Murray, 2004; Rogers *et al.*, 1999; Teece, 2014). Collectively, addressing

the antecedents of strategic planning capability from a KBT lens addresses the lack of wider

theory integration to advance theoretical and empirical knowledge on contemporary strategic

planning; as called for by Dameron *et al.* (2015), Hughes *et al.* (2018), Whittington *et al.* (2016),

and Wolf and Floyd (2017).

A Dynamic Strategic Planning Capability

Consideration of planning as a capability has been evidenced in the literature through

investigation of marketing planning capability (Slotegraaf and Dickson, 2004), product portfolio

planning capability (Newey and Zahra, 2009), and more broadly, strategic decision-making as

capability (Hughes and Morgan, 2007; Hughes *et al.*, 2019). Fundamental to the strategy process,

planning "can cultivate an organizational capability through the integration, combination, and

reconfiguration of a firm's resources" (Slotegraaf and Dickson, 2004, p. 371). The description of

planning offered by Bailey *et al.* (2000, p. 153) clearly aligns to Teece's (2014, p. 332)

description of dynamic capabilities as allowing "management to develop conjectures about the

evolution of consumer preferences, business problems, and technology; validate and fine-tune

them; and then act on them". Specifically, planning is an:

> *"intentional process involving a logical, sequential, analytic and deliberate set of procedures. The organization and its environment are systematically analyzed. Strategic options are generated and systematically evaluated. Based on this assessment, the option is chosen that is judged to maximize the value of outcomes in relation to organizational goals."*

It is a rational, analytical decision-making ability enabling the firm to transform proactively to environmental change, which distinguishes strategic planning from functional planning (i.e., at operational, project, or product levels). Strategic planning as dynamic capability should not be thought of as simply the development of a strategic plan (MacLean and MacIntosh, 2015) but as an activity that continually integrates, combines, and reconfigures the resource base (Slotegraaf and Dickson, 2004). The overall purpose is to achieve congruence with customer needs and market opportunities and reduce the risk of environmental uncertainty (Crick and Crick, 2014). More specifically, by selecting appropriate strategic options based on continual objective internal and external analyses (Wolf and Floyd, 2017), firms with a strategic planning capability can anticipate and respond to changing environmental conditions. This refutes the notion that strategic planning is for predictable environments only.

A dynamic strategic planning capability, thus, requires the organization to integrate and apply knowledge continually in their planning processes (Grant, 1996a). Yet, recent examinations of strategic planning (e.g., Atuahene-Gima and Li, 2004; Slater *et al.*, 2006; Slotegraaf and Dickson, 2004; Thomas and Ambrosini, 2015; Wolf and Floyd, 2017) have neglected its origins, with scholarly attention narrowly focused on the relationship between strategic planning and organizational performance (Sarkar and Osiyevskyy, 2017; Wolf and Floyd, 2017). Strategic planning is an information and knowledge intensive capability and the quality of planning decisions is reliant upon knowledge (Grant, 1996a). Therefore, knowledge management is widely considered a central tenet of strategic planning (Atuahene-Gima and Li,

2004; Rogers *et al.*, 1999). Yet, while knowledge-based insights on the development of

capabilities have been garnered (Dimitriades, 2005; Marsh and Stock, 2006), the role of different

knowledge management activities as precursors to the development of a dynamic strategic

planning capability requires investigation.

Strategic Planning and Knowledge Antecedents

Organizations are systems that scan and acquire information from their environments, distribute,

and interpret that information, and then store the information gained in organizational memory

(Huber, 1991). Organizations adept at environmental scanning and knowledge management can

develop stronger dynamic strategic planning capabilities to sense, seize, and reconfigure in their

strategizing (Teece, 2014). Consequently, they are able to allocate and reallocate resources

effectively to the most appropriate strategy at any point in time (Grant, 1996b). Within KBT,

organizations are viewed as entities that create, store, and deploy knowledge (Grant, 1996a). The

KBT is drawn on to conceptualize knowledge management as comprising the activities of

information distribution, learning values, memory, and symbolic information use.

Information distribution, learning values, and memory are knowledge resources that are

heterogeneous and imperfectly mobile between firms (Hughes and Morgan, 2007). Hence, there

will be variation in the degree to which different organizations invest in different learning or

knowledge activities (Zollo and Winter, 2002). The knowledge management activities examined

are suggested to play a prominent role in directing firm decision-making, proactively enabling

firm's generative learning for the execution of fundamental strategic shifts; with the intent to

create or maintain advantage (e.g. Baker and Sinkula, 1999).

Research into organizational learning, including insights from the KBT, focuses on the

acquisition and creation of organizational knowledge (Grant, 1996a) that have the potential to

direct behavior (Slater and Narver, 1995). The desire to do so is manifest in the value a firm puts

on the importance of learning (Baker and Sinkula, 1999). However, an organization may be

adept at knowledge acquisition but unable to apply that knowledge through their strategic

planning processes; hence, if organizations can be deemed to be entities that create knowledge *de*

facto, the challenge is to disseminate this knowledge and store this knowledge effectively for

decision-making. Indeed, forgetting knowledge is itself an example of a failure in knowledge

acquisition (Casey and Olivero, 2011). For instance, exploiting stored information from an

organization's history to inform present decisions (Walsh and Ungson, 1991) is an example of

memory driving decision-making.

Rather than examining knowledge management activities through a process lens, then,

the concern of this study is the content of those activities. This focus enables an examination of

the ability of firms to apply knowledge management activities in pursuit of competitive

advantage (Baker and Sinkula, 1999; Grant, 1996a). Information dissemination, learning values,

and memory represent knowledge resources available to the firm, much in the same way that

learning has been extensively treated as a firm resource in extant literature (Hunt, 2000; Hughes

and Morgan, 2007, 2008; Hunt and Morgan, 1995; Nahapiet and Ghoshal, 1998). Thus, when

exploited effectively to drive strategic planning processes, firms will achieve an advantage over

competitors and conversely, "…those weaker at learning are expected to suffer in developing

value and in reaching desired product-market goals as a result" (Hughes and Morgan, 2007, p.

508). An extension of this inability to use knowledge resources effectively is when knowledge is

used irresponsibly in planning processes. Such symbolic information use is typically neglected in

decision-making investigations, despite the many contemporary examples of 'fake news' and 'data fiction' feeding into decision practices. How the set of knowledge management activities impact firms' ability to develop a strategic planning capability is now investigated.

Hypotheses Development: Knowledge Management Activities

Distributing information organization-wide is fundamental to knowledge sharing that is necessary for effective strategic planning. Following the KBT, without distribution of knowledge, knowledge assets remain resident within individual employees and cannot be readily codified and transferred for the development of a strategic planning capability (Grant, 1996a; Teece, 2014). Widespread information distribution can, therefore, contribute to successful strategy development by drawing on collective intelligence. With greater quality and quantity of information, decision-makers can then respond effectively. To develop a strategic planning capability, the necessary decision-makers involved in formulating strategy, searching for solutions to strategic problems, assessing alternatives, evaluating potential strategic options, and systematic analysis of the business environment (e.g., Bailey *et al.*, 2000), require information as swiftly as possible (Rogers *et al.*, 1999); this cannot happen if information is not distributed.

Hypothesis 1. Strategic planning capability is positively influenced by information distribution.

Learning values ensure that organizations have procedures in place so that learning is accomplished as efficiently as possible (Brews and Hunt, 1999); evidenced by a focus on learning as an investment and valuing learning as key to improvement (Morgan and Turnell, 2003). This conceptualization is consistent with the work of Baker and Sinkula (1999), and specifically, their depiction of the second-order construct learning orientation; defined as an

organizational characteristic that "reflects the *value* that a firm places not only on adroitly responding to changes in the environment but on constantly challenging the assumptions that frame the organization's relationship with the environment" (Baker and Sinkula, 1999, p. 412 *[emphasis added]*). Thus, the degree of strategic planning is expected to be a function of a firm's focus or emphasis on learning (Sinkula, 1994); as has been observed in the development of portfolio planning capabilities (Newey and Zahra, 2009).

Commitment to learn is a key feature of a learning orientation and highlights the necessity of instilling learning values as central to firm action (Baker and Sinkula, 1999). Learning values that stress the importance of knowledge about customers and the market arena should, in turn, encourage the development of planning processes (e.g., Crick and Crick, 2014; Newey and Zahra, 2009). The presence of learning values enables "firms to regularly detect and correct errors in theory in use. If an organization places little value on learning, little learning is likely to occur" (Baker and Sinkula, 1999, p. 413). Thus, if strategic planning is constructed from a collection of routines, which are behaviors that are learned, highly patterned, repetitious (or quasi-repetitious), and based in part in tacit knowledge, learning values are central (Slotegraaf and Dickson, 2004). This logic is depicted in Teece's (2014) conceptualization of process 'signatures', that "arise from a company's heritage, including its prior management actions, certain irreversible investments, and context-specific learning" (Teece, 2014, p. 334). Conversely, too great a focus on learning may be harmful due to cost, time, and bounded rationality. Nevertheless, it is likely that learning values will aid the development of a strategic planning capability by enabling the resource base to be reconfigured and thereby mitigating the potential for routine rigidity and inertia (cf. Mintzberg, 1994). Therefore:

Hypothesis 2. Strategic planning capability is positively influenced by learning values.

Symbolic information use extends from the cognitive biases of managers, which have

being identified as a source of vulnerability that can negatively influence the effectiveness of

planning systems (Wolf and Floyd, 2017). By focusing attention on *people* and what they do in

the strategy process (MacLean and MacIntosh, 2015), it is evident that information can be

deliberately misused or taken out of context during strategic planning (Menon and Varadarajan,

1992). The organizational processes through which individuals engage in knowledge deployment

may be obscured (Grant, 1996a) through symbolic information use. This refers to the collection

and misuse of information to validate beliefs or past decisions (Diamantopoulos and Souchon,

1999), or the "distortion and manipulation of information to support, legitimize, and sustain the

opinion or dispositions of a strategic decision-maker" (Hughes *et al.*, 2010, p. 613). This

encompasses current information collection activities that may be used out-of-context and

manipulated to suit the agenda of the person(s) using the information.

This is likely to negatively affect strategic planning capability for two reasons. First,

information misused or manipulated from its original context could deliver a seemingly correct

or advantageous strategic solution to managers. However, this strategy is unlikely to be optimal

given that it is the consequence of biased thinking and flawed judgments, thus clouding sensing,

seizing, and reconfiguring ability e.g., it would likely not facilitate a strong response to the

market or enable resources to be allocated effectively. As such, a strategic planning capability

will not develop as the ability to plan is undermined. Second, information used to support the

opinions or desires of managers could be in conflict to the firm's competitive truth. The quality

of the strategic planning process deteriorates as the amount of biased or misused information

increases and this undermines the planning effort; subsequently, managers may decrease the

extent of strategic planning, thus, eroding their strategic planning capability.

Hypothesis 3. Strategic planning capability is negatively influenced by symbolic information

use.

Organizational memory is a repository of collective organizational insights (Day, 1994)

for future use (Sinkula, 1994) in the development of capabilities (e.g., Marsh and Stock, 2006).

The presence of prior related knowledge or 'knowledge signatures', is important to the

development of capabilities (Teece, 2014) and provides existing knowledge stocks that are

accessible for strategic planning purposes. Critics of strategic planning often comment on its

time-consuming and costly nature (Mintzberg, 1994). But, such perceived lead times to strategic

planning processes may be shortened by relying on memory for reducing the costs of 'search'

associated with problem-solving activities (Marsh and Stock, 2006), which are experienced

during strategic planning (Bailey *et al.*, 2000). Many organizations develop habitual ways of

interpreting events (Hodgkinson *et al.*, 2014) and miss the significance of new knowledge

necessary for strategic planning, but utilizing prior related knowledge can enable managers to

recognize the value of new information for capability development (Marsh and Stock, 2006).

Under the KBT, the absorption and interpretation of knowledge in this way is integral to an

organization's ability "to define problems and to generate, to evaluate, and to choose

alternatives" (Marsh and Stock, 2006, p. 425); consistent with the characteristics of a strategic

planning capability. Managers can then retrieve information on customers, the environment,

competitors, and technology to hasten strategic planning and lessen the perceived cost and time

of developing planning capabilities. Thus:

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Hypothesis 4. Strategic planning capability is positively influenced by organizational memory.

Research Methods

A mail survey was sent to a thousand high technology firms randomly sampled from the Kompass Directory of UK businesses. Key informants are Senior Executives as they are most likely to have specific knowledge on strategic planning, knowledge management, and are justifiably expected to provide reliable information. Firms were sampled at the SBU level. Sampled firms were required to be in business for longer than five years and employ a minimum of 100 full-time employees as a means to control for size and age in the research design. High technology firms are focused on given their salience to the KBT. They experience greater environmental uncertainty and dynamism and, thus, are an appropriate setting to examine strategic planning capability development.

Responses were received from 202 firms with 126 being eligible, consistent with past planning research (Slotegraaf and Dickson, 2004). To increase the response rate a random sample of 150 non-respondents were telephoned and invited to participate in the study or ascertain reasons for non-response. Reasons given included 'no interest in the study', 'no time', 'company policy not to respond to surveys', and so forth. Of these contacted non-respondents, 13 firms responded by completing the survey. Analysis of variance between these respondents and initial respondents reveal no significant statistical difference between them on all model constructs. The final number of responses totaled 139 firms. Second, examination of a random sample of 50 non-respondents and 50 respondents on both profit data and firm size reveal no significant difference between the two groups. Respondent firms have on average US$144 million sales turnover in the last 12 months; in business for an average of 52 years; and,

competing in their current product-market for on average 44 years. Respondents are mostly Chief

Executives (58%) with the remainder being Directors (25%) or Senior Managers (17%).

Respondents average 22 years of working experience and tenures of 11 years. Respondents'

belief regarding response accuracy averaged 5.61 on a 7-point scale.

Measures

Measures were adapted from existing batteries in the strategy literature. The measures for the

information distribution, learning values, symbolic information use, and memory were sourced

from Hughes and Morgan (2008), Morgan and Turnell (2003), Diamantopoulos and Souchon

(1999), and Hult *et al.* (2002), respectively. These measures capture the characteristics of

knowledge management activities revolving around creating, storing, and deploying knowledge

as outlined by Grant (1996a). For dynamic strategic planning capability, measures by Bailey *et*

al. (2000) are relied on as these reflect an ability to anticipate and respond to the market

environment to direct and reconfigure resources through routines that are learned, highly

patterned, quasi-repetitious and largely based on tacit knowledge (e.g., Slotegraaf and Dickson,

2004). Several factors are controlled for. Flexibility is created when the organization has a

diverse portfolio of strategic options to employ and reflects the capacity to alter strategy, and as

such, was controlled for. Centralization is controlled for as due to the rigidity hypothesis

associated with planning processes (limiting the application of knowledge).

The CFA Model includes all knowledge application constructs, planning capability, and

control variables. The model reveals acceptable fit: χ^2 (d.f.) = 610.38 (356); χ^2/d.f. = 1.71;

RMSEA = .07; CFI = .95; NNFI = .94; IFI = .95; Standardized RMR = .09. CFA results and all

measurement item properties are presented in Appendix A. All *t*-values load significantly on the

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specified construct indicating convergent validity. Composite reliability (CR) and average

variance extracted (AVE) are presented in Table 1. All CR values are above acceptable

minimum thresholds exceeding .50 (Bagozzi and Yi, 1988), implying both convergent validity

and model reliability. To ensure the AVE values are acceptable, the square root of AVE for each

construct is shown on the diagonal of the correlation matrix. These values exceed the

correlations and demonstrate discriminant validity (Kyriakopoulos *et al.*, 2016).

…Insert Table 1 Here…

Common Method Variance (CMV)

A single source self-report instrument is used for generating most of the data and so, CMV may

underlie the data. This bias was proactively addressed in developing the questionnaire by placing

measurement scales in random order; not implying any idealized responses; minimizing

questionnaire length; and providing detailed instructions for respondents. CMV is examined via

a marker variable test (Lindell and Whitney, 2001), but examining for difference in covariance

rather than correlation (Kyriakopoulos *et al.*, 2016) as (1) correlation has no effect on analysis in

LISREL using maximum likelihood estimation, and (2) CMV affects *variance* and it is this that

requires examination and not correlation. Respondent knowledge is chosen as the theoretically

unrelated marker and this is not correlated to any of the variables in the model. Following

Lindell and Whitney's (2001) guidance a CMV-adjusted covariance matrix is calculated and is

used in the CFA to compute a CMV-adjusted CFA. There are no significant differences between

the model fit statistics for the original CFA and the CMV-adjusted CFA. Common method

variance, then, does not appear to be a threat in the data.

Analysis and Results

Structural equation modeling is done with LISREL 8.80 using maximum likelihood estimation. Table 2 presents the results. The results for each hypothesis are reported in turn.

Hypothesis 1 expected strategic planning capability to be positively influenced by information distribution. The results ($\gamma = .21, p < .10$) confirm hypothesis 1. Hypothesis 2 proposed that strategic planning capability would also be positively influenced by learning values. The hypothesized effect of learning values is unsupported ($\gamma = -.08, ns$) however. Hypothesis 3 posited that a strategic planning capability will be negatively influenced by symbolic information use. As predicted, symbolic information use negatively affects strategic planning capability development ($\gamma = -.15, p < .05$), providing support for hypothesis 3. Finally, hypothesis 4 expected strategic planning capability development to be positively influenced by memory. Organizational memory ($\gamma = .30, p < .01$) positively influences the development of a strategic planning capability, supporting hypothesis 4.

…Insert Table 2 Here…

Discussion

A primary tenet of the KBT is that knowledge is central for the development of capabilities (Grant, 1996a, 1996b). This research supports this aspect of the theory in high technology organizations, demonstrating that information dissemination and organizational memory are positively related to the development of a strategic planning capability. This in turn addresses the lack of wider theory integration that typifies planning research (e.g., Wolf and Floyd, 2017) by offering distinct knowledge management antecedents to this discussion (e.g., Dameron *et al.*, 2015). The roles of information dissemination and memory contribute to a more coherent

understanding of how strategy materializes among firms in unpredictable environments (Thomas and Ambrosini, 2015). Providing empirical evidence of the positive role of information distribution and memory therein extends the relevance of these two dimensions beyond their observed positive effect on new product development capability (Marsh and Stock, 2006), to a dynamic strategic planning capability. However, not all knowledge management activities are appropriate for the development of a strategic planning capability.

While theoretically, the KBT indicates that activities that apply and integrate knowledge are critical to capability development, no support is found for a relationship between learning values and strategic planning capability. One explanation for the non-significant finding of learning values is offered by Chia and Holt (2009). They suggest that in process-based strategizing, such as under planning, emphasis is placed on addressing contingencies as they arise rather than what exists. This more reactive interpretation of planning thus minimizes the need to learn about what is occurring in the environment in a broader sense, in favor of addressing more defined environmental issues. Much of the knowledge management literature emphasizes the salience of learning in strategizing and clearly it is necessary to revisit its role in developing a strategic planning capability.

The results regarding symbolic information use demand that planning theory capture the process by which some managers manipulate or misuse current information when planning. Clearly, some managers may seek to further their own agenda by manipulating information collected previously or which is in the process of being interpreted, whether this is always a conscious act or a consequence of subconscious behavior is not clear, however. Nevertheless, there are clear dangers in this for the appropriateness of strategic planning. As Vyas and Souchon (2003) note, firms must guard against using information in a symbolic manner in favor of the

objective use of information and this is observed to be paramount to the successful development

of a strategic planning capability. The need to have multiple executives analyze and interpret

information is clearly of priority consistent with the move towards diverse strategy teams in

contemporary planning (Whittington *et al.*, 2016). How firms can mitigate symbolic information

use in their strategy process, therefore, remains a research priority given the lack of investigation

of its role in firm strategizing and what people actually do in the strategy process (e.g., MacLean

and MacIntosh, 2015).

Planning: Dispelling the Practitioner Bias

Much of the criticism directed at strategic planning to date concerns the poor application of

planning, rather than problems with planning itself. For instance, evidence of planning tools

being used persistently independent of context suggests that their use is more dependent on

standardized, organizational practices than on the fit of the tool with the situation in the

environment (Jarzabkoski and Kaplan, 2015). Moreover, strategic plans are often developed on

an annual basis, regardless of the actual pace of change in the environment (Reeves *et al.*, 2012).

A consequence of a lack of knowledge dissemination and failings in organizational memory.

Hence, the perception of strategic planning in practice has become one of affordability,

consisting of whichever initiatives fit the company's resources (Martin, 2014); rather than as a

means for real-time information collection and interpretation and adaptation to new information

(Thomas and Ambrosini, 2015). One explanation for the reliance on traditional 'static' strategic

planning may be attributed to a lack of recent research compared to the body of research from

prior decades when environmental stability was common (Whittington *et al.*, 2016).

Nevertheless, adherence to traditional planning that employs a stable core of norms, expectations and routines (Thomas and Ambrosini, 2015) will likely lead to reduced adaptability under conditions of uncertainty. Yet, when a strategic planning capability is informed and developed by information dissemination and organizational memory, planning activity will fit the situational context of the firm. For instance, under turbulent conditions plans should take the form of 'rough hypotheses based on the best available data…to best capture change signals and minimize information loss and time lags' (Reeves *et al.*, 2012, p. 5). The planning routines and values of search, analysis, and assessment (Bailey *et al.*, 2000) should, then, be appropriately supported by investments in knowledge dissemination and memory on a continual basis. Increasing managerial participation in contemporary strategic planning, via the inputs of wider organizational members and their knowledge (Whittington *et al.*, 2016), can ensure that information dissemination and memory are effectively cultivated for a dynamic strategic planning capability.

Though symbolic information use was identified as a damaging activity for the development of a strategic planning capability, managers need to appreciate that this is distinct from organizational memory. The former encompasses the collection of information that is to be used out-of-context and manipulated to suit the agenda of the person using the information. In contrast, organizational memory is based on information and knowledge gathered in the past that has been retained in the form of knowledge stocks. Past information that has been retained for future use is less vulnerable to the effect of symbolic information use, largely owing to the fact that these knowledge stocks are typically understood across the organization and are, therefore, less vulnerable to misuse by individuals.

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Limitations and Future Research

This study was not without its limitations. First, a cross-sectional design is adopted and whilst this approach is consistent with existing planning research it was not possible to observe the effects over time. Second, using a single informant approach to generate data can be problematic. Although no common method problems were found, and key informants were well qualified to provide data, adopting a multiple informant approach is desirable. Third, the results should not be generalized to populations that markedly differ from the high technology firms sampled.

Several avenues for future research are noted. First, managers may conduct environmental scanning not to develop appropriate planning for future success, but to commit the firm to its existing strategy. This may occur as a result of symbolic information use, thus, the role of symbolic information use warrants particular attention in future strategic planning research. Second, and linked to the former, there are grounds to suggest that symbolic information use may also have a negative effect on performance directly or moderates the strategic planning capability–performance relationship. Strategic management based on poor or misused information may have a detrimental effect on the ability to achieve strategic goals and, therefore, superior performance becomes untenable. This should be examined in future studies. Third, strategic planning may create rigidity when managers fail to respond to given environmental conditions (Atuahene-Gima, 2005) particularly in the face of an exogenous shock (Newey and Zahra, 2009) and existential crisis that threatens continuity (Sarkar and Osiyevskyy, 2017). Future research must study situations in which rigidity from planning can arise and the reasons for this. Fourth, scholars should develop a holistic model of the antecedents to strategic planning. This is a significant gap currently in the literature with many models considering the antecedent issue from singular perspectives. A more comprehensive approach here would go a long way to

generating a complete understanding of the drivers of effective strategic planning, their interaction, and how the development of strategic planning capabilities occur such that scholars and managers understand how firms can succeed at strategic planning. Fifth, scholars have suggested that planning could itself have an informational role (Mintzberg, 1994) and may provide a mechanism to encourage learning (Brews and Hunt, 1999). For instance, in planning extensively, managers are likely to develop new insights and create better understanding of strategy and their environment. Indeed, Menon *et al.* (1999) suggest that thoroughness in planning can enhance learning through the development of complex and richer mental maps, although no support was found in their results for such a hypothesis. Future research should delineate the role of different learning dimensions, as outlined by Huber (1991), on both the origins and outcomes of strategic planning; and examine whether these outcomes form an essential feedback loop to knowledge distribution and memory.

Conclusion

Drawing on the KBT, this study sought to address an important strategic dilemma for managers: how can organizations develop a strategic planning capability? A strategic planning capability represents the organization's core routines and skills in carrying out the activity of planning (e.g., Day, 1994). The capability endows firms with the ability to anticipate and respond to changes in the market environment through continual reconfiguration of the resource base, ensuring convergence with a changeable business environment (e.g., Teece, 2014). The strategic planning capability is fostered by the knowledge management activities of information distribution and organizational memory. Though counterintuitive, learning values is insignificant in the pursuit of strategic planning capability development. Symbolic information use is shown to degrade the

development of a strategic planning capability and managers must be conscious of how

knowledge might be being misused by colleagues to further personal gain at the disadvantage of

planning effectiveness. Collectively, the findings provide new empirical evidence as to the role

of knowledge management activities for the development of a strategic planning capability,

which has thus far been lacking in planning theory due to a neglect of its origins.

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Table 1. Correlation matrix and descriptive statistics

		1	2	3	4	5	6	7
1	Information distribution	.76[a]						
2	Learning values	.48**	.91					
3	Symbolic information use	-.19*	-.16	.66				
4	Organizational memory	.55**	.37**	-.25**	.79			
5	Strategic planning capability	.44**	.30**	-.27**	.44**	.80		
6	Flexibility	.35**	.42**	-.11	-.20*	.38**	.74	
7	Centralization	-.20*	-.20*	.10	-.14	-.16*	-.15	.80
CR		.80	.91	.80	.83	.93	.83	.88
AVE		.57	.83	.44	.63	.64	.55	.64
Mean		4.88	4.99	3.77	3.67	4.05	4.83	4.87
SD		1.14	1.24	1.11	1.27	1.13	.88	1.32

Notes: ** $p < .01$.* $p < .05$; SD: Standard deviation; CR: Composite reliability; AVE: Average variance extracted; [a] Figures on the diagonal are square roots of AVE; n/a: Not applicable (single measure latent variable).

1

Table 2. Structural equation modeling results[a]

Knowledge management activities	Hypotheses	Strategic planning capability	
		Standardized path estimate	*t*-value[b]
Direct effects			
Information distribution	H_1^+	.21	1.45†
Learning values	H_2^+	-.08	-.81
Symbolic information use	H_3^-	-.15	-1.78*
Organizational memory	H_4^+	.30	2.35**
Controls			
Flexibility		.31	3.12**
Centralization		-.02	-.24
Squared Multiple Correlations			
For Reduced Form		.42	

Notes: [a] Results from single structural equation model (unrestricted model); [b] Critical t-values (one-tailed): when ** $p = .01$, critical t-value = 2.326; when * $p = .05$, critical t-value = 1.645; when † $p = .10$, critical t-value = 1.282.

2

Appendix A. Measurement item properties

Construct[a]	Measurement item	Standardized factor loading	*t*-value
Information distribution	Meetings are frequently conducted to identify what can be learned and subsequently improved upon from activities and events	.79	—[b]
	Lessons learned from past product-market decisions are thoroughly shared and discussed with others in the organization	.81	9.18
	Exchange of information and experiences takes place frequently and informally among product-market strategic decision-makers	.65	7.39
Learning values	The sense around this organization is that employee learning is an investment not an expense	.81	—[b]
	The basic values of this organization include learning as a key to improvement	.99	10.16
Organizational memory	We always audit unsuccessful product-market strategy endeavors and communicate the lessons learned	.67	—[b]
	We have specific mechanisms for sharing lessons learned in the product-market strategy process	.85	8.18
	Formal routines exist to uncover faulty assumptions about the product-market strategy process	.84	8.15
Symbolic information use	Information is often collected to justify a strategic product-market decision already made	.71	—[b]
	Information is used to justify strategic product-market decisions is often collected/interpreted after the decision has been made	.71	6.87
	Information is often used to reinforce expectations	.68	6.68
	Information is sometimes manipulated in order to justify decisions really made on the basis of instinct	.57	5.76
	Key executives often 'distort' information in passing it on	.63	6.27
Strategic planning capability	Our product-market strategy is made explicit in the form of precise plans	.77	—[b]
	When we formulate a product-market strategy it is planned in detail	.86	11.15
	We have precise procedures for achieving strategic product-market objectives	.78	9.79
	We have well-defined planning procedures to search for solutions to strategic product-market problems	.79	10.04
	We meticulously assess many alternatives when deciding on a product-market strategy	.84	10.79
	We evaluate potential strategic product-market options against explicit strategic product-market objectives	.85	10.87
	We have definite and precise strategic product-market objectives	.76	9.56
	We make strategic product-market decisions based on a systematic analysis of our business environment	.73	9.13
Flexibility	Adapting your product-market strategy adequately to changes in the business environment of your organization?	.67	—[b]
	Adapting your product-market strategy adequately to changes in competitors' product-market strategies?	.70	7.00
	Adapting your product-market strategy quickly to the changing needs of	.78	7.53

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	customers?		
	Reacting quickly to new product-market threats?	.80	7.69
Centralization	There can be little action taken in the organization until a superior makes a decision	.83	_[b]
	A person who wants to make his or her own decisions would be quickly discouraged in the organization	.72	9.07
	Even small matters have to be referred to someone with more authority for a final decision	.84	10.89
	Any decision a person in the organization makes has to have his or her boss's approval (r)	.81	10.49

Notes: [a]All items anchored by 7-point agreement scales (1 = "Strongly disagree" to 7 = "Strongly agree") with the exception of flexibility (1 = "Very poor" to 7 = "Excellent"); [b] Item fixed to set the scale; (r) Item reverse-coded for analysis purposes.

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