Abstract — The ultimate intention of this thesis is to achieve a better understanding of how some critical factors for the successful application of knowledge management (KM) can effect on e-business in Malaysian companies. Besides, this study prepares a framework discriminating three dimensions of e-business: e-information, e-communication and e-workflow. 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. Therefore, to achieve the research objective, this work limits the field of investigation to that key success factors for KM, devoted to the formalization and the sharing of best practices and experiences within the organization and also examination of the influences and relationships between KSF and e-business.

Based on the existing literature, a research hypothesis has been developed and tested through a quantitative study. The data is collected through a questionnaire that was administrated among sample comprising 70 managers from the various private Malaysian companies/organizations.

The outcomes confirm positive relationships between all five KSF parameters but there is a lack of leadership. Moreover, there are highly positive relationships among the three dimensions of e-business. At last, the KSF has a significant effect on e-business in regarding the correlation results.

Index Terms — Knowledge Management (KM), KFS, e-business, e-business dimensions

I. INTRODUCTION

The fast rate of technological development, market globalization, and competition are having a straight effect on business organizations. They are needed to have knows how that enables them to calculate globally and locally. Based on [10] “nowadays, organizations know that in order to achieve they should observe information as a benefit and deal with it efficiently”. In fact, several organizations are “turning themselves into knowledge specialists” [5]. Thus, knowledge management is a creative management implement for these particular organizations, which allows promoting from the present interest in the subject in academia and practice as a new approach to development.

The knowledge sharing, creation and translating it to recent services and products causes to further loyal and satisfied consumers, superior decision making, enhances manpower abilities, and more than everything else enhances performance [21]. Considering these several organizations recognize that in knowledge economy; there is a recent access to act development attached to their capability to commit in activities purposely intended to enable the design and knowledge sharing as well as the competency to translate it to recent services and products, which develop performance of organizational and arises strategic profits. In a fast-paced and worldwide business condition, organizations are competing to enhance their market share and income by creating capable utilize of their intellectual investment to produce reasonable services and products in industrial societies [2].

e-Business, thus, depicts the manner of business activities through the internet and virtual environment. Study in the area of e-business, in late years, has endured an enormous growth within the information systems field. Therefore, a number of researches have been administrated on various subjects of e-business and also the other relevant factors [12], [8], [26], [22]. Despite this development, however, there is a necessitate to examine extra hoe business apply the internet as an interaction tools with internal and external business agents and likewise how improve the social interaction rank that occurs within the organization. So, knowledge is the appropriate method to allow an e-business investigation via internet analysis as well as its influence on execution of company.

Additional important part of this approach explanation allows the information flow to the exact person at the exact time; besides, an organization would be handling its knowledge in order that of controlling it and not to produce value. That conveys us to the most significant features of this explanation: creating more value for the scheme. The more
complicated knowledge sharing processes wouldn’t assist when the knowledge shared within an organization does not allow its recipient/s to produce value, be it through improved time or incomes or cost savings.

Various factors, initial, affected the success of a KM that some of them are manageable and some not. In a characteristic manner, essential success factors can be classified to five major classes; 1) culture; 2) leadership; 3) structure, roles, and responsibilities; 4) IT infrastructure; and 5) measurement.

The success factors organization elaborates that the knowledge creation value and association should be interlaced through an initiative. Effective processes must make straight with the strategy and framework of KM, involving all performance objectives and metrics. Whereas functional needs command organizational association, a KM system ought to be formulated to allow KM during the organization. Besides, technology facilitates and prepares the full communications and instruments to sustain KM in an initiative [1].

This study presents the development of a framework for improving e-business through key success factors of knowledge management process and discusses findings from the application of the framework based on literature review about e-business through knowledge management process.

II. LITERATURE REVIEW

A. Basic Function & Framework for KM

Knowledge management concentrates on the knowledge management in the business, it presents knowledge for operations and employee, support to superior decision. “KM systems assist the knowledge distribution in order to elevate the productivity and decrease the operating costs. The management of knowledge is affected with the creation, storage, dissemination, and application of organizational knowledge”[3].

![Figure 1. The Knowledge Management Framework](image)

Creation. The knowledge creation requires to achieve the information and knowledge outside the company, involving knowledge as regards suppliers or customers. The knowledge creation is the interface that is to say when the creation of knowledge can’t modify together with the environment the company can’t obtain the update knowledge.

Storage. The information can be amassed as pictures, document, and other relevant files. The knowledge, therefore, can be simply distributed.

Dissemination. The knowledge dissemination has classified into three modes: tradition, formula, and group mode.

Application. When employees require some information, s/he can seek in the database of knowledge. The knowledge management will apply the knowledge searching engine, assisting the employee discriminate and getting the associated knowledge. After the application, the employee should value the knowledge and this feedback will be revised and maintained into the knowledge database [4].

B. 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 [9]. 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”[11].

The success of a KM enterprise depends on a lot of 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.

C. e-Business

e-Business is explained as the management of collaboration, communication, relationships, electronic data interchange, and the enterprise of workflow procedures with the business employees, consumers, government, partners, and other business agents, since these procedures or tasks are done by electronic means [25]. This explanation is extensively coherent with definitions of e-business revealed in the literature [27], [19], [6], [20], [23], [10]. Likewise, e-business as the Web gathering together employees, suppliers, vendors, customers, and other stakeholders in an incoming way never possible earlier than [21]. e-Business is trade managed in virtual cyberspace. It is the outcome of combination of the broad reach and large Internet sources with systems of IT. e-Business can potentially change a business to a grouped entity with value creation procedure and seamless supply chains [20]. It prepares the electronic tools to facilitate links among and between procedures to participate in radically recent methods
and at such speeds that it actually opens up the task to fundamentally configure every core operating procedure in a different manner.

Nowadays, organizations often merge information technology to improve procedures in ways that build up their economical profits [14]. As a result, electronic business has an extending influence across the whole distance of the organization’s structure, from the purchasing division to the field sales staff, as well as beyond a scope of its business procedures, as of internal management to supply-chain management [27].“e-Business has the ability for producing incomes as if applications of e-commerce while its main contribution may come from its ability to decrease costs, involving both fixed and variable costs [16].

D. The Role of KM in the e-Business Environment

Before all else, KM works as vary factor in the e-business environment. KM enables staff members to adapt their new responsibilities and roles in the e-business environment easily and quickly during the knowledge provision that assists the evolution, for instance knowledge on new business processes and new organizational structures [23]. Knowledge management facilitates staff in gaining the needed competencies and skills in the new situation, and it assists new business unit integration.

Knowledge management ensures the knowledge accessibility and knowledge availability on the issues strategic to the business, involving services and products, customers, markets, employee skills, suppliers, competitors, processes and procedures and the regulatory environment [18]. “In consequence of the fact that knowledge management concentrates on knowledge strategic to the business, it will certainly tie to the organization business strategy and will also sustain the business strategy execution. It prepares the business with a superior perceptive of the market it performs in, allowing the e-Business to contest sellers and buyers in new value added markets and thus positioning itself in the market”[24].

Naturally, e-businesses are more complex and difficult than traditional bricks and mortar businesses. KM can help in overcoming this complication via controlling the knowledge base and creating related accessible knowledge, consequently making the adoption of the recent business pattern easier and allowing knowledge to flow across limited, consisting of inter-organizational, intra-organizational and geographical boundaries. “Knowledge management increases organizational agility [17]; It enables for flexible and more accurate decision making due to the availability and accessibility of relevant knowledge at the exact time to the exact person. In addition, knowledge management prepares the knowledge to allow quick adaptation of the business to suit new market conditions. Knowledge management enhances e-businesses’ efficiency by preparing 24-hour access to knowledge via a single point of entry, which avoids duplication and rises creativeness”.

“Staff can search information they need easier and faster via adequate structuring of the knowledge base, which permits easier access and retrieval, therefore growing staff productivity”[15].

Moreover, repetition is avoided, due to the fact that staff now have contact to act that has been performed before or what knowledge is accessible, which enables them to reutilize the accessible knowledge in various situations. This is particularly true of e-businesses in geographically spread situations.

Knowledge management assists combination among disparate groups or department in an e-business. These dissimilar groups might be in various organizations, in disparate geographical locations, and in varied business units where supply chain integration is happening. Knowledge management helps the knowledge flow among the groups via processes of knowledge management, therefore facilitating earlier and further efficient integration.

e-Businesses frequently end with a extending consumers and supplier base, that drives to further knowledge to be handled, inevitably. KM offers systems and procedures to address these extending knowledge management requests considering the knowledge management lifecycle, that is to say knowledge sharing, knowledge creation, knowledge harvesting and knowledge leveraging. KM increase the organizational liveliness in these extending marketplaces because of further effective decision making and reply to market replacements [13]. In addition to, knowledge management enables an organization to change its business form in effect to market changes by assisting knowledge sharing and communication in the processes of changed or new business.

Knowledge management helps simplicity in sense of the knowledge availability. It creates this option by preparing an “inventory” of knowledge advantages accessible in the e-business. Approach is prepared via a single point of entry to the knowledge base, regardless of business unit or business location [13]. This approach saves much time as staff has only one port of call to discover the knowledge they need. Likewise, knowledge management prepares navigation tools, taxonomies, to facilitate employee to regain the information they require efficiently and quickly.

Cooperation is becoming increasingly common in the e-business environment. e-Businesses collaboratively could propose products across organizational and sometimes geographical boundaries. There is also collaboration through intranets and extranets, in the shape of online communities internal and external to the organization. “These communities share knowledge on an extended range of concerns. To enable the collaboration within organization, knowledge management presents the processes, platforms, and technology. Moreover, knowledge management ensures the structuring and retention of the knowledge shared in the forums of combined that can be utilized as contribution to more creation knowledge in these and other forums. Knowledge management encourages a creativity culture and innovation culture through the
knowledge availability that can serve as an input to the improvement process, and through rewarding and recognition of innovative schemes within the organization. Modernization is a means component in ensuring liveliness for an e-business by maintenance ahead in the marketplace”[11].

In the virtual world, a new skills profile will be needed to manage business. Knowledge management can assist in extending knowledge and staff competencies by creating a learning environment through the knowledge provision on specific districts of expertise strategic to the business. Knowledge management, hence, produces a self-learning environment where employee has acquired to knowledge that permits them to need particular competencies and skills [7]. The learning environment conducts to the institutionalizing of knowledge harvested, shared, and created. “The organization, hence, continues to utilize its knowledge base to produce further knowledge, a spiral effect of knowledge creation and knowledge leverage, is obtained” [7].

Knowledge management performs a role in promoting communication via the processes provision, platforms, and technology that allow communication. These procedures, platforms, and technologies are particularly valuable in e-businesses with varied geographical locations and also connected time zones, or where organizational silos are provide that restrain communication and knowledge sharing [13]. Furthermore, “KM ensures the maintenance of knowledge shared in these communication forums for future use”[11].

Knowledge management presents the processes, tools, and structure to prepare one single boundary with numerous business partners. This interface might assume a shape an Internet webpage [3]. The organization’s knowledge management task should be in charge for the website content structuring, to ensure that information and knowledge is organized efficiently to certify logical and easy organization and knowledge retrieval.

Knowledge management [11] allows consumer association management via the knowledge creation, knowledge sharing, knowledge harvesting and knowledge leveraging of an organization’s consumers. “Knowledge management certifies the creation of the customer one view that can be shared across divisional and geographical limited within the organization, therefore ensuring that staff works with one series of updated knowledge on the customer regardless of where they work” [3]. This enables a more in depth perceptive of consumers and their desires, and consequently allows more accurate and more effective improvement of channel, product, and strategies of market segmentation [15].

Knowledge management presents the knowledge creation, knowledge sharing, knowledge harvesting and knowledge leveraging of standards in the e-business environment. This guides to better competence and lower cost for the organization in sense of the knowledge base’s updating and managing, but also regarding improved staff members' productivity. This is because of easier and quicker access and leverage of the accessible knowledge [13]. Likewise, standardization creates consumer and supplier approach and knowledge retrieval further efficient, then growing satisfaction rates of customers and suppliers.

II. METHODS

Based on the major key of this study, the approach of this study was survey strategy form the quantitative approach. Frequently, it is one in which the inquirer makes knowledge claims based primarily on advocacy particular perspectives or constructivist perspectives or both. Quantitative approach is systematic scientific assessment of data and associations among them[29].

The research was conducted in Kuala Lumpur, Malaysia and the sampling size was randomly chosen based on convenience sampling from Malaysian managers who had worked in private business companies. Then, after omitting missing values and outliers, the total 70 questionnaires were collected among the respondents. The survey consisted of two main questionnaires, the key factors of KM questionnaire and e-business questionnaire. Both of them were designed in the year 2003 and also the key questionnaire prepared in 2004. The first questionnaire was probing into the “know-how” on the respondent by addressing the problem in five principle areas. The questions of survey extracted based on the other relevant studies of knowledge management and e-business to answer the following research hypotheses:

**Ha1.** The KFS knowledge management is positively related to e-information dimension of e-business in Malaysian companies.

**Ha2.** The KFS knowledge management is positively related to e-communication dimension of e-business in Malaysian companies.

**Ha3.** The KFS knowledge management is positively related to e-workflow dimension of e-business in Malaysian companies.

<table>
<thead>
<tr>
<th>Table 1. Cronbach’s Alpha Value of the Instruments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Variables</strong></td>
</tr>
<tr>
<td>e-information dimension</td>
</tr>
<tr>
<td>e-communication dimension</td>
</tr>
<tr>
<td>e-workflow dimension</td>
</tr>
<tr>
<td>e-Business</td>
</tr>
<tr>
<td>Key Success Factors</td>
</tr>
</tbody>
</table>

The procedure was to ascertain that the assumptions of parametric test are met before any statistical analysis was done. Since all data met the assumption of normality, the researcher proceeded to the next step for the descriptive analysis. In the present research, both categories of statistics, descriptive and inferential, were carried out. Descriptive (such as means, standard deviation, variance, frequency, and percentage) were carried out to determine the demographics of
the respondents and inferential statistics (such as pearson product moment correlation, Analysis of Variance) were applied to answer the research hypotheses and demonstrated the association between the dependent and independent variables.

IV. RESULTS

The Distribution of Key Success Factors

The 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 2., the first factor is culture that the mean of this item is represented all detailed results regarding the culture factor are slightly above or below a scale value of 3.5 (M=3.52, 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 2. Mean for Key Success Factors

<table>
<thead>
<tr>
<th>Key Success Factors</th>
<th>Items</th>
<th>Mean</th>
<th>SD</th>
<th>Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Culture</td>
<td>13</td>
<td>3.528</td>
<td>1.086</td>
<td>1.258</td>
</tr>
<tr>
<td>Leadership</td>
<td>13</td>
<td>2.642</td>
<td>.948</td>
<td>.746</td>
</tr>
<tr>
<td>Strategy, Systems &amp; IT</td>
<td>2</td>
<td>3.471</td>
<td>1.259</td>
<td>1.586</td>
</tr>
<tr>
<td>Effective &amp; Systematic</td>
<td>8</td>
<td>3.185</td>
<td>1.053</td>
<td>1.110</td>
</tr>
<tr>
<td>Measurement</td>
<td>5</td>
<td>3.185</td>
<td>1.094</td>
<td>1.197</td>
</tr>
<tr>
<td>Key Success Factors</td>
<td>41</td>
<td>3.614</td>
<td>.921</td>
<td>.849</td>
</tr>
</tbody>
</table>

The Distribution of e-Business Dimensions

In this part explored variations in how business is being managed. The three sets of questionnaires were pursued to understand the e-business in the organization as perceived by the employees.

Three various types of questions were designed to gather data regarding managers’ e-business perspectives in applying the own organizations. As shown in Table 3, all of e-business dimension’ results are about an average scale value of 3. Moreover, the first dimension of e-business is e-information that is has four relevant items and the mean of this item is 3.585, and with 1.014 standard deviation. The next dimension is e-communication that is one of the main and prominent e-business dimensions. The mean of this item 3.671 and the standard deviation is .928 and the last dimension is e-workflow with 3.621 averages and .835 standard deviation. In regarding the details of e-business dimension, the predominant opinion of the managers was measured toward the e-business by considering the three levels of dimensions (M=2.698, SD=.816).

Table 3. Mean for e-Business Dimensions

<table>
<thead>
<tr>
<th>Key Success Factors</th>
<th>Items</th>
<th>Mean</th>
<th>SD</th>
<th>Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>e-Information</td>
<td>4</td>
<td>3.585</td>
<td>1.014</td>
<td>1.029</td>
</tr>
<tr>
<td>e-Communication</td>
<td>4</td>
<td>3.671</td>
<td>.928</td>
<td>.861</td>
</tr>
<tr>
<td>e-Workflow</td>
<td>4</td>
<td>3.621</td>
<td>.835</td>
<td>.699</td>
</tr>
<tr>
<td>e-Business Dimensions</td>
<td>12</td>
<td>2.698</td>
<td>.816</td>
<td>.666</td>
</tr>
</tbody>
</table>

Relationship among Dimensions of e-Business

A correlation analysis was conducted on the three dimensions of e-business. The results are shown in following table, and indicated that there was a positive and significant relationship among three dimensions of e-business is namely “e-information”, “e-communication”, and “e-workflow”. The relationships of the dimensions were explored through a Pearson product moment correlation analysis. Table 4. revealed the correlation matrix.

As shown in Table 4, 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 .803 to .729.

Table 4. Relationship among Items in Dimensions of e-Business

<table>
<thead>
<tr>
<th>e-Business Dimensions</th>
<th>e-Information</th>
<th>e-Communication</th>
<th>e-Workflow</th>
</tr>
</thead>
<tbody>
<tr>
<td>e-Information</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>e-Communication</td>
<td>.803**</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>e-Workflow</td>
<td>.729*</td>
<td>.802**</td>
<td>1.00</td>
</tr>
</tbody>
</table>

** Correlation is significant at the .01 level (2-tailed)

There are highly positive relationships between “e-Information” and “e-Communication” (r=.803, p<.01), between “e-Information” and “e-Workflow” with (r=.729, p<.01) and also among “e-Communication” and “e-Workflow” (r=.802, p<.01). In regarding the results, thus, the second hypothesis is almost supported in this study.

The Relationship between KSF and e-Business Dimension

To follow the data analysis, a bivariate correlation analysis (Spearman’s rho) was computed among the three dimensions of e-business and key success factors for knowledge management (Table 5.). Hypotheses 8, 9 and 10 stated that the KFS knowledge management is positively related to dimensions of e-business in Malaysian companies. As shown in Table 5., the results of this study are supported all three last hypothesis.
Based on the Guilford Rule of Thumb table (1986), the results revealed that there is a high positive relationship among the key success factors of knowledge management and the e-communication of e-business dimension ($r=.867$, $p<.01$). While this relation is moderately among the KFS and e-information ($r=.739$, $p<.01$) as well as there was a moderate relationship between KSF and e-workflow ($r=.797$, $p<.01$). Consequently, there were positively relationships between key success factors of knowledge management and three dimensions of e-business.

V. CONCLUSION

The expected findings of this study from the positive relationship found between five aspects of key success factor for knowledge management as well as three dimensions of e-business. The moderate influences of key success factors on e-business were presented for two of the three e-business dimensions: e-information and e-workflow while this effect was higher for the e-communication dimension. The fact that effects were not discovered for the e-information and e-workflow dimension could be explained in a way that a purely educational presence on the internet does not enhance by considering the KFS. As opposed to, adopting a further dynamic attendance directed to interact with stakeholders such as selling products, providing customer service, communicating and so on, can be more advantageous. The findings certify Amit and Zott’s (2001) research, which demonstrated the new occasions for wealth creation presented by e-business.

Consequently, KM is not just regarding systems, it is also concerning attitudes of people and institutional. In this place, the staff should suffer rearrangement and learn to distribute or participate beneficially in knowledge exchange among those who had done the tasks before and those who were given new missions.

REFERENCES


Ali Af. Asgari was born in Khoy, Iran on 6th of June 1979. He pursued his tertiary education in Industrial Engineering field at Islamic Azad University of Sirjan, Iran and received his Bachelor's degree on February 2003 and also Master of Science in MBA (2011) from Multimedia University, Cyberjaya, Malaysia in 2011. Currently he is a PhD student of Management at Universiti Teknologi Malaysia, Johor Bahru, Malaysia, since 2011.