

Does Knowledge Management Enhance Innovation: A Literature Review

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Abstract— Knowledge management is one of innovation driven in a firms. The aim of this research want to find out knowledge management implementation in a firm and the relation of knowledge management on innovation in a firm. This research is an article review that published in various academic journals. The articles in this research, we identified through a search engines for electronic databases using search strings such as knowledge management, and innovation, knowledge management implementation or knowledge management practice. The findings prove that knowledge management has an important role to do innovation in business activities whether in product innovation, marketing, and service.

Index Terms— Knowledge Management, Innovation.

1 INTRODUCTION

The study of knowledge management has becomes the most influential and visible novel approaches to the art, and management science [1]. Knowledge management actually existed before the modern era. For example in Indonesia there is the Borobudur Temple which is a cultural heritage that has been very well known throughout the world. In Egypt there is a pyramid, in China there is the Great Wall of China, these are evidence of human creativity, imagination, managerial and organizational capabilities, and efforts that were undertaken before in this modern era [2].

Digital economy pattern, the artificial intelligence, big data, robotic, and so on in this industrial revolution 4.0 era, or known as the disruptive innovation phenomenon make the use of human power in business activities is decreasing, whereas the use of technology is increasing rapidly in all business activities. The increasing of business competition as a result of the development of knowledge and technology in this era, this is a challenge for a manajer or the owner of the firm both small firms and also the large firms to be able to adapt to the complex environment situation. A dynamic and unpredictable business environment makes the firms must be able to changes and adaptability, as stated in paper [3] that in the fast changing business world today, innovation in all business activities has become the mainstay of firms.

The implementation of knowledge management not only in private sector, knowledge management has also been widely used in the activities of public or government organizations, the world of education, health, infrastructure development and also the military. All aspects have taken the advantage of knowledge management. The use of knowledge management has also brought a lot of changes in economic activity, so that it can provide benefits for the community and also increase economic growth. Knowledge management also has becomes as the key basis of competitiveness [4] and and firm performance. In paper [5] also found in their research, some knowledge resources (e.g. organizational structure, knowledge application) are directly related to the firm performance.

The ability to manage knowledge within a firm is very important. In paper [6] state that in the presence of hypercompetitive business, complex, and the changing of environment rapidly, the use of knowledge management (KM) becomes one of the most interesting and important concepts in management. Manajers or leaders in an organization have an important role in responding to the changing business environment. In the Complexity Leadership Theory theory proposed [7] states that in dealing with a complex business environment, a leader must be able to become a leader who has the capability to adapt to a complex environment. Innovation capability of the firm becomes the important points to respond to a changing business environment, and the company's ability to innovate must be supported by the company's ability to manage knowledge. The absence of innovation will make the company's performance decrease, while continuous innovation will make the company show better performance.

At this time the using of technology as a tool of knowledge management has become an absolute thing in a frim and has provided many benefits to the firms. In the paper states that one of the many benefits of knowledge managment in a firm is an increasing of the ability to innovate in products and services [7]. In paper [8] also said that firm with a capability in knowledge management is also likely to be more innovative in their business activities.

2 SCOPE AND RESEARCH QUESTION

The purpose of this paper to investigate the role of knowledge management on innovation through a systematic literature review. The systematic literature review in this paper considers a defined time frame from 2005 to 2017. The initial approach to this research was to answer the following question:

1. What is knowledge management
2. How is the implementation of knowledge management
3. What is innovation
4. Does knowledge management link to innovation capability?

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3 METHODOLOGY

The articles included in this article, we identified through a search made using the search engines for electronic databases using search strings such as “knowledge management and innovation”, and “knowledge management implementation”. The study of articles was conducted between 2005 and 2017 which was published in various academic journals.

TABLE 1
LIST OF JOURNALS SELECTED IN THE FINAL SAMPLES

Name of Journal	Number of articles
Asian Social Science	1
Baltic Journal of Management	2
Global Business Review	1
International Journal of Management Science and Business Administration	1
iBusiness	1
Innovation,	1
International Bulletin of Business Administration	1
International Federation of Library Associations and Institutions	1
International Small Business Journal	1
International Journal of Quality & Reliability Management	1
Journal of Intellectual Capital	1
Journal of Knowledge Management	4
Journal of Business Economics and Management	1
Journal of Transnational Management	1
Leadership Quarterly	1
Management Research Review	1
Global Business Review	1
The Journal of Business Perspective	1
Technology Analysis & Strategic Management	1

4 FINDING

4.1. Knowledge Management

Knowledge management can be defined as organizational process in creating centralize of knowledge source in the organization that acquiring, assimilating, distribute, integrate, share, retrieve and reuse the internal and external, explicit and tacit knowledge to drive innovation in the organizationn, such as product innovation, people and organizational process [10]. The implementation of knowledge management will positively impact to the innovation performance [11]. We can conclud that knowledge management as the process of identifying or creating, assimilating proses, and applying organizational knowledge to exploit new opportunities to do innovation and enhance organizational performance.

Knowledge can be tangible and intangible knowledge [12]. Tangible knowledge such as human capital profiles, data, explicit information (financial reports, marketing research reports, productivity reports and customer databases), while

intangible knowledge such as information knowledge, skills and experiences of employees [9]. Knowledge management is a process to obtain, store, understand, share, apply knowledge through organizational culture and strategy [13]. Conceptual model about link of knowledge management, innovation and firm performance proposed [9], can be seen below :

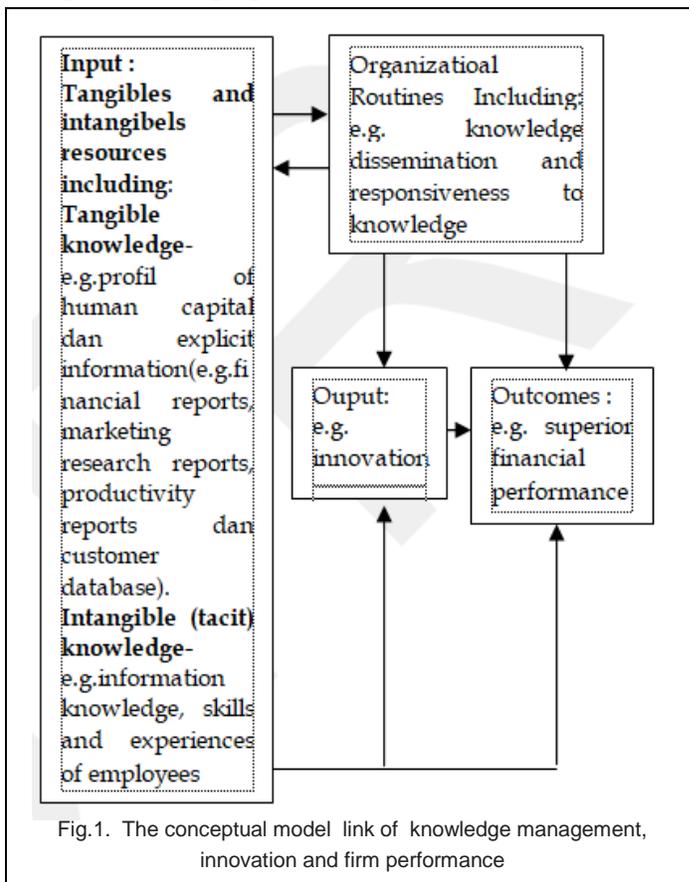


Fig.1. The conceptual model link of knowledge management, innovation and firm performance

4.2 Innovation

Many countries develop strategy in which one of the priorities has been transformation of economy into innovation driven[14]. Innovation defined as an organization activities and processes in creating and the implementation of new knowledge in order to produce new products, services and processes. The innovation must be done in order to meet the needs and preferences of customers in different ways as well as to make process, structure and technology more sophisticated [10]. Innovation also called as a process of learning in which valuable ideas transformed into new forms of added value for the organization[15].

Innovation in a firm depend on employees' knowledge, skills and experience [16] and therefore associated with the creation and use of knowledge in a firm [11]. To develop innovations, firms can range from R&D to the introduction of machinery, equipment or software, the use of inventions, technological surveillance systems, market research or individual training [17]. Firms that have successfully in innovation of products or processes gain experience and knowledge which helps the firm adapt and get the greater returns [18].

4.3 Knowledge Management Implementation

In paper [19] measure with six items evaluates the system in regard to the knowledge management activities such as creating, organizing, diffusing, exploiting transferring, and storing knowledge. The benefit of all six knowledge management can improve proses performance, employee performance, market performance and firm performance. In the implementation of knowledge management, it is need organizational support. In paper [15] said that the organization structure, organizational culture, technology and leadership skills are the four pillars which support knowledge management.

There are three core of knowledge mangement implementation in a firm, they are (1) critical success factor of knowledge mangement (human resource, information technology, leadership, organizational learning, organizational strategy, organizational structure, and organizational culture), (2) knowledge management strategies (codification and personalization), and (3) knowledge management process (utilization, sharing, storage, organization, creation) [20].

In paper [11] there are two main knowledge management practices in a firm, they are consist of knowledge dissemination and knowledge storage. Knowledge dissemination practices in a firm include processes that spread explicit and tacit knowledge across the organization, formally and informally. Knowledge storage systems, refer to a class of systems and procedures for storing and managing knowledge in a firm. According to [21] cited that knowledge management programme in a firm can affect the generation of innovative, distinctive competencies by developing employee skills in investment and knowledge flow management; the acquisition of internal knowledge; transfer, dissemination and internal application of accumulated knowledge in a firm

4.4 Knowledge Management and Innovation

In paper [1] demonstrate the most efficient management mechanisms for increasing innovation. They also said that strategic planning, implementation, and updating activities merupakan knowledge as the main component seem to be positively linked with firm's innovativeness. In paper [22] also emphasize that knowledge management in a firm integrates capability of information technology to process data and information and the ability of innovation. To make innovation in a firm is extremely depend on the availability of relevant knowledge to make innovation [23]. In paper [9] using three components of knowlede management in a firm in their research. The three components of knowledge management are knowledge acquisition, knowledge dissemination, responsiveness to knowledge. In their research, they found that the three components had a positive and significant effect on innovation and ultimately would improve the firms performance.

The analysis about the link of knowledge management on innovation showed that there was a significant and positive impact the using of management processes on innovation in Jordanian consulting firm. In tihs research, examine the the

process of knowledge management which consists of knowledge acquisition, knowledge sharing and knowledge utilization of innovation. Knowledge acquisition effect on innovation is demonstrated by continuous internally and externally gathering information and knowledge that relevant to the firm's operations. Knowledge sharing also plays an important role to the innovation a firm. This research shows knowledge sharing with the highest meas. Knowledge utilization is concerned with applying the existing knowledge. The respondents showed that they sought to fully utilize the available knowledge in improving their consulting service [6].

Research Results conducted [13] examine whether knowledge management can contribute to innovation in Small and Medium Enterprises in Rwanda, Uganda. The results of the research show that knowledge sharing has a positive and significant influence on innovation. In paper [24] also found that there is relationship between knowledge management and innovation performance.

Innovation is an absolute thing to do in a business that is increasingly dynamic and constantly changing and difficult to predict. Changes in the environment, technology, economic conditions, and political situation make companies must continue to make changes in the organization. The application of knolwedge management is not only for certain companies, but has become something very important in economic activity.

In paper [16] also discussed a study about the effect of knowledge management on environmental innovation, they found that the investment in knowlede management practices trigger environmental innovation. They also distinguish between two types of knowledge management practices: a written policy of knowlede management and a culture intended to promote knowlede management sharing. The main results are also confirmed for both types of knowlede management practices. Based on their research, knowlede management sharing has a more substantial impact on green innovation than a written policy of knowlede management.

5 CONCLUSION

Today's economic and business activities cannot be separated from the existence of knowledge management. Knowledge management has been able to drive a country's economic growth. Knowledge management has a role in innovation in business activities, both product innovation and service . The application of knowledge management in an organization has been able to provide improved service quality to users and knowledge management and innovation are relatet to firm performance.

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