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The Role of Knowledge Management Process in Creating Dynamic Capabilities: An Exploration

Dr. Anil Kumar Gope
Assistant Professor
School of Management Sciences- Varanasi

ABSTRACT

In the volatile, uncertain, complex and ambiguous (VUCA) business environment of today, Knowledge Management as Dynamic Capabilities have become the key for achieving and sustaining a Competitive Advantage. The two particular domains i.e. the role of dynamic capabilities, and the firm's abilities for knowledge management have attracted the attention of researchers and practioners. In the anticipation of sustained competitiveness, intellectuals have extensively recognized the noteworthy role of dynamic-capability. Researchers highlight the promising role of KM in augmenting dynamic-capability and underlined its significance. This paper is based on a literature review focusing on key Knowledge Management processes and activities as well as the concept of Dynamic Capabilities. The synthesis is centred on knowledge management activities which then are compiled into dynamic capabilities. The aim of this study is to connect KM process and Dynamic Capability and explore the effect of various KM processes on dynamic-capability. The endeavour has been made to propose a theoretical framework based on theoretical insights which reconnoitre the proposed relationship and enlighten this under-explored arena of management domain. Based on findings, contribution of the study to emerging knowledge-management and Dynamic-Capability domain, managerial implications and conclusions are also discussed.

Keywords: *Knowledge Management, VUCA, Dynamic Capability, Competitive Advantage*

1. INTRODUCTION

In today's world, organizations continue to be impacted by a multitude of changes and it influences the way they operate. With increasing volatility in the markets, ever changing customer needs and continuous technology led disruptions to business models. The VUCA World i.e., Volatile, Uncertain, Complex and Ambiguous are the characteristics of modern strategic dilemmas which require a different orientation and a set of skills. In highly competitive and constantly changing environment businesses need to be able to anticipate changes and prepare to make changes in their strategy, in order to gain and maintain competitive advantage. On-going global competition, rapid technological change and economic uncertainties, forced business organizations to go for transformational and strategic changes in their management approach in order to respond strategically to environmental challenges and ensure organizational growth and sustainable competitiveness. The ability to do this systematically has been referred as dynamic capability. Its main goal is to explain long term competitive advantage of the firm (Eriksson, 2014; Teece et al., 1997). There is general consent among the intellectuals that developing

dynamic-capability is decisive for the survival of organizations, which can be evaluated through the enormous amount of publications in this domain. Consequently, organizations are fascinated in dynamic-capability as a vital key to leverage their unique core competencies and increase the productivity of their processes in order to attain solutions for competitiveness. This discloses the significant implication of the dynamic-capability to the business organization and highlights, further special attention to augment dynamic-capability construct(Ambrosini & Bowman, 2009; Cepeda and Vera, 2007; Easter by-Smith *et al*., 2009; Eisenhardt and Martin, 2000; Helfat & Peteraf, 2009; Helfat et al., 2007; McKelvie and Davidsson, 2009; Nieves and Haller, 2014; Prieto and Easerby-Smith, 2006; Teece, 2000; Teece, 2007; Teece et al., 1997; Wu,2006; Wang & Ahmed, 2007; Zahra et al., 2006; Zollo & Winter, 2002) for sustaining competitive advantage. Researchers cited KM particularly relevant in augmenting dynamic-capability and underlined its significance drawing on Knowledge-Based-View (KBV) and Dynamic-Capability-View (DCV) theorization that knowledge acts as an influential factor for developing organizational capability. The basic idea is that Knowledge Management cultivates favourable conditions for knowledge processes and learning activities that influence knowledge and skills of employees and contribute for augmenting organizational capabilities (Cepeda and Vera, 2007; Eisenhardt and Martin, 2000; Hung *et al*., 2009; Zahra et al., 2006). There is plethora of research, both conceptual and empirical related to dynamic capabilities, especially in western countries. But KM perspective towards dynamic-capability has not been established extensively in previous studies (Eisenhardt and Martin, 2000; Tseng and Lee, 2014; Wang & Ahmed, 2007, Prieto and Easerby-Smith, 2006). In addition, researcher has basically focused on capability aspect of Knowledge Management. The processes perspective of KM towards dynamic-capability has not enjoyed a greater consent among researchers and academician. Little empirical research subsists to explore the linkages between KM process and dynamic-capability and investigate how various KM processes influence the development of dynamic-capability. Therefore, addressing this issue is an important line of investigation. Hence, this paper is based on a literature review focusing on key Knowledge Management processes and activities as well as the concept of dynamic capabilities; the paper connects these two approaches. The synthesis is centred on Knowledge Management activities, which are then compiled into Dynamic Capabilities. The prime objective of this review is to connect KM process and dynamic-capability and explore the effect of various KM processes on dynamic-capability. The endeavour has been made to propose a conceptual framework based on theoretical insights, which reconnoitre the proposed relationship and enlighten this under-explored arena of management domain.

2.THE EMERGENCE OF DYNAMIC CAPABILITY

The dynamic capabilities perspective has existed since the beginning of 1990s, being derived from the resource-based view as an attempt to explain the source of competitive advantage of firms operating in changing environments (Teece and Pisano, 1994; Teece et al., 1997). The resource -based strategy theorists such as Barney (1991) argued that sustained competitive advantage stemmed from the acquisition and effective use of bundles of distinctive resources that competitors cannot imitate. Distinctive resources have four attributes; they must be valuable, rare,

imperfectly imitable and non-substitutable. These resources include all the experience, knowledge, judgement, risk-taking propensity and wisdom of individuals associated with firms. Teece et al. (1997) have extended resource based view to dynamic markets. He claims that in dynamic and unpredictable markets, where competitive landscape is shifting, the dynamic capabilities help managers to integrate, build and reorganize external and internal competences to address rapidly changing environments, thus building and maintaining competitive advantage. According to Teece (2007), dynamic capabilities can be grouped into three dimensions: **I) Sensing Capabilities** – to identify and shape opportunities and threats; **II) Seizing Capabilities-** to take those opportunities; and **III) Reconfiguration Capabilities** – to gain and maintain competitive advantage through enhancing, protecting, reconfiguring organization's intangible and tangible assets (Fischer et al., 2010). The underlying assumption is that firms, which are able to sense and then seize new opportunities and, further, reconfigure their resources and capabilities in line with recognized opportunities and environmental change can create and sustain a competitive advantage. Further based on the literature review, six capabilities were recognized as relevant firm capabilities as shown in figure-1 and further analysed from the dynamic capabilities perspective.

(I)Managerial Capability - managers' dominant role in developing dynamic capabilities has been widely recognized (Helfat & Martin, 2014; Augier & Teece, 2009; Rindova & Kotha, 2001; Teece, 2007), especially in reconfiguring the resource base (Ambrosini & Bowman, 2009; Moliterno & Wiersema, 2007).

(II) Marketing Capability- it is an "enduring source" of competitive advantage. Bruni and Verona (2009) presented the dynamic marketing capabilities as abilities of developing, releasing, and integrating market knowledge to successfully address changes in the environment. Barrales-Molina, Martinez-Lopez and Gazques-Abad (2014) define marketing capability as a core element in determining the needs of customers, especially in the process of generating market knowledge.

(III) Technological Capability- it is closely linked with the Research & Development capability and it is a core capability of every firm in today's dynamic environment, especially for technological firms operating in the IT industry. **(IV) Research & Development Capability-** it is the ability to recognize and exploit knowledge. In general, it can be seen as a function of prior related knowledge. Accordingly, R&D capability generates innovation potential

(V)Innovation Capability-for technological firms, especially for firms in the IT industry, acquiring new knowledge and exploiting it through their resource base is a key factor of success (Verloop, 2004). Birchall and Tovstiga (2005) state that innovation capability is probably the most important capability a firm can have. To develop innovation capability through time, we must constantly search, scan, explore and implement new opportunities inside and outside the firm. **(VI)Human Resource Capability**-human resources have been recognized as one of the major sources of a competitive advantage (Barney & Clark, 2007) and human resource capability has become one of the most widely studied capabilities in the study of sources of competitive advantage (Newbert, 2007). In line with human capital theory, the resource-based view (RBV) emphasizes that investment in people increases their value to the firm. It proposes that

sustainable competitive advantage is attained when the firm has a human resource pool that cannot be imitated or substituted by its rivals (Armstrong, 2010).

Hence, by utilizing dynamic capabilities organizations adapt to changing environment faster and more efficiently, thus producing new innovations, gaining and sustaining competitive advantage. Dynamic capabilities allow the companies to capture new opportunities and convert organizational resources into both tangible and intangible assets (Easter by-Smith et al., 2009). This reflects organization's capacity to create, extend, and modify the existing resource base. Dynamic capabilities utilize this capacity by renewing of existing processes and promote innovation to adjust to the fast changing environment (Eisenhardt and Martin, 2000; Winter, 2003).

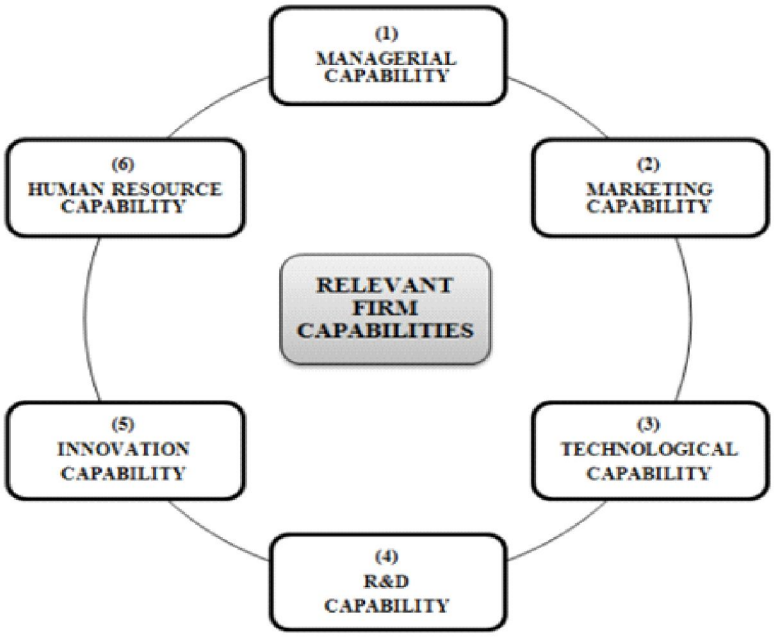

Figure 1: Relevant Firm Capabilities

3. ORGANIZATIONAL KNOWLEDGE AND ITS MANAGEMENT

Knowledge is defined as what people understand about things, concepts, ideas, theories, procedures, practices and the 'the way we do things around here'. Knowledge management is 'any process or practice of creating, acquiring, capturing, sharing and using knowledge, wherever it resides, to enhance learning and performance in organization (Scarborough et al, 1999). KM denotes to the process of creating, attaining, sharing,

transmitting, and applying knowledge within an organisation to improve its core capabilities and performance (Grant, 1996a & 1996b; Spender, 1996). Marr et al. (2003) delineated KM as practices that improve the effectiveness of creation and application of knowledge-resources. Knowledge management is concerned with both stock and flow of knowledge. Stock includes expertise and encoded knowledge in computer system. Flow represents the way in which knowledge is transferred from people to people or from people to a knowledge database. Scarborough and Carter (2000) described knowledge management as 'the attempt by management to actively create, communicate and exploit knowledge as a resource for the organization'. Extant of literature available on KM, reveals different views regarding dimensionality of the term to outline and define the KM process that represents knowledge from an overall KM perspective: create, integrate, assemble, transfer, and exploit (Teece et al, 1997), create, transfer and use (Spender, 1996), acquire, create, collaborate, integrate and experiment (Leonard, 1995), acquire, apply, convert, protect knowledge (Gold et al., 2001). Thus knowledge management involves transforming knowledge resources by identifying relevant information, and then disseminating it so that learning can take place. KM strategies promote the sharing of knowledge by linking people with people and by linking them to information so that they learn from documented experiences. Hence, this conceptual paper defines KM as comprising of acquisition, application, conversion and sharing for conceptualizing and exploring its relationship with dynamic-capability.

4. KNOWLEDGE-BASED-VIEW AND DYNAMIC-CAPABILITY-VIEW

Since nineties ,researchers and practitioners focused on two most influential schools-of-thought that to explain competitive advantage namely Knowledge Based View (KBV) and Dynamic Capability View (DCV), deeply rooted in Resource Based View (RVB).Emergent in early nineties, KBV focuses on knowledge and its management as a value creation element and process. The core of this thought lies in its endeavour to explain the eminence of KM in managing knowledge-resources for organizational capability development and sustainable competitiveness (Grant 1996a; 1996b; Kogut and Zander, 1992). Extending the traditional notion of organisational resource based capability to KM function, a firm's KM capability is defined as 'its ability to mobilise and deploy KM-based resources in combination with other resources and capabilities', leading to sustainable competitive advantages. DCV scholars submit that knowledge acts as a dominant factor for developing dynamic-capability and advocate the promising role of knowledge flows for building and mounting dynamic-capability construct within the organizational learning processes (Eisenhardt and Martin, 2000; Nonaka and Takeuchi, 1995; Teece & Pisano, 1994; Hsu and Sabherwal, 2012). By adopting the dynamic capability approach blended with a knowledge-based perspective, Nielsen (2006) argues that KM processes that change, renew and exploit the knowledge-based resources can represent knowledge related dynamic capabilities of the firm. In particular, KM processes create flows to and from the firm's stock of knowledge, thereby not only generating new knowledge but also changing the state of knowledge-based resources in consideration. Such a renewal, development, and exploitation of knowledge are central in connection with creating and sustaining a competitive advantage in today's

dynamic markets. Thus, the core of both the thoughts lies in their attempt to explain knowledge as a basic element for success and sustainable competitiveness of the firm. This implies the plausible linkages between KM processes and dynamic-capability, however little attempt has been made in prior literature to sketch the full picture of this phenomenon. Based on these two significant paradigms of strategic management, this study endeavours to address the potential gap that rests in literature.

5. RESEARCH APPROCH

This study is an exploratory study and based on qualitative method. The study is based on the literature survey. To explore the proposed linkages and achieve the objective, the scholar has reviewed the relevant literature. The related literatures and secondary data were collected from related journals, books, articles, publications and online platform such as DELNET, Google search engine etc. In this process more about thirtyarticles and research papers receives attention. After identifying the literature, analysis and systematic integration process begins with final synthesis. The proposed linkages are discussed below.

6. PROPOSED CONCEPTUAL FRAMEWORK

With the intention to explore the linkages of Knowledge Management Process and Dynamic Capability, the review of relevant literature has been done and theoretical framework exploring the linkages of Knowledge Management process and dynamic-capability have been presented, as shown in Figure 2. The proposed framework will throw light on how organizations can effectively augment dynamic-capability by fostering Knowledge Management process and reveal that organisations targeting to sustainable competitive advantage in turbulent environment should consider KM process to develop dynamic-capability and in turn sustain competitiveness. The fundamental conception, behind this inquiry is KBV and DCV paradigms that contemplate knowledge as the vital source of firm competitiveness and supports that process managing knowledge trigger organisational capabilities. In this framework, dynamic-capability is deliberated as a product of KM process by providing favourable conditions for learning and creation of knowledge assets both tangible and intangible.

7. LINKING KNOWLEDGE MANAGEMENT PROCESS AND DYNAMIC CAPABILITY

Based on KBV and DCV theorisation that knowledge is an influential factor for evolution of dynamic capability (Eisenhardt and Martin, 2000). Scholars advocate that firm can realize enhanced dynamic-capability, through organizational processes that foster learning mechanisms and facilitate the acquisition, application, exploration and exploitation of knowledge resources (Wu, 2006; Cepeda and Vera, 2007; Wang & Ahmed, 2007; Zollo and Winter, 2002; Sher and Lee, 2004). In the same line, Pandza et al. (2003) also postulate that" the process of how a firm acquires its capabilities cannot be separated from how it acquires its knowledge." There tends to be an agreement that KM incorporates organisational learning from internal and external sources and facilitate processes required in dynamic markets to creates core competencies (Zollo & Winter, 2002; Wang & Ahmed, 2007) and further sustain competitive advantage (Eisenhardt & Martin, 2000; Easterby-Smith and Prieto , 2007). This implies that

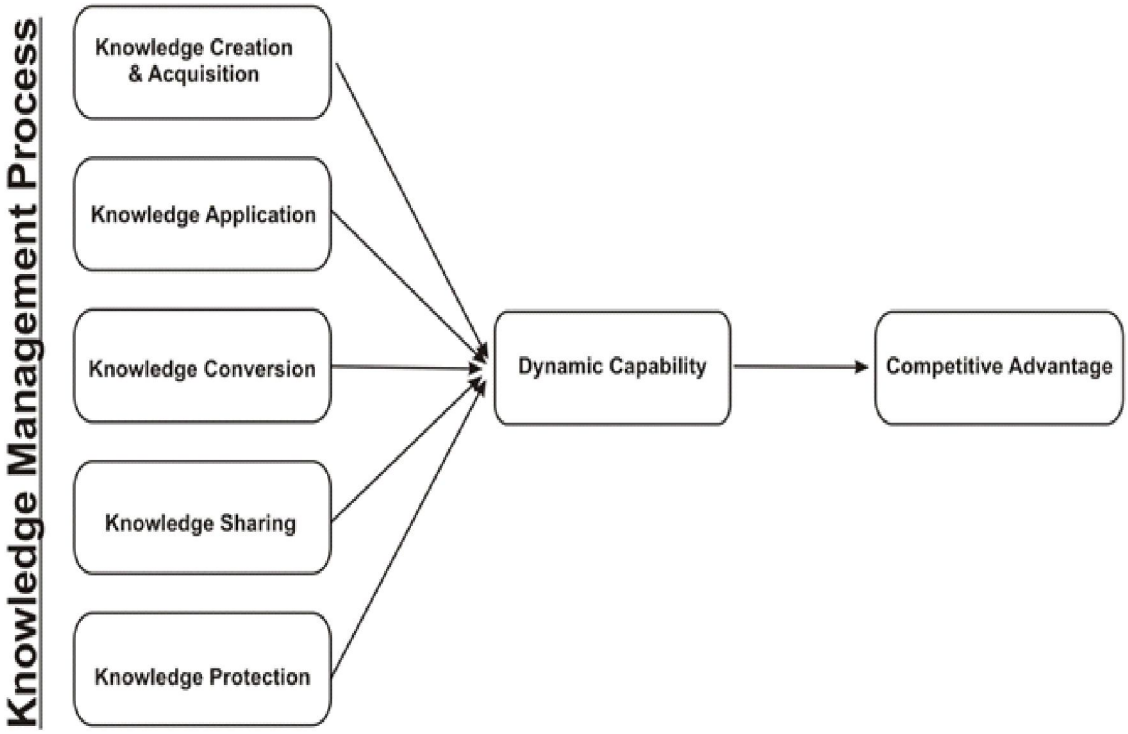

Figure 2 : Linkage Between Knowledge Management Process & Dynamic Capability

achievement of dynamic-capability has significant bearing on KM processes (Cepeda and Vera, 2007; Easterby-Smith and Prieto, 2009; Hung et al., 2009; Reijson et al., 2014; Tseng and Lee, 2014). Cepeda and Vera, (2007) argued that KM and dynamic-capability are closely interweaved as the creation and advancement of dynamic-capability involves KM processes (Zollo & Winter, 2002). This section proposes and discusses, based on the review how each KM processes significantly impacts on the development of Dynamic Capability.

7.1 KNOWLEDGE CREATION AND ACQUISITION PROCESS

Acquisition-oriented KM processes are those oriented toward obtaining knowledge which can be described by many other terms such as acquire, seek, generate, create, capture, and collaborate, all with a common theme – the accumulation of knowledge (Gold, Malhotra, and Segars, 2001). According to Chakravarthy (2005) 'knowledge is accumulated when units within the firm or the organization as a whole gains new understanding'. Knowledge creation and acquisition are both important sources of new knowledge for a firm of which the former is concerned with the development of new organisational knowledge in the firm, including improved use or new application of existing knowledge, while the latter represents a flow of knowledge from external stocks of knowledge into the firm (Nielsen, 2006). As proponents of KBV and DCV suggest, the combination and integration of knowledge embedded in individuals, social processes, structure and technology through knowledge acquisition process supports the renewal of the organizational knowledge, a fundamental

element of dynamic-capability (Macher & Mowery, 2009; Nielson, 2006). Artificial intelligence, expert system, etc. are some of the advanced tools developed in this area.

7.2 KNOWLEDGE APPLICATION PROCESS

Application-oriented KM processes are those oriented toward the actual use of the knowledge (Gold, Malhotra, and Segars, 2001), making knowledge 'more active and relevant for the firm in creating value' (Bhatt, 2001). Process characteristics that have been associated with the application of knowledge in the literature include storage, retrieval, application, contribution, and sharing (Almeida, 1996; Appleyard, 1996). It develops organisational routines and supports knowledge exploitation activities by applying integrated knowledge resources on certain tasks (Gold et al., 2001). Organisational routines facilitate the replication of solutions in new and varied contexts and enable the evolution of dynamic-capability (Zollo & Winter, 2002). While knowledge exploitation activities integrates and generate new knowledge that lead to creation of hard to imitate capabilities thereby supports continuous renewal of the firm. These are what, scholar accentuates as essential element on which dynamic-capability rest on, Based on KBV and DCV(Teece et al.,1997; Zollo and Winter, 2002; Easter by-Smith and Prieto, 2009).

7.3 KNOWLEDGE CONVERSION PROCESS

The most critical aspect in any Knowledge Management system is the process of converting tacit knowledge within an organization into explicit knowledge that can be stored for access and retrieval. Conversion-oriented KM processes are those oriented toward making existing knowledge useful (Gold, Malhotra, and Segars, 2001) which can be enabled by several processes such as socialization, externalization, dissemination and internalization. These processes enable the enhancement of dynamic capabilities by fostering collective learning among personalities and groups (Hsu and Sabherwal., 2012). Prior literature highlights the crucial role of learning as an essential fuel in developing and creating organizational capabilities (Zollo & Winter, 2002).

7.4 KNOWLEDGE SHARING PROCESS

Knowledge, unless effectively shared and acted upon, does not possess intrinsic value for an individual and organization. The sharing and reuse of accumulated knowledge would lead to increase in the productivity of the Knowledge Management system. Knowledge sharing is also entitled as a proactive style to knowledge reconfiguration and utilisation (Kale & Singh, 2007), enables interaction among individuals and supports the sharing of organizational knowledge from one individual to another or from individuals to groups, or else from one group to another thereby renew organizational resource base and develop dynamic-capability. Knowledge exploitation and exploration activities that triggered dynamic-capability (Teece et al., 1997; Zollo and Winter, 2002) are also underline by sharing tacit and explicit knowledge and competencies (Grant, 1991; Prieto and Easterby- Smith, 2006; Easterby-Smith and Prieto, 2007).

7.5 KNOWLEDGE PROTECTION PROCESS

Security-oriented KM processes are those oriented toward the protection of knowledge

within an organisation from illegal or inappropriate use or theft (Gold, Malhotra, and Segars 2001). According to Appleyard (1996), protection encompasses activities that seek to maintain the proprietary nature of a firm's knowledge stocks which include seeking legal protection (via patents, trademarks and copyrights), designing policies to limit turnover, and educating employees about the types of knowledge they should not share with their peers in other organisations. When knowledge is applied to existing ends, the size and durability of a firm's competitive advantage will be defined by how well protected its knowledge is (Chakravarthy *et al.*, 2005). It is because knowledge as an asset is the source of a competitive advantage only when it is rare and inimitable (Barney, 1991). Therefore, protection processes are very important for an organisation at this point. Thus Adopting the knowledge related dynamic capability approach, the five key dimensions of KM process capabilities discussed above, covering from knowledge creation and acquisition to knowledge protection. The Literature suggests that firms with effective processes to create, acquire, integrate, transfer and use knowledge will be more capable of integrating, reconfiguring and ascertaining their resource base to face a changing environment (Teece et al., 1997; Hung et al., 2009). In the similar trace, Reijson et al., (2014) advocate positive linkage of KM and dynamic-capability taking into account formal approach towards KM. All of these arguments recommend that a process of acquiring, applying and sharing knowledge enhances firm's capability to integrate and reconfigure resources to meet management challenges in complex environment and supports continuous renewal of the firm. Based on these rationalities, this investigation proposes that KM process have a significant effect on a firm's ability to cultivate dynamic capabilities.

8. MANAGERIAL IMPLICATIONS AND CONCLUSIONS

This study is based on a DCV of KM to conceptually investigate the contribution of KM process capabilities to a firm's Competitive Advantage in the dynamic market of today.The purpose of this paper was to improve the understanding of dynamic capabilities, organizational knowledge and the interplay between the two.Theoretical analysis provides strong evidence of linkages between KM process and Dynamic Capacities. With respect to managerial implication, the dynamic role of knowledge acquisition, application and transfer process in developing dynamic-capability and in turn, sustaining competitiveness, in this turbulent competitive environment has been established. Organisations are suggested to concentrate on organizational KM processes, to develop dynamic-capability and encounter challenges of volatile, uncertain, complex and ambiguous (VUCA) business environment. Thus, this research paper incorporates two areas KM and dynamic-capability and makes contribution to the relevant literature with multi-disciplinary angles. With the interesting findings related to linkages between KM process and dynamic-capability this research contributes significantly to this domain. To conclude, this research endeavours to explain the notion of dynamic-capability through the lenses of various KM processes. Naturally this research is not free from limitation as it is totally based on literature review. Hence, further empirical research is essential to improve our understanding and validate statistical linkages among the constructs and their significance. More DC factors along with DC outcomes can be incorporated in proposed framework to

present the comprehensive picture of Dynamic Capability phenomenon and provide valuable guidelines to scholars, managers and practitioners currently struggling with unconvincing state of knowledge regarding this issue. Finally, this paper contributes significantly to the research arena aiming to identify the organisational aspects leading to dynamic-capability.

9.REFERENCES

- Almeida, P., (1996). Knowledge sourcing by foreign multinationals: Patent citation analysis in the US semiconductor industry. *Strategic Management Journal 17,* 155-165.
- Ambrosini, V., and Bowman, C., (2009). What are dynamic capabilities and are they a useful construct in strategic management. *International Journal of Management Reviews, 11*(1), 29–49.
- Appleyard, M., (1996). How does knowledge flow? Interfirm patterns in the semiconductor industry, *Strategic Management Journal 17,* 137-54.
- Armstrong Michael (2010). Armstrong's Essential Human Resource Management-A Guide to People Management-Koganpage
- Augier, M., and Teece, D. J., (2009). Dynamic capabilities and the role of managers in business strategy and economic performance. *Organization Science, 20*(2), 410–421.
- Barney, J. B.(1991). Firm resources and sustained competitive advantage. *Journal of Management*Studies, 17(1) 99–120.
- Barney, J. B. and Clark, D. N., (2007).*Resource-based theory: Creating and sustaining competitive advantage.* Oxford: Oxford University Press.
- Barrales-Molina, V., Martínez-López, F. J., and Gázquez-Abad, J. C., (2014). Dynamic marketing
- Capabilities: Toward an integrative framework. *International Journal of Management Reviews, 16* (4), 397-416.
- Bhatt, G.D., (2001). Knowledge management in organisations: Examining the interaction between technologies, techniques, and people. Journal of Knowledge Management 5 (1), 68-75.
- Birchall, D., and Tovstiga, G. (2005).*Capabilities for strategic advantage: Leading through technological innovation*. Basingstoke: Palgrave Macmillan.
- Bruni, S. D., and Verona, G. (2009). Dynamic marketing capabilities in science-based firms: An exploratory investigation of the pharmaceutical industry. *British Journal of Management, 20,* 101–117.
- Cepeda,G., & Vera, D. (2007). Dynamic capabilities and operational capabilities: a knowledge-management perspective. *Journal of Business Research*, 60, 426-37.
- Chakravarthy, B., McEvily, S., Doz, Y., Rau, D., (2005).Knowledge management and competitive advantage. In: Esterby-Smith, M., Lyles, M. (Eds.), The Handbook of Organizational Learning and Knowledge Management. Blackwell, Oxford, 104-121.
- Chien, S. Y., & Tsai, C.H. (2012). Dynamic capability, knowledge, learning, and firm

performance. *Journal of Organizational Change Management,* 25, 434-444

- Easterby Smith, M., Lyles, M. A., &Peteraf, M. A. (2009). Dynamic capabilities: current debates and future directions. *British Journal of Management,* 20,S1-S8.
- Eisenhardt, K. M., & Martin, J. A. (2000). Dynamic Capabilities: What are they? *Strategic Management Journal,*,21,1105–1121.
- Eriksson, T. 2014. 'Processes, antecedents and outcomes of dynamic capabilities.'*Scandinavian Journal of Management* 30 (1): 65–82.
- Fischer, T., Gebauer, H., Gregory, M., Ren, G., and Fleisch, E. (2010). 'Exploitation or exploration in service business development?: Insights from a dynamic capabilities perspective.' *Journal of Service Management* 21, 591–624.
- Gold, A. H., Malhotra, A., &Segars, A.H. (2001). Knowledge-management: an organizational capabilities perspective. *Journal of Management Information Systems,* 18, 185-214.
- Grant, R.M. (1991). The Resource-based theory of competitive advantage: Implications for strategy formulation.*California Manage. Rev.,* 33, 114–135.
- Grant, R. M. (1996a). Toward a knowledge-based theory of the firm.*Strategic Management Journal,*17, 109–122.
- Grant, R. M. (1996b). Prospering in dynamically-competitive environments: Organizational capability as knowledge integration.*Organization Science,*7,375–387.
- Helfat, C., Finkelstein, S., Mitchell, W., Peteraf, M., Singh, H., Teece, D., &Winter, S. (2007). *Dynamic Capabilities: Understanding Strategic Change in Organizations*. Oxford: Blackwell Publishing.
- Helfat, C. E., and Martin, J. A. (2014). Dynamic managerial capabilities: Review and assessment of managerial impact on strategic change. *Journal of Management, 41* (5), 1281-1312.
- Helfat, C. E., &Peteraf, M. A. (2009).Understanding Dynamic Capabilities: Progress along a developmental path.*Strategic Organization,* 7,91–102.
- Hsu, I.C., &Sabherwal R. (2012).Relationship between Intellectual-capital and Knowledge-management: An Empirical Investigation. *Decision Sciences Journal*,43, 489-524
- Hung, R.Y.Y., Lien, B.Y.H., &McLean,G.N. (2009). Knowledge-management Initiatives, Organizational Process Alignment, Social Capital, and Dynamic Capabilities.*Advances in Developing Human Resources,* 11, 320-333.
- Kale, P., Singh, H., 2009. Managing strategic alliances: what do we know now, and where do we go from here? *Academy of Management Perspectives* 23, 45–62.
- Kogut, B., & Zander, U.(1992). Knowledge of the firm, combinative capabilities and replication of technology.*Organization Science,* 3, 383-97.
- Leonard, D. (1995). Wellsprings of knowledge: Building and sustaining the source of innovation. *Boston: Harvard Business School Press.*

- Macher, J. T. & D. C. Mowery (2009).Measuring dynamic capabilities: practices and performance in semiconductor manufacturing.*British Journal of Management,* 20, S41–S62.
- Marr, B., Gupta, O., & Pike, S. (2003).Intellectual capital and KM Effectiveness.*Management Decision,* 41(8), 771-81.
- McKelvie, A., &Davidsson P. (2009). From Resource Base to Dynamic Capabilities: an Investigation of New Firms. *British Journal of Management,* 20, 63–80.
- Moliterno, T., and Wiersema, M. F. (2007). Firm performance, rent appropriation, and the strategic resource divestment capability. *Strategic Management Journal, 28* (1), 1065–1087.
- Newbert, S. L. (2007). Empirical research on the resource based view of the firm: An assessment and suggestions for future research. *Strategic Management Journal, 28* (2), 121–146.
- Nielsen, A. P. (2006). Understanding dynamic capabilities through knowledge-management. *Journal of knowledge-management,* 10, 59-71
- Nieves, J., & Haller, S., (2014). Building dynamic capabilities through knowledge resources, *Tourism Management,* 40,224-232.
- Nonaka, I., & Takeuchi, H. (1995).*The Knowledge Creating Company: How Japanese Companies Create the Dynamics of Innovation*. Oxford University Press, Oxford.
- Pandza, K., Horsburgh, S., Gorton, K., &Polajnar, A. (2003). A real options approach to managing resources and capabilities.*International Journal of Operations & Production Management,* 23,1010—1032.
- Penrose, E. (1959). *The Theory of the Growth of the Firm.* Blackwell, Oxford.
- Peteraf, M. A. (1993). The cornerstones of competitive advantage, *Strategic Management Journal,* 14, 179–191.
- Prieto,I.,&Easterby-Smith, M. (2006). Dynamic capabilities and the role of organizational knowledge: an exploration. European Journal of Information Systems, 15, 500-10
- Rindova, V. P., and Kotha, S. (2001). Continuous morphing: Competing through dynamic capabilities, form, and function. *Academy of Management Journal, 44* (6), 1263–1280.
- Van Reijsen, J., Helms, R., Batenburg, R., &Foorthuis, R. (2014). The impact of knowledge-management and social capital on dynamic capability in organizations, *Knowledge-management Research & Practice.*1-17
- Scarborough, H and Carter, C (2000). Investing Knowledge management, CIPD, London
- Scarborough, H, Swan, J and Preston, J (1999). Knowledge management: A literature review, IPM, London
- Sher, P. J., & Lee, V. C. (2004). Information technology as a facilitator for enhancing dynamic capabilities through knowledge-management,*Information and Management,*41, 933–945.
- Spender, J.C. (1996). Making knowledge the basis of dynamic theory of the firm. *Strategic Management Journal,* 17, 45-62.

- Teece D. J., (2000). Strategies for managing knowledge assets: the role of firm structure and industrial context. *Long Range Planning,* 33,35–54.
- Teece, D. J., Pisano, G., &Schuen, A. (1997). Dynamic capabilities and strategic management.*Strategic Management Journal,* 18,509–533.
- Teece, D. J. (2007).Explicating dynamic capabilities: the nature and microfoundations of sustainable enterprise performance. *Strategic management journal,* 28, 1319-1350
- Teece, D. J., Pisano, G., &Schuen, A. (1997). Dynamic capabilities and strategic management.*Strategic Management Journal,* 18,509–533.
- Tseng, S. M., & Lee, P. S. (2014).The effect of knowledge-management capability and dynamic capability on organizational performance. *Journal of Enterprise Information Management,* 27,158-179.
- Van Buren, M. (1999).A yardstick for knowledge-management.*Training & DevelopmentJournal,* 53, 71-8.
- Verloop, J. (2004). *Insights in innovation: Managing innovation by understanding the laws of innovation.*

  Amsterdam: Elsevier.
- Wang, C. L., & Ahmed, P. K. (2007). Dynamic capabilities: A review and research agenda. *International Journal of Management Reviews,* 9,31–51.
- Wernerfelt, B. (1984). A resource-based view of the firm. *Strategic Management Journal,* 5, 171–180.
- Winter, S. G. (2003).Understanding dynamic capabilities.*Strategic Management Journal, 24* (10), 991–995.
- Wu, L.-Y. (2006). Resources, dynamic capabilities and performance in a dynamic environment: Perceptions in Taiwanese IT enterprises. *Information and Management,* 43, 447–454.
- Zahra, S. A., Sapienza, H. J., &Davidsson, P. (2006). Entrepreneurship and dynamic-capabilities: A review, model and research agenda. *Journal of Management Studies,* 43, 917–955.
- Zollo, M., & winter, S. G. (2002).Deliberate learning and the evolution of dynamic-capabilities.*Organization Science,* 13, 339–351.