

## The Impact of Hrm Practices on Km: A Conceptual Model

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**Abstracts:** This paper outlines how HRM practices (selective hiring, recognition and reward, performance appraisal, self-managed team and extensive training) can enhance the firm's levels of knowledge acquisition, sharing and application. A conceptual model was proposed to examine the relationship between human resource management practices and knowledge management. This model is expected to provide a strategic map that could be utilized by the practitioners and managers so that the initiated KM practices can be more effective in contributing to the overall organizational performance.

**Key words:** Human resource management, knowledge management, knowledge acquisition, knowledge sharing, knowledge application.

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### INTRODUCTION

According to Ulrich (1997), human resource management (HRM) plays an important role in the success of many firms regardless of their sizes. HRM is keys for them as it prepares the firms' human capital to effectively contribute to the operations and to achieve the organizational goals. Lado and Wilson (1994) suggested that HRM practices can contribute to a firm's competitive advantage by facilitating the competencies development and organizational knowledge creation. Investing in the appropriate HRM practices was found to lead to the higher level of commitment from employees (Guest, 2002). Guest further argued that employees could benefit not only from functioning autonomously but at the same time to be able to work independently with the necessary knowledge and skills gained from training and development. However, implementation of HRM practices requires an efficient management system to exercise these tasks ranging from planning and selection to performance appraisal, training, career development and management. This has urged the researchers to study how firms can leverage its performance through HRM. Ooi, Arumugam, Safa, and Bakar (2007) identified that HRM is considered as one of the crucial subjects in the research area of management and business for the past few decades due to its impacts on both the individual and organizational performance as a whole.

Today's dynamic and competitive business environment has posed constant challenges to firms. For example, Bessant, Kaplinsky, and Lamming (2003) pointed out that the sustainable growth of manufacturing firms rely on the ability to master the knowledge content in production rather than a mere transformation of inputs into outputs through the use of standard equipment and techniques. Knowledge is thus recognized as one of the most important elements that are needed to be applied to employee's daily activity (Hall, 2004; Papmehl, 2004). Such learning values and benefits enable employees to continue contributing to firms' competitiveness. While knowledge is viewed as the strategic asset for the success of an organization, an effective management of individual knowledge can be a powerful tool to facilitate this learning journey by transforming knowledge into competitive advantages (Cohen and Leventhal, 1990; Grant, 1996; Ipe, 2003).

According to the World Bank (1998), knowledge management (KM) acts as a facilitator in the process of knowledge creation, acquisition and dissemination. The concepts of KM have attracted investment from many organizations with the aims to maximize profits, to be competitively innovative, or simply to survive (Nonaka and Takeuchi, 1995; Prusak, 1997; Wigg, 1997; Davenport and Prusak, 2000). According to Lengnick-Hall and Lengnick-Hall (2003), successful knowledge application is essential for gaining competitive advantage in the rapidly growing economy. The study by Chong, Holden, Wilhelmij, and Schmidt (2000) found that KM connects people and knowledge together, and this helps in maintaining the growth of an organization and its

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ability to learn. Nevertheless, firms must be aware that the willingness of sharing knowledge among employees determines the success or failure of the implementation of KM (Storey and Quintas, 2001). Overall, the proliferation of knowledge management research is largely due to the fact that KM activities can improve performance of both employees and organization towards better performance.

Previous scholars demonstrated that the traditional role of HRM in managing people has now been extended to managing organizational capabilities and relationships which include the learning activities (Ulrich, 1997; Saint-Onge, 2001; Coates, 2001; Lengnick-Hall and Lengnick-Hall, 2003). HRM practices were found to have positive and strong influence on employee attitudes (Fiorito, 2002; Guest, 1999; Guest and Conway, 2002; Appelbaum and Berg, 2000). More importantly, firms must be prepared and able to develop and create a conducive learning environment in cultivating the culture of knowledge acquisition and sharing within organization.

While there are many studies dedicated to HRM, there is a lack of focus on the study of HRM practices towards the knowledge management especially in the manufacturing sector. In Malaysia, the manufacturing sector is one of the main sectors of the nation economy representing approximately 34 percent of gross domestic product (GDP) (Economic Review, 2000). In December 2009, the sales value of manufacturing sector posted growth of 16.2% (RM6.0 billion) to record RM43.3 billion as compared to RM37.3 billion in December 2008 (Department of Statistics Malaysia, 2010). Based on this notion, it is therefore important to study how HRM practices enhance the KM practices in the manufacturing industry particularly in Malaysia. The objective of this paper is to analyze HRM practices (selective hiring, recognition and reward, performance appraisal, self-managed team and extensive training) that may impact the KM level. A conceptual framework is proposed to examine the relationships between HRM practices and KM behavior. We hope that this paper can deepen our understanding on how to leverage the organizational performance through integrating the role of HRM practices in the process of knowledge acquisition, sharing and application. This paper is organized as follows: first, we discuss the literature review on human resource management and knowledge management. Secondly, we provide the links between the human resource management practices and knowledge management. Then, we propose a conceptual model with its implications from theoretical and managerial perspective and end with the conclusion.

### ***Literature Review:***

#### ***Human Resource Management:***

The role of HRM has been increasingly important in the last few decades since 1960s mainly due to the continuous efforts of organizational management improvement. The fundamental function of HR includes recruitment, training and development, performance appraisal and rewards (Evans, 2003; Scarbrough, 2003). Ferris, Rosen, and Barnum (1995) as cited by Yeganeh and Su (2008, p. 204) defined HRM as:

“The science and the practice that deal with the nature of the employment relationship and all of the decisions, actions, and issues that relate to that relationship”.

The concept, personnel management which dominates in the dealing of labour matters in an organization was widely used prior the term of HRM (Torrington and Hall, 1998). In the 1980s, HRM was first introduced and it suggests firms to view and focus on employees as valued assets that help to leverage firms' competitiveness (Yeganeh and Su, 2008; Pfeffer, 1994; Schuler and MacMillan, 1984), to increase productivity and to reduce turnover rates (Becker and Huselid, 1998; Guthrie, 2001). HRM activities involves planning and selection; promotion, compensation and reward; training, development and appraisal; labor relations and human resource research (e.g. Mondy and Noe, 1993; Tichy, Fombrun, and Devanna, 1984).

Legge (1995) categorized HRM into: (1) soft HRM, which is human-oriented and emphasizes on commitment, communication, skills and leadership; and (2) hard HRM, which emphasizes on employee costs and numbers. The soft HRM approach perceives employees as the valued assets in line with appropriate HRM practices such as motivation in order to improve organization performance (Guest, 1997; Storey, 1987; Edgar and Geare, 2005). On the other hand, the hard HRM concerns with utilitarian (Guest, 2002) and focuses on HR policies in quantitative calculation of the strategic and resource management in a natural way for measuring the economic factors (Storey, 1987).

It is clear that organizational success depends on the extent of the effectiveness of the strategy and operations. HRM is a key strategic requirement for building and sustaining future competitiveness (Barney, 1991; Jackson and Schuler, 2000; Pfeffer, 1994, Gerhart and Milkovich, 1992; MacDuffie, 1995). Evidences of the impacts of HRM practices on organizational performance are observed in the both manufacturing industry (e.g. Youndt, Snell, Dean, and Lepak, 1996); and servicing industry (banks) (Delery and Doty, 1996).

### **Knowledge Management:**

Petersen and Pouffelt (2002) stated that KM relates to knowledge development, application and sharing within the organization to gain sustainable competitive advantage. The application of KM within the organizations provides better decision making, increased productivity and profitability (Edvardsson, 2006). The goal of KM is therefore refers to as strategic actions applied by the right people with the right knowledge and derived at the right time so that the circulation processes can be improved in an organization (O'Dell and Grayson, 1999; Milton, Shadbolt, Cottman, and Hammersley, 1999). For the perspective of contemporary manufacturers, KM becomes increasingly important because of the highly competitive markets. KM is particularly applicable and useful to improve the entire production process cycle from product design, conceptualization, creation, production to distribution.

While researchers attempt to understand more about KM, they define and conceptualize KM differently. For instance, Bukowitz and Williams (1999: 2) described KM as "the process by which the organization generates wealth from its intellectual or knowledge-based assets". Chong, Holden, Wilhelmij, and Schmidt (2000, p. 366) stated that KM is "the ability to recognize and manage the system of core competencies required for knowledge-intensive businesses".

Knowledge is human creation that is embodied in mind (Lang, 2001). Polanyi (1967) classified individual knowledge into explicit and tacit knowledge. Tacit knowledge is naturally within an individual's mindset that the articulation is applicable and transferable in the form of doing and watching through learning process (Choi and Lee, 2003). Many organizations consider the tacit knowledge to be the primary source of sustainable competitive edge over their competitors (Chen and Edgington, 2005; Jashapara, 2003; Lopez, 2005). On the other hand, explicit knowledge can be recorded in documentation (Choi and Lee, 2003), is readable and transferable through technologies or formal communication among the organizational units (Keskin, 2005; Choi and Lee, 2003). Overall, organization's knowledge refers to "a collection of individual knowledge that is generated and stored" (Brown and Duguid, 1998: 92). Usually, new knowledge is created when knowledge is applied in a dynamic and systematic manner during the KM activities (Drucker, 1993).

How firms manage knowledge so that they can add values to the operations and performance? Hansen, Nohria, and Tierney (1999) explained the two strategies used for managing knowledge: 'codification' and 'personalization'. Codification refers to acquiring and sharing of knowledge where it is accessible and reusable explicitly (Edvardsson, 2008). Codification aims to improve effectiveness and growth through formal sharing, learning and teaching. Hansen, Nohria, and Tierney (1999, p. 110) highlighted that "The reuse of knowledge saves work, reduces communications costs, and allows a company to take on more projects". Personalization refers to development of knowledge through person-to-person communication (i.e. dialogue and learning history) in order to directly share tacit knowledge that related to personal insight and skills (Edvardsson, 2008). While knowledge is only applicable in the concept of human being related activities, proper KM involves the basic processes of knowledge acquisition, application and sharing which can only be conducted between humans. Organizational knowledge therefore requires managerial practices that apply KM activities from one part of the organization to another, and/or create new knowledge that may be useful to the organization based on such human activities. Many approaches have been identified and recommended by scholars to foster knowledge sharing. As suggested by Gilbert and Cordey-Hayes (1996), knowledge sharing is seen as dynamic and it becomes one of the important elements of continuous learning in KM. In fact, Allee (1997) argued that the renewal of knowledge is valuable not only for building competitive advantage but also for new knowledge creation and letting go out-dated (old) knowledge. Firms' survival and innovation rely greatly on the ability to generate new valuable knowledge (Harrison, 2000). Overall, KM seems to play a critical role in the 'knowledge society' where companies felt that 'knowledge' is the most significant and the 'single greatest asset' in production as compared to capital, raw materials or labor (Drucker, 1993).

Nonaka and Takeuchi (1995) identified four modes of knowledge conversion: (1) socialization, which is from tacit to tacit knowledge; (2) externalization, which is from tacit to explicit knowledge; (3) combination, which is grouping of explicit knowledge; (4) internalization, which is from explicit to tacit knowledge. During the process of socialization, tacit knowledge is acquired through observation and practice (Lave and Wenger, 1991). Through such processes, a common shared understanding of problem and solution can be derived from various experiences, skills and ideas via dialogue, videoconferencing, conferences, knowledge fairs and coffee breaks (Isaacs, 1999; Davenport and Prusak, 1998). Process of externalization, similes and analogy between experts in a dialogue are useful for creating a network of new explicit concepts from tacit knowledge (Nonaka and Takeuchi, 1995). Sprague and Watson (1996) explained that the process of combination aims to create new knowledge from the grouping and exchanging different bodies of explicit knowledge in the form of information technology (i.e. internet, intranet and ERP) and mechanism (i.e. knowledge mapping and e-libraries). In the

process of internalization, explicit knowledge in documents, guidebook or oral stories that are internalized through an individual experience has a closed relationship of 'learning by doing' can lead to greater level of tacit knowledge (Nonaka and Takeuchi, 1995).

KM generally refers to the efficient management of using knowledge and knowledge worker with the ability to establish strong collaborations among workers in the process of knowledge creation, knowledge integration, knowledge sharing and knowledge application (Rowley, 1999; Shanks and Tay, 2001). A successful KM is deemed as the primary foundation for organizations to attain competitive advantage (Cepeda-Carrion, 2006; Grant, 1996). KM also enables firms to achieve competitiveness in the market and retention of customer loyalty by building a close relationship with the customers (Paquette, 2006). Thus, KM provides a continuing learning culture with collective skill and aptitude towards innovation (Massey, Montoya-Weiss, and Holcom, 2001; Romano, 2000).

From the process perspective, KM consists of five components: knowledge acquisition, knowledge codification, knowledge dissemination, knowledge development and knowledge application (Sprenger, 1995; Van der Spek and Spijkervet, 1995). In our paper, we refer (1) knowledge acquisition as new knowledge integration in the organization; (2) knowledge codification as making knowledge explicit and readable by other persons; (3) knowledge dissemination as knowledge transmit across individual and group; (4) knowledge development as combination of new insights into existing knowledge to form new knowledge; and (5) knowledge application as new knowledge is then being applied and used by the organization.

Arthur Andersen Business Consulting and APQC (1996) divided the knowledge processes into seven elements: creation, identification, collection, adaptation, organization, application and sharing whereas Lee, Lee, and Kang (2005) identified five components of knowledge processes; namely knowledge creation, knowledge accumulation, knowledge sharing, knowledge utilization and knowledge internalization. Although KM concepts are perceived differently, knowledge acquisition, knowledge application and knowledge sharing are generally the major accepted components of KM (Ooi, 2009).

#### ***Human Resource Management Practices That Are Linked to Knowledge Management:***

Rapid growth and changes of information technology have challenged the firms to constantly review the strategy to stay competitive. To a large degree, the competitive edge for these firms is based on the successful application of knowledge (Lengnick-Hall and Lengnick-Hall, 2003). With the perception of knowledge is residing in the human resource for competitive advantage, Soliman and Spooner (2000) suggested that a well-positioned HRM is essential to the success of KM activities due to the systematic process of knowledge capturing, using and re-using it. The HRM is deemed to be a main determinant for developing a continuous learning of KM activities. For examples, while the source of employee knowledge can be identified through knowledge acquisition and application, the knowledge sharing makes the information available to others (Lengnick-Hall and Lengnick-Hall, 2003). Previous studies on HRM and KM have shown that the employee motivation is greatly influenced by the sharing knowledge through organizational practices. Soliman and Spooner (2000) argued that HRM practices can be the facilitators for knowledge absorption, creation, sharing and transfer among employees. Hislop (2003) added that the adoption of HR policy and practices can influence for sharing knowledge.

In the following section, we discuss how our framework focuses on the well-established HRM practices namely; selective hiring (recruiting right people), recognition and reward (motivating employee), performance appraisal (job evaluation), self-managed team (active cooperation culture) and extensive training (continuous education and development) to enhance the level of knowledge management.

#### ***Selective Hiring:***

Superior human capital determines the success of a firm. It is important to note that recruiting and retention of outstanding (high quality and committed) staff are require for achieving sustainable competitive advantage (Boxall, 1996). As pointed out by Scarbrough (2003), it is fundamental to integrate various sources of knowledge in order to recruit and select qualified candidates with appropriate skills and attitudes. He stressed that a frequent revision of the selection approach is necessary.

Knowledge sharing often happens during the socialization process. According to Chatman (1991), person-organization (P-O) fit is an important assessment to guide managers to recruit the right people. P-O fit ensure the perceived values between existing and new staff are similar. New staff is usually expected to make adjustment to the organization culture. One basis for determining the effectiveness of 'fit' process as stated by Schein (1999) is to assess whether the employees can match with the organization's culture and reputation. Currie and Kerrin (2003) found that application of traditional selective hiring practices (i.e. the wrong HRM

practices can be detrimental to knowledge sharing) can impede the knowledge sharing between sub-cultures of functions in a firm.

Therefore, with the presence of the similar value perception between the organization and individuals who are employed, the role of knowledge sharing in KM acts to support the 'fit' process. Thus, the following proposition is developed:

***P1. Higher Level of Selective Hiring Will Leads to Higher Level of Knowledge Management:***

Recognition and rewards influences the employees' performance. Thus, developing an effective and appropriate recognition and reward system can motivate competent and talented employees in achieving the organization mission and goals. The learning behaviors should be rewarded when performance is achieved as Huselid (1995) explained that, without motivation, the performance of skilled employees are likely to be affected and certain task cannot be executed effectively.

Both intrinsic and explicit rewards are found to have a positive and strong impact on encouraging employees to apply KM activities such as knowledge acquisition and knowledge sharing (Goh, 2006; Yu, Kim, and Kim, 2004). Pangil and Nasuridin (2005) suggested that that the rewards should be given when employees implement knowledge sharing practices within the organization, and the incentives should be given to motivate the continuous efforts in a long term basis. Nevertheless, Evans (2003) pointed out that there are mixed views for organization to decide the rewards classification to initiate KM activities such as knowledge building and sharing. He further stated that rewards classification is not required in theory if knowledge building and sharing behaviors have been included as a competency framework by the organizations.

Recognition and reward with a perspective of incentive personal interaction in applying with KM activities (i.e. acquisition, application and exchange skills, experience and knowledge) is a great motivator for employees to perform high level of achievement in KM. Thus, the following proposition is developed:

***P2. Higher Level of Recognition and Reward Leads to Higher Level of Knowledge Management:***

Performance appraisal is a management review on employee's successes and achievements so that their productivity can be improved (Mondy, 2010; Brown and Heywood, 2005). Performance appraisal aims to reduce any role ambiguity (Brown and Peterson, 1993; Dubinsky and Mattson, 1979; Jaworski, Stathakopoulos, and Krishan, 1993); and to ultimately increase the employees' effort, good performance, better satisfaction, high commitment; and also to reduce the turnover rate (e.g. Babakus, Cravens, Johnston, and Moncrief, 1996; Brown and Peterson, 1994; Jones, Katak, Futrell, and Johnston, 1996). Besides, performance appraisal provides information used for evaluation on the effectiveness of organization's selection program (Dubinsky, Skinner, and Whittler, 1989; Thomas and Bretz, 1994); for promoting the development of organizational knowledge and competencies (Snell, Lepak, and Youndt, 1999); and for providing a direction to employees in performance improvement (Latham, Skarlicki, Irvine, and Siegel, 1993).

Previous studies (e.g. Cabrera and Cabrera, 2005; Morris, Snell, Kang, and Collins, 2002) suggested that the performance appraisal activity could be enhanced through the organizational KM initiative such as knowledge exchange. Hansen, Nohria, and Tierney (1999) demonstrated that the use and sharing of knowledge which embedded in a system are valuable for appraisal and reward program. Thus, the human resource management such as training, incentive compensation and performance evaluation can be further improved leading to a higher productivity (Brown and Heywood, 2005). A successful system should be established to facilitate and motivate knowledge creation and sharing (Bartol and Srivastava, 2002). Thus, the following proposition is developed:

***P3. Higher Level of Performance Appraisal Leads to Higher Level of Knowledge Management:***

Team is created by an organization to improve the operational processes for enhancing competitive advantage (Jones and George, 1998). Self-managed team and its behaviors are essential for organizational success (Banker, Field, Schroeder, and Sinha, 1996). Research evidence suggests that teams typically outperform individuals when the tasks being done require multiple skills, judgment and experience. Self-managed team is thus seen as a way of delivering more creative solutions for better decision making (Pfeffer, 1998). According to Funk (1992), teams are important as the products and processes are growing in complexity as it requires a wide range of knowledge, and knowledge sharing should be implemented to overcome the complexity. In other words, team provides the learning environment for KM activities so that individual's knowledge that is embodied in human mind could be shared and applied at the organizational level (Beech and Crane, 1999; Sims, 1995).

In summary, when self-managed team combine with team members (with individual knowledge) tend to result an improved the level of performance that is greater than the sum of that individual knowledge. Effective self-managed team is composed of competent individuals who have the necessary technical and interpersonal skills to achieve the desired goals while working well together enhances the communication (i.e. face-to-face communication) during KM activities such as knowledge acquisition, application and sharing. As a result, an early identification of problems could be observed from the better communication of self-managed team through KM activities. Thus, the following proposition is developed:

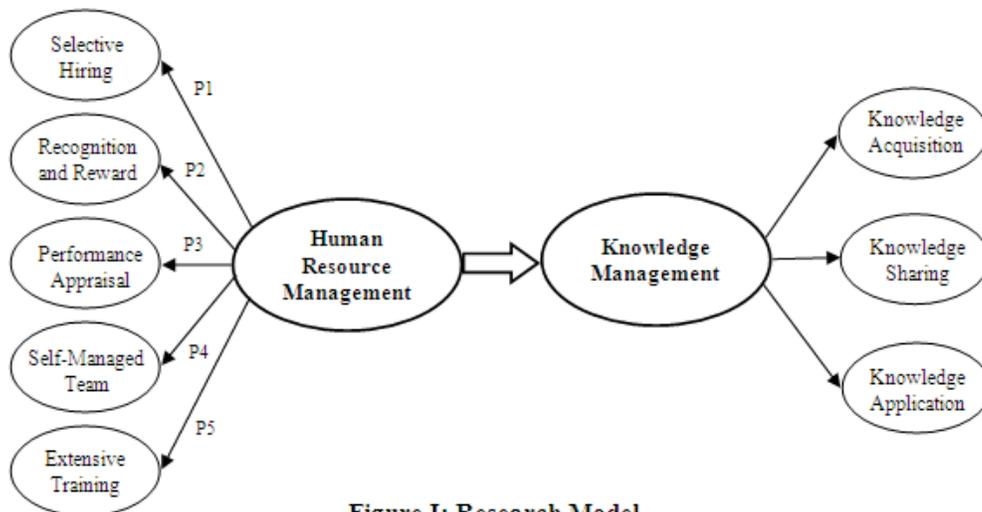
**P4. Higher Level of Self-managed Team Leads to Higher Level of Knowledge Management:**

Buckley and Caple (2002) as cited by Ooi, Teh, and Chong (2009) argued that training is the planned and designed efforts in the development of knowledge through learning experience so that the main objectives can be achieved. According to Swanson (1999), the main objective of carrying out an extensive training is to improve the employees’ performance through a work-related knowledge and skills development process. In fact, a regular or frequent professional extensive training are particularly crucial in the field of specialized and knowledge workers (Robertson and Hammersley, 2000).

An extensive training is able to improve employees’ self efficacy leading to a greater level of competency and ability for exchange knowledge among each others (Cabrera and Cabrera, 2005; Ooi, Teh, and Chong, 2009). In addition, prior studies found that the extensive training tends to improve the KM system of organization. For instance, Sparkes and Miyake (2000) found that the extensive training is essential for knowledge transfer process for Japanese firms in Brazil and Mexico. Tsang (1999) reported that the extensive training is important for the knowledge dissemination and learning process of Singaporean MNCs in China. KM activities of an organization among employees and the management team such as managers, executives and supervisors have a positive impact through dissemination of knowledge and skills (De Fong, Leenders, and Thijssen, 1999). Darwin (2000) also argued that one of the training methods such as mentoring can create co-learning workplace for sharing knowledge among employees. Thus, the following proposition is developed:

**P5. Higher Level of Extensive Training Leads to Higher Level of Knowledge Management:**

Based on the discussion above, a framework is proposed to examine the impacts of HRM practices (i.e. selective hiring, recognition and reward, performance appraisal, self-managed team and extensive training) on knowledge management (i.e. knowledge acquisition, knowledge sharing and knowledge application) as illustrated in Figure I. The model suggests that greater emphasis on the levels of HRM practices lead to higher levels of knowledge management.



**Figure I: Research Model**

**Implications:**

**Theoretical Implication:**

From the theoretical perspective, this study establishes a strong link between HRM practices and

knowledge management. It highlights how the five dimensions of HRM can influence the process of knowledge acquisition, sharing and application. The proposed model serves as an important framework for researchers and practitioners to understand the impacts of HRM practices on the firm's level of knowledge management. This study also focuses on the need of examining the role of human capital in implementing and developing KM activities.

#### ***Managerial Implication:***

From the practical perspective, this paper provides useful guidelines to managers particularly for firms that have initiated with KM practices. We highlight how the five dimensions of HRM influences KM processes. Firstly, selective hiring is an important activity of staffing in HRM practices; that is to recruit the right candidate with required knowledge and desired skills. The recruitment of the right candidate will fill the knowledge gaps that fit the organization's culture according to their job specification. Secondly, recognition and reward serve as a motivational factor and to encourage employees to share knowledge. Right motivation can encourage competent and talented employees to acquire and share knowledge leading to skills enhancement and increased productivity and job satisfaction. Thirdly, performance appraisal aims to improve and enhance staff development by evaluating their successes and failure. A periodical performance appraisal system provides prompt feedback to the employee and also provides the suggestion to improve their skills and ability so that new knowledge can be further acquired and applied. In other words, knowledge obtained from the feedback will enhance the employees' incentive and motivation by making necessary corrective actions. Fourthly, communication among team members is important for any self-managed team. Knowledge can be created, applied and shared across departments, divisions and units through the development of effective self-managed team. Fifth, training helps employees to gain better understanding in the area of KM and this will enhance their stock of knowledge. Extensive training providing the continuous development, such as on-the-job training, training programmes and workshops can be a driving factor for the KM activities in the firm.

#### ***Conclusion:***

In summary, our research model demonstrates the association between the contribution of HRM practices and the effect towards an effective KM. It is clear that continuous supports from the HRM will be a key strategic requirement for facilitating the knowledge management activities in the firm. The proposed framework is valuable to practitioners and managers so that they can be well-prepared in the efforts of improving the firms' knowledge management processes. It is also suggested that this framework to be examined through empirical data. We expect that the findings can provide more insights and deepen our understanding in examining the relationship between HRM practices and knowledge management. More importantly, the findings can be used to gauge the effectiveness of KM in improving the organisational performance and sustaining future competitiveness.

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