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KNOWLEDGE MANAGEMENT CAPABILITY AND FIRM PERFORMANCE: THE MEDIATING ROLE OF ORGANIZATIONAL AGILITY

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Abstract

Implementing knowledge management capability (KMC) effectively is becoming an important strategic issue for organizational success. However, our understanding about the underlying mechanism of KMC on firm performance is still limited. Based on the dynamic capabilities perspective, this study tries to explore how KMC (i.e., exploration KMC and exploitation KMC) affects firm performance through the mediating role of operational adjustment agility and market capitalizing agility. Survey data from 211 firms indicate that both operational adjustment agility and market capitalizing agility can fully mediate the influence of KMC on firm performance. In addition, the relationship intensions of these two KMC on organizational agility are distinguishing. We conclude with implications and limitations for future research.

Keywords: Knowledge management capability, Organizational agility, Firm performance, Dynamic capabilities.

1 INTRODUCTION

Implementing knowledge management capability (KMC) effectively is becoming an important strategic issue for organizational success (Jasimuddin & Zhang 2008; Mills & Smith 2011). KMC reflects firms' ability to identify, develop, and leverage organizational knowledge resources (Alavi & Leidner 2001; Zheng et al. 2010). This capability can help firms promote product innovation, improve market responsiveness, and reduce information and knowledge redundancy, leading to superior firm performance (Fan et al. 2009; Liao & Wu 2010; Liu et al. 2004). However, it is still unclear about the influencing process of KMC on firm performance (Chuang 2004; Miranda et al. 2011). Specifically, although many scholars have realized the benefits of KMC, some argue that the KMC–performance relationship may be not direct (Darroch 2005; Lee 2001; Liao & Wu 2010). The literature further indicates that organizational factors, especially dynamic capability, may play an important role in the KMC–performance relationship (Chung et al. 2012; Garrido-Moreno & Padilla-Meléndez 2011). In this view, scholars call for more empirical studies to explore the underlying mechanism in the relationship between KMC and firm performance (du Plessis 2007; Wang & Wang 2012).

The dynamic capabilities perspective proposes that firms' dynamic capability is the critical source of superior firm performance (Eisenhardt & Martin 2000; Liu et al. 2012). Dynamic capability reflects firms' ability to integrate, build, and reconfigure internal and external competence to address changing environment (Pavlou & El Sawy 2011). In this view, the literature indicates that as a fundamental capability, KMC can help develop dynamic capability, which can improve firm performance (Cepeda & Vera 2005; Haas & Hansen 2005; Sher & Lee 2004). KMC, for example, could provide the intellectual basis to help firms adjust to external environment (Ambrosini & Bowman 2009; Nielsen 2006). Therefore, scholars propose that, organizational agility, as a key dynamic capability, thus could play an important role in the relationship between KMC and firm performance. Organizational agility reflects firms' capability to respond and adapt to market changes with a rapid and innovative manner (Lu & Ramamurthy 2011; Sambamurthy et al. 2003). It has been defined as a direct source of superior firm performance (Liu et al. 2012; Overby et al. 2006). Meanwhile, the literature indicates that organizational agility needs to rely on effective knowledge sharing and transferring (Chung et al. 2012; du Plessis 2005). However, the existing literature about the relationship among KMC, organizational agility and firm performance is still limited.

In this study, we try to investigate the influencing mechanism of KMC on firm performance through exploring the mediating role of organizational agility. Specifically, we classify KMC into exploration KMC and exploitation KMC. Exploration KMC reflects firms' ability to create new knowledge, and exploitation KMC refers to firms' ability to transfer and diffuse existing knowledge (Curado 2008). We propose that the influence of these two KMC on firm performance may be different because exploration KMC is “the experimentation with new alternatives”, while exploitation KMC is “the refinement and extension of existing competences, technologies, and paradigms” (March 1991, p.85). In the existing literature, scholars have presented that different dimensions of KMC have various effects on firm performance (Mills & Smith 2011). For example, Darroch (2005) finds that firms' knowledge dissemination cannot affect firm performance positively. Chuang (2004) points out that different to structural and cultural KMC, technical KMC is not essential for competitive advantage. However, few studies explore the various roles of exploration KMC and exploitation KMC in improving firm performance.

Further, based on the dynamic capabilities perspective, this study investigates the mediating effect of organizational operational adjustment agility and market capitalizing agility (Lu & Ramamurthy 2011) in the relationship between KMC and firm performance. Operational adjustment agility is an internally focused agility that highlights flexible and rapidly responding operations (Lu & Ramamurthy 2011). In contrast, market capitalizing agility is an externally focused agility, which emphasizes dynamic, aggressively change-embracing and growth-orientated market strategy (Lu & Ramamurthy 2011). This study tries to explore the various roles of these two types of organizational agility in the KMC–performance relationship.

The rest of the paper is structured as follows. Section 2 provides the theoretical background and presents our hypotheses development. Section 3 describes the research methodology. Section 4 discusses our data analysis and research findings. Section 5 concludes with a discussion of the results, contributions, and limitations.

2 CONCEPTUAL FRAMEWORK AND HYPOTHESES DEVELOPMENT

The dynamic capabilities perspective proposes that firms' dynamic capability is a direct source of superior firm performance (Helfat & Peteraf 2009; Wang et al. 2007; Zott 2003). Dynamic capability refers to firms' ability to integrate, build, and reconfigure internal and external competences to address rapidly changing environments (Teece et al. 1997). According to this perspective, dynamic capability enables firms to effectively respond to market changes through leveraging organizational resources (Wang et al. 2007; Zollo & Winter 2002). In this view, organizational agility has been defined as one of key dynamic capabilities (Agarwal & Selen 2009; Cai et al. 2013; Sambamurthy et al. 2003). Organizational agility reflects firms' ability to cope with unpredictable changes and thrive in a continually changing environment through seizing appropriate opportunities (Lu & Ramamurthy 2011). This agility enables firms to sense and respond to market changes and opportunities effectively, thereby enhancing firm performance (Swafford et al. 2006; Tallon & Pinsonneault 2011).

On the other hand, the dynamic capabilities perspective indicates that dynamic capabilities are organizational routines or processes that rely on acquiring and synthesizing knowledge resources (Cepeda & Vera 2007; Eisenhardt & Martin 2000; Schilke 2014). The development of dynamic capability thus needs to rely on effective knowledge management activities, including change, renew and exploit firms' knowledge-based resources (Nielsen 2006). Accordingly, the literature indicates that KMC can be described as the fundamental capability to support the development of dynamic capability by providing various processes to utilize these intangible resources to create value (Cai et al. 2013; Easterby-Smith & Prieto 2008; Yang & Chen 2009). Following this logic, the current study proposes that KMC (i.e., exploration KMC and exploitation KMC) are fundamental capabilities that can be leveraged to develop organizational agility (i.e., operational adjustment agility and market capitalizing agility), which can affect firm performance. Figure 1 shows our research model.

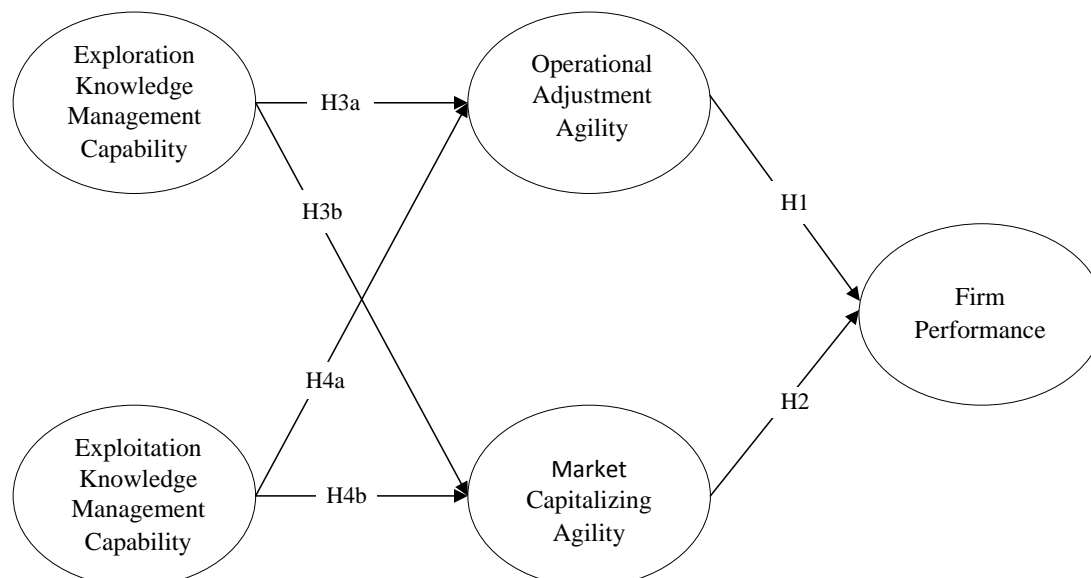


Figure 1. Conceptual model.

2.1 Organizational Agility and Firm Performance

Organizational agility is “a firm-wide capability to deal with changes that often arise unexpectedly in business environments via rapid and innovative responses that exploit changes as opportunities to

grow and prosper” (Lu & Ramamurthy 2011, p.933). Rapid and innovative responses reflect the timeliness and nimbleness of organizational agility. That means agility not only reflects a firm’s ability to anticipate and seize market opportunities proactively, but also its ability to adapt in modifying strategies and organizing new business approaches to gain early advantages (Chakravarty et al. 2013; Overby et al. 2006). In this view, scholars have categorized organizational agility into operational adjustment agility and market capitalizing agility (Lu & Ramamurthy 2011). Operational adjustment agility is an internally focused agility that highlights firms’ ability of adjusting internal business processes to cope with market or demand changes physically and rapidly (Lu & Ramamurthy 2011). This agility emphasizes more on routine maneuvering or operational activities to provide flexible and fast responses in the face of changes (Dove 2002; Volberda 1997). In contrast, market capitalizing agility is an externally focused agility, which refers to firms’ ability to capitalize on and respond to changes through continuously monitoring and innovatively improving product or service (Lu & Ramamurthy 2011). This agility treats external changes as opportunities and maintains a continual readiness to uncertainties. It enables firms to innovatively make and implement appropriate decisions in the face of dynamic environment (Benaroch et al. 2006).

The literature suggests that organizational agility can improve firm performance by expanding its innovation actions in the form of new products, services, or business and making rapid responses to changes (Chakravarty et al. 2013; Tallon & Pinsonneault 2011). Specifically, operational adjustment agility can improve firm productivity by fast execution or implementation, which focuses on flexible and rapid responding operations (Lu & Ramamurthy 2011). Moreover, it enables firms to make necessary alternative arrangements and internal adjustments timely, guaranteeing superior firm performance (Tsourveloudis et al. 1999). On the other hand, market capitalizing agility emphasizes on entrepreneurial mind set which helps firms find right actions about strategic direction, decision making, and judgment in uncertain conditions (Dove 2002). And then, market capitalizing agility gains market intelligence and explores competitive action opportunities, eventually improving firm performance (Sambamurthy et al. 2003).

H1: Operational adjustment agility is positively associated with firm performance.

H2: Market capitalizing agility is positively associated with firm performance.

2.2 KMC and Organizational Agility

KMC refers to firms’ ability to mobilize and deploy critical knowledge resources and manage their assimilation and exploitation across functional boundaries (Chuang 2004; Liao et al. 2011; Miranda et al. 2011). Dynamic capabilities perspective views the development of knowledge management as firms’ learning processes (Sivula et al. 1996), which include implementing pre-existing knowledge, assimilating and applying it to create new knowledge and capabilities (Wong & Wong 2011). Basically, organizational learning comprises explorative learning, which emphasizes expanding firms’ knowledge domains into novel areas, as well as exploitative learning, which focuses on obtaining well-defined solutions related to the existing knowledge (Filippini et al. 2012; Kang & Snell 2009). In this regard, we follow the categorization of organizational learning, dividing KMC into the types of exploration KMC and exploitation KMC (Curado 2006; Curado 2008).

Based on the characteristics of explorative learning, we define exploration KMC as the ability to create or integrate knowledge resources in a novel manner that finds new alternatives and newly discovered opportunities (Lee et al. 2006; Tanriverdi 2005). This KMC generates knowledge synergies across business units or renews the existing knowledge to create synergies (Tanriverdi 2005). Pursuing new knowledge enables firms to reconfigure internal business processes to respond to market changes (Haeckel 1999), which would enhance firms’ operational adjustment agility. Specifically, when firms face frequent and unpredictable market changes, the existing products or services might become obsolete. Exploration KMC can help firms integrate relevant knowledge resources to make innovative internal adjustments like creating new products or services to deal with changes quickly and creatively. In fact, new product development process can be viewed as a process of embodying new knowledge (Rothaermel & Deeds 2004). Thus, exploration KMC improves and

renews firms' knowledge and competences for firms' development and operation, which can enhance the ability to cope with market or demand changes (Prater et al. 2001).

Managing knowledge for innovation in products, services, customers or processes is critical to market capitalizing agility. Most exploration activities are feed forward learning processes, which have the perspective of using future knowledge (Curado 2006). Thus, exploration KMC has the capacity of efficient perception of information that allows firms to access knowledge proactively and actively (Zaheer & Zaheer 1997). For example, exploration KMC enables firms to integrate customers' knowledge and information effectively, which can make firms more easily to gain new market insights (Tanriverdi 2005). Then, it can timely seize opportunities and modify organizational decision making activities to seek the new way to adjust the market. Moreover, exploration KMC makes firms keep initiative, take greater risk and use more innovative strategies to respond to unpredictable changes (Revilla et al. 2010). And it brings in the variations needed to provide sufficient choices to solve problems, which is helpful in increasing firms' innovative responses.

H3a: Exploration KMC is positively associated with operational adjustment agility.

H3b: Exploration KMC is positively associated with market capitalizing agility.

Based on the characteristics of exploitative learning, we define exploitation KMC as the ability to transfer or leverage knowledge resources in a rapid manner that improves and extends its existing competences (Lee et al. 2006; Tanriverdi 2005). It focuses on enlarging knowledge base through the application of pre-existing knowledge in the firm, which helps spread the most efficient practices and then benefit rapid responses (Easterby-Smith & Prieto 2008; Kuo 2011; Szulanski 2002). Exploitation KMC helps firms utilize and incorporate existing expertise and knowledge into their operations (Revilla et al. 2010). For example, with exploitation KMC, firms can exchange the knowledge about customers across departments, which would facilitate them to quickly adjust their operational processes to respond to the changes of customers' demands and tastes. Meanwhile, through leveraging the existing knowledge resources of product, firms can adjust production scale timely. An agile firm uses knowledge to alter its routines, processes, and resource configurations (Ashrafi et al. 2006). Thus, exploitation KMC enhances operational flexibility and increases rapid response ability in turbulence and market uncertainty.

Exploitation KMC allows firms to share the knowledge across organizational boundaries (Hargadon & Sutton 2000). Through transferring timely information and knowledge, firms can make decision quickly and effectively (Eisenhardt 1989; Jennex 2007). Also, exploitation KMC encourages sharing and exchange of knowledge between business units which leads to superior customer service (Ray et al. 2005). A firm with good exploitation KMC disseminates knowledge to all in the firm and builds knowledge into products and services, which can act rapidly to changes in the marketplace and can act ahead of other competitors (du Plessis 2005). Exploitation KMC provides firms knowledge of markets, competitors and others, which helps firms sense important opportunities and solve problems in products, services, processes and distribution channels (Egbu & Renukappa 2008).

H4a: Exploitation KMC is positively associated with operational adjustment agility.

H4b: Exploitation KMC is positively associated with market capitalizing agility.

3 METHOD

3.1 Sample and Data Collection

In this study, data were collected through the designed questionnaire survey. We conducted a survey in China to test our proposed model, as Chinese firms contribute largely to the global economic power. We purposely selected a Chinese educational institution to collaborate with to get valid and reliable responses. Because this educational institution is famous for its executive training programs, including the training courses about strategic management and knowledge management. We obtained a sampling pool including 330 firms with the help of the educational institution.

For each firm in the sampling pool, one senior executive in the educational institution's training programs was selected to serve as the key informant. Although the single respondent approach may not reflect the whole perspective of the firm for firm level studies, this method is frequently used in recent empirical studies about organizational capability (Liu et al. 2012; Wong & Wong 2011). Moreover, the reasons why we chose these senior executives are as follows. First, these senior executives receiving the training programs are knowledgeable about the survey issues such as KMC and organizational agility. Second, senior executives are at the relative top of firms, thus they are capable of possessing a more holistic view of their firms to answer all questions in the survey. Finally, senior executives have the opportunity participating in decision making to affect firms' operations, such as these regarding knowledge resources and organizational responses.

The questionnaires were directly sent to the informants in the sampling pool. Then, we sent reminders such as follow-up emails and telephone calls to the non-respondents to increase the response rate. Ultimately, 223 returned questionnaires were received and 12 incomplete questionnaires were discarded. Thus, 211 valid questionnaires were used for the analysis, representing a response rate of about approximately 63.94%. We estimated the non-response bias following the method suggested by Armstrong & Overton (1977). Through comparing the chi-squares of the measures between the first response 25% and the late response 25% of the responses, we found that there were no significant differences between these two groups on these items. The results demonstrated that non-response bias was not a key issue in this study. The demography of the samples is shown in Table 1.

Measure	Items	Frequency	Percentage
Ownership types	State-owned	100	47.39%
	Privately Owned	83	39.34%
	Foreign-controlled	11	5.21%
	Joint Venture	7	3.32%
	Others	10	4.74%
Industry types	Mechanical Equipment Manufacturing	28	13.27%
	Finance Industry	39	18.48%
	Wholesale and Retail Trade	11	5.21%
	IT Industry	16	7.58%
	Real Estate Industry	14	6.64%
	Construction Industry	15	7.11%
	Others	88	41.71%
Firm size	Less than 100	52	24.65%
	100-299	52	24.65%
	300-499	18	8.53%
	500-999	23	10.09%
	1000-1999	20	9.48%
	More than 2000	46	21.80%
Firm history	1-5 years	35	16.59%
	6-10 years	47	22.28%
	11-25 years	80	37.92%
	26-50 years	24	11.37%
	More than 51 years	25	11.85%
IT department size	Less than 2	47	22.28%
	2-5	72	34.12%
	6-10	37	17.53%
	11-15	10	4.78%
	More than 16	45	21.33%

Table 1. Sample Demographic (N=211).

3.2 Measures

We developed the initial English questionnaire according to previous literatures. All the instruments on the English questionnaire were professionally translated into Chinese by four native Chinese speakers who are fluent in English and come from different majors. Then we invited a professional translator to help us translate the Chinese questionnaire back into English. We compared the translated English version with the original one, and found that there were no semantic discrepancies. All items in the questionnaire were assessed with five-point Likert scales, ranging from “strongly disagree” to “strongly agree”.

All measures used in our survey were adopted from previous established studies. The measures for the two specific types of KMC (i.e. exploration KMC and exploitation KMC) were adopted from the instrument of Tanriverdi (2005). Meanwhile, we measured the two dimensions of organizational agility (i.e. operational adjustment agility and market capitalizing agility) with the items adopted from the work of Lu & Ramamurthy (2011). The items used to measure firm performance (i.e. operational performance and financial performance) were adopted from Wang & Wang (2012).

Moreover, the current study considered three control variables (i.e. ownership, industry and firm history), which may impact organizational agility and firm performance. The ownership type mainly contains state-owned, privately owned, joint venture, and foreign-controlled. The industry type contains 18 industries involved in our study. And the years of the firm’s operating can be used to measure firm history.

4 DATA ANALYSIS AND RESULTS

4.1 Common Method Bias

We first checked the possible common method bias using Harman's one-factor test, as all data were perceptual and collected from a single source simultaneously, which gain the threat to research validity. The results indicated that all the items can be categorized into four distinct factors with eigenvalues above 1.0, and account for 66.401% of the variance. And the first factor only occupied 21.398% of the variance, which didn't account for the majority. In consequence, the common method bias was unlikely to be a major issue in our study.

4.2 Reliability and Validity

We assessed the construct reliability and validity of the measurement by employing exploratory factor analysis (EFA) and confirmatory factor analysis (CFA). Specifically, following the guidelines summarized by Fornell & Larcker (1981), we measured the reliability of each construct. The results showed that Cronbach’s Alpha ranged from 0.702 to 0.893, above the recommended value of 0.700. The composite reliability ranged from 0.814 to 0.928, also above the recommended value of 0.700. As shown in Table 2, these values of all constructs were all higher than the benchmark value, which indicated good reliability of the measurement.

Further, we assessed construct validity via convergent and discriminant validity. The convergent validity was tested by the items’ loadings and average variance extracted (AVE). As Table 2 reports, the loadings of all items varied from 0.648 to 0.921 at a significance level of 0.001, and the AVE values ranged from 0.526 to 0.812, which were above the 0.50 recommended level. The results showed that the measures had satisfactory convergent validity. To assess the discriminant validity, we compared the relationship between the correlations among the constructs and their square root of AVEs. The data in Table 3 indicated that the square roots of AVEs for all constructs were higher than the correlations between constructs, which verified the discriminant validity of the measurement model.

As two inter-construct correlations in Table 3 had value over the criteria of 0.60, we conducted a test to verify the potential threat of multicollinearity. Generally, if variance inflation factors (VIFs) are greater than 10 or tolerance values are less than 0.10, the existence of multicollinearity is confirmed

(Mason & Perreault Jr 1991). The results of our study showed that the highest VIF was 1.994 and the lowest tolerance value was 0.501. Thus, multicollinearity did not appear to be a significant problem in our study.

Items	Loadings range	Cronbach's Alpha	Composite Reliability	AVE
Exploration KMC	0.648-0.779	0.702	0.814	0.526
Exploitation KMC	0.804-0.877	0.789	0.877	0.704
Operational adjustment agility	0.871-0.921	0.884	0.928	0.812
Market capitalizing agility	0.881-0.906	0.879	0.926	0.806
Firm performance	0.737-0.853	0.893	0.918	0.651

Table 2. Results of Confirmatory Factor Analysis (CFA).

	Mean	SD	1	2	3	4	5	6	7	8
1. Exploration KMC	3.854	0.712	0.725							
2. Exploitation KMC	3.788	0.744	0.659	0.839						
3. Operational adjustment agility	3.733	0.838	0.451	0.420	0.901					
4. Market capitalizing agility	3.586	0.879	0.412	0.377	0.646	0.898				
5. Firm performance	3.500	0.750	0.421	0.387	0.524	0.574	0.807			
6. Ownership	NA	NA	0.000	-0.012	0.030	0.062	-0.012	NA		
7. Industry	NA	NA	-0.040	-0.056	-0.046	0.028	0.048	0.162	NA	
8. Firm history	NA	NA	0.001	-0.015	-0.048	-0.129	-0.006	-0.206	0.016	NA

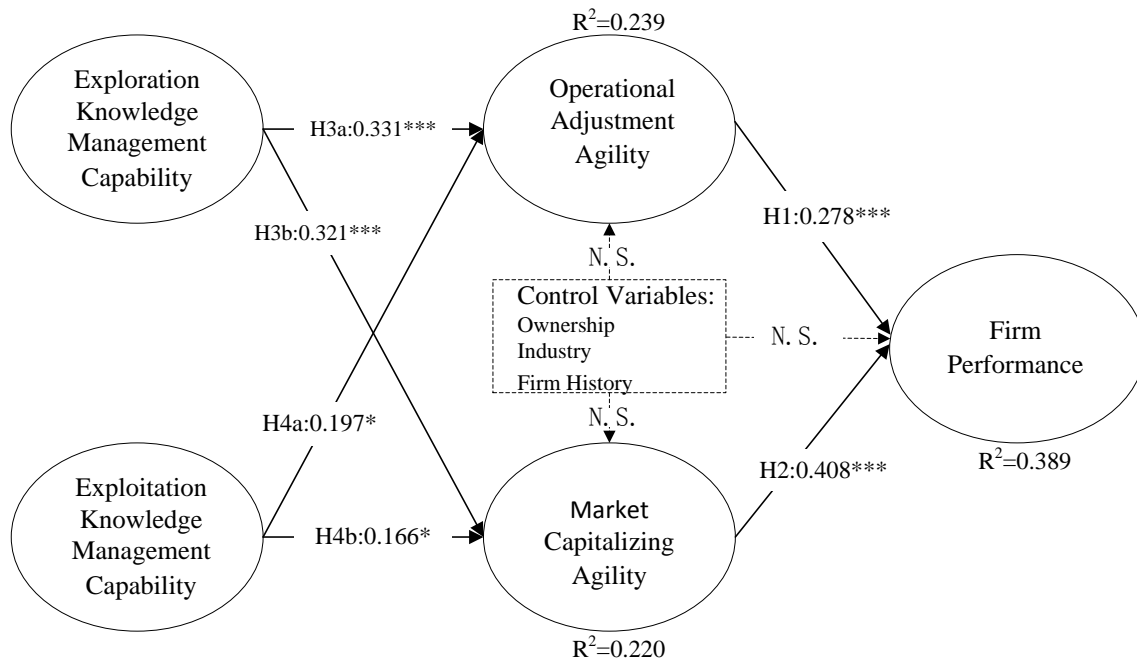
Note: The diagonal elements are the square roots of AVEs.

Table 3. Assessment of Discriminant Validity.

4.3 Hypothesis Testing

The partial least squares (PLS-Graph version 3.00) analysis technique was used to test the research model. The results of the structural model were shown in Figure 2, which includes the R^2 of endogenous variables, the path coefficients and their significance. The research model explained 22.00 to 38.90 percent of the variances.

The results show that all the hypotheses are supported. Specially, exploration KMC has a positive effect on both operational adjustment agility ($\beta=0.331$, $p<0.001$) and market capitalizing agility ($\beta=0.321$, $p<0.001$), as anticipated in H3a and H3b. And exploitation KMC has a positive effect on both operational adjustment agility ($\beta=0.197$, $p<0.05$) and market capitalizing agility ($\beta=0.166$, $p<0.05$) which support H4a and H4b. Moreover, consistent with H1 and H2, both operational adjustment agility ($\beta=0.278$, $p<0.001$) and market capitalizing agility ($\beta=0.408$, $p<0.001$) positively impact firm performance.



Note: * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

Figure 2. The Results of the Structural Model.

To compare the relationship intensions of these two KMC on organizational agility, we adopted the method suggested by Chin et al. (2003). Table 4 shows the t-values for each comparison. The results show that, for operational adjustment agility, exploration KMC has a stronger impact than exploitation KMC ($t=17.097$, $p < 0.001$). And for market capitalizing agility, exploration KMC also has a stronger impact than exploitation KMC ($t=19.000$, $p < 0.001$). Further, it is notable that the t-value of exploration KMC for operational adjustment agility and market capitalizing agility is not significant, so we cannot tell which effect is more important ($t=1.220$). On the other hand, the influence of exploitation KMC on operational adjustment agility is stronger than its influence on market capitalizing agility ($t=3.975$, $p < 0.001$). Finally, the relationship between operational adjustment agility and firm performance is much weaker than the relationship between market capitalizing agility and firm performance ($t=-19.712$, $p < 0.001$).

	t-values		t-values
KM1→OAA vs. KM2→OAA	17.097***	KM1→MCA vs. KM2→MCA	19.000***
KM1→OAA vs. KM1→MCA	1.220	KM2→OAA vs. KM2→MCA	3.975***
OAA→FP vs. MCA→FP	-19.712***		

Note: KM1: Exploration KMC; KM2: Exploitation KMC; OAA: Operational adjustment agility; MCA: Market capitalizing agility; FP: Firm performance.
*** $p < 0.001$.

Table 4. Comparison of path coefficients.

4.4 Mediating Effect Testing

We further tested the mediating effects of operational adjustment agility and market capitalizing agility on the relationship between each KMC and firm performance by the procedures proposed by Gregory et al. (2009). The analysis was conducted in three steps based on the path coefficients and t-values among the independent variables (IVs), mediating variables (MVs) and dependent variable (DV). The results show that the positive impacts of exploration KMC on firm performance are mediated by both operational adjustment agility and market capitalizing agility. Moreover, the two

dimensions of organizational agility fully mediate the effects of exploitation KMC on firm performance. Table 5 shows the results of our structural model.

IV	M	DV	IV → DV	IV → M	IV + M → DV		Results
					IV → DV	M → DV	
KM1	OAA	FP	0.311***	0.365***	0.133	0.181**	Full
KM1	MCA	FP	0.311***	0.359***	0.133	0.312***	Full
KM2	OAA	FP	0.198*	0.241**	0.086	0.181**	Full
KM2	MCA	FP	0.198*	0.221*	0.086	0.312***	Full

Note: IV: independent variable; M: mediator; DV: dependent variable; KM1: Exploration KMC; KM2: Exploitation KMC; OAA: Operational adjustment agility; MCA: Market capitalizing agility; FP: Firm performance. *p<0.05; **p<0.01; ***p<0.001.

Table 5. Mediating Effects of Organizational Agility.

5 DISCUSSION, IMPLICATIONS AND LIMITATIONS

The purpose of this study is to investigate the influencing mechanism of KMC on firm performance. Based on the dynamic capabilities perspective, our study proposes a conceptual model bridging separate studies on KMC, organizational agility and firm performance. The empirical results of the effects of KMC on organizational agility are not only consistent with prior studies, but also offer new findings on the association between KMC and organizational agility in improving firm performance. Hitherto, very little empirical research has investigated the three constructs together, and our research results have highlighted that KMC influences firm performance through the mediation of organizational agility.

This study has several theoretical implications for the literature. First, this study bridges separate studies on KMC, organizational agility, and firm performance. It empirically tests the influences of KMC on organizational agility. Our study contributes a dynamic capability perspective to explore the business value of KMC and demonstrates that organizational agility can have an important mediating role in the relationship between KMC and firm performance.

Second, the literature can be enriched by distinguishing different dimensions of KMC and organizational agility. In the existing literature, few studies unpacked the composition of KMC and agility simultaneously. In the current study, we classify KMC into exploration and exploitation KMC based on the KM and management literature. We propose that exploration KMC concerns the development of new knowledge to develop innovative opportunities for the future, while exploitation KMC is required to increase efficiency by refining pre-existing knowledge. Meanwhile, we define operational adjustment agility and market capitalizing agility as the two fundamental dimensions of organizational agility. These categorizations allow scholars to investigate KMC and organizational agility from different angles, which would help explore the influencing mechanism of KMC from a new perspective.

Finally, the understanding about the multi-dimensional relationship between KMC and organizational agility is extended. Specifically, we find that exploration KMC has a stronger influence on both dimensions of organizational agility than exploitation KMC. This indicates that in today's high level environment dynamism, firms face more opportunities, as well as risks which result in the existing knowledge and skills becoming obsolete (Sørensen & Stuart 2000). Further, the results show that the positive effect of exploitation KMC on operational adjustment agility is much stronger than on market capitalizing agility. This suggests that exploitation KMC is about refinement, implementation and execution of existing knowledge, which tends to promote internal processes. Moreover, market capitalizing agility has a stronger effect on firm performance than operational adjustment agility. This indicates that creating opportunity and exploring innovation in highly competitive market environment is far more significant than the development of the existing.

Our study also has numbers of implications for practitioners. First, the findings provide some guidelines for managers who try to apply KMC to improve firm performance. But the application may

not reach the highest if firms do not deploy the KMC to improve organizational agility. Thus, managers should make an effort to improve firm performance by building organizational agility and focusing on the influence of KMC on organizational agility. Second, managers should also pay attention to the effects of different KMC on organizational agility. The impact of exploration KMC on organizational agility is greater than exploitation KMC. Thus, managers should make an effort to improve exploration KMC chiefly and then balance the development of the two kinds of KMC.

There are a couple of limitations in our study that should be noted, which would be addressed in future research. First, collecting data from the single informant may be not an ideal method. Although the selected senior executive has the knowledge to answer our questions, their responses are still partial and can't reflect the firm's comprehensive situation. Multiple respondents from different departments may minimize the threat of common method bias. Second, we used the cross-sectional research design which may limit our findings. The development of KMC and organizational agility normally reflect a firm's long-term goal associated with on-going processes. A longitudinal design would be desirable to explore the relationships between KMC and organizational agility at different stages considering the time issue. Third, our study was conducted in the context of China and chose informants from the same educational institution. Scholars should be cautious to generalize our findings to firms located in different economic, political, or cultural environments. Thus, future researches can extend the findings of the current research to other contexts.

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