The Investigation of Key Success Factors on Knowledge Management in Malaysian Firms

Ali Af. Asgari, Abu Bakar Abdul Hamid, Nik Muhd Naziman Ab Rahman, Azadeh Asgari

Abstract—The ultimate intention of this paper is to achieve a better understanding of how some critical factors for the successful application of knowledge management (KM) in Malaysian firms. KM covers an extensive range of usefulness and sustains various sets of activities and supposed that the KM success, are the Key Success Factors (KSFs) on the contributions of quality and quantity to the system. Based on the existing literature, a research hypothesis has been developed and tested through the quantitative study. The data were collected through a questionnaire that was administrated among sample comprising 70 managers from the various private Malaysian firms. The outcomes confirm positive relationships between all five KFS parameters but there is a lack of leadership.

Index Terms—Key success factor (KFS), knowledge management (KM), firms

I. INTRODUCTION

The information technology beginning has created not only attention in how to obtain, gather and mine data, but also how to handle knowledge [4]. In the current post-developed society, knowledge has developed into an explanation means of the economy. Growing the customers’ demands regarding innovativeness and quality of services and products impose companies under force and pressure. At the same time, threats from worldwide competitors force them to reduce the price of the products and services. These challenges of improving quality, innovativeness, and the increasing pressure to diminish cost require companies to devise their business process again [11]. In that market, knowledge is the only assurance is uncertainty, the one certain resource of lasting competitive advantages [24].

Knowledge, indeed, is the most significant strategic source and the task to obtain and expand it, allocate it and employ it can hint to maintainable competitive advantages [16]. This is because advanced knowledge can contribute to traditional funds and assets in new and unique conducts and by this means prepare higher value to consumers [27].

In recent years organizational effort has been locate into knowledge management (KM) initiatives that became one of the management buzzwords [29], [17]. Ever since the mid 1990s, the description of KM has enhanced fairly a bit. Basically, it is started as essential knowledge movement, that value is concluded by the recipient and the organization. It is focusing on taking employees’ knowledge regarding competitors, products, consumers, and services created in an organization [15]. In its simplest form, KM is regarding supporting individuals to share ideas, knowledge and information, in order to create value-adding services and products, thought the internet [7]. Therefore, the perspective of the KM is inside the organization and the KM benefit is in fact adhering to an essential KM success factor: listen to your consumers and employees [15].

A basic success factor key of knowledge management is to have a regular perceptive of the terms "knowledge management" and "knowledge sharing" and how these terms use to particular condition and requests. Several organizations select generally, not to refer these certain terms since they terms are not consented in the culture [1]. Some intrinsic essential success factors are produced into the explanation. KM is a series of approaches and strategies and approaches that marks a specific construction or a manner to do things.

II. BACKGROUND OF THE STUDY

The goal of this part is to elaborate an overview of the relevant literature relating to each of the stated research questions. The literature review chapter emphasizes several success studies of firms resulting from the knowledge management implementation.

A. Knowledge

The matter of concentrated research in closely each area of organizational examination has been knowledge [31]. In recent years, knowledge has been an accepted subject with
considerable attention focused on areas like the fundamental role of knowledge workers, the knowledge creation, intensive societies and organizations, and the need to create and share knowledge [29]. In market, knowledge comprises the essential belief of the marketing concept as this is stated by market orientation means that indicates the case of a company that systematically saves and spreads knowledge regarding the competitors and consumers, and makes decisions that strongly are based upon this knowledge [18].

[26] outlined a pattern that determines the different concepts and various terms of knowledge in order that an apparent graph results. As shown in Figure 1, actuality was connected to things whereas data are the characteristics of those entities. This model describes the knowledge creation process with the information technology playing an assistant role. In that process data are being captured from various paths and methods and are processed to create information [2].

Information is defined as data endowed with relevance and purpose or data that create a distinction. The information value is clearly identified by the receiver not by the sender. Data suits as information once they insert value in some way, and after that information will be knowledge as it adds abstractive value, insight, better perceptive [26].

- **Data** is depict, record, supply, and keep entities attributes.
- **Information** is demonstrated as knowing that and it is the finding of operations of data processing like sorting, organizing, and so on.
- **Knowledge** is explained as knowing how and it is an outcome of operations of information processing.
- **Wisdom** is about knowing “when” and/or “if”. Knowledge donates to wisdom throughout actions like value, discovery, experience, and further.

Researchers have identified two classes of knowledge, the explicit knowledge and tacit knowledge. Explicit knowledge is the type of knowledge that is relatively easy to communicate and articulate. It is the knowledge that inhabits in formulae, textbooks, technical documents and so on. On the contrary, tacit knowledge is the type of knowledge that cannot be interpreted completely and can be relocated from one person to another only throughout an apprenticeship lengthy procedure [3]. “Tacit knowledge is the tasks and know-how we have inside each of us that cannot be easily shared” [20].

### B. Knowledge Management

Even though, knowledge management (KM) is critical to executive survival, although it is a complicated mission because it requires large disbursement in recourses. Information Technology explanations, like document management, email and intranets are demonstrating extremely applicable in particular areas [23]. The process of knowledge management can therefore be somewhat unclear and vague [12]. In this field, managers working should recognize that knowledge management is greater than intranet or groupware (Group level/Package-Store & Share-Apply in the KM Map), it is also more than business intelligence (Organization level/Scan-Map) and more than an employee CVs’ yellow pages database (Individual level/Package-Store).

KM is engaged with the managing of information profits and shared knowledge of company to prepare this knowledge to as numerous employees as possible and its business process also to encourage better sustain and more reliable making decision [5]. It appears that, now, knowledge management as an individual field of work and has been supported in the individual and her/his behavior, regularly. With the formalization of this area, concentration has moved to encourage the knowledge application, generation, transfer, and reinvention in a company [10]. Knowledge management is demonstrated as an emergent set of operational principles, processes, organizational design and structures, applications and technologies that assist knowledge workers dramatically leverage their creativity and ability to deliver business value [20].

### C. Knowledge Management Process

Fundamentally, KM is a sustain process and in consequence of extending knowledge nature any business process can be converted into a “Knowledge Management Process”, like for example knowledge use, knowledge creation, and knowledge dissemination [14]. Besides, it is suggested that the sample list of KM process namely, 1) producing new knowledge, 2) approaching knowledge from external sources, 3) depicting knowledge in software, databases, documents, and so on, 4) implanting knowledge in processes, services or products, 5) shifting being knowledge in the region of organization, 6) using accessible knowledge in decision making, 7) assisting knowledge development via incentives and culture, 8) evaluating the generation importance...
and the effect of KM [13].

D. Key Success Factors of Knowledge Management

Some intrinsic essential success factors are created into the meaning. KM is a series of approaches and strategies that marks a limited structure or an approach to do things. On the other hand, this approach allows the information flow to the exact person at the exact time, this is another critical creation of this definition; otherwise, an organization would be controlling its knowledge just in order that handling it and not to create value [19]. That presents us to the most crucial factor of this explanation: producing more value for the initiative. “The largest amount complicated procedures of sharing of knowledge would not assist once the knowledge shared within an organization does not facilitate its recipients to produce value, be it through improved time or income or cost savings” [21].

The success of a KM enterprise depends on many elements, some of them within our control some are not. In characteristic manner, important success factors can be classified into five principal categories:
1. Culture;
2. Leadership;
3. Structure, Roles, and Responsibilities;
4. Information Technology Infrastructure; and
5. Measurement.

Culture

Culture, as one of the main success factor, is the mixture of expectations shared, social customs, unwritten rules, and history that influence behaviors. It is the series of basic ideas that are constantly affect the understanding of communications and actions of all employees while rarely articulated in an accurate manner. According to some researcher’s explanation, cultural issues about KM enterprises generally appear for the several factors as follows:

Lack of time - The purpose is to act further efficiently not to support the employees to work further. The roles designed, technologies, and processes within a KM enterprise have to keep employees' time, not burden with extra work. This can just be concluded once the employees' work patterns are explained through the primary intend and scheming the initiative phase [6].

Unconnected reward systems - Organizations have to sustain scales among explicit and intrinsic rewards in sequence to influence behavior of employee. The most efficient apply of explicit rewards has been to support sharing at the onset of a KM initiative. When the attendees do not determine worth in either the system information or the meetings, preparing encouragements will not encourage their contribution. People distribute culture due to they want to, they like being honored by their peers, and they like to observe their expertise being used [6].

Lack of usual perspectives - Sharing should be motivated by a usual insight. The individuals influenced by the recent technology or procedure should all buy in to this insight and consider it will work [6].

No formal communication - Make sure that consumers and employees recognize on the modifications happening within organization once designing and implementing KM initiatives. Based on literature, it has been assumed that people have to hear the same message at least three times it embeds in the short-term memory. Consequently, communication must be ingeminating and extending. Whereas executing KM in any organization, market yourself. Ensure each person knows what you are trying to do, and created expectation for the initiate. Moreover, you will be initiating a cultural change by designing KM initiatives around your culture [6].

Leadership

Leadership performs a significant role in confirming success in closely any enterprise in an organization. Leadership effect on KM is even more considerable due to this is a comparatively recent method [22]. Nothing prepares superior effect on an organization than when leaders model the behavior they are trying to encourage between employees. Some other top practice organizations have exhibited this guarantee to KM . “At the World Bank, the president's support led to the creativity of an infrastructure that supported and promoted the development of communities of practice (CoPs) not only right through the organization, but around the world. At present, the World Bank has supported its KM initiative via its CoPs” [21]. Its knowledge managers persistently look for recent methods to sharing of knowledge. Although leadership performs a crucial role in the KM success enterprise, while the factor of culture can become even more importance to the success of KM.

Structure, Roles, and Responsibilities

There are a numerous methods which, organizations structure the management of their KM enterprises, while APQC has discovered one of special common elements between the greatest practice partner organizations: a central KM support group, stewards/owners through the organization who are in charge for KM and a steering committee [21]. This is a mixture of a decentralized approach and centralized approach.

At the top level, the executives have usually been in the advising committee. They encourage the concept and prepare direction, guidance, and support. The central KM group is usually composed of three to four members who prepares the projects/initiatives’ basic support, that are typically transferred to the business stewards when they are executed. More often than not, the central group comprise of people with advanced project management, communication, and facilitation abilities. The stewards/owners are responsible for knowledge sharing and acquisition in the business units [6]. For an example, Chaffey stated that “the core KM group, the stewards are change agents for the organization. They model and teach employees the principles of knowledge sharing applying an
usual vocabulary. All of these partakers act as a team to avoid a silo mentality and incorporate resistant employees in the process.

Even though the structure was put in place to promote accountability and ownership, when there is no generally knowledge ownership and learning in the organization and the leadership does not “walk the talk,” it would be complex to keep any sharing behavior.

**Information Technology (IT) Infrastructure**

In the absence of a firm IT infrastructure, an organization cannot allow its employees to distribute information on a large scale [8]. Although the trap that most organizations fall into is not a lack of IT, but rather too much concentrate on IT. The KM enterprise is not a software application; the only part of a KM initiative is having a platform to communicate and share information. Some KM success factors related to IT are represented as followings:

**Approach** - The individual who are accused of execution KM must take the time to comprehend their users' requirements. The corresponding of the KM objectives and the KM system is critical.

**Content** - With a comparable concentrated upon users' needs, determining huge content consists of having processes in place to purchase, control, validate, and distribute related knowledge, where and when it is needed.

**Usual platforms** - A standards’ companywide architecture ensures the sustainability and scalability of KM attempts. By perceptive the infrastructure of organization at a high level, the steering committee can advise the KM team in choosing the proper technology. Once in while organizations recognize that they need an extensive renovation of their IT infrastructure sooner than they can assume their employees to share knowledge. “A number of organizations have removed and replacing them with market-standard operating systems or are in the process of phasing out customized legacy systems by using off-the-shelf software that was written to support these platforms based on the existing architecture”[25].

**Simple technology** - The users will get frustrated when it requires more than three clicks to gain information as a result you have to temper with the information complexity demanded by the users and also the amount of information being delivered. The emphasis on explicit knowledge is another frequent mistake made in information delivery [22]. Even though technology is mainly applied to convey explicit knowledge clearly with no emphasis, it affects the user to be unable to find the context in which the information was distributed and guides to misunderstanding on how to clarify the knowledge.

**Adequate training** - KM is enhanced in two ways, by people who know how to apply it and by suitable technology. The excellent practice examples expose that after deployment, the central group of KM must spend most of its time guiding, instructing, and coaching the users how to utilize the professional systems to communicate, cooperate, as well as share knowledge and information with another [25].

**Measurement**

The measurement is as synonymous with ROI, so the majority of organizations fear measurement because they don’t know how to connect knowledge management efforts to ROI [30]. Even if the final intention of measuring the KM initiative effectiveness is to identify several kinds of ROI, but there are still several intervening variables that influence the results as well [9].

Because of the variables effect on outcome, it is significant to create a connection among KM actions and business effects, while not claimable an absolute cause and effect relationship. Growth sales might be a finding not only of the sales agents having further information about the products, but also of the competitor closing down, a market turning, or 10 percent prices descending. Tracking the correlations over time is important because the lack of ability to completely separate outcomes of knowledge sharing. By listening to consumers; they will tell you how you can distinguish their needs and have a successful KM enterprise [21]. This is the last imperative regarding essential success factors that can be applies to all interactions and transcends KM.

**III. Methods and Materials**

Research methodology is a scheme how to achieve answers for the research questions. It is included the limitations such as access to information, time, position and so on obvious issues of the provided questions and particular resources is contained. According to [28], a quantitative research has been done when the findings are according to statistics and numbers that are indicated in figures and graphs.

This study is administrated in Kuala Lumpur, Malaysia and the population will be the total number of manager who had worked in private firms. In accord with the convenience sampling 79 managers who had worked in private firms were chosen randomly among the Malaysian managers. The total 70 questionnaires were collected among the respondents after omitting missing values and outliers.

The 6-point Likert scale questionnaire consisted of 41-items from 0 to 5 (not applicable to always) in five sections, supporting quantitative analysis, covering the key factors of KM success areas. These elements are: 1) Culture; 2) Leadership; 3) Strategy; 4) Effective& Systematic Processes, and 5) Measurement. The questions of survey extracted according to the other relevant studies of knowledge management, and the critical concerns for success in knowledge management to examine the following research hypotheses:

**Ha1.** There are positively relationships between key success factors for knowledge management.

**Ha2.** The culture factor is the most significant to indicate knowledge management in Malaysian companies.
Ha3. The leadership factor is the most significant to indicate knowledge management in Malaysian companies.

Ha4. The strategy, systems & an IT infrastructure factor is the most significant to indicate knowledge management in Malaysian companies.

Ha5. The effective & systematic processes factor is the most significant to indicate knowledge management in Malaysian companies.

Ha6. The measurement factor is the most significant to indicate knowledge management in Malaysian companies.

The value of Cronbach’s Alpha for all items of key success factors of the survey (0.716) is revealed that the inter-items have high reliability. The data were coded and entered into the Statistical Package for Social Science [SPSS version 16 for Windows Vista], a statistics computer program applied to prepare and analyze data.

IV. RESULTS

The Distribution of Key Success Factors

The study concentrates on essential success factors. The study indicated deviations in how knowledge is being promoted. The five sets of questionnaires were pursued to comprehend the KM in the firm as perceived by the employees.

Five various types of questions were designed to gather data regarding respondents’ key success factors in applying their business. Managers were asked to self-rank their level of knowledge management from never to always. Key success factors were measured with five main items. As shown in Table 1, the first factor is culture that the mean of this item is represented all detailed results regarding the culture factor (questions 1 to 13) are slightly above or below a scale value of 3.5 ($M=3.52, \text{SD}=1.086$) followed by Strategy, Systems & IT factor with the average of 3.471 and standard deviation of 1.181 is one of the other factor concerning the KM. In addition, Effective & Systematic factor and also Measurement factor with the same mean ($M=3.185, M=3.185$) have an effective value on key success factors whereas the mean of leadership factor was the lower than others ($M=2.642, SD=948$). In regarding the details of key success factor, the predominant opinion of the managers was measured toward the key factors for knowledge management ($M=3.614, SD=849$).

In accord with the majority of factors’ results are about an average scale value of 3. It can be concluded that this refers the existence of crucial procedures and practices where culture, strategy, systems and IT, effective and systematic processes and also measurement are included, which leads to the average scale value of 3 for almost all variables.

<table>
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<th>Table 1. Mean for Key Success Factors</th>
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<td><strong>Key Success Factors</strong></td>
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<tr>
<td>Culture</td>
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<td>Leadership</td>
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<td>Strategy, Systems &amp; IT</td>
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Effective & Systematic | 8 | 3.185 | 1.053 | 1.110 |
Measurement | 5 | 3.185 | 1.094 | 1.197 |
Key Success Factors | 41 | 3.614 | .921 | .849 |

Relationship among Key Success Factors

The five factors of key success is namely “culture”, “leadership”, “strategy, systems & IT”, “effective & systematic” and “measurement”. The correlations of the key success factors were explored through a Pearson Product Moment Correlation analysis. Table 2. depicts the key factors correlation matrix.

<table>
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<th>Table 2. Relationship among Items in KFS</th>
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<tr>
<td><strong>Key Success Factors</strong></td>
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<tr>
<td>X1Culture</td>
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<td>X2Leadership</td>
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<tr>
<td>X3Strategy, Systems &amp; IT</td>
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<tr>
<td>X4Effective &amp; Systematic</td>
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<tr>
<td>X5Measurement</td>
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As shown in Table 2, each variable is positively related to each other as indicated by the high scores on one variable which were related with the high scores on the second variable. The ($r$) values vary widely, with the coefficients ranging from .623 (the strongest) to .322 (the weakest).

There are positive relationships between “Culture” and “Leadership” ($r=.533, p<.01$), between “Culture” and “Strategy, Systems & IT” ($r=.491, p<.01$), between “Culture” and “Effective & Systematic” with ($r=.370, p<.01$) and the last among “Culture” and “Measurement” ($r=.322, p<.01$). Likewise, the results displayed in above table depicted that there is a positive relationship between “Leadership” and “Strategy, Systems & IT” ($r=.447, p<.01$), between “Leadership” and “Effective & Systematic” with ($r=.514, p<.01$) and the last among “Leadership” and “Measurement” ($r=.547, p<.01$). Moreover, the result indicated a positive relationship between “Effective & Systematic” and “Strategy, Systems & IT” ($r=.375, p<.01$). “Effective & Systematic” and “Measurement” also showed a positive relationship ($r=.492, p<.01$), and between “Strategy, Systems & IT” and “Measurement” ($r=.623, p<.01$). In accord with this result, therefore, the first hypothesis is supported.

To Find Out the Most Significant Factors on KM

In order to see whether there is any significant indication of key success factors for knowledge management in Malaysian firms, the one-way ANOVA procedure was utilized to examine the significant differences among five types of key factors and key success factors for knowledge management and the results examined.

As shown in following tables, the ANOVA results revealed that culture factor is not the most significant to indicate knowledge management in Malaysian companies at the .05 level of significant ($F=2.60, p<.05$).
Similarly, the same analytic tool is applied to depict the effects among the variables. Based on the results in the Table 4, indicate that leadership factor is not the most significant to indicate knowledge management in Malaysian companies at the .05 level of significant (F = 2.526, p < .05). Therefore, it can be concluded that the strategy, systems & an IT infrastructure factor is not the most significant to indicate knowledge management in Malaysian companies at the .05 level of significant (F = 3.701, p < .05).

In reference to Table 5, it can be seen that there is main and significant effect observed based on the displayed value of p (p < .05). Therefore, it can be concluded that the system factor at the .05 level of significant. As shown in the Table 4.9., the effective & systematic processes factor is not the most significant to indicate knowledge management in Malaysian companies (F = 3.195, p < .05).

At this stage the same analytic tool is conducted on the system factor at the .05 level of significant. As shown in the Table 4., the effective & systematic processes factor is not the most significant to indicate knowledge management in Malaysian companies (F = 2.526, p < .05). Therefore, it can be concluded that the key success factors are not the most significant to indicate knowledge management in Malaysian at the .05 level of significant; thus, the five null hypotheses is rejected at the .05 level of significant.

As shown in following tables, the ANOVA results revealed that the measurement factor is not the most significant to indicate knowledge management in Malaysian companies (F = 2.526, p < .05). Therefore, it can be concluded that the key success factors are not the most significant to indicate knowledge management in Malaysian at the .05 level of significant; thus, the five null hypotheses is rejected at the .05 level of significant.

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