Journal of International Business, Innovation and Strategic Management

Volume 4, Issue 1, 2020, ISSN: 2617-1805

Journal of International Business, Innovation and Strategic Management

2020: 4 (1):47-65

ISSN: 2617-1805

Knowledge Management Capability, Top Management Team Demographics and Market Capitalizing Agility in the Banking Sector of the Kingdom of Saudi Arabia

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To Cite this Article:

Fahad, H. (2020). Knowledge Management Capability, Top Management Team Demographics and Market Capitalizing Agility in the Banking Sector of the Kingdom of Saudi Arabia. J*ournal of International Business, Innovation and Strategic Management*, 4(1), 47-65

ABSTRACT

In this study, we examine the relationship between knowledge management capability and market capitalizing agility which is an important antecedent of competitive advantage in organizations. We first set out to determine the Knowledge Management and organisational agility dispositions and then tested the relationship between the two in the Kingdom of Saudi Arabian banking sector using data from 285 respondents from the commercial banks. Data was collected using structured questionnaires that were derived from literature and tested for validity and reliability prior to their use. We found that the relationship between knowledge management capability and market capitalizing agility was weak, negative and not significant at $p < 0.05$ but at $p < 0.1$ ($r = - 0.142$, $p < 0.063$). We also compared the mean scores of the two strategic capabilities across a set of demographic variables and found significant ($p < 0.01$) variation in the two strategic capabilities across age, level education, and working experience.

Further using Chi Square analysis, we established that both market capitalizing agility and knowledge management capability had a significant relationship with TMTs work experience ($\chi2 = 89.705$ & 97.69; $P < 0.01$), level of education ($\chi2 = 7.78$ & 4.4976; $P < 0.01$) and TMTs age ($\chi2 = 21.213$ & 57.836; $P < 0.01$). This is one of first attempt to examine the relationship between Knowledge Management Capability (lower order capability) and Market Capitalizing Agility (higher order capability) in an emerging economy context. The findings imply that Knowledge Management Capability has not reached the threshold to positively influence the Market Capitalizing Agility which is necessary for superior performance. Furthermore, there are TMTs demographic characteristics (Age, level of education and tenure / work experience) that impact both Knowledge Management Capability and Market Capitalizing Agility.

Key words: ***Knowledge Management, Market Sensing Agility, Demographics***

INTRODUCTION

Organizations are continuously keen on their competitive advantage. Researchers and practitioners of strategic management are continuously seeking to establish which factors have the highest impact on competitive advantage of firms (Lee, 2013). Alhadid and As' Ad (2015). Posited that no single factor can fully explain competitive advantage of firms and thus there is a need to combine various factors. On the other hand, Huang, Ouyang, Pan and Chou (2012) agitate for a combination of both lower order and higher order capabilities to sustain competitive advantage. In the highly volatile market however, firms ought to be agile and be able to sense and respond to market changes quickly and smoothly to maintain their competitiveness (Lu & Ramamurthy, 2011). In these days of globalization and internationalization of markets, only firms that have the ability to create and sustain a competitive advantage within the turbulent environment are able to survive (Lee, 2013). To do so, higher order agility, market capitalizing agility is relevant.

Of critical importance too since the propositions of Hambrick and Mason (1984) in the upper echelons theory is the Top Management Team (TMT) characteristics and researchers have attempted to study the influence of various dimensions of Top Management Team (TMT) on organizational performance and competitive advantage (Tulung & Ramdani, 2016). The influence of TMT demographics on competitive advantage could be subject to other factors such strategic capabilities. For instance, TMTs demographics influence competitive advantage by the strategic decisions that they make (Ruiz-Jiménez & Del Mar Fuentes-Fuentes, 2016).

Knowledge Management Capability

This is a lower order capability which has been established to enhance higher order capability such as organizational agility. Liao, Chuang and To (2011) defines knowledge management capability as the degree to which the firm mobilizes and deploys knowledge resources such as product knowledge, customer knowledge, and managerial knowledge across functional boundaries. Knowledge management promotes organizational agility mainly through improving innovative response (Trinh-Phuong, Molla & Peszynski, 2012). Specifically, with a favorable level of knowledge management, tacit knowledge processed by individual can be converted to explicit knowledge in order to transfer it.

Effective knowledge management on the other hand relies on the TMTs demographic characteristics such as managerial experience, education level and knowledge. Harnessing knowledge management into organizational agility is hence critical since capability ensures that the firm has the ability to integrate the transferred knowledge with the existing knowledge within the firm and then apply such knowledge to improve the managerial practices or behavioral norms and

as a consequence, innovative responds are emerged to cope with market turbulence (Seethamraju & Sundar, 2013)

Top Management Team (TMT) Demographics

TMTs are the highest ranking executives responsible for the entire organization (Hiebl, 2014). TMT demographics include age, gender, education level, functional background, experience, and tenure. Other critical TMT characteristics is the TMT psychological characteristics which include self-esteem, general self-efficacy, locus of control, emotional stability, task specific, self-efficacy, hope, optimism and resilience (Hambrick, 2016). TMT translates policy into goals, objectives, and strategies, and projects to shared-vision of the future. TMTs make decisions that affect every staff and are held entirely responsible for the success or failure of the enterprise. Therefore, TMT are linked to development of lower order capabilities which would later support higher order capabilities of a firm (Hambrick, 2016).

TMT can also be engaged in the strategic decision-making process, each manager's perceptions and interpretations will reflect his or her own cognitive base. Nielsen (2010) proposed that a manager's cognitive base influences the perceptual process underlying decision making. First, it limits the manager's field of vision, or the areas in the environment to which attention is directed. Second, selective perception occurs because the manager only pays attention to some of the stimuli in his or her field of vision. And third, the information that is processed is filtered through the lens of the cognitive base. This study adopted the demographic characteristics as opposed to psychological characteristics since they are observable and objective.

Market Capitalizing Agility

This agility reflects a firm-wide capability to deal with unexpected changes via rapid and innovative responses (Trinh-Phuong, Molla & Peszynski, 2012). Agility has increasingly become indispensable for survival and prosperity for organizations operating in an environment that is characterized as Volatile, Uncertain, Complex and Ambiguous (VUCA). Nafei (2017) argues that as a dynamic capability, organizational agility facilitates integrating and assembling resources, such as assets, knowledge, and relationships. The role of organizational agility in enhancing competitive advantage lies in concentrating on the integration of operational processes to provide a support to the innovative ideas, putting the ideas and decisions into implementations more easily. Market capitalizing agility refers to a firm's ability to quickly respond to and capitalize on changes through continuously monitoring and quickly improving product/service to address customers' needs. This agility emphasizes a dynamic, aggressively change-embracing and growth-oriented entrepreneurial mindset about strategic direction, decision making, and judgment in uncertain conditions (Kraaijenbrink, Spender & Groen, 2011).

Theoretical Foundation

The interface of TMT demographics, strategic capabilities and competitive advantage is anchored on the upper echelons theory (Hambrick & Mason, 1984). The key postulations of the upper echelons theory is that strategic decisions adopted by organizations and the competitive edge of organizations are partially predicted by management demographic characteristics such as age, level of education and tenure in the organization which shape the lower order capabilities such as knowledge management. One of the core fundamentals of upper echelon theory is that demographic characteristics are tangibly intertwined to the psychological and cognitive elements of the executive orientation. In turn, TMT demographics are used as extended referents of executive orientation. The orientations, a direct result of demographic characteristics affect corporate strategy choices and decisions and therefore have tangible effects on organizational outcomes, notably organizational performance (Hambrick, 2016). Demographic characteristics such as education level and specialized knowledge form part of lower order capabilities in an organization.

The study also anchors on the Dynamic Capability Theory proposed by Teece *et al*. (1997). The theory argues that in the hierarchy of capabilities, various kinds of resources and specialized knowledge could be combined and integrated to generate lower-order capabilities which can be combined to generate higher-order capabilities, which can enhance the performance or competitive advantage of organizations (Grewal & Slotegraaf, 2007).

RESEARCH METHODOLOGY

Research Design

Research design is the arrangement of conditions for collection and analysis of data in a manner that aims at combining relevance of the research purpose with economy in procedure (Garg & Kothari, 2014). This study employed a descriptive survey research design which is suitable in describing the present situation, what people currently believe, what people are doing at the moment and so forth (Olusola *et al*, 2013).

Target Population

A total of 285 respondents were targeted from the pool of all the licensed commercial banks operating in the Kingdom of Saudi Arabia by the year 2019. This comprised of the head of human resource department, operations department, finance department, research and development department, information technology department, head of customer care department and sales and marketing department.

Research Instruments and Data Collection Procedure

The study used primary data. The primary data collection instrument in this study was a questionnaire. It was more suitable because the constructs studied had been documented in literature and most of their indicators discernible in empirical literature. The questionnaire was structured to capture information through a 5-point Likert scale type. The questionnaires were self-administered.

Measurement of Variables

The study had three variables namely Knowledge Management Capability, Top Management Team Demographics and Market Capitalizing Agility measured using multiple items anchored on a 5-point likert scale type. Some of the measures of Knowledge Management Capability were whether the recruitment systems favor competent recruits, deployment of employees to units is based on competence, research and development is conducted to enhance the firm's knowledge on products, services as well as customer needs and whether mechanisms have been put in place to enhance knowledge on customer needs, preferences and customer buying behavior. Some of the measures of Market Capitalizing Agility were whether the banks continuously conduct market surveys to establish the trends in the market, continuously monitors the market trends and adjusting accordingly, continuously monitors the market status and adjusting accordingly and improves services and services according to change of customers' preferences. On the other hand, demographic characteristics focused on TMT' age, level of education and work experience (Tenure).

Reliability and Validity of Research Instrument

Pilot tests were conducted to test the validity and reliability testing of the data collection instrument. A pilot study was undertaken on 5% population of the sample population which was not included in the final research (Lewis, Saunder & Thornhill, 2007). In this study, reliability was measured using internal consistency captured as Cronbach alpha. Cronbach

alpha (Sullivan, 2011). The Cronbach's Alpha (α) threshold was set at 0.7. The measures of Knowledge Management Capability had a combined Cronbach's Alpha (α) of 0.717, Market Capitalizing Agility had 0.857 and Demographic characteristics had 0.783. These were above the threshold hence reliable for this study.

Construct Validity of Research Instrument

Construct validity is the extent to which the items in a scale measure the abstract or theoretical construct (Allred & Ross-Davis, 2011). All factor loadings less than 0.4 were eliminated (Cooper & Schindler, 2009). The communalities indicating factor loading sshowed that all the measures of knowledge management capability, market capitalizing agility and demographics characteristics had factor loadings above 0.5 hence no question was eliminated in accordance with the argument by Cooper and Schindler (2009).

Data Analysis

The collected data was analyzed quantitatively using both descriptive statistics and inferential statistics. Statistical Package for Social Sciences (SPSS) version 22 was used to generate descriptive statistics as well as inferential statistics. Descriptive statistics including the mean and standard deviation were used to capture the extent of adoption of knowledge management practices and market capitalizing agility as well as description of the demographics. The Specific inferential statistics adopted was Pearson Correlation (Between the strategic capabilities) and Chi Square analysis (Between the score of Strategic capabilities and demographics data) since the demographics data was categorical.

RESULTS AND DISCUSSION

Demographic Results

Table 1 Demographic Results

Demographic Characteristic	Category	Frequency	Percentage
Age Bracket	21-30 Years	12	7
	31-40 Years	24	14
	41-50 Years	68	40
	Over 50 Years	68	40
Level of Formal Education	Tertiary	20	11.6
	University	152	88.4
Work Experience	Less than 3 Years	12	7
	3 to 5 Years	64	37.2
	6 to 10 Years	48	27.9
	Over 10 Years	48	27.9

Majority of the respondents, 40%, were of age bracket of 50 years and above. The results indicate that most of the respondents occupying top positions in commercial banks are aged 41 years and above. Majority, 88.4%, of the respondents, had acquired university level of education while 11.6% had acquired tertiary level of education. The results

imply that all respondents included in the study were educated and understood the contents of the questionnaires and responded to them accordingly. The results indicated that 27.9% of respondents had worked in the bank for more than 10 years while those who had worked between six and ten years were 27.9%. Those who had worked in the bank between three and five years were the majority and accounted for 37.2%. The results imply that majority of the respondent had worked in the bank for more than three years. This was important to the study since the respondents had high institutional knowledge.

Knowledge Management Capability

Extent of on the Job Training

The extent to which the banks provide on the job training to improve employee's knowledge was established. There was an agreement by 43% of the respondents that their employers provide on the job training to a moderate extent, 34.3 % agreed that its offered to a high extent and 22.7% agreed its conducted to a very high extent to improve employee's knowledge. This is consistent with Nzuve and Omolo (2012) who established high frequency of trainings to improve competitive advantage of commercial banks.

Frequency of Training

It was established that 39% of the respondents indicated that their organizations train employees more than three times per year; 32% showed that training is done three times per year while 29% of respondents indicated that training in the organization happens twice per year. These findings are consistent with the findings of a study by Katua (2015) who argued that commercial banks have embraced training in order to equip their employees to perform in the ever changing business environment.

Extent of Adoption of Knowledge Management Practices

Respondents were asked to indicate their level of agreement with statements on Knowledge Management Practices on a scale of 1-5 where 1=Very low extent, 2=Low extent, 3 = Moderate extent, 4=High extent and 5= Very high extent. The results are presented in Table 2.

Table 2 Extent of Adoption of Knowledge Management Practices

Statement	Mean	Standard Deviation
In my organization, the recruitment systems favor competent recruits	4.45	0.78
In my organization, the deployment of employees to units is based on competence	4.38	1.07
In my organization, research and development is conducted to enhance the firm's knowledge on products	4.19	1.08
In my organization, research and development is conducted enhance the firm's knowledge on services	4.15	1.05
In my organization, research and development is conducted to enhance the firm's knowledge on services	4.15	0.92
In my organization, mechanisms have been put in place to enhance knowledge on customer needs	3.91	0.85
In my organization, mechanisms have been put in place to enhance knowledge on customer preferences	3.90	0.73

Statement	Mean	Standard Deviation
In my organization, mechanisms have been put in place to enhance knowledge on customer buying behavior	3.62	1.06
In my organization, Knowledge sharing to enhance knowledge on governance of the firm is practiced	4.30	1.08
Average	**4.12**	**0.96**

The three most developed Knowledge Management Capability practice among commercial banks was recruitment systems which favor competent recruits (M = 4.45, SD = 0.78), deployment of employees to units based on competence (M = 4.38, SD = 1.07) and conducting research and development to enhance the firm's knowledge on products (M = 4.19, SD = 1.08). However, the three least prevalent knowledge management capability is putting in place mechanisms to enhance knowledge on customer needs (M = 3.91, SD = 0.85), customer preferences (M = 3.91, SD = 0.73) and customer buying behavior (M = 4.3, SD = 1.08). The aggregate mean of KMC suggests that the banks are making efforts to develop their KM capability for deployment in a competitive market environment. The results agree with Teece *et al*. (1997) who suggested that the success of a firm relies on its ability to integrate, build, and reconfigure internal and external competencies to achieve new forms of competitive advantage.

Market Capitalizing Agility

Respondents were asked to indicate their level of agreement with statements on Information Technology Capability on a scale of 1-5 where 1=Very little extent, 2=little extent, 3 = Moderate extent, 4=High extent and 5= Very high extent. The results are presented in Table 3.

Table 3 Extent of Implementation of Market Capitalizing Agility

Statement	Mean	Standard Deviation
My bank continuously conducts market surveys to establish the trends in the market	3.97	1.32
My bank continuously monitors the market trends and adjusting accordingly	3.45	1.51
My bank continuously monitors the market status and adjusting accordingly	4.10	1.33
My bank quickly improves services according to change of customers' preferences	3.34	1.37
My bank quickly improves products according to change of customers' preferences	3.49	1.15
My bank continuous communicates with customers to understand their preferences	4.13	0.76
My bank uses modeling to predict the market trends in the future	3.55	1.20
Average	**3.72**	**1.23**

The three most prevalent market capitalizing capability are continuously communicating with customers to understand their preferences (M = 4.13, SD = 0.76), continuously monitoring the market status and adjusting accordingly (M = 4.10, SD = 1.33) and continuously conducting market surveys to establish the trends in the market (M = 3.97, SD = 1.32).On the other hand, the three least prevalent market capitalizing agility among commercial banks in Kingdom of Saudi Arabia are continuously monitoring the market trends and adjusting accordingly (M = 3.45, SD =1.51), improving services according to change of customers' preferences (M = 3.34, SD = 1.37) and quickly improving products according to

change of customers' preferences (M = 3.49, SD = 1.15).

As a whole, there is an agreement that market capitalizing agility among commercial banks in Kingdom of Saudi Arabia has been adopted at a high extent (M = 3.72) and that varies across the commercial banks (SD = 1.23). Generally, it was established that KMC is well developed among commercial banks (M = 4.12) compared to market capitalizing agility (M = 3.72). The responses on Market Capitalizing Agility was more varied (SD = 1.23) compared to Knowledge Management (SD = 0.96) hence a need to develop this capability more.

Relationship between Knowledge Management Capability and Market Capitalizing Agility

To establish the strength of the relationship between Knowledge Management Capability (lower order capability) and Market Capitalizing Agility (higher order capability), Pearson correlation was established and results are shown in Table 4.

Table 4 Relationship between Knowledge Management Capability and Market Capitalizing Agility

		Market Capitalizing Agility	**Knowledge Management Capability**
Market Capitalizing Agility	Pearson Correlation	1	
	Sig. (2-tailed)		
Knowledge Management Capability	Pearson Correlation	-0.142	1
	Sig. (2-tailed)	0.063	
	N	172	172

The results established that the relationship between knowledge management capability and market capitalizing agility was weak, negative and not significant at $p < 0.05$ ($r = -0.142$, $P = 0.063 > 0.05$) but at $p < 0.1$ ($r = -0.142$, $p = 0.063 < 0.05$). This implies that knowledge management capability among the commercial banks is not fully developed to determine the market capitalizing agility.

Knowledge Management Capability, TMTs Demographic Characteristics and Market Capitalizing Agility

There was also a comparison of the mean scores of the two strategic capabilities across a set of demographic characteristics in a cross tabulation. The strategic capabilities were scored into high extent (Mean Scores > 3.5) and low extent (Mean Scores < 3.5) and then compared against age of the TMTs as shown in Table 5.

Table 5: Knowledge Management Capability, Market Capitalizing Agility and TMTs Age

		Age						
		21-30 Years	**31-40 Years**	**41-50 Years**	**Over 50 Years**	**df**	**$\chi 2$**	**P-Value**
Market Capitalizing Agility	Low Extent	0	0	16	28	3	21.213	P < 0.01
	High Extent	12	24	52	40			
Knowledge Management Capability	Low Extent	0	0	0	31	3	57.836	P < 0.01
	High Extent	12	24	68	37			

Market capitalizing agility was developed to a high extent among the commercial banks whose TMTs are aged between 41 to 50 years (Frequency = 52). Knowledge Management Capability was also developed to a high extent among the commercial banks whose TMTs are aged between 41 to 50 years (Frequency = 68). Both strategic capabilities, had a significant relationship with TMTs age ($\chi 2$ = 21.213 & 57.836; P < 0.01). The results imply that TMTs age is a significant determinant of the commercial bank's lower and higher order capabilities which affects their strategic choices. TMTs with more advanced age are associated with higher development of both lower and higher order strategic capabilities. Older managers have been found to be risk averse and would be best suited for organizations that are in stable environments. Younger managers are perceived to be innovative, agile and have higher risk appetite (Nielsen, 2010). There was also a comparison of the mean scores of the two strategic capabilities across age of the TMTs as shown in Table 6.

Table 6: Knowledge Management Capability, Market Capitalizing Agility and TMTs Education

		Education				
		Tertiary	University	df	$\chi 2$	P-Value
Market Capitalizing Agility	Low Extent	0	44	1	7.78	p < 0.01
	High Extent	20	108			
Knowledge Management Capability	Low Extent	0	31		4.4976	p < 0.01
	High Extent	20	121			

Market capitalizing agility was developed to a high extent among the commercial banks whose TMTs have university level of education (Frequency = 108). Knowledge Management Capability was also adopted to a high extent among the commercial banks whose TMTs have university level of education (Frequency = 121). Both strategic capabilities, had a

significant relationship with TMTs level of education ($\chi 2$ = 7.78 & 4.4976; P < 0.01). The results imply that TMTs level of education is a significant determinant of the commercial banks lower and higher order capabilities. TMTs with high level of education are associated with higher development of both lower and higher order strategic capabilities. Menz (2012) linked high educational attainment with greater innovation, knowledge, skills and openness to change. Carpenter and Fredrickson (2013) note that socio-cognitive capacities of TMTs related to educational level are open mindedness, greater information-processing abilities, flexibility and greater receptivity to change play important roles in defining capability development of the organization. Finally, a comparison of the mean scores of the two strategic capabilities across age of the TMTs experience was established as shown in Table 7.

Table 7: Knowledge Management Capability, Market Capitalizing Agility and TMTs Work Experience (Job Tenure)

		Experience						
		Less than 3 Years	3 to 5 Years	6 to 10 Years	Over 10 Years	df	$\chi 2$	P-Value
Market Capitalizing Agility	Low Extent	0	0	36	8			
	High Extent	12	64	12	40	3	89.705	p < 0.01
Knowledge Management Capability	Low Extent	0	0	0	31			
	High Extent	12	64	48	17	3	97.69	p < 0.01

Market capitalizing agility was developed to a high extent among the commercial banks whose TMTs had a work experience between 3 and 5 years (Frequency = 64). Knowledge Management Capability was also adopted to a high extent among the commercial banks whose TMTs had a work experience between 3 and 5 years (Frequency = 64). Both strategic capabilities, had a significant relationship with TMTs work experience ($\chi 2$ = 89.705 & 97.69; P < 0.01). The results imply that TMTs job tenure / work experience is a significant determinant of the commercial banks lower and higher order capabilities. TMTs with more work experience are associated with higher development of both lower and higher order strategic capabilities.

Longer tenured TMTs tended to pursue corporate strategies imitative of industry trends, which they speculate reflects a manager's risk aversion, commitment to prior actions, and restriction in information processing (Hambrick, 2016). It can thus be postulated that TMT demographics have an effect on the choice of strategic capability to pursue.

CONCLUSION

The study concludes that the relationship between knowledge management capability and market capitalizing agility is weak and that knowledge management capability among the commercial banks is not fully developed to develop market capitalizing agility. The study also concludes that both market capitalizing agility and knowledge management capability was also developed to a high extent among the commercial banks whose TMT's have advanced age. Another conclusion is that TMT's age is a significant determinant of the commercial bank's lower and higher order capabilities and TMT's

with more advanced age are associated with higher development of both lower and higher order strategic capabilities.

The study also concludes that both market capitalizing agility and knowledge management capability has been developed to a high extent among the commercial banks whose TMTs have university level of education. It can be concluded TMTs with high level of education are associated with higher development of both lower and higher order strategic capabilities since they are associated with greater innovation, knowledge, skills and openness to change. The study concludes that market capitalizing agility and knowledge management capability was also adopted to a high extent among the commercial banks whose TMTs had a work experience between 3 and 5 years. It was concluded that TMTs with more work experience are associated with higher development of both lower and higher order strategic capabilities.

POLICY IMPLICATIONS

With the findings that the relationship between knowledge management capability and market capitalizing agility is weak, commercial banks can build on this and establish areas for improvement in their knowledge management or market capitalizing agility development in order to realize stronger competitive edge. Since demographics characteristics of the TMTs (Age, Education level and Tenure / work experience) are critical in development of both lower and higher order organizational capabilities, commercial banks have a need to reassess the demographic characteristics of their TMTs as one of the critical factors for their strategic positioning. There may be a need to treat TMTs demographics characteristics (Age, Education level and Tenure / work experience) as important as any other factor when determining the strategies for improving competitive advantage.

THEORETICAL CONTRIBUTION

The study provides support for Hambrick and Mason (1984) Upper Echelons Theory in the banking setting in the Kingdom of Saudi Arabia which argues that strategic decisions adopted by organizations and the competitive edge of organizations are partially predicted by management demographic characteristics such as age, level of education and tenure in the organization which shape the lower order capabilities such as knowledge management. The study however doesn't support Teece *et al*. (1997) Dynamic Capability Theory which argues that in the hierarchy of capabilities, various kinds of resources and specialized knowledge could be combined and integrated to generate lower-order capabilities which can be combined to generate higher-order capabilities since knowledge management has failed to significantly contribute to market capitalizing agility in the banking setting.

CONFLICT OF INTEREST

No potential conflict of interest was recorded by the Author.

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