Investigating the Critical Success factors and Infrastructure of Knowledge Management for Open Innovation Adoption: The Case of GlaxoSmithKline (GSK) in Egypt

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Abstract

During the past few years organizations are moving towards the adoption of open innovation models to make use both internal and external knowledge. Recent efforts concerning open innovation involve building portfolio of relationships and networks that provide access to technology, information and knowledge. For successful open innovation implementation knowledge management (KM) strategies adopting its frameworks are important. This study investigates the critical success factors for the underlying KM frameworks in developing countries. The case of GlaxoSmithKline (GSK) has been investigated as one of the few examples of KM initiatives in Egypt. A comparison of GSK’s critical success factors of its KM framework between the cases of its headquarters and its Egyptian branch, resulted in identifying a set of factors that have been customized for GSK Egypt specifically. We further argue that these newly identified, additional factors, could serve as lessons learnt for others.

1. Introduction

During the last few years several researchers such as [38], highlighted that firms face pressures to differentiate themselves in the marketplace by being innovative. They try to make rational decisions regarding the identification, selection, and use of resources to make differentiated new products and services that will lead to superior profits. R&D expenditures, and in particular a firm’s R&D strength relative to its main competitors, may be considered to play a key role in this process. R&D strength drives innovation and innovation process outcomes. The higher a company’s R&D strength the more innovative new products and services it will develop and launch [32] and [47]. Further [23] add that innovation is fundamental to the development of society, business rejuvenation and growth and critical to company survival in the long run is conventional wisdom that is hardly challenged by anyone in academia, politics or the business world. It is also acknowledged that innovation is more than invention or new products but a complex and multi-dimensional concept, which should be seen from different perspectives in its specific context [20] and [22]. Further, adding to the complexity of innovation and widening the scope of required collaboration and integration and thus information systems support, according to [52], there has been a paradigm shift to a knowledge-oriented economy in the 21st century. Innovation can therefore arise in connection with any object, such as technologies, structures, markets, culture, strategies, systems, products, services or anything else man-made, and needs to be perceived as a difference concerning the qualitative newness [22]. The process of innovation is typically iterative, interactive, context-specific, multi-tasking, uncertain, path-dependent and the result of a new combination of ends and means.

The great contemporary organizational challenge for enterprises is to create a conceptual and methodological framework allows the management of knowledge by means of networks designed for social interaction. This statement is based on the premise that the competitive drive and sustainable success of the company depend on the introduction of new forms of production innovative processes, which can only be ensured through integrated approaches to knowledge management and the incorporation information technologies IT [48]. While discussing the issue of open innovation, it is essential to identify the critical success factors that ensure appropriate KM frameworks implementation as a supportive infrastructure. Thus the following section provides an overview of open innovation and its importance and concluding to the importance of successful KM
implantation in this context. This leads us to provide an overview of KM and its frameworks. Critical success factors for KM implementations complete the essential issue that we are willing to address, which is been discussed at a later section. The GSK case including pilot and detailed case study investigates the critical success factors for KM implementation in its headquarters as well as GSK Egypt to specify those related to GSK Egypt as a developing county in particular. Finally, the paper ends up with some concluding remarks in its last section.

As the innovation support is mostly discussed from an IT rather than IS perspective, in this paper we are going to follow [41] definition of IS: Information Technology in Use, which implies multiple issues such as the time dimension, human dimension gardening, frequently updated formal rules, and major organizational changes requiring matching IS changes [41].

2. Open Innovation

Some researchers [33] highlight the issue that due to the recent economic crisis, many industrial firms attempt to capture additional value from their technologies by means of open innovation strategies. Besides acquiring external technology, many firms therefore increasingly try to license their own technology to other firms either exclusively or in addition to its application in their own products. Adding to the complexity of innovation and its underlying need of support, [52] discuss this shift in the world of innovation. As they list, many academics and business practitioners have abandoned the “linear model of innovation” ([3]; [17]; [4]). Since the early 2000s there has been increasing attention to the concept of open innovation as a theoretical concept. ([8]; [9]; and [7]) in order to recognize the cooperative nature of partners in industrial innovation, as opposed to the vertical integration of innovation functions in one large corporation [43]. According to the original open innovation theory developed by [9], the term open innovation refers to, “a process, a set of inter-firm relationships, and a cognitive paradigm”. According to [9] this definition, open innovation “assumes that firms can and should use external ideas as well as internal ideas, and internal and external paths to market, as the firms look to advance their technology”. [9] coined the notion Open Innovation to signify a new model for organizing technological innovation in large R&D-intensive companies. According to this model, “firms can and should use external ideas as well as internal ideas, and internal and external paths to market, as the firms look to advance their technology” [16].

This definition has been extended as: the intentional use of “inflows and outflows of knowledge to accelerate internal innovation and expand markets” [7]. Further, [2] discuss the extension of the innovation boundaries in the context of open innovation, that it overcomes not only the boundaries of the firms but also the boundaries of the region, which has been confirmed through empirical evidence resulting form their study.

Other researchers such as [21] add further to open innovation explanation as being built on the assumption that organizations need to cast their nets far and wide to garner the knowledge they need to create new products and processes. Today we also see how ideas as well as knowledge come from both inside and outside organizations By doing this they emphasize that innovation is not only about open processes, but also dependent on the integration of knowledge from diverse sources from networks of different kinds.

Further, [10] in their study classify the managerial levers for open innovation including 1. networks: extensive use of inter-organizational relationships to in-source external ideas from a variety of innovation sources and to market internal ideas that fall outside the firm’s current business model, using a range of external market channels; 2. organizational structures: the development of complementary internal networks, i.e. organizational structures devoted to accessing and integrating the acquired knowledge into the firm’s innovation process. The same internal re-organization is needed to follow external paths to market for internally developed ideas; 3. evaluation processes: as the openness of the innovation system increases the difficulties determined by the evaluation of innovation projects, which often involve significant technical and market uncertainty and they need new metrics of evaluation to focus more upon external sources and/or exploitation paths of innovation. In this respect, procedures to systematically scan and continuously monitor the range of technologies available in the external environment, as well as new forms for the involvement of external sources of innovation through the strategic use of corporate venturing, appear to have an increasing importance for the outside-in dimension of Open Innovation. Similarly, introducing inside-out Open Innovation has deep implications on the evaluation process; and 4. knowledge management systems: as open innovation is indeed all about leveraging and exploiting knowledge generated inside and outside the firm to develop and exploit innovation. Implementing Open Innovation means, therefore, to adopt knowledge management systems able to foster the diffusion, sharing and transfer of knowledge within the firm, and between the firm and external environment.
3. KM adoption Frameworks

As been concluded through the previous section open innovation requires knowledge management adoption [10]. Further, in order to adopt knowledge management supporting open innovation, knowledge management frameworks are essential. This section highlights KM frameworks according to previous research. At a later stage, the frameworks presented in the literature have been used to develop our interviews with the company under investigating in order to identify the specific frameworks they are adopting.

In general, the importance of knowledge and its management has been highlighted through the literature. For example, [12] clarify that knowledge is seen as one of the most important resources in any organization [39] and [45]. The success or even the survival of any organization depends on how effectively it manages the knowledge present internally and externally [46], [15] and [14]. Reuse of existing organizational knowledge gained via past experience can greatly reduce the time spent on problem solving and increase the quality of work. Further, some researchers [36] discuss that it has been recognized as an important source of competitive advantage and value creation [28], as an indispensable ingredient for the development of dynamic core competencies and, more generally, as a determinant factor for firms with global ambitions. Moreover, knowledge that firms acquire is a dynamic resource that needs to be nourished and managed carefully. Although this is true for all industries, it is particularly relevant to all those traditional sectors where companies have to cope with globalization, mature markets, increased customer service, cost reduction and changing purchasing behaviors. Other researchers [37] mention that the managerial and academic communities have been alerted to understand the importance of how to create and effectively use knowledge based resources.

The area of knowledge management has been addressed from different perspectives that have been classified by [49], for example, knowledge management as a profession [50], definitional issues [25], theoretical foundations [1], proposed research agendas [19]. This paper is going to investigate the issue of knowledge management adoption frameworks from information systems (IS) perspective including their challenges, in the context of developing countries. The need for addressing knowledge management research from the IS point of view is supported by [27], where he highlights that knowledge management (KM) is one of the emerging topics of academic and professional discourse in many fields of knowledge, including cognitive sciences, sociology, management science, information science (IS), knowledge engineering, artificial intelligence, and economics ([15]; [35]; [44]; [42]; and [53]).

Previous KM research efforts have been attempting to identify the complete environment in which KM is performed have been addressed, which is in other words a KM frameworks to be followed. This includes, the combination of knowledge management roles performed by people, the multiple knowledge management processes taking place within different knowledge management models, and performing them using different knowledge management tools. These processes, models and tools can all be different, depending on the focus of each company or organization on managing its knowledge and also depending on the company/organization’s social culture, economic status and technological capabilities. For example, [24]'s study develops a framework for Knowledge Management Activities (KMA) that reflects their multilayer nature and accommodates the multilevel of flow that knowledge goes through in organizations. Further, [26]'s 'workflow-based knowledge map framework'. supports KM by the idea of having knowledge being created and re-used during business processes execution, and exploring the business processes to link certain specific knowledge that is relevant to a particular task on the process. Focusing on knowledge maps presents knowledge aspects within an organization that fulfills a specific information need for employees’ roles within that organization [13] discuss their 'knowledge mapping framework', which aims to present a complete picture of the different entities and relationships that are essential for using organizational knowledge. Further, [13]'s framework consists of three aspects, which are: knowledge resources (human capital, structure capital and customer capital), knowledge management activities (initiation, generation, modeling, repository, distribution and transfer, use and retrospect) and knowledge influences (technology, culture, value and norms, measurement, leadership and reward and incentive systems). The framework provides a complete environment of all these aspects working together to create an effective and efficient knowledge management solution for any organization. This includes providing a clear picture of what, why and how knowledge management can be applied to different industries through the analysis of eight different companies.

A company that is interested in implementing a KM solution must first analyze its strategic objective and goals, then choose a KM strategy which aligns with its business strategy. The company starts to choose the most important KM processes which need to take place to increase its competitive advantage, then it needs to choose the suitable KM model for
implementation and finally analyze its tools and IT infrastructure and decide on the most fitting KM tools which will carry out the KM solution successfully. Looking at all these factors, a complete picture becomes clear for the choice of the most suitable KM framework which can be followed. [13].

After performing a pilot study within our case under investigation, we have identified one of the frameworks being followed, namely, the IMPaKT framework presented by [6]. Thus, we will explain this specific framework in further details within this section. The first stage is to develop a business improvement strategy proposed by [6], aims at providing a structure to form a strategic business plan. This can be done by identifying the external business drivers, by defining strategic objectives and goals, by identifying critical success factors for the business and finally developing some measures to monitor business performance improvement. The outcome of this stage is basically a business improvement plan with measurable indicators for assessing performance and performance targets that needs to be reached. The second stage, KM strategy development, is to develop specific KM initiatives to address the business problem; the outcome of this stage is a plan for KM strategy with a set of implementation tools to support business improvement. The last stage, to develop a KM evaluation strategy and an implementation plan, should come up with an approach for evaluating the impact of KM implementation on the business performance; the outcome of this final stage is a KM strategy and an implementation plan of the impact of KM on the business’ performance improvement measures (effectiveness and efficiency measures).

4. Critical Success Factors for KM Frameworks Adoption

As been highlighted, open innovation implies the adoption of knowledge framework. In this section, the critical success for KM adoption presented in previous studies are investigated. These factors have been investigated through our case study, identifying the most important, from the company under investigation’s perspective. Some researchers [34] ensure that major critical success factors for KM framework implementation are the motivation and commitment of knowledge workers, because these are critical for sharing of tacit and explicit knowledge. Many practitioner experts have recommended the use of rewards and incentives, to increase workers’ motivation to create, share and use knowledge. They argue that the rewards in companies differ, depending to a great extent on the cultural norms in the company. At McKinsey for example, having teams give presentations at luxurious resorts and recognition from peers and senior management, are used as rewards for the winning teams who showed good sharing of knowledge. At Xerox, the name of the winning employee for sharing knowledge is being posted in lights before thousands of peers. In other companies, employees would be rewarded financially. These are all different ways of rewarding employees to motivate them to share and exchange knowledge.

Other critical success factors for successful KM frameworks implementation are discussed by [40]. These factors are:

- Looking at the organization profile and putting into consideration the budget available for the KM activities to be implemented, the training and incentives which will be given to employees, the strategy to change work culture after KM framework implementation and deciding on the KM strategy which should be aligned with the business strategy.
- Analyzing the KM approach which will be followed by deciding on the knowledge process activities, the work flow processes, increasing KM awareness between employees and creating a knowledge sharing culture.
- Choosing suitable KM drivers by finding dedicated personnel and increasing their technical skills, make employees’ job specifications clear, ensure top management commitment and users support.
- Deciding on the needed technology resources such as the KM systems, the network infrastructure, knowledge repositories and different supporting KM tools.

Some researchers [40] believe that these are the most essential critical success factors for a successful KM frameworks implementation:

5. Methodology

As mentioned above, this research aims to investigate the critical success factors of KM frameworks adoption in developing countries. One of the appropriate research strategies that allows in depth investigation, is case study research. For this research it is considered as a single exploratory case study (Yin, 1994). To investigate these critical success factors we needed a company within a developing country that is already having KM initiatives and implementing one of the KM frameworks. This was difficult to find. One of the few companies adopting KM initiatives where we could have access to is GlaxoSmithKline Egypt, which is within the pharmaceutical domain. GlaxoSmithKline (GSK) Egypt is the biggest multinational pharmaceutical company in Egypt with a
market share of 7.4%. GSK Egypt in its current shape is a result of the merger of two legacy companies in 2001, as well as two local acquisitions in 1992 and 1999, these are Advanced Biomedical Industries (ABI) and Amoun Pharmaceutical Industries Company (APIC) respectively. GSK Egypt is the largest foreign investor in the pharmaceutical/healthcare field in Egypt. The company’s turnover is currently comprised of 58% GSK brands, 27% locally acquired brands, 6% vaccines and 9% licensors.

The case of GSK is considered as an asset for this research as we believe that the pharmaceutical sector is one of the most knowledge-rich sectors in the business. As stated by Ward and Abell (2002), there are additional drivers in the pharmaceutical industry differing from other industries, and these are bioinformatics and major technological advances. These major drivers necessitate the implementation of a KM framework, which will ensure the integration of information and knowledge in the daily business processes of pharmaceutical companies. The pharmaceutical industry’s profitability is based on utilizing and creating new scientific knowledge, thus this industry has always been a knowledge-based industry. Concerning GSK Egypt the most important issue is, that it already adopts a knowledge management framework and passed through the experience of identifying the critical success factors during that implementation. The company can help to refocus future investigations in the field of knowledge management in similar companies in developing countries.

This study has been conducted through two phases, namely pilot study to explore the type of KM framework being investigated and the criteria for its adoption; and a detailed case study to investigate the critical success factors of this specific KM framework adoption in the context of developing countries. As mentioned earlier, the type of KM framework has been identified through interview questions including characteristics of previous frameworks discussed in the literature. For the critical success factors, the ones specified in the literature have been listed as part of our interview questions. The interviewees were asked to identify those which are related to the headquarters as well as those which are related to the Egyptian branch to highlight the differences, if any.

In this paper we present the results of the main study. In order to achieve this, the critical success factors implemented at GSK headquarters have been compared with those of GSK Egypt. The outcome of this comparison is a list of different critical success factors, some of which are specifically related to GSK Egypt.

6. Case Study Findings

Following the pilot study, which has provided us with an overview of the KM initiatives at GSK and the KM framework being adopted for this purpose, detailed a case study has been conducted to investigate the critical success factors for their specific IMPaKT framework implementation. To gather the data, two semi-structured interviews have been developed. The first is to be conducted with the knowledge manager, while the second is targeting other KM advocate (Executive Officer in the Quality Department). The first interview was designed for the KM manager, where the questions asked covered different situations which could have occurred throughout the whole company; the second interview mostly covered situations or events occurring in a specific department, as well as some questions related employees’ views.

To ensure that the case study is of a good quality, the interview questions and results have been reviewed by the stakeholders who were involved or participated in it, to make sure that the right ideas were delivered as well as ensuring the privacy-related issues.

One of the results during this further in-depth investigation phase is the confirmation that GSK companies worldwide view knowledge management as a shared asset. They use a “KM Toolbox” which aims to maximize the KM value in the company, and this KM toolbox can be different for each company, depending on the company’s business processes and the KM tools being used. This KM toolbox provides a how-to guide for each element of the key aims of the company, puts KM principles into practice by making KM tools and processes available to all who might need it and aims to prevent knowledge and understanding being lost in the event of people changes in the company. The vision of GSK companies is to have excellent communications for successful knowledge sharing and to put KM into profit by preventing reinvention of the wheel and following the process of learning before, during and after (LBDA). The GSK companies share and manage knowledge by using several KM working tools such as: communities of practice for sharing knowledge between members of common interests, collaborative tools (conferences, chats, meetings), Live Link (documents repository), GPs repository (good practices repository), PeopleConnect (a shareware for people to share knowledge), AAR (after action review done before closing of any project), KM excellence profile (to measure the level of knowledge in each company by measuring the competency value of each person involved in knowledge sharing) and using a learned lessons repository. Based on the previous factors,
GSK companies worldwide chose the IMPaKT framework for fulfilling their objectives of aligning knowledge with their business goals.

GSK Egypt recognizes knowledge as a part of its asset base and the company views new knowledge creation as part of the organizational philosophy and culture. The company has faced some problems before its KM framework implementation such as reinventing the wheel and loss of crucial knowledge due to a key employee leaving the company; this led management to start taking some serious steps in solving these problems by implementing a KM framework which has saved them a lot of lost effort, time and money.

The implementation of the KM framework in the company improved its competitive advantage, improved the customer focus, increased employee development, led to better decision making and led to faster response to key business issues. It was also indicated that for the KM framework to stay being successful there has to be continuous improvement of knowledge to turn knowledge into profit, build a different paradigm where knowledge is a shared asset and its value can be measured and increased, the KM infrastructure and knowledge managers would be recognized as world class leaders, the culture of (LBDA) would be habitual and all employees act as knowledge entrepreneurs, using technology to enable knowledge to be rapidly accelerated through the knowledge cycle, embedding KM in business strategy using core KM working ad collaborative tools (mentioned above at the beginning of this section), keep building up the intellectual capital, continuously measuring KM value propositions through the KM excellence profile, continuously use a knowledge management action plan to prioritize business goals that are to be supported with knowledge, work closely with corporate KM CoP to enhance knowledge exchange and sharing.

The KM advocate of the Quality Department, indicated that there are problems due to lack of enough training for employees to use the KM tools. She confirmed what the KM manager also mentioned, that the biggest hurdle in effective implementation of KM in GSK Egypt is lack of top management commitment to KM and added to that also the changing of people’s behavior concerning knowledge sharing. She indicated that major current knowledge problems are reinventing the wheel, knowledge getting lost when employees leave the company, employees having a problem in finding someone who encountered the same problem they sometimes are faced with, company not formally rewarding knowledge sharing, and company not encouraging the use of informal communities for cross project reuse/learning.

It was also indicated by the KM advocate, that KM can play a significant role in achieving best results in improving productivity and sharing of best practices. She also indicated that there has been a significant growth in the knowledge available and being used in her unit since the KM framework has been implemented, as well as resources (people, money,...etc.) are growing and strategic goals are being shared across the company. Although there is no formal reward or recognition for knowledge sharing now in the company, she confirmed that employees are continuously motivated to share and use knowledge, as well as employees feeling that knowledge sharing should be an important and essential requirement of their daily work. She also indicated that information is readily and easily available and accessible in one place, and when employees encounter a new problem, they can quickly identify and mobilize the people who can solve it.

Following our in depth investigation, the critical success factors listed in the literature have been investigated by the stakeholders to identify those, which GSK is adopting. The following is a list of success factors that are being taken into consideration at GSK Egypt:

- The success factors which helped in a successful KM framework implementation in GSK Egypt are:
  - Creating a knowledge-friendly corporate culture
  - Integrating knowledge processes into business processes
  - Promotion by top management
  - Creating conditions fostering knowledge sharing and using by supporting team work
  - Sufficiently motivating employees for sharing and using knowledge
  - Communicating organizational knowledge as an important and essential requirement of employee’s work in the company
  - Formally rewarding knowledge sharing
  - Having a unit responsible for KM
  - Having information ready and easily available and accessible in one place
  - Using KM tools to help in managing knowledge (Intranet, Internet, document management systems, video conferencing, online information sources, CD-ROMs,…etc.)
  - Being able to quickly identify and mobilize people who can solve a new encountered problem

As our study also aiming identifying those that have to be taken in developing countries, in particular, Table 1 lists the critical success factors and whether each of
those is implemented at GSK Headquarters, GSK Egypt, in both or neither, including any possible comments.

<table>
<thead>
<tr>
<th>Success Factors</th>
<th>Implemented at GSK Headquarters</th>
<th>Implemented at GSK Egypt</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>KM requirements analysis</td>
<td>Yes</td>
<td>Yes</td>
<td>Knowledge management action plan for each project and a project initiation form is written to specify business objectives and knowledge requirements</td>
</tr>
<tr>
<td>Interdepartmental knowledge sharing through communities of practice (CoPs)</td>
<td>Yes</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Capturing explicit specialist knowledge and lessons learned</td>
<td>Yes</td>
<td>Yes</td>
<td>Written in AAR (after action review)</td>
</tr>
<tr>
<td>Documentation of implicit and explicit knowledge before an expert leaves company</td>
<td>Yes</td>
<td>No</td>
<td>Still working on knowledge retention problem</td>
</tr>
<tr>
<td>Top management support of KM initiative</td>
<td>Yes</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Motivation and commitment of knowledge workers</td>
<td>Yes</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Considering correct budget for initiative</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Training and incentives for employees</td>
<td>Yes</td>
<td>Yes</td>
<td>Training only, no incentives</td>
</tr>
<tr>
<td>Changing work culture after KM framework implementation</td>
<td>No</td>
<td>Yes</td>
<td></td>
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<tr>
<td>Choosing suitable KM strategy</td>
<td>Yes</td>
<td>Yes</td>
<td></td>
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<tr>
<td>Increasing awareness between employees and creating knowledge sharing culture</td>
<td>Yes</td>
<td>Yes</td>
<td>In GSK Egypt, it is done through the KM advocate team</td>
</tr>
<tr>
<td>Make employees' job specifications clear</td>
<td>No</td>
<td>No</td>
<td></td>
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<tr>
<td>Choosing suitable KM tools</td>
<td>Yes</td>
<td>Yes</td>
<td></td>
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<tr>
<td>Taking a close look at business processes and IT infrastructure</td>
<td>Yes</td>
<td>Yes</td>
<td></td>
</tr>
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Table 1. KM Framework of Critical Success Factors at GSK
Discussing the results of Table 1 with the stakeholders allowed us to classify the critical success factors to the following categories:

1. One critical success factor that has been identified by previous literature mentioned above, but is not implemented neither at GSK headquarters, nor GSK Egypt. This is related to making employees’ job specifications clear.

2. Although there was a rewards and recognition system available at the beginning of implementation and it proved to be a success factor, it was later on disregarded by top management, which is one of the challenges now; that is why it has been listed as a success factor at the beginning but is one of the challenges now.

3. Critical success factors that are limited to its headquarters but not to GSK Egypt include documentation of implicit and explicit knowledge before an expert leaves company, and motivation and commitment of knowledge workers. This is because GSK Egypt is still working on the knowledge retention problem.

4. Multiple critical success factors that have been identified through the literature and been confirmed are taken into consideration in both GSK headquarters and GSK Egypt. These include KM requirements analysis, interdepartmental knowledge sharing through communities of practice (CoPs), capturing explicit specialist knowledge and lessons learned, top management support of KM initiative, training and incentives for employees, choosing suitable KM strategy, increasing awareness between employees and creating knowledge sharing culture, choosing suitable KM tools, and taking a close look at business processes and IT infrastructure.

5. Critical success factors that is just limited to GSK Egypt include one that has been identified through the literature, namely changing work culture after KM framework implementation, which is essential for a developing country. Further, GSK experience has added two major customized solutions which have not been addressed by other researchers in this specific way. These could be regarded as major differences between the headquarters and its Egyptian environment adopting these solutions:

   a) Knowledge advocate team: it ensures embedding KM in every day business activities in all the different units of the company. This has been started since the beginning of the KM framework implementation, to ensure knowledge management throughout the whole company, by having a KM advocate member for each department. This system will eventually change when all employees act towards knowledge management as the KM advocate member does; in GSK all employees act like KM advocate members.

   b) KM QuickPlace of Cairo site: this is a portal freely accessed by all site employees; it includes all best practices worldwide and those best practices that can be specifically applicable in Egypt. It is categorized by functions such as quality, procurement, logistics, engineering and it also includes subsections consisting of (KPIs-key performance indicators, KM strategies, success stories, adopted good practices, knowledge classes of presentations, knowledge performance monthly reports, KM manufacturing innovations and knowledge market exchanges). It provides knowledge about business processes that can only be applicable in GSK Egypt, such as processes for example that do not require electronic signatures because its law was not finalized during the time of this study.

7. Conclusion

This research discussed the importance of innovation and linked it to the need of knowledge management frameworks implementation as a one of its vital infrastructures. The choice of which KM framework to be used in a company has been examined, depending on the company’s business processes, goals and objectives. Four categories of critical success factors have been identified, for some of which solutions have been developed. These solutions can be considered as lessons learnt for future KM initiatives. Whether in GSK headquarters, or GSK Egypt, implementing such frameworks requires identifying necessary critical success factors. The results of the presented analysis show that there are two major success factors, which have been specifically customized for GSK Egypt and are not implemented in its headquarters. The two success factors include the use of a suitable KM tool (Quickplace), containing knowledge specifically for usage in GSK Egypt, and the creation of a knowledge advocate team to enable the sharing, reuse and creation of knowledge throughout all units in GSK Egypt, until this process becomes a daily routine process embedded in the business processes done by each employee. One of the important issues concerning GSK Egypt is that one of the success factors that was disregarded by top management
became a challenge by itself. This shows the importance of the critical success factors support.

Even if it has been argued that KM adoption in developing countries is still at an infancy stage, GSK Egypt was able to implement mechanisms to overcome this disadvantage, and managed not only to generate almost all the success factors of its headquarters (apart from a few), it has identified and developed some specific factors that apply to its own environment.

Although we understand that our case would be only applicable to its research prepositions, other Egyptian companies could use our findings and conclusions as guidelines that could be further customized according to their own environment. Finally, further research might be needed in order to identify more lessons learnt in the context of other companies, in developing supportive frameworks for developing countries.

8. References


