

Development of Strategic Planning Capability by Saudi Technology Firms and their Knowledge Management Activities

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Abstract

Saudi technology firms develop their strategic planning capability to improve their performance, but in ways that remained to be explored. This investigation was made by conducting a survey of 112 randomly selected technology firms in Saudi Arabia operating in competitive markets. It was found that an extensive arrangement for storing and distributing information is typical in such firms, and use of symbolic information degrades this development whereas learning values makes little difference. These findings not only show how strategic planning capability is developed by technology firms, but also establish the important role of knowledge management activities in their strategic planning. Also examined are strategic planning routines, knowledge dissemination, organisational memory, and information misuse and manipulation. Practical implications have been considered for managers of Saudi technology firms.

Keywords: *strategic planning capability development, information distribution, knowledge dissemination, learning values, use of symbolic information, organisational memory, Saudi high technology firms*

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I. Introduction

Strategic planning is a widely adopted practice among competitive businesses. Its importance in the dynamic and turbulent context of Saudi Arabia has been established in order for firms to remain competitive and maintain a desired strategic orientation (Alotaibi, 2019). Such conditions require foremost adequate knowledge of the operating environment and its likely impact, and necessitate strategic planning with foresight, preparedness, and the development of greater agility and adaptability (Alotaibi, 2019b).

Strategic planning may be defined generally as a systematic and formalised effort by an organisation to define its objectives, policies and strategies (Steiner, 1979). This definition shows that strategic planning is an analytical and rational process which supports decision-making for transforming organisations in line with various changes including environmental changes. This makes strategic planning different from functional planning, which is typically related to products and operations. In comparison, strategic planning is a dynamic capability. It is also more than a simple strategic plan in that activities are arranged which integrate with, combine and reconfigure the resource base continuously (MacLean & MacIntosh, 2015). The purpose in undertaking this planning is to gain greater congruence with new market opportunities and the needs of customers in order to reduce risks arising from environmental uncertainties (Crick & Crick, 2014). By adopting suitable strategic options based on regular analyses of both the internal and external environments, those firms with developed strategic planning capability can then anticipate and respond effectively to changed conditions (Wolf & Floyd, 2017). This also highlights the usefulness of strategic planning for unpredictable business and economic environments.

The majority of studies on strategic planning tend to focus on its impact on performance (Dibrell et al., 2014; Bicen & Johnson, 2016; Hughes et al., 2018), as compared to its development (Alotaibi, 2016). There is also a dearth of literature on theoretical and conceptual aspects of strategic planning (Hu et al., 2014; Alotaibi, 2015b; Wolf & Floyd, 2017), including how strategic planning takes place in strategic-oriented organisations (Thomas & Ambrosini, 2015). Recent conceptualisations of strategic planning and empirical validation of the same have been framed as being essential for business success (Hughes et al., 2019). This trend raises the question as to how organisations manage to develop their capability for strategic planning.

Previous research on strategic planning has also identified several antecedents from various theoretical perspectives. For example, cognitive antecedents, such as managerial reasoning, were identified by Hughes et al. (2018), and the structural antecedents to decision processes in strategic planning of centralisation, formalisation and complexity were identified by Fredrickson (1984). Menon et al. (1999) introduced innovative culture as another antecedent in strategic planning, which they referred to as strategy-making, and Atuahene-Gima & Murray (2004) considered antecedents of process rewards, and conflict and extra-industry relationships, to strategic planning comprehensively.

Researchers have also provided guidance for materialising strategy by such comprehensive strategic planning through formal and informal controls as the salient antecedents (Thomas & Ambrosini, 2015). It has also been noted that strategic planning capabilities tend to evolve by making designs purposeful (Hart & Banbury, 1994). Further socio-cultural, organisational and technological factors were identified by Whittington et al. (2011) that bear on strategic planning. Externalities have also been discussed as possible foundations, such as varying environmental conditions and changed reference points.

In the present study, strategic planning capability development is examined by means of Knowledge-Based Theory (KBT), which is typically a salient feature of high technology firms. This involves examining a set of knowledge-based activities that could affect the deployment of strategic planning capability, specifically information distribution, use of symbolic information, learning values, and organisational memory. It is important to discuss the topic of how organisations produce and implement knowledge in order to examine the development of strategic planning capability (Marsh & Stock, 2006). Most researchers tend to agree that it is knowledge management that facilitates the development of this capability (Friesl, 2012; Teece, 2014). This includes creating, storing and applying knowledge. It has been observed, for example, that existing stores of knowledge, new knowledge, and management team learning shape the strategic actions and goals of firms (Crick & Crick, 2014), and there is a potential for developing strategic planning capability through the creation, storage and application of knowledge in knowledge-based activities.

Furthermore, this present study takes a knowledge-based perspective with respect to the antecedents of dynamic strategic planning capability. This theoretical lens is considered suitable given that strategic planning is usually viewed in terms of evaluation, systematic analysis, the creation of strategic options, and relying purposefully on information with respect to its comprehensiveness. This reliance is on elements of the process of strategic planning (Bailey et al., 2000), which themselves rely on knowledge as the foundation for successful strategic planning. At the same time however, understanding of the above-mentioned antecedents of knowledge of strategic planning is deficient above the normative assumption of there being significant effects on the nature of the process of strategic planning.

The study makes two potential contributions to the literature on strategic management and strategic planning. It investigates activities considered to be contributive to the development of strategic planning capability, gives insight into how strategic planning manifests in organisations (Thomas & Ambrosini, 2015), and reveals various effects on strategic planning capability through knowledge-based activities. The latter draws on the first contribution, and on Knowledge-Based Theory, and extends existing empirical studies which show the pivotal role of strategic planning (Teece, 2014). Additionally, this has allowed for considering strategic planning capability antecedents from the lens of KBT, particularly for addressing the deficiency of integration with theory, and for advancing both theoretical knowledge and empirical data on current practices in strategic planning (Whittington et al., 2016; Hughes et al., 2018).

Dynamic capability for strategic planning

Regarding strategic planning as a capability can be seen in the literature in the form of investigations into planning capabilities for marketing (Slotegraaf & Dickson, 2004), as well as planning capabilities for product portfolios (Newey & Zahra, 2009), and strategic decision-making (Hughes et al., 2019). According to Slotegraaf & Dickson (2004), strategic planning, which is a critical part of the strategy process, has the potential to lead to development of organisational capability by integrating, combining and reconfiguring organisational resources. As for describing strategic planning in terms of dynamic capabilities, it may be noted that Teece (2014) claimed it allows for the management to conjecture how consumer preferences, business problems and technology evolve, and then to validate them, do fine-tuning, and finally to act upon them.

This integration and application of knowledge is essential for the development of dynamic strategic planning capability during strategic planning processes (Grant, 1996). However, recent investigations of strategic planning have effectively ignored or not given due consideration of this aspect due to focusing narrowly instead on organisational performance and its relationship with strategic planning (Thomas & Ambrosini, 2015; Wolf & Floyd, 2017; Sarkar & Osiyevskyy, 2017).

As per the view taken in this present study, strategic planning is an information-intensive capability and a knowledge-based activity in which the quality of decisions made as an outcome of the strategic planning depends on knowledge. This view makes knowledge management an integral part of strategic planning, as was also taken by Atuahene-Gima & Li (2004), Dimitriadis (2005) and Marsh & Stock (2006). Although some insights have been gained through these few knowledge-based examinations of the development of dynamic strategic planning capabilities, the present study takes these further by examining a range of knowledge-based activities as antecedents to this development.

Knowledge antecedents in strategic planning

With respect to the flow of information, an organisation may be viewed as a system capable of scanning and acquiring information from its environment, and then storing, interpreting and distributing that information

(Huber, 1991). The storage of information is referred to as organisational memory. Importantly, those organisations that are proficient in these processes are able to develop stronger capabilities for dynamic strategic planning in order to detect, capture and reconfigure their strategising (Teece, 2014). As a result, these organisations can then allocate and reallocate their resources effectively in line with their strategy as and when required (Grant, 1996b). In terms of KBT, such organisations function as entities for creating, storing and deploying knowledge (Grant, 1996), and thus conceive knowledge management as formed by activities relating to the distribution of information, values of learning, symbolic use of information, and organisational memory. The above-mentioned information distribution, learning values and organisational memory are treated as knowledge-based resources (Hughes & Morgan, 2007). These resources being heterogeneous and also imperfectly mobile between different firms, can vary between them in degree according to the investment and engagement of each in knowledge-based and learning activities (Zollo & Winter, 2002). Activities pertaining to knowledge management may play an important role in guiding the decision-making of firms, and enabling those firms to learn generatively in order to bring about critical strategic changes for either maintaining or creating a new economic advantage (Baker & Sinkula, 1999).

Existing research on organisational knowledge inclusive of knowledge gained from KBT delves on how organisational knowledge is acquired and created (Grant, 1996). Although this may be used to direct behaviour (Slater & Narver, 1995), the willingness to do this is evident by the importance placed by the organisation on organisational learning (Baker & Sinkula, 1999). An organisation may, for instance, be proficient in acquiring new knowledge, but not so in the application of that knowledge as an outcome of its strategic planning processes. By treating organisations as entities with respect to knowledge creation, the remaining challenge is storing and disseminating this knowledge gained and created. Knowledge that is forgotten is then a case of failing in the acquisition of knowledge (Casey & Olivera, 2011). An example where decision-making is driven by memory would be accessing and utilising information that has been previously stored for informing on present decision-making (Walsh & Ungson, 1991).

Instead of examining activities related to knowledge-management in terms of processes, the present study examines the content of those knowledge-based organisational activities. The rationale for this is to allow for examining the ability of organisations to utilise their knowledge-based activities in their pursuit of gaining competitive advantage (Grant, 1996; Baker & Sinkula, 1999). Information distribution, learning values and organisational memory represent knowledge-based resources made available to an organisation like how learning has also been considered as an important organisational resource (Hughes & Morgan, 2008).

If the critical knowledge-based resources of an organisation are utilised to guide the processes involved in its strategic planning, it may gain a competitive advantage, whereas an organisation that is weak in learning in this way may be expected to fail in developing adequate value for attaining its product and market-related goals (Hughes & Morgan, 2008). Additionally, the failure to effectively utilise knowledge-based resources may also occur in case of using knowledge irresponsibly during strategic planning processes. The use of symbolic information is often neglected during the course of decision-making. The focus in this present study is on examining the development of strategic planning capability.

Development of Hypothesis: Knowledge management activities

Information distribution

An important component of knowledge sharing for making strategic planning effective is information distribution arranged throughout the organisation. If the knowledge is not properly distributed, then knowledge-based assets lie idle in the organisation, and are not therefore transferred for strategic planning capability development (Teece, 2014). In contrast, if information is distributed effectively throughout the organisation, the organisation then has the potential to direct the development of its strategic planning based on its knowledge-based resources. As a result, the enhanced quality and quantity of information could better inform the organisation's decision-makers to respond to environmental changes effectively.

Effective development of strategic planning capability requires for decision-makers to be involved during the strategic planning, and to find solutions to their organisational problems through considering different option and evaluating their options systematically (Bailey et al., 2000). Furthermore, proper information distribution is necessary for the information to be made available as quickly as possible (Rogers et al., 1999). In view of this importance, the following hypothesis is devised:

H₁: Strategic planning capability development is impacted positively by information distribution.

Learning values

Besides effective information distribution, organisations need to have procedures developed for learning to take place efficiently, which is referred to as learning values (Brews & Hunt, 1999). This is confirmed when learning is treated as an investment that leads to improvement through value learning (Morgan & Turnell, 2003). This view of learning values is shared by Baker & Sinkula (1999) with respect to their second-order construct of a learning orientation as an organisational characteristic. In their view, a learning value is the

value placed by a firm on its ability to respond to environmental changes, and furthermore on constantly reviewing its assumptions underlying its relationship with the environment. It is different, for example, from the identification through gaining knowledge of value creating resources so that they can be used effectively to improve products and services (Alotaibi, 2015). This makes the degree of strategic planning a function of an organisation's emphasis or attention on the learning it engages in (Sinkula, 1994).

The commitment to learn is an important aspect of having a learning orientation, which highlights the need for a firm to adopt learning values to guide its actions (Baker & Sinkula, 1999). These values also emphasise the need for gaining knowledge of customers, the market, and encourage the firms to develop adequate strategic planning processes (Crick & Crick, 2014). Furthermore, by adopting such learning values, the firm becomes more able to detect errors in theory and make corrections, and if this value is deficient, then there will also be deficiency in learning (Baker & Sinkula, 1999).

By arranging for strategic planning based on established routines where the behaviours are learned, organised or patterned, and able to be repeated, the learning values become central for the organisation (Slotegraaf & Dickson, 2004). However, it should also be noted that if the focus on learning is excessive, the learning values can also be harmful for the organisation due to the bounded rationality, and the time involved and costs incurred. As long as this situation is not reached, learning values can assist in developing capabilities in strategic planning through reconfiguring the resource base as required, and diminishing the dependency on inertia, routine and rigidity (Mintzberg, 1994). Teece (2014) conceptualised this process as 'signatures' developed from context-based learning, prior actions and irreversible investments. In view of the above findings in the literature on learning values, the following hypothesis is devised:

H₂: Strategic planning capability development is impacted positively by learning values.

Symbolic information

According to Wolf & Floyd (2017), the use of symbolic information stems from managers' cognitive biases, but these could be a source of vulnerability that impact negatively on how effective strategic planning systems can be. For instance, information may be misused, distorted or manipulated deliberately to validate decisions or beliefs (Diamantopoulos & Souchon, 1999), or for supporting, legitimising and sustaining the decisions or opinions of strategic decision-makers (Hughes et al., 2010), or it may be taken out of context in case of a narrow focus on people and their role in the strategy process (Menon & Varadarajan, 1992). Also, there is a possibility of an obscured deployment of knowledge when individuals engaged in organisational processes using symbolic information (Grant, 1996). This may include activities pertaining to the collection of current information that are also used misleadingly or out of context, or in a manipulative manner.

In either case, the impact on capability for strategic planning can be negative for two main reasons. Firstly, the use of misused or manipulated information could still lead to a strategic solution that seems to be correct and advantageous. Despite this, it is unlikely the strategy will be optimal due to its basis in biased thinking and flawed deductions or analysis, nor would it be likely to result in effective allocation of resources or a strong response in the market. Consequently, it is also unlikely that an adequate strategic planning capability could be developed due to undermining of the managers' ability to plan properly. The second reason is that the information could be used for supporting the desires of managers or their untoward opinions, which would likely be in conflict with the organisation's 'competitive truth'.

Importantly, as the quality of information deteriorates in the strategic planning process, the quantity of misused and biased information increases, which then undermines the managers' efforts in planning. As a result, the extent of strategic planning decreases, which erodes the capability for strategic planning. With this in view, the following hypothesis is formed for use of symbolic information:

H₃: Strategic planning capability development is impacted negatively by use of symbolic information.

Organisational memory

Information stored by an organisation is considered as organisational memory if it serves the purpose of providing collective insights (Day, 1994) for later use (Sinkula, 1994) in developing strategic planning capabilities (Marsh & Stock, 2006). The presence of these 'signatures' of knowledge in the form of relevant prior knowledge is critical to strategic planning capability development (Teece, 2014). It also provides for existing stores of knowledge to be made accessible for the purpose of strategic planning. Organisational memory is criticised however for being time-consuming and costly to arrange (Mintzberg, 1994), although the lead times may be reduced for strategic planning by relying on it to reduce costs incurred while engaging in problem-solving activities (Marsh & Stock, 2006).

In practice, many organisations tend to settle into habitual ways of event interpretation (Hodgkinson et al., 2014), and therefore lose out on gaining adequate new knowledge which is also important in developing strategic planning capability. However, the use of relevant prior knowledge itself could help recognise the worth of acquiring new information to support this development (Marsh & Stock, 2006). As per KBT, absorbing and

interpreting knowledge is integral to how organisations define problems, and generate and evaluate alternatives in line with characteristics required for strategic planning capability development. This information can then be retrieved related, for example, to customers, technology, competitors and the wider environment for minimising the time involved and costs incurred in strategic planning capability development. In view of the above-mentioned points on organisational memory, the following fourth hypothesis is devised:

H₄: Strategic planning capability development is impacted positively by organisational memory.

II. Method

An online survey was administered to a randomly selected sample of 500 high technology firms obtained from Saudi business directories. These were directed at individuals in managerial positions involved in knowledge management and strategic planning so that the data gathered would be as reliable as possible. The selection was also delimited by age and size by being in business for at least five years and employing a minimum of 100 full-time employees. These requirements make the firms out of the criteria for SMEs (Small and Medium Enterprises), which means only larger enterprises were included. The capital of these selected firms was above the SME threshold of 20 million Saudi riyals. Firms grounded in KBT were selected because these are common among high technology firms, they are challenged by dynamism and environmental uncertainties, and are therefore considered appropriate for examining the development of strategic planning capabilities.

Of the 500 firms approached, 136 of them responded to the request out of which 112 were identified as valid responses. A test for significant differences was conducted by comparing a randomly selected sub-sample of 40 firms with 40 other non-respondent firms outside of the sample. No significant difference was found. The firms in the final sample of 112 high technology Saudi firms have an average age of 18 years, and all the respondents had managerial roles, such as chief executive, director or senior manager.

Measures and factors

The measures used in conducting this study were taken from the existing literature on the development of strategic planning for the constructs of information distribution, learning values, use of symbolic information, and organisational memory. They may be found, for example, in studies by Hughes & Morgan (2008), Morgan & Turnell (2003), Diamantopoulos & Souchon (1999), and Hult et al. (2002) respectively. The constructs were chosen because they reliably capture knowledge management activity characteristics related to the creation, storage and deployment of knowledge. In respect of capabilities for dynamic strategic planning, the measures used by Bailey et al. (2000) were adopted due to their ability to not only respond to environmental changes, but also anticipate them, and their usefulness for directing resources utilising learned, patterned and repeatable procedures combined with tacit knowledge (Slotegraaf & Dickson, 2004).

A number of factors were also controlled for in this study. Firstly, centralisation was controlled for in view of the rigidity hypothesis related with strategic planning processes that limit knowledge applicability. Secondly, flexibility was controlled for due to the diverse portfolio employed of strategic options reflecting the capacity to amend the strategy. The four constructs are present in the CFA Model, as well as a measure for planning capability and the two control variables for centralisation and flexibility. When tested, the model provided an acceptable fit:

$\chi^2 (d.f.) = 583.21 (281)$; $\chi^2/d.f. = 1.61$; $RMSEA = 0.06$; $CFI = 0.82$; $NNFI = 0.74$; $IFI = 0.88$; *Standardized RMR = 0.07*

The t-values load significantly on the constructs, which indicates convergent validity. Values for CR (Composite Reliability) and AVE (Average Variance Extracted) are presented in Table I below. All these values for CR values are higher than the minimum thresholds being greater than 0.50 (Bagozzi & Yi, 1988), which indicate the presence of both convergent validity and model reliability. In order to ensure the acceptability of the AVE values, the AVE square root was calculated for each construct as shown in the correlation matrix by the diagonal. The values are higher than those for the correlations, which demonstrates discriminant validity (Kyriakopoulos et al., 2016).

Common method variance

It was determined that there is potential bias of CMV (Common Method Variance) due to the use of a single self-reported instrument for generating much of the data. To mitigate this bias, the measurement scales were placed randomly so that no idealised responses would be implied, and additionally the questionnaire length was minimised, and all respondents were provided with clear and detailed instructions. The CMV bias was indicated using a marker variable test (Lindell & Whitney, 2001), but covariance difference was examined instead of correlation for two reasons: Firstly, correlation does not affect the analysis when using maximum

likelihood estimation in LISREL, and secondly, CMV impacts on the variance, which is what needs to be examined rather than correlation.

For a theoretically unrelated marker, respondent knowledge was chosen, which does not have any correlation with any of the model's variables. In line with the procedure adopted by Lindell & Whitney (2001), the researcher calculated an adjusted covariance matrix for CMV, which was used for computing the CMV-adjusted CFA. No significant differences were found between the original CFA model fit statistics and adjusted CFA for CMV. It was deduced that CMV does not pose any threat to the validity of the data.

Table 1: Correlation matrix and descriptive statistics

	1	2	3	4	5	6	7
1 Information distribution	0.75						
2 Learning values	0.46*	0.92					
3 Use of symbolic information	-0.17**	-0.21	0.74				
4 Organisational memory	0.58*	0.44*	-0.31*	0.80			
5 Strategic planning capability	0.39*	0.35*	-0.29*	0.48*	0.78		
6 Centralisation	-0.24**	-0.22**	0.13	-0.15	-0.17**	0.71	
7 Flexibility	0.39*	0.50*	-0.21	-0.27**	0.43*	0.47	0.81
CR (Composite Reliability)	0.77	0.89	0.82	0.86	0.94	0.85	0.82
AVE (Average Variance Extracted)	0.56	0.73	0.46	0.66	0.69	0.58	0.68
Mean	4.87	4.91	3.87	3.72	4.14	4.47	4.73
SD (Standard Deviation)	1.24	1.26	1.21	1.36	1.27	0.90	1.43

*p<0.01; **p<0.05; Square roots of AVE are on the diagonal

III. Results and Analysis

Structural equation modelling was undertaken by maximum likelihood estimation using LISREL 8.8 for which the data is presented in Table II below.

Table 2: Results of the structural equation modelling

Variable	Knowledge management activity	Hypothesis	Strategic Planning Capability		
			Standardised path	Estimate	t-value
Direct effects	1 Information distribution	H ₁ +	0.23		1.49***
	2 Learning values	H ₂ +	-0.07		-0.82
	3 Use of symbolic information	H ₃ +	-0.18		-1.80**
	4 Organisational memory	H ₄ +	0.34		2.36*
Controls	5 Centralisation		-0.04		-0.28
	6 Flexibility		0.33		3.21*
	Squared multiple correlations for reduced form			0.51	

The critical t-values are one-tailed when *p=0.01; **p=0.05; ***p=0.10

First hypothesis

The first hypothesis expects the impact of information distribution on strategic planning capability to be positive:

H₁: Strategic planning capability development is impacted positively by information distribution.

H₁ is confirmed by the result of: $\gamma = 0.23$ ($p < 0.10$).

Second hypothesis

The second hypothesis expects the impact of learning values on strategic planning capability to be positive:

H₂: Strategic planning capability development is impacted positively by learning values.

H₂ is not confirmed by the result of: $\gamma = -0.07$.

Third hypothesis

The third hypothesis expects the impact of the use of symbolic information on strategic planning capability to be negative:

H₃: Strategic planning capability development is impacted negatively by use of symbolic information.

H₃ is confirmed by the result of: $\gamma = -0.18$ ($p < 0.05$).

Fourth hypothesis

The fourth hypothesis expects the impact of organisational memory on strategic planning capability to be positive.

H₄: Strategic planning capability development is impacted positively by organisational memory.

H₄ is confirmed by the result of: $\gamma = 0.34$ ($p < 0.01$).

IV. Discussion

In KBT, knowledge is a central tenet in strategic planning capability development (Grant, 1996). The present study has upheld this theoretical aspect in the content of high technology firms in Saudi Arabia, and also demonstrated the importance of information dissemination and organisational memory as being associated positively with strategic planning capability development. The results are consistent, for example, with the study of Hughes & Hodgkinson (2019). Four distinct constructs were treated as antecedents of knowledge management, namely information distribution, learning values, use of symbolic information, and organisational memory (Dameron et al., 2015).

Information dissemination and organisational memory for instance, contribute to a coherent understanding of the materialisation of strategy in firms, which is especially valuable under unpredictable environments (Thomas & Ambrosini, 2015). The provision of empirical evidence that these two antecedents play a positive role confirms their relevance and importance in the development of dynamic strategic planning capability, including the development of new products (Marsh & Stock, 2006). It was also shown however, that not all activities may be suitable in this regard.

From a theoretical perspective, KBT shows those activities with the potential to be used to apply and integrate knowledge considered critical in strategic planning capability development. Notably, this present study did not lend support to learning values impacting positively on strategic planning capability. A possible explanation for this is that process-based strategies do not place sufficient emphasis on dealing with contingencies when they arise (Chia & Holt, 2009). The reactive form of planning implied here reduces the need for learning what is generally taking place in the environment, and focuses the attention instead on specific environmental issues. The literature on knowledge management is mostly concerned with learning through strategising, whereas it is necessary to understand its role in strategic planning capability development.

The findings on the use of symbolic information require for planning theory to capture the process in which there is misuse or manipulation of existing information during planning. Some managers may therefore seek to advance an agenda of manipulation of previously collected information, or information that is still under process of interpretation, which raises the issue of its suitability in strategic planning. Firms thus need to protect themselves from relying too much on such symbolic information instead of using information objectively, and this has been shown in this study to be critical for successful strategic planning capability development.

This also highlights the need for having multiple analysts for interpreting information besides adopting a diversification strategy in planning (Whittington et al., 2016), and for mitigating the use of symbolic information during strategic planning. This area is identified as needing further research due to inadequate knowledge of the role of this antecedent and existing practices in strategic planning (MacLean & MacIntosh, 2015).

Strategic planning and practitioner bias

Among the criticisms levelled against strategic planning is weak application more than issues with the actual process of strategic planning. Evidence, for instance, on the use of existing planning tools shows that their usage is dependent on organisational practices that are standardised, and do not take the context into consideration to see whether they are suitable for the given situation (Jarzabkowski & Kaplan, 2015). That is, strategic plans tend to be developed on a fixed annual basis, although not without regard to changes in the environment, but irrespective of the pace of changes (Reeves et al., 2012). This is in consequence of lacking in information or knowledge dissemination, and weaknesses in storing or accessing organisational memory. Instead, the indication is that strategic planning in terms of practice has become confined by considerations of whether initiatives are in accord with resources or the issue of affordability (Martin, 2014).

However, this non-dynamic strategic planning is practised due to deficiency in research and understanding of dynamic economic environments (Thomas & Ambrosini, 2015), and the prevalence of relatively more stable environments in previous decades (Whittington et al., 2016). On one hand, adherence to this static or traditional planning has the advantage of stable norms, and having predefined routines that can easily be followed and applied with expected outcomes, but on the other, it reduces the ability to adapt when conditions are uncertain. In order to take advantage of the knowledge-based antecedents, it would be necessary to avail information in real-time for collecting, storing, interpreting and adapting to it (Thomas & Ambrosini, 2015). Information dissemination and organisational memory in particular, can be utilised to adapt for the context of changed conditions. The situation of turbulent conditions was examined by the researcher in a previous study which provided evidence of foresightful strategic planning and organisational flexibility in the Saudi telecommunication sector (Alotaibi, 2019b).

Under such conditions, it may be appropriate for the firm to resort to using the best available data in order to capture the signals indicative of changes, and thereby minimise time lags and loss of valuable information (Reeves et al., 2012). The investments in knowledge and memory can then be utilised continuously in supporting adapted planning routines, and the organisation can build upon its search, assessment and analysis values (Bailey et al., 2000). This would require greater involvement of and participation by management in the process of strategic planning, and wider input from employees for their knowledge to ensure the information dissemination and organisational memory are utilised effectively (Whittington et al., 2016).

Regarding the use of symbolic information, this was identified as having a negative impact on strategic planning capability development. Managers therefore need to recognise its harmful potential, and appreciate how it is different from organisational memory. The latter relies on useful information accumulated in the past that is retained as a store of knowledge, whereas use of symbolic information takes the form of collecting information, not contextualising it, and increases the likelihood of manipulating the information to suit a particular agenda. The advantage of relying on organisational memory instead of symbolic information is that it is widely understood, the store of knowledge is accessible throughout the organisation, and is therefore not as vulnerable to being misused.

Limitations of the study

A number of limitations may be identified relating to the present study. Firstly, it relied on a single informant from each firm in the sample to generate the data. Although no common method problems were detected, and the informants were reliable and knowledgeable to provide the requested data, involving multiple informants could have increased its validity. Secondly, the adoption of a cross-sectional design, although consistent with planning research, did not enable observing the effects of the antecedents over time. Furthermore, the focus on high technology firms means the results and findings are not generalisable to the wider population of large Saudi firms, nor are they applicable to SMEs in the Kingdom.

Scope for further investigations

The practice of environmental scanning may be adopted for committing to an existing strategy rather than exclusively to plan for future success, which may be achieved through the use of symbolic information, so there may be some aspects of symbolic information that could prove useful, and these could be identified through further investigation on moderating factors in the relationship between capacity and performance. Furthermore, the impact of the misuse of or deficient information may be examined to see how difficult it is to sustain good performance. Another aspect that could be examined is the rigidity that occurs in the event of failing to respond appropriately or not at all to changes in environmental conditions (Atuahene-Gima, 2005), particularly when the organisation experiences an existential crisis hindering its continuation (Sarkar & Osiyevskyy, 2017), or when it faces an exogenous shock (Newey & Zahra, 2009). This research could focus on examining the reasons why rigidity occurs, or the situations in which it occurs.

The possibility of developing a holistic model of strategic planning antecedents should also be investigated to combine the research on individual antecedents, and how they can function together as a system. Such a comprehensive approach could help generate a more thorough understanding of strategic planning in terms of effective drivers. Another potential area of study is the informational role of strategic planning itself (Mintzberg, 1994), which could lead to or encourage organisational learning (Brews & Hunt, 1999). Managers could, for instance, gain new and valuable insights into strategic planning, which could lead to clearer understanding of strategy and adapting to environmental changes. This could also lead to identifying dimensions of learning, as hinted by Huber (1991), with respect to strategic planning origins and outcomes.

V. Conclusion

The present study on the development of strategic planning capability by Saudi technology firms drew upon KBT to confirm important aspects of this development with respect to a number of antecedents. Based on a sample of 112 high technology firms in Saudi Arabia, it was found that information storage and distribution practices are common; that use of symbolic information degrades this development, and that learning values makes little difference. These findings establish the importance of knowledge-based activities and knowledge management in strategic planning. The capability is developed by engaging in knowledge management based activities, such as information dissemination and organisational memory, which then enables those firms to improve its routines and human resource skills to better respond to environmental changes in the market. The use of learning values was found to be insignificant in this study as far as the development of strategic planning capability is concerned, and the use of symbolic information was shown to be detrimental to strategic planning capability development. The latter suggests the need for being more conscious of how knowledge may be used effectively, and how it may be misused as a result of deficient planning or the pursuit of personal gains. The findings in this present study have provided empirical evidence on the role and value of knowledge-based managerial activities for the sake of strategic planning capability development.

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