The Impact of Technology Acceptance on the Effectiveness of the Electronic Customer Relationship Management in Hospitality and Tourism industry: The Mediating Role of Employees’ Satisfaction

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Abstract

The E-CRM has evolved as one of the most remarkable platforms that enable organizations to communicate with their existing and potential customers and collect, store, and analyze their data to establish an extensive understanding of their needs. This study aims to measure the influence of technology acceptance on the effectiveness of E-CRM in the tourism and hospitality sector. Furthermore, it measures the mediating effect of employees' satisfaction on the relationship between technology acceptance and E-CRM. For this purpose, a questionnaire was distributed to a convenience sample of employees working in hotels and tourism companies' class (A) in Greater Cairo, Egypt (January to February 2020). The results were analyzed with structural equation modeling and ended up with several guiding recommendations. The results for both hotels and tourism companies indicated that technology acceptance and employees' satisfaction play an important role in E-CRM effectiveness. Moreover, there is a partial mediation of employees' satisfaction on the relationship between technology acceptance and E-CRM effectiveness.

Keywords: Electronic Customer Relationship Management (E-CRM), Tourism and Hospitality Sectors, Technology Acceptance, Employees’ Satisfaction
Introduction

Recently, the Internet had an effective role in facilitating, transferring, and sharing information; as it enables tourists to access information on various products, programs, offers, prices etc. as well as it helps tourism companies and hotels to attract new clients, know their needs, online behavior and purchasing preferences, thus allocating the appropriate means of communication, products, services, and prices for each category separately then influence their purchasing decisions. These technologies provided many services to tourists such as: booking airline tickets, hotel rooms and car rental, electronic tour guides, hotel self-check-in, and automated hotel check-out; which positively affected the tourist experience and satisfaction as well as the competitiveness of tourism companies and hotels (Kaushika et al., 2015; Guler, 2019).

Due to the emergence of these new technologies in addition to the continuous change in tourists’ needs, tourism companies and hotels had to switch from CRM(customer relationship management) that can be explained as a collection of processes of managing accurate information about clients to become loyal customers to E-CRM (electronic customer relationship management) which can be illustrated as a technological system that helps hotels and tourism companies to locate and form long-term relationships with customers by using different technological tools such as email, chat rooms, forums, social media, mobile applications etc.(Kampani & Jhamb, 2020).

The Technology Acceptance Model (TAM) was first presented by Davis in 1989; this model is based on clarifying persons’, firms, or companies’ attitude towards using new technology via two main variables: perceived usefulness (PU) and perceived ease of use (PEOU). Nowadays, after three decades of the emergence of TAM model, tourism and hospitality studies is still largely relying on the
basic elements of this model (Davis, 1989; Ukpabi & Karjaluoto, 2017; Pourfakhimia et al., 2018).

The purpose of this study is to explore the concept of E-CRM, investigate the impact of TAM on the effectiveness of the E-CRM in Hospitality and Tourism, as well as measure the mediation effect of employees’ satisfaction (ES) on the relationship between technology acceptance and E-CRM effectiveness.

Literature Review

1- Electronic Customer Relationship Management (E-CRM) in Tourism and Hospitality

To understand E-CRM in a proper way, the definition of traditional CRM should be first explained. CRM is the process that focuses on the customer (customer-centered-management) (Papaioannou et al., 2014); it manages customer information, builds, and sustains profitable and effective customer relationship to achieve customer loyalty, satisfaction, acquisition, retention, and profitability in addition to enhancing interaction between organizations and their customers (Gigi & Divya, 2020; Ensafi & Shoar, 2021). Besides the rapid growth of technology and the emergence of internet-based services, a new concept of CRM appeared, namely E-CRM (Tavana et al., 2013; Rahimi et al., 2015; Sunny & Abolaji, 2016). E-CRM can be defined as a technological system that enables hotels and tourism companies to improve strong, long-term, personal, and mutually beneficial customer relationships, thus increasing profits, sales efficiency, and business performance (Milović, 2012; Cherapanukorn, 2017). Moreover, E-CRM merges traditional CRM tactics and e-business applications to manage customer relationships and interact with customers automatically by using internet technology, web browsers, email, or other electronic tools (Mang'unyi et al., 2017; NurAdlin et al., 2019; Rosalina et al., 2019; Farmania et al., 2021).
E-CRM has two main types that can be illustrated as follows: Operational E-CRM that supports the front office operations by collecting data and controlling workflow related to marketing, sales, or customer services through electronic communication channels (i.e., chat boxes, websites, e-mails, weblogs, data aggregation systems ... etc.). For example, operational E-CRM enables hotels and tourism companies to easily interact with customers, access their information and identifying their needs (Erkiah & Ladkoo, 2018); and analytical E-CRM that operates at the back-office activities as well as enables organizations to analyze customer characteristics and behavior (by processing, interpreting, distributing, and exploiting customer data) then implementing the appropriate marketing and promotional strategies. For example, analytical E-CRM, enables hotels and tourism companies to use customers’ history information, their feedback, and requests to understand their behavior and adjust their strategies accordingly (Rahimi et al., 2015; Saifi, 2019).

Recently, many hotels and tourism companies tended to use the internet for selling, reserving, providing, advertising, and marketing their services. E-CRM helps hotels and tourism companies to provide a high quality of customer service through several steps which can be illustrated as follows: (1) Collecting, storing and updating massive volume of data and information concerning their customers and competitors, (2) Communicating effectively with customers, (3) Providing services, information, advice, choices, alternatives and solutions to customers, (4) Recording customers’ preferences and complaints, (5) Promoting, restoring and improving their services, (6) Identifying and understanding customers’ needs, (7) Building and implementing marketing strategies aligned with these needs, (8) Improving customers interaction, (9) Serving the customer interest, (10) Enhancing personalized e-services, and (11) providing speed e-responses (Alim & Ozuem, 2016; Sunny & Abolaji, 2016; Mikaeily et al., 2017; Erkiah & Ladkoo, 2018).
In conclusion, implementing E-CRM in the tourism and hospitality sector will be an effective tool for increasing customer loyalty, satisfaction as well as retention rate, reducing business operations costs by using the latest technology (i.e. websites, social media and e-mail …etc.), Maximizing business profitability and market shares, building competitive advantage, achieving a successful business performance, and finally creating a fruitful business environment in these extremely competitive industries (Cherapanukorn, 2017).

2- Technology Acceptance Model (TAM)
To understand individuals’ behavior toward technology use, researchers have adopted many theories and models concerning behavior and intention over last decades. In 1989, Davis presented for the first time the Technology Acceptance Model (TAM); which is considered one of the most important models used in research related to information systems (IS) (Davis, 1989); this model has been used to explain the attitude and intention of individuals, groups, or organizations towards using new technology via two main variables: perceived usefulness (PU) and perceived ease of use (PEOU). The first variable can be defined as the level of belief that using a specific technological system will improve an individual’s work performance, whereas the second variable can be defined as the level of belief that using a specific technological system will significantly reduce an individual’s effort. TAM has been modified by numerous studies and research since 1989 till now by adding new theoretical constructs that greatly influence its main variables (PU and PEOU) (Wahdain & Ahmad, 2014; Dumpit & Fernandez, 2017; Gbongli et al., 2019; Asadi et al., 2019; CheSoh et al., 2019). This study focuses on five main constructs: perceived usefulness, perceived ease of use, enjoyment, information quality and system quality; their influence on determining employees’ acceptance of technology, as well as their impact on the effectiveness of electronic customer relationship and employee satisfaction.
2.1 Perceived Usefulness (PU)
The perceived usefulness (PU) construct can be seen as one of the essential factors identified by TAM which refers to people realization that using new technology would positively affect their job performance. (Sevim et al., 2017; Gu et al., 2019). In the current research, PU refers to employees’ belief that using technology systems in hotels or tourism companies would obviously improve their job performance.

2.2 Perceived Ease of Use (PEOU)
The perceived ease of use (PEOU) construct can be explained as the ability of learning and using an easy technological system without any effort; it can be concluded that the more the technology system is simple and easy to use, the higher the acceptance rate by users (Selamat et al., 2009; Sevim et al., 2017). In the current research, PEOU refers to employees' willingness to use technology systems in hotels or tourism businesses, as well as their perception that these systems can make their jobs easier, especially if they are simple to learn, comprehend, and use (Gu et al., 2019).

2.3 Perceived Enjoyment (PEJ)
The perceived enjoyment (PEJ) construct can be illustrated as the enjoyment, entertainment, and interest of using a technological system; as these would encourage users to accept using this technology system (Davis et al., 1992; Venkatesh, 2000; Huang et al., 2013; Oakley, 2019). In the current research, PEJ can be seen as a significant motivating factor for employees in tourism companies and hotels to accept using technology system in their work.

2.4 Information Quality (IQ)
Information quality (IQ) construct can be outlined as the capability of a technology system to provide correct, relevant, secure, up to date, trustworthy, useful, important, complete, and prime quality information
that meet persons’ expectations, needs, and wishes (Machdar, 2016; Samsi et al., 2016). In the current research, IQ construct may be seen as a vital pillar that helps employees in tourism companies and hotels to use recent, easy, understandable, and important information in their field of work.

2.5 System Quality (SQ)
System quality (SQ) construct can be identified as the capability of this system to provide all the needed elements (i.e., accuracy, reliability, time of response, usability, adaptability, trust, maintainability... etc.) to facilitate the work (Alsamydai, 2014; Alksasbeh & Alqaralleh, 2017). In the current research, SQ construct refers to using a technological system in tourism companies and hotels to facilitate the staff job.

3- Employees Satisfaction
Employee satisfaction is defined as how employees feel about working in an organization (tourism company or hotel) according to their expectations and feelings, which are affected by several factors (employees’ salary and their welfare, working hours, coworkers, stress and conflicts at workplace, work safety and security, working environment and condition...etc.) (Yuan & Jiaqing, 2019). It has a vital influence on achieving profitability, efficiency, productivity and effectiveness in tourism and hospitality sectors (Raziq & Maulabakhsh, 2015; Vijayakumar & Vivek, 2018). Furthermore, employee satisfaction positively affects customer satisfaction due to the quality of service provided by tourism companies and hotels (Perić et al., 2015; Perić et al., 2018). Tourism companies and hotels can increase employees' satisfaction by implementing some procedures related to salary, rewards and compensation systems as well as providing technological systems that would make their work easier and enjoyable (Misoc, 2018).

Using technology in tourism companies and hotels may produce new changes in the working environment (i.e., changes in work tasks, relationships with coworkers, more training courses, using new
systems and devices…etc.); and these changes may influence employees' satisfaction (Mariani et al., 2013). This study examines relationships between (enjoyment and employees' satisfaction; information quality and employees' satisfaction; system quality and employees' satisfaction; usefulness and employees' satisfaction and finally ease of use and employees' satisfaction).

4- The Relationship between Technology Acceptance and E-CRM
Technology and the Internet have a prominent aspect in the implementation and improvement of E-CRM performance by strengthening the relationship between customers and companies and improving sales and marketing efficiency (Azila & Noor, 2011; Saifi, 2019). Technology acceptance and E-CRM have been examined in many research studies e.g., Sanayei et al. (2010) illustrated that innovation factors regarding usage of E-CRM and usefulness of E-CRM have a significant and encouraging impact on using the system. The most significant impact on performance comes from PU, followed by PEOU. The more users think the E-CRM system is useful and easy to use whenever they accept to use it. Mekkamol et al. (2013) found that website contact interactivity and care and service dimensions of the Modeling e-CRM for community tourism positively correlated in upper northeastern Thailand. Navimipour and Soltani (2016) investigated the TAM and the effectiveness of the E-CRM. It was found that TAM variables (ease of use, e-learning systems, and infrastructure capabilities) are key drivers of the effectiveness of E-CRM. It also summarized that the achievement of the E-CRM system depends on the ease of use of the system as well as the ease of use is one of the technological factors This has a major impact on E-CRM performance. Finally, Suresh (2019) proposed that perceived quality, perceived usefulness, perceived ease of use, and perceived enjoyment have a significant influence on consumers' attitude towards E-CRM behavioral intentions. Based upon the previous studies, the suggested hypotheses are:
H1: TAM positively affects Employees’ Satisfaction.
H2: Employees’ Satisfaction positively affects E-CRM effectiveness.
H3: TAM positively affects E-CRM effectiveness.

5- The Mediating Role of Employees’ Satisfaction in the Relationship between TAM and E-CRM Effectiveness
While various research measured the direct effect of TAM on employees' satisfaction and employees' satisfaction on E-CRM effectiveness (Sanaye1 et al., 2010; Perić et al., 2015; Navimipour & Soltani, 2016; Perić et al., 2018), limited research measured the mediation effect of employees' satisfaction on the relationship between TAM and E-CRM effectiveness. This study is among the first attempts to analyze employees' satisfaction as a mediator between TAM and E-CRM. Based upon the results of this research, the following hypothesis is suggested:

H4: Employees’ satisfaction mediates the relationship between TAM and E-CRM Effectiveness

Fig. 1. The research framework of the effect of TAM on Employees’ Satisfaction and E-CRM Effectiveness.

Method and Measures
The research instrument used was a questionnaire directed to employees who work in both hotels and tourism companies. The questionnaire was divided into four sections. The first section

Commented [A1]: How do you test H4 According To H1 – H2 – H3 Es is considered as a mediator variable between TAM and E-CRM H4 is not recommended

Commented [A2]: Through (unstandardized regression weight & Standard error) Sobel Test of mediation in order to approve whether there is mediation or not and the type of mediation (partial/full) mediation
identifies the staff profile such as gender, age, educational level, and department. The second section covers items regarding technology acceptance while parts three and four cover employees’ satisfaction and E-CRM effectiveness respectively (see Appendix 1). Items in parts two, three, and four came from Park et al. (2011), Islam et al. (2014), and Mekkamol et al. (2013) respectively. A five-point Likert scale, where 1 = strongly disagree and 5 = strongly agree was used. To confirm the words of the survey is understandable and to guess the time of contribution subsequently, timing is crucial for hospitality and tourism employees, the survey was piloted statistically on a small sample of 40 employees in both hotels and tourism companies before distribution. A minor revision was completed, i.e., the word “my establishment” has been changed to “my hotel/company” according to respondents’ comments. The scale reliability was measured using Cronbach’s alpha. All constructs were reliable for both samples of hotels and tourism companies where the alpha level was ranged from 0.844 to 0.975 for hotels and ranged from 0.938 to 0.970 for tourism companies compared to an acceptable reliability level above 0.60 (Hair et al., 2013).

Research Sample and Data Collection

The survey was focused on employees in deluxe hotels and tourism companies’ class (A) in Greater Cairo, Egypt investigating their technology acceptance on their satisfaction and effectiveness of E-CRM. Ten international deluxe hotels and thirty tourism companies’ class (A) in Greater Cairo. The survey was self-administrated to employees in the selected hotels and tourism companies. Before filling out the questionnaires, respondents were given a written agreement, and all respondents were reassured of their confidentiality and informed that the survey was done only for research purposes.

It took over two months to distribute the questionnaire (January to February 2020). A total of 300 questionnaire forms were distributed to
a convenience sample of the investigated hotels. Thirty forms in each hotel and ten forms in each tourism company. There were 226 completed and valid forms among them, representing an 85% response rate for hotels. Furthermore, 213 questionnaires were completed and valid for analysis, representing a response rate of 71 percent for tourist companies.

Data Analysis

Respondents’ profile, (e.g., gender and age, educational level, and department), were analyzed using SPSS software version 25 to analyze the data. Moreover, the researchers screened the data and employed the following methods of analysis: the path model in the current research covering the direct effects tested via structural equation modeling (SEM) using AMOS version 25. In addition, utilizing AMOS, regression analysis was used to assess the research hypotheses. Sobel z test was used to examine the mediating effects of employee satisfaction in the link between technology acceptance and E-CRM effectiveness (Sobel, 1982).
Results and Discussions

The Respondents’ Profile

Table 1 reveals that males made up most respondents (77% vs. 23%) in a sample of hotel employees. Concerning employees’ age, 46 percent of respondents were between the ages of 26 and 35, with 28.3 percent of those aged 25 and under. Furthermore, 19% of respondents were between the ages of 36 and 50, with 6.6 percent beyond 50.

It's worth noting that 78.3 percent of respondents had a university or higher education institute diploma. Meanwhile, 13.3% of them had earned a postgraduate degree (Master degree or Ph.D. degree). Likewise, 8.4% of the employees had completed secondary school,

Table 1: Respondents’ Profile

<table>
<thead>
<tr>
<th>Demographic Data</th>
<th>Hotels</th>
<th></th>
<th>Tourism Companies</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequency</td>
<td>%</td>
<td>Frequency</td>
<td>%</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>174</td>
<td>77</td>
<td>70</td>
<td>32.9</td>
</tr>
<tr>
<td>Female</td>
<td>52</td>
<td>23</td>
<td>143</td>
<td>67.1</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25 years or under</td>
<td>64</td>
<td>28.3</td>
<td>94</td>
<td>44.1</td>
</tr>
<tr>
<td>From 26 to 35 years</td>
<td>104</td>
<td>46.0</td>
<td>88</td>
<td>41.3</td>
</tr>
<tr>
<td>From 36 to 50</td>
<td>43</td>
<td>19.0</td>
<td>26</td>
<td>12.3</td>
</tr>
<tr>
<td>Over 50</td>
<td>15</td>
<td>6.6</td>
<td>5</td>
<td>2.3</td>
</tr>
<tr>
<td>Educational Level</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Secondary School Education</td>
<td>19</td>
<td>8.4</td>
<td>8</td>
<td>3.8</td>
</tr>
<tr>
<td>University or Higher Institute Degree</td>
<td>177</td>
<td>78.3</td>
<td>184</td>
<td>86.3</td>
</tr>
<tr>
<td>Postgraduate Degrees (Masters or PhD)</td>
<td>30</td>
<td>13.3</td>
<td>21</td>
<td>9.9</td>
</tr>
<tr>
<td>Computer Proficiency Level</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average</td>
<td>31</td>
<td>13.7</td>
<td>28</td>
<td>13.1</td>
</tr>
<tr>
<td>Experienced</td>
<td>163</td>
<td>72.1</td>
<td>154</td>
<td>72.3</td>
</tr>
<tr>
<td>Expert</td>
<td>32</td>
<td>14.2</td>
<td>31</td>
<td>14.6</td>
</tr>
</tbody>
</table>

23% in a sample of hotel employees. Concerning employees’ age, 46 percent of respondents were between the ages of 26 and 35, with 28.3 percent of those aged 25 and under. Furthermore, 19% of respondents were between the ages of 36 and 50, with 6.6 percent beyond 50.

It's worth noting that 78.3 percent of respondents had a university or higher education institute diploma. Meanwhile, 13.3% of them had earned a postgraduate degree (Master degree or Ph.D. degree). Likewise, 8.4% of the employees had completed secondary school,
indicating that many hotel workers were highly educated (Sobaih & Hasanein, 2020). The computer proficiency of hotel employees varied, 72.1% of the respondents experienced it. Likewise, 14.2% of the are experts and only 13.7% of the average in using a computer, this means that most hotel employees experienced in using the computer.

Table 1 shows that females were most respondents in a sample of tourism company employees, with 67.1 percent compared to 32.9 percent males, which supports Obadic and Marie's (2009) conclusions that women make up most employees in tourism organizations. In terms of age, 44.1 percent of respondents were 25 years old or younger, followed by 41.3 percent of respondents aged 26 to 35 years. Furthermore, 12.3% of the respondents were between the ages of 36 and 50, and 2.3 percent were over 50, demonstrating the youth's dominance in the Egyptian tourist business and validating Elbaz and Haddoud's work (2017).

Table 1 also shows that 86.3% of the respondents held a college or higher institute degree. Simultaneously, 9.9% of them were had postgraduate degrees (Master degree or Ph.D. degree). Besides, 3.8% of the respondents were secondary school holders which indicates that a huge number of the tourism companies' employees in Egypt were highly educated. The computer proficiency of tourism companies' employees various, 72.3% of the respondents experienced it. Likewise, 14.6% of the are experts and only 13.1% of the average in using a computer, this means that the majority of the tourism companies' employees experienced in using the computers.

CFA Results for Measurement Model Constructs

Each construct is factor examined in SPSS using confirmatory factor analysis (CFA) to see if questionnaire questions loaded into their appropriate scales or not. Item loading of (0.40) is fitting for a sample size of 200, (0.35) for a sample size of 250, and (0.30) for a sample size of 350 (Perera et al., 2018). To provide a high degree of
significance, a factor loading of (0.40) was chosen for both the hotel sample (N = 226) and the tourism enterprises sample (N = 213) in the current study. As a result, components with a load of 0.40 or higher were included in the study (see Appendix 1).

Technology acceptance factors have been measured using a 17-item scale adapted from Park et al. (2011). It was bundled as follows: enjoyment, information quality, system quality, perceived usefulness, and perceived ease of use. For all item loadings, there is a suitable convergence of technology acceptance factor for both hotels and tourism companies were high and significant and ranged from high of (0.99) to a low of (0.75) for the factors assigned in a sample of hotels and the variables assigned in a sample of tourism organizations ranged from a high of (0.97) to a low of (0.79) (See Appendix 1).

The overall satisfaction of employees regarding using the technology of E-CRM has been measured using a 3-item scale adapted from Islam et al. (2014). For both hotels and tourism companies, all loadings employee satisfaction factors were highly significant, ranging from (0.87) to (0.71) for the factors assigned in a sample of hotels and (0.88) to (0.74) for the factors allocated in a sample of tourism organizations (see appendix 1). This signifies that each item scored highly on its characteristics.

E-CRM effectiveness factor has been measured using a 5-item scale adapted from Mekkamol et al. (2013). For both hotels and tourism companies, all item loadings of the E-CRM effectiveness factor were highly significant, ranging from a high of (0.90) to a low of (0.74) for factors assigned in a sample of hotels and a high of (0.92) to a low of (0.81) for factors assigned in a sample of tourism companies (see appendix 1). This means that each item had a strong weighting on its factors.
Testing Research Hypotheses: The Direct Relationships

Table 2 summarizes the results regarding the hypotheses of the study proposed previously, particularly the direct relations, and will be discussed in the following paragraphs.

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Hypothesized Relationship</th>
<th>Hotels ( \beta )</th>
<th>( t )-Value</th>
<th>Result</th>
<th>Tourism Companies ( \beta )</th>
<th>( t )-Value</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1</td>
<td>TAM ( \rightarrow ) ES</td>
<td>0.140</td>
<td>13.38**</td>
<td>Supported</td>
<td>0.148</td>
<td>16.69**</td>
<td>Supported</td>
</tr>
<tr>
<td>H2</td>
<td>ES ( \rightarrow ) E-CRM Effectiveness</td>
<td>0.416</td>
<td>4.023**</td>
<td>Supported</td>
<td>0.485</td>
<td>4.007**</td>
<td>Supported</td>
</tr>
<tr>
<td>H3</td>
<td>TAM ( \rightarrow ) E-CRM Effectiveness</td>
<td>0.139</td>
<td>6.395**</td>
<td>Supported</td>
<td>0.134</td>
<td>5.658**</td>
<td>Supported</td>
</tr>
</tbody>
</table>

Note: \( \beta \) = Standardized path; *Absolute \( t \)-value > 1.96, \( p < 0.05 \); **Absolute \( t \)-value > 3.29, \( p < 0.001 \).

Hypothesis 1 focused on the impact of TAM on ES. It was hypothesized that TAM positively affects ES. Regarding both hotels and tourism companies, the results respectively demonstrated that ES is statistically dependent on TAM (\( \beta = 0.140, p < 0.001 \)); (\( \beta = 0.148, p < 0.001 \)). This means that this hypothesis is supported. This result agrees with several studies (i.e., Sanayei et al., 2010; Perić et al., 2015; Navimipour & Soltani, 2016; Perić et al., 2018) who found that TAM is the powerful source of ES.

Hypothesis 2 dealt with the impact of ES on E-CRM effectiveness. It was suggested ES positively affects E-CRM effectiveness. Both hotels and tourism companies found that there is a positive and significant effect of ES on E-CRM effectiveness (\( \beta = 0.416, p < 0.001 \)) and (\( \beta = 0.485, p < 0.001 \)), respectively. This suggests that hypothesis 2 is supported. This finding is in line with the findings of several studies (e.g., Tsai et al., 2007; Ahmad & Tarmudi, 2012; Islam, 2014; Yeh, 2014) showing ES has a positive impact on E-CRM effectiveness.
Hypothesis 3 was focused on the influence of TAM on E-CRM effectiveness. It was assumed that TAM had a significant positive effect on E-CRM effectiveness. The results for both hotels and tourism companies revealed that positive and significant paths from TAM to E-CRM effectiveness respectively (β=0.139, p<0.001); (β=0.134, p<0.001). This implies that hypothesis 3 is supported. This result is in line with further research (i.e., Jutla et al., 2001; Holzinger et al., 2011; Navimipour & Soltani, 2016) who confirmed that TAM was identified as key enablers of E-CRM.

Testing Research Hypotheses: Mediating Relationships

The Sobel z test was used to test mediating relationships. Table 3 shows the results, which were consistent with the mediation hypotheses.

<table>
<thead>
<tr>
<th>Table 3: Hypotheses Test Results for Indirect Relationships</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hypothesis</td>
</tr>
<tr>
<td></td>
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<td></td>
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<tr>
<td>H4</td>
</tr>
</tbody>
</table>

** P ≤ 0.001, * P ≤ 0.05

As shown in Table 3, it was hypothesized in H4 that ES has a mediation effect on the relationship between TAM and E-CRM effectiveness. Regarding both hotels and tourism companies, the result of hypothesis H4 demonstrated that ES partially mediates the relationship between TAM and E-CRM effectiveness respectively (Sobel z test= 3.880, p<0.01); (Sobel z test= 3.894, p<0.001). This means that TAM positively affects E-CRM effectiveness directly and indirectly.
Conclusion and Implications

With the growth of the internet and the broad use of web technology, organizations now can spread E-CRM technology capabilities. Nowadays, organizations know the customers are the driving force for their success and survival. The present study aims to examine the impact of technology acceptance on the effectiveness of E-CRM in the tourism and hospitality sector. Likewise, it measures the mediation effect of employees’ satisfaction in the relationship between TAM and E-CRM effectiveness. A survey was conducted with a sample of employees in deluxe hotels and tourism companies’ class (A) in Greater Cairo, Egypt, and the results were analyzed with structural equation modeling. The study showed that the E-CRM improves customer relationships and interactions and creates a competitive advantage in the marketplace. Many hotel and tourism companies are moving towards web-based customer services to reduce costs and provide real-time services to enhance customers’ convenience and satisfaction. Furthermore, implementing E-CRM in the tourism and hospitality sector would be an efficient tool for increasing customer loyalty, satisfaction as well as retention rate, reducing business operations costs by using the most recent technology (i.e. websites, social media, and e-mail …etc.), Maximizing business profitability and market shares, building competitive advantage, achieving a successful business performance, and eventually creating a fruitful business environment in this extremely driven industry. This study provided a model and framework for the factors assessing the impact the direct and indirect on E-CRM effectiveness. The findings for both hotel and tourism companies show that organizations should have appropriate technical staff, hardware, and software to provide technical support for using E-CRM systems to establish customer relationships.
and serve customers. The findings from this study address several critical implications for information systems and information management research.

The current study examined the influence of employees' technology acceptance on the effectiveness of E-CRM. TAM variables (PEOU, PU, SQ, and IQ) are the key drivers of the effectiveness of E-CRM. Furthermore, the success of the E-CRM system is subjected to the accessibility of the system. Therefore, this study concluded that ease of use is one of the significant technological factors that affect the performance and effectiveness of E-CRM. The findings obtained showed that, to improve the effectiveness of the E-CRM system, organizations should develop their infrastructure capabilities and acceptance technology strategies to support the implementation of the E-CRM system. Finally, the study shows that one of the useful ideas for the effectiveness of E-CRM is that organizations should focus on employee satisfaction, reduce customer costs, and apply simple technological systems to customers and employees.

References


The Impact of Technology Acceptance on the Effectiveness of the Electronic Customer Relationship Management in Hospitality and Tourism Industry: The Mediating Role of Employees' Satisfaction

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### Appendix 1: The Research Instrument

<table>
<thead>
<tr>
<th>Source</th>
<th>Construct</th>
<th>Items</th>
<th>Hotel Companies</th>
<th>Tourist Companies</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>M</td>
<td>SD</td>
<td>Factor Loading</td>
</tr>
<tr>
<td></td>
<td>Enjoyment</td>
<td>4.4</td>
<td>0.65</td>
<td>0.793</td>
</tr>
<tr>
<td></td>
<td>Information Quality</td>
<td>4.3</td>
<td>0.68</td>
<td>0.901</td>
</tr>
<tr>
<td></td>
<td>System Quality</td>
<td>4.3</td>
<td>0.70</td>
<td>0.853</td>
</tr>
<tr>
<td></td>
<td>Perceived Usability</td>
<td>4.2</td>
<td>0.69</td>
<td>0.835</td>
</tr>
<tr>
<td></td>
<td>Perceived Ease of Use</td>
<td>4.2</td>
<td>0.65</td>
<td>0.840</td>
</tr>
<tr>
<td></td>
<td>Employee Satisfaction</td>
<td>4.2</td>
<td>0.69</td>
<td>0.918</td>
</tr>
<tr>
<td></td>
<td>E-CRM Effectiveness</td>
<td>4.2</td>
<td>0.62</td>
<td>0.872</td>
</tr>
</tbody>
</table>

The E-CRM system enables me to access many links to other useful web resources (e.g., news, forums, blogs, and videos).

The E-CRM system provides up-to-date information.

The E-CRM system provides relevant information for my job.

The E-CRM system supports interactivity between employees and the customers via chat, forums, discussions, etc.

The E-CRM system enhances my career performance.

Overall, I find the E-CRM system to be useful.

The process of using E-CRM is clear and understandable.

The company hotel decides to use the E-CRM system as a time saver.