Knowledge Management and Tourism: An Exploratory Study Applied to Travel Agents in Egypt

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Abstract—Knowledge management focuses on the development, storage, retrieval, and dissemination of information and expertise. It has become an important tool to improve performance in tourism enterprises. This includes improving decision-making, developing customer services, and increasing sales and profits. Knowledge management adoption depends on human, organizational and technological factors. This study aims to explore the concept of knowledge management in travel agents in Egypt. It explores the requirements of adoption and its impact on performance in these agencies. The study targets Category A travel agents in Egypt. The population of the study encompasses Category A travel agents having online presence. An online questionnaire is used to collect data from managers of travel agents. This study is useful for travel agents who are in urgent need to restructure their intermediary role and support their survival in the global travel market. The study sheds light on the requirements of adoption and the expected impact on performance. This could help travel agents identify their situation and determine the extent to which they are ready to adopt knowledge management. This study is contributing to knowledge by providing insights from the tourism sector in a developing country where the concept of knowledge management is still in its infancy stages.

Keywords—Benefits, determinants, Egypt, knowledge management, travel agents.

I. INTRODUCTION

Nowadays, the value of an organization may be based on its intellectual capital. Thus, many organizations began to feel that their employee’s knowledge is the most valuable assets [1]-[4]. The concept of being able to store and use the knowledge generated inside an organization has an obvious appeal. However, the management of this knowledge and the ability to use it for an advantage require careful planning and an understanding of knowledge inside the organization and its employees [5]. Knowledge management (KM) refers to the creation of knowledge repositories, improving knowledge acquisition, enhancing the knowledge environment, and managing knowledge as an asset [6].

The key purpose of KM is supporting continuous learning within the organization in order to improve the ability to cope with constant changes in the market. Consequently, KM is seen as an intentional approach aimed at eliciting required knowledge from knowledgeable people, sharing it with appropriate people at the right time and putting that knowledge into action to improve organizational performance [7].

The interest in KM is understandable given the moves towards knowledge based economies and workplaces. KM efforts focus on the management of knowledge as a strategic asset and a focus on encouraging the sharing of knowledge [8], [9].

KM implementation is a significant source of sustainable innovation and organizational performance [9]. It enables enterprises to share and re-use information resources, and to have the power to make decisions faster, less expensive, efficient, and to increase productivity and revenues [10]. Despite the importance of KM, a limited number of large enterprises have actually begun to actively manage their knowledge assets on a broad scale. Beside large organizations, small and medium sized enterprises (SMEs) have also an explicit need to manage their intellectual capital. SMEs can use KM in their organizations to gain many advantages.

The tourism industry, in particular, has a significant knowledge component and KM could provide substantial benefits [5]. The study and practice of KM has grown rapidly since the 90s, driven by social, economic, and technological trends [11]. However, tourism has been slow in adopting this approach due to not only a lack of gearing between researchers and industry, but also to a ‘hostile’ knowledge adoption environment. Tourism researchers have suggested reasons why KM is limited in research and practice in the tourism and hospitality industry (i.e., [11], [12]). KM concepts in the literature are mostly developed from a manufactured and multinational perspective, thus failing to take into account the many facets of tourism services [12].

The tourism and hospitality industry adapts slowly to KM strategies due to the complexity of the concept, which requires certain skills in data mining, statistics and substantial knowledge of tourism and hospitality management [13]. This research aims to explore the determinants of KM adoption in travel agents in Egypt and how this affects their expected benefits of adoption.

II. LITERATURE REVIEW

A. Knowledge Management Overview

Although it is too difficult to define KM precisely [14], it is noted that there is growing agreement on its meaning [15]. As would be expected, definitions reflect the interest of their authors with a clear distinction between practitioners and academics. The latter approach of KM introduces it as a complex amalgam of disciplines and subjects, including information technology, human resources, business
management, organizational behavior, and psychology. It is described as comprising multiple dimensions including strategy, communities of practice, help desks, capture, storage, and dissemination of knowledge, taxonomies, quality assurance, authentication procedures, budget incentives, and knowledge measures [16]. In contrast, practitioners use KM to leverage within an organization in order to better achieve its objectives; and so they define it as an art of creating value from intangible assets [17], [18]. KM often encompasses identifying and mapping intellectual assets within the organization, generating new knowledge for competitive advantage, making vast amounts of corporate information accessible, and sharing of best practices [14].

Practitioners create value through a process of capturing and making use of a firm’s collective expertise anywhere in the business. This is done through bringing together the organizational processes, information processing technologies, organizational strategies, and culture for the enhanced management and leverage of human knowledge and learning for the benefit of the company [11], [19].

The two approaches of academics and practitioners can be combined to deliver a straightforward and clear definition to which the additional tourism emphasis can be added: “knowledge management is about applying the knowledge assets available to [a tourism] organization to create competitive advantages” [19].

B. The Key Determinants of Knowledge Management

To implement KM successfully in tourism enterprises, the development and understanding of critical factors must be considered. This means that without consideration of these factors, expected benefits are not likely to be delivered [20]. There are key determinants for KM adoption. These include technological readiness, organizational culture and structure, and human resource readiness. ‘TOH’ is the abbreviation given to those three dimensions in extant studies [21]

1. Technological Readiness Determinants

The balanced use of information technology is seen as a factor that can beneficially support different KM processes. Typical example for information technology aiming at the support of KM adoption is database solutions acting as knowledge repositories.

Some of the most important determinants touching the technological domain of KM are information overload and redundancies, and missing instruments for integrated planning and evaluation of KM [32], lack of technological infrastructure to adopt KM [31], low data and information security [33], lack of service exchange [34], and lack of technical assistance to suppliers [26].

2. Organizational Structure and Culture Determinants

There is evidence that the way KM is practiced is strongly dependent on the cultural context in which it is embedded. For the organizational structure, a common determinant of KM is the lack of proper organizational structure to create and share knowledge [22], [23]. Additionally, communication and knowledge flows are restricted into certain directions [24].

Further determinants include deficiency in organization resources that would provide adequate knowledge-sharing opportunities to employees, no adequate knowledge of functioning [25], and shortage of formal and informal spaces to share, reflect, and generate knowledge [26]. Therefore, cultural determinants must be identified and overcome for a successful adoption. These organizational determinants prevent employees from sharing knowledge, teaching and mentoring others, using their expertise to innovate, and improving productivity. In many organizations, employees feel that their promotion depends upon the expertise they have, and not on the extent to which they help others. In addition, some employees may not realize what aspects of their knowledge ought to be shared. Without a systematic routine for knowledge capturing, an organization might not benefit from its accumulative knowledge.

In many organizations, a major cultural shift is required to change employees’ attitudes and behavior, so they would willingly and consistently share their knowledge and insights [27], [28] and have the spirit of sharing [26]. Additionally, formalization and standard operating procedures may hinder KM adoption initiatives [27]. Other determinants of KM adoption encompass lack of trust and lack of management commitment towards KM [29], lack of empowerment [30], lack of motivation and reward for knowledge-sharing [26], in addition to different values, cultural and linguistic environments [22], [31].

3. Human Resource Determinants

Human actors play a central role in the identification, acquisition, creation, storage, structuring, distribution and evaluation of knowledge. The knowledge of an employee is the most important factor for the processes organization within an enterprise, though it is this implicit knowledge, which is most difficult to measure, to store, and to distribute [35].

Human determinants include personal fears and uncertainties, inadequate motivation [32], lack of roles and responsibilities [22], and lack of clear understanding of KM adoption [25]. Further human determinants are fearing of embarrassment for sharing incorrect information [36], [37], lack of time to share knowledge [25], fearing of loss of intellectual property ownership [37], poor verbal written communication, interpersonal and computer skills [26], [38], and lack of education and training [39].

C. KM Benefits

One of the key benefits of introducing KM practices in organizations is its positive impact on organizational performance [40]. KM has a great importance to tourism enterprises because its efforts focus mainly on organizational objectives such as improved performance, competitive advantage, innovation, the sharing of lessons learned, integration and continuous improvement of the organization [41]. In addition, one of the significant goals of KM is to improve the performance of human resources through appropriate KM streamline operations and to reduce...
costs by eliminating the redundancy of knowledge resources [42].

Knowledge is one of the enterprise’s most important assets that influence its competitiveness. One way to capture an enterprise’s knowledge and make it available to all its members is through the use of knowledge management practices [43]. There are many benefits of KM adoption which have been classified under four categories; financial, customers, employees, and processes [44], [45].

In the category of customers, benefits include reducing time to react, increasing quality of products and services, better communication with customers, increasing customer satisfaction, better customer retention, and increasing knowledge on customer.

For employees’ benefits, these include increased motivation, employee involvement, improved teamwork, shorter onboarding time, competence development, increased personal market value, enhancement of personal knowledge base, and increased speed of learning.

In relation to process, KM adoption have led to an acceleration of processes, it reduces redundancies, re-uses internal knowledge, reduces transaction costs, increased process transparency, increased productivity, reduces errors, and saves time in routine work. Financial benefits of KM adoption include better risk management, increased market share, optimized marketing efforts, and reduced administration costs.

III. RESEARCH MODEL AND HYPOTHESES DEVELOPMENT

Based on literature review, the proposed research model of this study explores and conceptualizes the causal relationships among KM determinants, adoption, and the expected benefits. The research model is based on the ‘TOH’ determinants [21] (independent variables) and its effect on KM adoption (mediator) and how adoption affects the expected benefits of adoption (outcome variable). Expected benefits are based on previous studies [44], [45] and are categorized into four categories; financial, employees, processes, and customer benefits (Fig. 1).

![Diagram](image_url)

**Fig. 1 Proposed research model and hypotheses**

Looking at the proposed research model, seven hypotheses were developed. The first three hypotheses measure the effect of knowledge management determinants on knowledge management adoption. The first hypothesis (H1) measures the influence of technological readiness on KM adoption. The second tests the effect of organizational culture and structure on KM adoption (H2). The third investigates how human resource readiness affects KM adoption (H3).

Hypotheses 4 to 7 test the influence of knowledge management adoption on expected benefits of adoption. This includes the effect of KM adoption on financial benefits (H4), processes (H5), customers (H6), and employee benefits (H7).

IV. RESEARCH METHOD

This study uses online questionnaire to collect data from managers of travel agents. The questionnaire is developed based on literature review. It has 40 five-point Likert scale statements. The form includes 6 statements to measure adoption of knowledge management in travel agents, 4 statements for technological readiness, 5 for organizational culture and structure, 7 for human resources, and 18 statements to measure expected benefits. Expected benefits’ measurement is divided into four main categories; financial (4 statements), process (5 statements), employees (5 statements), and customers (4 statements). The questionnaire was piloted on 50 travel agents and reliability statistics showed a good construct validity and reliable measurement.

The population of the study includes travel agents’ category ‘A’ with online presence, counting 317 websites [46]. 181 forms, the ideal sample size best represents the population of the study [47], were completed online by managers of travel agents free of missing data and valid for analysis. Deductive quantitative approach was used to test the hypotheses of the study.

Structural equation modelling, the powerful technique combines measurement and structural models into a simultaneous statistical test, valuable in hypothesis-testing approach and flexible in modelling the causal relationships among multiple predictor and criterion variables [48], was used for analysis purposes. It is valuable for this study because it measures the causal relationships among the constructs of the study 3 main determinants of KM adoption (as independent variables) on KM adoption (mediator), and expected benefits (outcome variable). WarpPLS Software version (5) was used for analysis purposes. Measurement and structural models are developed and fit indices, validity, and reliability concerns were revealed.

V. FINDINGS OF THE STUDY

This section introduces descriptive statistics, measurement and structural models as follows.

A. Descriptive Statistics

Findings of the study revealed that 97% of travel agents responded to the survey working in both local and international markets versus 3% work on a local level only. Table I depicts the mean values and standard deviations of the research model. It is revealed from Table I that respondents agree to the determinants of KM adoption (organizational culture and structure, technological readiness, and human resources), and this leads to a conclusion that knowledge management is not adopted in Egyptian travel agents.
However, managers agree that adopting knowledge management could gain travel agents some benefits, financially, processes-related, customers, and employees-related. These findings reflect the absence of knowledge management concept in travel agents in Egypt.

### TABLE 1

<table>
<thead>
<tr>
<th>Constructs</th>
<th>Mean</th>
<th>Std. deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technological readiness</td>
<td>3.79</td>
<td>.837</td>
</tr>
<tr>
<td>Organizational culture</td>
<td>3.58</td>
<td>.916</td>
</tr>
<tr>
<td>Human resources</td>
<td>3.78</td>
<td>.915</td>
</tr>
<tr>
<td>KM adoption</td>
<td>2.19</td>
<td>.967</td>
</tr>
<tr>
<td>Financial benefits</td>
<td>4.12</td>
<td>.660</td>
</tr>
<tr>
<td>Process benefits</td>
<td>4.19</td>
<td>.611</td>
</tr>
<tr>
<td>Customer benefits</td>
<td>4.20</td>
<td>.820</td>
</tr>
<tr>
<td>Employee benefits</td>
<td>4.16</td>
<td>.666</td>
</tr>
</tbody>
</table>

![Fig. 2 The structural model and hypotheses-testing](image)

**B. Measurement Model**

The measurement model measures the correlations between indicators and their latent variables. The model fit indices are acceptable where average path coefficient= 0.384, P<0.001, average R-squared= 0.288, P<0.001, average adjusted R-squared= 0.279, P<0.001, Average block VIF (AVIF)= 2.847, and Average full collinearity VIF (AFVIF)= 2.849 [49].

It is clear from Table II that values of average variance extracted (AVEs) are greater than 0.50 meaning that convergent validity of the model exists [50], square roots of AVEs are greater than correlations among constructs which is evident of discriminant validity [49]. Cronbach’s alpha and composite reliability values are greater than 0.7 which is an indicator of reliable measurement model [51].

**C. Structural Model**

The structural model measures the causal relationships (cause-effect) among the constructs of the study. Looking at Fig. 2, it is shown the negative effect of three KM determinants on KM adoption in travel agents. It is found that the adoption of KM is negatively affected by the lack of technological readiness (β_{technological readiness → KM adoption}= -0.33, P<0.01) (H1), the lack of organizational culture and structure (β_{organizational culture and structure → KM adoption}= -0.28, P<0.01) (H2), and the lack, and human resources concerns (β_{human resources → KM adoption}= -0.21, P<0.05) (H3). Those three determinants explain 56% of non-adoption of KM by travel agents (R^2=0.56). In turn, the non-adoption of knowledge management is negatively affecting the expected benefits gained by travel agents; financial benefits (β_{KM adoption→financial benefits}= -0.50, P<0.01, R^2=0.25) (H4), process benefits (β_{KM adoption→process benefits}= -0.44, P<0.01, R^2=0.20) (H5), customer benefits (β_{KM adoption→customer benefits}= -0.49, P<0.01, R^2=0.24) (H6), and employee benefits (β_{KM adoption→employee benefits}= -0.44, P<0.01, R^2=0.19) (H7).

**VI. DISCUSSION OF FINDINGS**

Collecting meaningful knowledge, sharing it with the right people, at the right time, is simply referred to as successful organizational performance. Organizations need to adopt an approach that enables them to use and manage the knowledge in order to achieve their target benefits. These benefits could be financial, processes, customers, and employees-related.

To adopt knowledge management successfully and effectively, organizations need to have a unit to develop KM activities within the organization, this unit should have a team to collect data from internal and external sources, these data should be analyzed, categorized, and stored in repositories, these repositories should be accessible, and finally knowledge should have transferred freely within the organization. The components of repositories, data, and people have knowledge-sharing culture are the main components of knowledge management adoption within any organization based on various definitions of knowledge management (i.e. [6]-[9]).

This study has concluded that travel agents do not adopt knowledge management. It is found that travel agents do not adopt the activities of knowledge management. This is represented in the inexistence of a unit to develop knowledge management activities in travel agents, no team to collect data, data analysis, and storing in repositories. This finding is concurrent with the claims that tourism has been slow in adopting knowledge management [11]-[13] although it is an information rich industry and needs to manage this information to gain substantial benefits. The reason of this non-adoption is the determinants of adoption. These determinants include lack of organizational culture and structure, lack of technological and human resource readiness.

This study revealed that the lack of technological readiness has the greatest negative effect on knowledge management adoption in travel agents. Travel agents are missing instruments for integrated KM planning and evaluation for better adoption of knowledge management. This finding confirms the claim that knowledge management needs a careful planning of knowledge within the organization [5]. Therefore, the absence of instruments for planning and evaluation is certainly a cause of non-adoption of knowledge management as revealed by previous studies [32].

In addition, the lack of technological infrastructure to adopt KM is another determinant of adoption. Knowledge management adoption needs logistics and infrastructure to enable data collection, analysis, storing, and sharing. This finding is in line with a previous study [31] where infrastructure is a basic technological component of KM adoption.
Further technological determinants are inefficient e-communications within organization. This inefficient communication means that knowledge will not be shared in an efficient way which in turn defects the successful adoption of knowledge management within organizations. Furthermore, having no repository to store knowledge means the loss of necessary and useful information required for decision-making process. Therefore, it is clear that travel agents lack one main component to adopt management which in turn makes them loss substantial benefits of adoption and performance improvement.

The second category of knowledge management adoption determinants is the lack of organizational culture and proper structure. The lack of organizational culture includes lack of knowledge-sharing culture which is a basic component of successful knowledge management adoption. It is claimed that sharing the appropriate knowledge among the right people is a synonym of knowledge management adoption. Lacking this sharing practice is definitely a barrier to KM adoption. This finding is agreed by a previous study [24] who found that communication flows are restricted into certain directions and [25] who mentioned that this lack of sharing culture could be a result of organization resource shortage. Another reason is the lack of trust among employees to share knowledge among them [29]. Other organizational determinants include the lack of management commitment towards KM adoption. This lack of commitment is a crucial determinant of KM adoption where the support of management in the organization is missing and therefore the strategy to adopt KM is absent. This finding is concurrent with [29] who found that lack of management support and commitment are barriers of KM. Add to this the lack of motivation and rewarding employees for knowledge-
sharing practices [26]. The other organizational barrier is the lack of proper organizational structure to create and share knowledge. This means that there is no clear and solid structure supports knowledge creation, transfer, and sharing throughout the organization. This finding is in line with [22] who pointed out the importance of organizational structure to successful knowledge management adoption.

The third category of determinants is the lack of human resource readiness within organizations. This category encompasses the lack of clear understanding of KM adoption, where employees are not totally aware of how to adopt such concept. This lack of understanding is certainly a barrier to KM adoption that hinders the KM activities flow. This finding is revealed by a previous study [25] where employees are confused in how to adopt such concept. This confusion leads to the second determinant where employees lack specific roles and responsibilities as revealed by extant studies [22]. This reflects the absence of adoption strategy with clear organizational structure and specified roles. Another determinant in this category is employees’ fearing of embarrassment for sharing incorrect information. This fearing is resulting from employees lacking confidence in what to share and what not to. This result is in line with [36], and [37] who found that this psychological feeling of embarrassment could be a barrier to adoption. One reason of lacking confidence of what to share is the lack of education and training on KM activities and practices. This finding is revealed by a previous study [39] in which authors emphasized the important role of education and training for successful knowledge management adoption and getting ready to effective adoption of the concept. A further reason of not sharing knowledge is the lack of time [24] and/ or employees who have poor verbal/ written communications, and weak interpersonal skills to share knowledge [25], and/ or they are not motivated enough to adopt KM [32].

To sum up, travel agents fail to have organizational culture and structure to adopt knowledge management, in addition to the lack of technological and human resource readiness to adopt the activities of knowledge management, which in turn causes travel agents not to adopt the concept and its activities. On the other hand and despite of travel agents do not adopt knowledge management, they perceive KM as an approach to gain them substantial benefits. Managers of travel agents agreed that adopting knowledge management could have benefits relating to processes, customers, employees beside financial benefits. It is found that the financial benefits are the most affected negatively by the non-adoption of knowledge management in travel agents.

The financial benefits that travel agents lose due to non-adoption are the expected increase of market-share, optimized marketing efforts, reduced administration costs, and better risk management. It is obvious that these benefits are information-based in the first place and the absence of information and knowledge could decrease these benefits. Expecting these benefits by travel agents are concurrent with extant studies [44], [45] in which they numerate the financial benefits resulted from knowledge management adoption.

The second category of benefits that travel agent managers expect from knowledge management adoption is customer benefits. Customer benefits come second after financial benefits in terms of negative effect by KM non-adoption. This category includes the expected reduced time to react with customers, increased quality of products and services, increased customer satisfaction, and better customer retention. This category reflects the value of knowledge as a fortune to organizations by which they can keep their customers, increase their satisfaction level and improve their loyalty to the organization as a result of producing high quality products and services and the quick response to their inquiries. This finding is also concurrent with [44], [45] who explained the expected customer benefits of effective knowledge management adoption.

The third category of benefits negatively affected by the non-adoption of knowledge management in travel agents is process-related benefits. It includes effective re-use of internal knowledge, reduced transaction costs, reduced errors, supporting decision-making processes, and increased productivity. It is clear that the main benefit in this category is improving processes to increase productivity through the decreased costs, errors, and confident decisions made. This finding is in line with [44], [45], and [10] who confirmed these benefits for organizations’ processes.

The last category of benefits affected negatively by non-adoption of knowledge management is employee-related benefits. This category includes involving employees in decision-making process, better teamwork, increased speed of learning, shorter time to achieve tasks, and developing their competences. This category reflects the value of knowledge management and sharing for better teamwork and exchanging experiences to learn from each other besides saving time achieving tasks. This finding is in line with [44], [45] who pointed out the expected employee benefits of knowledge management adoption.

To summarize, travel agents do not adopt knowledge management due to the lack of organizational culture/ structure, technological readiness, and human resources. Therefore, they lose many customer, process, employee in addition to financial benefits that could be gained of KM adoption to improve their market-share, and increase their productivity and revenues.

VII. CONCLUSION AND IMPLICATIONS

Tourism enterprises and SMEs, in particular, are slow adopters of knowledge management. Knowledge management implies enterprises to create, collect, share right knowledge among appropriate people at the right time to improve enterprises’ performance. This study is evidence from tourism sector in a developing country, Egypt, in which travel agents do not adopt knowledge management due to some determinants and thus they lose many expected benefits of adoption.

The study revealed that travel agents do not have a unit/ team to develop knowledge management activities; they do not have repositories to store data, and use it later for better
decision-making. The lack of knowledge management adoption perceived by managers is a result of travel agents lacking the technological logistics to effectively adopt the concept, the lack of a proper organizational structure and culture to share and manage knowledge, and the lack of human resource readiness (i.e., lack of clear understanding, lack of specific roles and responsibilities, lack of trust and lack of education and training on KM practices).

The non-adoption of knowledge management in travel agents have negatively affected the substantial benefits they could gain form this adoption. These benefits include increased market-share and better risk management, customer retention, satisfaction, and loyalty, improving processes and increasing productivity, and developing the competencies of employees and saving time of achieving tasks. These benefits could help travel agents to improve their competitive positions and effectively benchmark themselves in travel market, but they should effectively adopt the activities of knowledge management particularly knowledge-sharing practices.

This study contributes to extant knowledge by introducing the determinants of knowledge management adoption in travel agents, as SMEs. The study developed and tested a structural model conceptualizes the causal relationships between KM adoption and its main determinants of organizational culture/structure, technological and human resource readiness. It investigates the negative effect of KM non-adoption on expected financial, process, customer, and employees-related benefits. The current study responds to the claim that there is a limited research in knowledge management area and tourism. Another implication is providing evidence from tourism industry in Egypt as a developing country that could be compared later with a developed country.

This study contributes also to practice. It clearly indicates the main determinants of knowledge management adoption and in the same time it depicts the substantial benefits enterprises could gain from successful and effective adoption of knowledge management. This study explains clearly what determinants travel agents should overcome to gain target benefits. This could help travel agents to identify their weaknesses and level of readiness to adopt knowledge management and target specific benefits to achieve. A clear equation of barriers and benefits of knowledge management adoption is introduced to travel agents. This equation implies the more barriers travel agents could overcome, the more benefits of KM adoption they could gain.

VIII. LIMITATION AND FUTURE RESEARCH

Similar to any study, this study lacks the qualitative research to understand the non-adoption of knowledge management in travel agents and to what extent they achieve the mentioned benefits without adopting knowledge management. Future research should address this limitation and could compare the findings of this study with another study would be conducted in a developed country.

Future venues of research should focus on the human resources within travel agents to understand their lack of KM understanding and the main detailed barriers that hinder their adoption of knowledge management, and how to motivate top management and encourage employees to adopt the activities of knowledge management for better performance of their enterprises.

REFERENCES


