# THE IMPACT OF KNOWLEDGE MANAGEMENT AND ENTREPRENEUR'S KNOWLEDGE ON INNOVATION AND FIRM PERFORMANCE

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#### **ABSTRACT**

There is lack of evidence from previous studies that examined the relationships among entrepreneur's knowledge, knowledge management, innovation, and firm performance. Entrepreneur if s/he has more knowledge than other entrepreneurs can be more competitive. Literature studies show that entrepreneur knowledge and knowledge management had significant and direct positive effect on innovation and firm performance. Further studies are needed for showing a model and factors that enhance innovation and improve firm performance. The purpose of this paper is to propose a framework of improving the firm performance by enhancing of the innovation, through the entrepreneur knowledge and knowledge management. Based on this paper, further research is needed on the potential role of EK and KM in innovation, and how the value of EK and KM can be maximized to have a more valuable innovation that would be an impact on firm performance.

**Keywords:** entrepreneurship, knowledge, management, innovation, firms performance

#### **ABSTRAK**

Ada kurangnya bukti dari penelitian sebelumnya yang meneliti hubungan antara pengetahuan wirausaha (entrepreneur), manajemen pengetahuan, inovasi, dan kinerja perusahaan. Wirausaha (entrepreneur) jika memiliki lebih banyak pengetahuan dari wirausaha lain dapat lebih kompetitif dibandingkan dengan yang lain. Studi literatur menunjukkan bahwa pengetahuan pengusaha dan pengetahuan manajemen memiliki pengaruh yang signifikan dan secara positif langsung berpengaruh terhadap inovasi dan kinerja perusahaan. Penelitian selanjutnya diperlukan untuk menampilkan model dan faktor-faktor yang meningkatkan inovasi dan meningkatkan kinerja perusahaan. Tujuan dari tulisan ini adalah untuk mengusulkan kerangka kerja untuk meningkatkan kinerja perusahaan dengan meningkatkan inovasi, melalui pengetahuan pengusaha dan manajemen pengetahuan. Berdasarkan tulisan ini, penelitian lebih lanjut diperlukan pada peran potensial EK dan KM dalam inovasi, dan bagaimana nilai EK dan KM dapat dimaksimalkan untuk memiliki inovasi lebih berharga yang akan berdampak pada kinerja perusahaan.

Kata kunci: kewirausahaan, pengetahuan, manajemen, inovasi, kinerja perusahaan

# **INTRODUCTION**

There are so many studies that examine the relationship between knowledge and firm performance, and also between knowledge and innovation. Knowledge is becoming hot topics among scientists and business communities. It is because knowledge is probably a source and driver of innovation (Emadzade, et. al., 2012). Knowledge can be a unique advantage that cannot be easily copied by competitors. Knowledge would be a great resource if the firm can effectively and efficiently manage it.

Moreover, an entrepreneur, if s/he has more knowledge than other entrepreneurs, can be more competitive. It also means s/he can manage her/his firm better than the others. Entrepreneur Knowledge (EK) is difficult to find, especially in the context of how EK affects innovation besides firm performance. This paper, thus, purposes on a model design which measures the influence of EK on innovation and firm performance. Entrepreneur and her/his organization are related, moreover, this study purposes on how the organization manages knowledge since knowledge becomes more important (Theriou, et. al, 2009) and it is an important asset in global competition (Omerzel & Antoncic, 2008).

#### **METHOD**

This research used literature review as a systematic search of published works to find out what is already known about the intended research topic. Literature review allows the research to find out what has been done in terms of the problem being investigated and to ensure that duplication does not occur. Literature used in this paper did not only identify and analyze all written information about the topic, but also gained any insight and had a notion about the problem investigated.

## **DISCUSSION**

In the competitive environment, the entrepreneurs need to use their knowledge and skill and use them to connect existing and new technologies to their company. Successful entrepreneurs can develop their knowledge, skill, and managerial capabilities (Tidd & Bessant, 2009:79) in order to survive in the competitive environment. In order to survive, they must innovate new opportunities in their industries. In today's competitive environment, innovation becomes more and more relevant, mainly due to three major trends: intense international competition, fragmented and demanding markets, and diverse and rapidly changing technologies. Firms that adapt to the needs and wants of target customers are in a better position to create a sustainable competitive advantage (Alegre-Vidal et al., 2004). Dobni (2010) argues that enhancing the innovative ability in organization is one of the most important levers to increasing profitability and growth in organizations. Innovative firms are more successful over long term if they are more creative, have desire to succeed, possess a common sense of purpose and constituency, and they are empowered (Dobni, 2010). This means firms must understand the relationship between strategy and innovation, and they have identified the configurations that are best suited to their environment, and also know how the business will achieve their objectives (Dobni, 2010; Stankevice & Jucevicius, 2010).

A successful entrepreneur constantly supplements the system of acquiring knowledge with his or her vision. Therefore entrepreneurs combine their knowledge, broaden it, and create new innovative ideas (Omerzel & Antoncic, 2008) and organization needs individual key that has power and influence

acting as gatekeeper—collecting information from various sources and passing it to the relevant people (employee) who will be best able to use capabilities (Tidd & Bessant, 2009:114). It is expected that:

#### Hypothesis 1: Entrepreneur Knowledge (EK) is positively related to innovation.

Entrepreneur uses knowledge to recognize or create an opportunity and to take action, and also uses innovation knowledge by realizing it into pratice or product. Joseph Schumpeter pointed out that entrepreneur is often an innovator. S/he brings new goods and new technologies to market, open new markets, proceses, and also ideas. Entrepreneurs at organization must transform into organizational knowledge (Theriou et. al., 2009) which is must shared to employees, and therefore use this knowledge to improve organizational performance. Knowledge management (KM) enables the existing individual knowledge to be captured and transformed into organizational knowledge, which in turn must be diffused and shared by many employees (Theriou et. al. 2009). The knowledge-based view of the firms mentioned that the organization as the key element in the creation process and application of knowledge (Grant, 1997; Nonaka, 1994). This theory recognized that organization performance depends on the capabilities in developing and deploying knowledge. Organizations need to understand how they create and manage new knowledge (Nonaka & Takeuchi, 1995) to strengthen organization capability to innovate (Jennex & Olfman, 2004). It is expected that:

# Hypothesis 2: Entrepreneur knowledge (EK) is positively related to Knowledge Management (KM).

Many literatures indicate that knowledge management tends to reflect the experience of the entrepreneur. At organizational level the entrepreneur must have a lot of experiences in maintaining her/his organization aiming to perform competitive firm. Entrepreneur tends to be more competitive in case of her/his knowledge base, as well as facing resource scarcity and time constraints, entrepreneur also faces tougher competition in the market. Entrepreneurs have to be more adapted in the fast of changing world; they must develop new learning and skills that are crucial ingredients in the world of successful economy.

Globalization and knowledge driven economy require entrepreneur to develop a more skillful entrepreneur in order to compete within global market and global competition. This means that entrepreneur should pay attention to her/his knowledge and manage it to be source of innovation and for further improvement that should be useful for organization. Experiential knowledge of the entrepreneur and making tacit or explicit knowledge and developed within the firm in order to share, combine knowledge, and create new knowledge are the innovative process that lie at the heart of knowledge management. Entrepreneur has facing major challenges: (a) keeping the firm's capabilities, resources and routines up to date; (b) maintaining the owner-manager's entrepreneurial and management competences; (c) acquiring new knowledge, which raises issues concerning the source of information (formality/informality, education/experience), the internal absorptive capacity for interpreting and absorbing the new information as applicable knowledge and the use of the new knowledge; and (d) creating new knowledge, which also raises very interesting and challenging issues concerning innovation, creativity, and strategy.

Theriou et al. (2009) indicates that knowledge management is considered to be vehicle for organization effectiveness and competitiveness. Global competition in this era becomes more and more intense; this indicates that organization must survive and face the challenge of daily instability and uncertainty environment that force organization to be more innovative (Trias de Bes & Kotler, 2011:14). It is expected that:

#### Hypothesis 3: Knowledge Management (KM) is positively related to Innovation.

Knowledge management is recognized as a process of capturing collective organizational skills. Knowledge, wherever, it is located, either in the database, the papers, or in people's heads, and then is

distributed to any knowledge in order to increase of organization performance. According to Wiig (1997), Knowledge management is a systematic building, explicit and deliberate, renewal, and application of knowledge to maximize the effectiveness with respect to organizational knowledge.

While Townley (2003), KM as a set of the process of creating and sharing of knowledge throughout the organization to optimize achievement the mission and goals of the organization. Thus, knowledge management is about improving the use of organizational of knowledge through information management practices and organizational learning to achieve excellence competitive advantage.

Uhlaner, et. al. (2007) found that KM acquisition or input strategies may be the most important aspect of the innovation process influencing the performance of small firms they also found that the knowledge exchange is critical in the success of KM innovation efforts. It should be a point of attention to entrepreneurs. Small firms often lack the financial capacity to make full use of new methods and innovations developed by academic researchers. Nevertheless they also found that KM input strategies related to knowledge acquisition are positively related to sales turnover growth. Their research results emphasize the importance of both knowledge absorption and knowledge creation to the success of innovative efforts in small firms.

Kim (2003) defines knowledge as something that makes both data and information manageable and meaningful. He also classified knowledge into different types: know-what, know-why, know-how and know-who. "Know-what" and "know-why" are the explicit knowledge that can be expressed through language. Thus, the explicit knowledge is relatively easy to codify and transfer to others. On the other hand, "know-how" and "know-who" – are tacit knowledge that is acquired mainly by experience and are more difficult to codify, measure, and transmit.

Types of knowledge according Kim (2003) are as follows. "Know-what" refers to knowledge about "facts". It is close to what is normally called information. In dealing with some complicated matters, experts like lawyers and analyst must have a lot of know-how (information) to perform a specific job. "Know-why" refers to scientific knowledge of the principles and laws of nature. The acquisition of know-why is accomplished in specialized organizations such as research laboratories. "Know-how" refers to skills or the capability to do something. This kind of knowledge is hard to codify in language. A firm may establish industrial networks to share and combine elements of know-how or adopt out-sourcing to efficiently utilize others' know-how. "Know-who" refers to information about who knows what and who knows how to do what. It involves the formation of special social connections, which make it possible to get access to experts and use their knowledge efficiently. Know-who is important in economies where information is widely dispersed and imbalanced because of a highly developed division of work forces and a rapid change (or an advance) of technology.

Zhou et. al. (2007) found that external acquisition has a positive indirect effect on innovation behavior, mediated by innovation orientation. Also SMEs rather seek opportunities and acquire new external knowledge through social ties and communication with external resources than building new knowledge and creating innovation opportunity in-house. Further Zhou et al (2007) conclude that favorable external communication system can make SMEs more innovative, perhaps by improving their judgment of perceived opportunities in order to react to the changing environment.

Madhoushi et al (2011) examined the relationships among EO, knowledge management and innovation performance in industrial zone SMEs. They found that entrepreneurial orientation both directly and indirectly through the knowledge management influence on innovation performance. Further, they also conclude that knowledge management plays a mediating role between entrepreneurial orientation and innovation performance and they proposed the needed to understand organizational knowledge, knowledge management process, entrepreneurship process and their integrated influences on firms' innovation performance.

#### Hypothesis 4: Knowledge Management (KM) boosting up the EK to increasing the innovation.

Innovation is defined as "the creation of new knowledge and ideas to facilitate new business outcomes, aimed at improving internal business processes and structures and to create market driven products and services"(Al-Hakim & Hassan, 2012). When defined as an outcome, innovation is the tangible product, service or process that is adaptable or diffusible, meaning it can be used in various contexts by different individual (Schaper & Vollery, 2004). Successful organization indicates that knowledge management enables the organization to become innovative (Theriou et al., 2009) and innovative becomes priority action for established corporations (Grant, 2010) also as a main reason to survive and growth (firm performance). It is expected that:

# Hypothesis 5: Innovation is positively related to Firm Performance.

Hence, the conceptual framework from the 5 hypotheses is in Figure 1.

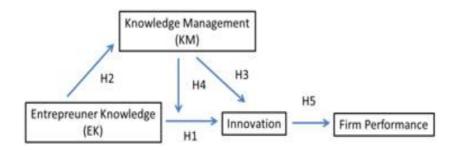


Figure 1 Conceptual Framework

Knowledge is one of important elements for innovation. This paper focuses on the Entrepreneur Knowledge, Knowledge Management, Innovation, and Firm Performance. EK significantly related to the innovation. Innovations refer to practice, ideas or any object, which is perceived as new (Mirza & Ali, 2011). Tidd and Bessant (2009) argue that innovation has four dimensions, such as: product innovation, process innovation, position innovation, and paradigm innovation. Rodrigues and Riccardi (2002) argued that entrepreneurship, knowledge and innovation are the three key elements necessary to assure continuity to our economic model and success to the new organization. The success of the new organization would be based on conditioning its behavior, in terms of aligning entrepreneurial behavior to knowledge learning and acquisition, in order to reach innovation. They also conclude that innovation in the organization is the object of entrepreneurship and knowledge and also have higher levels of competitiveness.

Knowledge management plays an invaluable role in innovation (Du Plessis, 2007), and she defines the value proposition of KM in innovation: KM assists in creating tools, platforms and processes for tacit knowledge, creation, sharing and leverage in the organization; KM assists in converting tacit knowledge to explicit knowledge; KM ensures the flow of knowledge used in innovation process.KM also has a function to maximizing (Wiig, 1997), optimizing (Townley, 2003) and improving the efficiencies in organizing of knowledge to improving the firm performance through the innovation.

## **CONCLUSION**

Company in the coming year views knowledge as the most powerful source that can be valuable to build strategic competitive advantage (Long Wu & Chang Lin, 2009) in the very rapid market environment. Firms that use this knowledge require KM as vehicle for organizations'effectiveness and competitiveness (Theriou et al., 2009). KM facilitates organizations to be faster, more efficient, and more innovative. Organization also views KM as powerful solution to contribute innovation improvement and also improve its performance. KM helps developing skill and knowledge of the entrepreneurs in order to transfer, disseminate, and accumulate knowledge, and stimulate this knowledge to become an innovation through products and services. Based on this paper, further research is needed on the potential role of EK and KM in innovation and how the value of EK and KM can be maximized to have a more valuable innovation that will impact firm performance.

#### REFERENCES

- Al-Hakim, L. A. Y. & Hassan, S. (2012). Critical success factors of knowledge management, innovation and organizational performance: An empirical study of the Iraqi mobile telecommunication sector. *British Journal of Economics, Finance and Management Sciences*, 4(1), 31–49.
- Alegre-Vidal, J., Lapiedra-Alcam T, R. & Chiva-Gómez, R. (2004). Linking operations strategy and product innovation: an empirical study of Spanish ceramic tile producers. *Research Policy*, *33*, 829–839.
- Dobni, C. B. (2010). Achieving synergy between strategy and innovation: The key to value creation. *Int. Journal of Business Science and Applied Management*, 5(1), 48–58.
- Du Plessis, M. (2007). The role of knowledge management in innovation. *Journal of Knowledge Management*, 11(4), 20–29.
- Emadzade, M. K., Mashayekhi, Behnaz, Abdar, Elham. (2012). Knowledge management capabilities and organizational performance. *Interdiciplinary Journal of Contemporary Research in Business*, 3(11), 781–790.
- Grant, R. M. (2010). Contemporary Strategy Analysis (7th ed.). UK: John Wiley & Sons.
- Grant, R. M. (1997). The knowledge-based view of the firm: Implications for management practice. *Long Range Planning*, *30*(3), 450–454.
- Jennex, M. E. & Olfman, L. (2004). Assessing knowledge management success/effectiveness models. *Proceedings of the 37<sup>th</sup> Hawaii International Conference on System Sciences (HICSS'04)*, 5–8 January 2004, Big Island, Hawaii, United States, pp. 1–10.
- Kim, Moon-Kyum. (2003). A knowledge management model for SMEs in the knowledge-based economy. entrepreneurship and innovation in the knowledge-based economy: Challenges and strategies. *Report of the APO Symposium on Entrepreneurship in Knowledge-based Industry*, Taipei, Republic of China, 23–26 July 2002.

- Long Wu, I. & Chang Lin, H. (2009). A strategy-based process for implementing knowledge management: an integrative view and empirical study. *Journal of the American Society for Information Science and Technology*, 60(4), 789–802.
- Madhoushi, M., Sadati, A., Delavari, H., Mehdivand, M., & Mihandost, R. (2011). Entrepreneurial orientation and innovation performance: The mediating role of knowledge management. *Asian Journal of Business Management*, *3*(4), 310–316.
- Mirza, W. A., & Ali, B., (2011). The dilemma of Knowledge Management, Innovation and Entrepreneurship in SME's: an empirical study. *Journal of Contemporary Research in Business*, 3(2), 1112–1128.
- Nonaka, I. (1994). A dynamic theory of organizational knowledge creation. *Organization Science*, 5(1), 14–37.
- Nonaka, I. & Takeuchi, H. (1995). The Knowledge-creating Company. New York: Oxford University Press.
- Omerzel, D. G. & Antoncic, B. (2008). Critical entrepreneur knowledge dimensions for the SME performance. *Industrial Management and Data Systems*, 108(9), 1182–1199.
- Rodrigues, L. C. & Riccardi, R. (2002). Entrepreneurship, knowledge and innovation: Shaping the new organization. *In: International Conference Global Business and Technology Association*-GBATA, *1*, 1028–1034.
- Schaper, M. & Volery, T. (2004). *Entrepreneurship and Small Business* (2<sup>nd</sup> Pacific Rim ed.). Australia: John Wiley & Sons.
- Stankevice, I., & Jucevicius, G. (2010). Innovation Strategy: an integrated theoretical framework. *Social Sciences*, 69(3), 24–31.
- Theriou, N., Maditinos, D., & Theriou, G. (2009). *Knowledge Management Enabler Factors and Firm Performance: An Empirical Research of the Greek Medium and Large Firms*. Kavala Institute of Technology, School of Business & Economics, Department of Business Administration, Kavala.
- Tidd, J. & Bessant, J. (2009). *Managing Innovation: Integrated Technological, Market, and Organizational Change*. 4<sup>th</sup> Edition. West Sussex, England: John Wiley & Sons.
- Townley, C. T. (2003). Will the Academy Learn to Manage Knowledge? *Educase*, (2), 8–11.
- Trias de Bess, F. & Kotler, P. (2011). *Winning at Innovation: The A-to-F Model* (1<sup>st</sup> ed.). New York: Palgrave Macmillan.
- Uhlaner, L., van Stel, A., Meijaard, J., & Folkeringa, M. (2007). The relationship between knowledge management, innovation and firm performance: evidence from Dutch SMEs. *SCientific AnaLysis of Entrepreneurship and SMEs*. Netherlands Ministry of Economic Affairs.
- Wiig, K. M. (1997). Knowledge management: Where did it come from and where will it go? *Expert Systems with Applications*, 13(1), 1–14.
- Zhou, H., Tan, S.Y.G.L., & Uhlaner, L. (2007). Knowledge Management and Innovation: An empirical study of Dutch SMEs. *SCientific AnaLysis of Entrepreneurship and SMEs*. Netherlands Ministry of Economic Affairs.