



The influence of optimism and innovativeness on customers' perceptions of technological readiness in five-star hotels

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Abstract

This study aims to investigate the impact of innovation and customer optimism on the ease of using self-service technologies. A total of 940 respondents from 46 hotels answered a survey questionnaire. A stratified random sampling technique was used to select participating hotels from five tourist regions in Egypt. Descriptive statistics are computed to show the level of agreement towards technological innovation and optimism. Regressions are then estimated to test the effects of innovation and optimism on perceived technological accessibility. With respect to technological innovation, survey participants generally enjoyed learning about new technology products. Similarly, the respondents were highly optimistic about the use of technology. Regression results indicate that technological innovation and customer optimism towards technology are positively correlated with the perceived accessibility of self-service technologies. The effective application of self-service technologies in hotels is not well understood in the current literature, despite the implications for higher-quality customer experiences. This study contributes to the fields of hotel/tourism and consumer technology research. The continuing challenges and fierce global competition that have emerged in today's business environment, especially in the hotel industry, were bound to shed light on the subject of customers' perceptions of technological readiness in five-star hotels in Egypt, which can be perceived as an issue of great importance for hotel management.

Keywords: Self-service technologies, Innovation, Optimism, Customer perception, Technological accessibility.

1. Introduction

The hospitality industry is one of the world's leading economic sectors, showing stable growth despite economic downturns (UNWTO, 2015). According to statistics from UNWTO Tourism Highlights (2015), export earnings from international tourism amounted to \$1.5 trillion (6% of world exports) in 2014, with international tourist arrivals increasing by 4.4%, reaching a total of 1.14 billion, up from

1.09 billion in 2013 and projected to grow by 3.5% in 2017 (UNWTO, 2017). These statistics proved that tourism is a significant economic sector and a human activity that millions of people engage in worldwide. Tourism also creates employment, and it is a major industry in many developing countries (Turner and Sears, 2013). Tourism directly employed over 98 million people, representing 3% of total world employment (Turner and Sears, 2013), and contributed US\$2.3 trillion and 109 million

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jobs worldwide in 2016 (United Nations World Tourism Organisation (UNWTO) Highlights, 2017). "By 2027, travel and tourism are expected to support more than 380 million jobs globally, which equates to 1 in 9 total jobs in the world, and the sector is expected to contribute around 23% of total global net job creation over the next decade" (UNWTO, 2017). Technology is viewed as a necessity for all hospitality and travel businesses, and 2017 is considered the year travel companies think beyond the "what" of technology innovation and proliferation. "the shiny devices, applications, and capabilities—and understand what technologies consumers are ready to adopt and what experiences will drive real value," UNWTO (2017). This is also evident in the literature of hospitality, tourism and information technology since last decade (Lee, 2022; Legrand, Chen and Laeis, 2022; Elsayy, 2023).

Technology has infused the service sector over the past few decades and has affected every aspect of service management and delivery (Kowalkowski, Bigdeli, and Baines, 2022). The face of the service industry includes increasing technological elements that replace employees or enhance the service process with new aspects (Jasiulewicz-Kaczmarek, Legutko, and Kluk, 2020). Many airlines have streamlined their operations with self-check-in and automatic scan facilities (Kalbarczyk, Kwasiborska and Gładys, 2023). Banks encourage their customers to manage their accounts online and reduce their offline branches (Singh and Sood, 2023; Aboushouk and Elsayy, 2020). These technologies have also made their way into the hotel industry, e.g., hotels have used electronic kiosks as check-in systems to offer their guests a variety of hotel facilities, such as room facilities, which customers can simultaneously virtually select from without interaction with any of the hotel employees.

A shared application of these technologies is known as self-service technology (Hsu, Nguyen and Huang, 2021). Self-Service Technology (SST) is a common term used to describe a wide variety of

technological interfaces that enable customers to produce a service independent of direct employee involvement (Shim, Han and Ha, 2020). Generally, there are two basic types of self-service technologies. The first one is the transaction, which is related to technologies such as placing an order, scanning, or paying for services. The second type is customer service or information-related technologies, which are often referred to as self-service information technologies (Oliveira, Maia, Fonseca, and Moraes, 2021).

Implementation of new technologies, including SST, is very costly and time-intensive. To avoid the loss of investment, hotel companies should understand the reasons for acceptance or avoidance before they implement such technologies in their businesses (Cao, Duan, Edward and Dwivedi, 2021). The crucial factor is the awareness of the intentions of the customer to use new technology. Additionally, a flexible environment and strong competitive atmosphere force companies to apply new technology, techniques, and practices. As a result of this effort, various new management techniques have appeared (Barnes, 2020; Elkhwesky et al., 2023). However, applications of SSTs are still limited within the field of hotel business worldwide, including Egypt.

To expand on the literature regarding the incorporation of SSTs in hotel operations, this study aims to determine the impact of innovation and customer optimism towards technology on the perceived ease of using SSTs. The next section of this paper reviews related literature on acceptance, innovation and customer optimism. Following, the study's descriptive methodology is discussed. Then, the results of the data analysis are presented. Finally, the paper concludes with major findings and recommendations.

2. Literature Review

Section 2.1 discusses the behavior of customers using technology; specifically, the concept of their capability and willingness to use SSTs. Section 2.2 discusses customer

readiness to accept the applications for SST in the hotel industry. This section aims to support the idea that increasing the ease of using SSTs will lead to a greater positive customer experience and build loyalty.

2.1 Technology readiness: innovativeness and optimism

Ismail and Wahid (2020) stated that technology readiness can be regarded as an overall state of mind resulting from a gestalt of mental enablers and inhibitors that cooperatively limit a person's tendency in the direction of using new technologies. Amelia, Mathies and Patterson (2022) found that there are some physical characteristics that fulfil the customers' acceptance of using SST or service outcomes through technology. Thus, the concept of technology readiness refers to customers' tendency to use and embrace the latest technologies for achieving goals, e.g., enhancing their lifestyle, facilitating work, or other activities. Shin and Dai (2022) recommend that firms encourage their customers to use SST by increasing the level of application of such technologies in their businesses. This will allow firms to achieve their goals of technology readiness for customers and increase the level of satisfaction with their services.

The Technology Readiness Index (TRI) was developed to measure acceptance and perceptions of using technology. TRI contains four sub-dimensions such as optimism, innovativeness, discomfort, and insecurity (Hassan, Nassar and Kamal, 2022; Alarafee, Sallabi, Altriki and Maatuk, 2022). Although Shin and Dai (2022) have studied the four dimensions and their effect on the acceptance of technology, we believe that separating the two dimensions of optimism and innovation will facilitate further study of their effect on ease of use of SSTs, specifically in the context of hotels in Egypt. Similar to Massey, Khatri and Montoya-Weiss (2007) studied the possible positive and negative feelings that may develop in the minds of customers from using SST. Explicitly, technology-enthusiastic

customers are more likely to use innovative technology to enrich their lives and work and, therefore, gain satisfaction (Buhalis and Cobanoglu, 2014). Wiese and Humbani (2020) segmented customers and identified "five distinct groups of technology users: explorers, pioneers, skeptics, paranoids, and laggards". "Explorers" and "pioneers" segments include optimism and innovativeness as characteristics of higher contributors or users of technology. Accordingly, explorers and pioneers are customers who are fascinated by innovative technology (innovativeness) and are more optimistic about adopting new technology (optimism). These segments perceive little to no difficulties in adopting technology such as SSTs (Massey et al., 2007). However, optimism means that customers have an apposite view of using or interacting with new technology and they consider that self-service technology offers them flexibility, freedom, and more efficiency in the work environment (Park, Ha, and Jeong, 2021).

In this study, optimism is defined as a construct that provides customers with more control, flexibility, and effectiveness in their lives. Typical statements of optimism (a positive vision of using technology) as an example: customers prefer doing business through computers; technology gives guests more control of their decisions; and technology provides customers with more efficient processes. While innovativeness is the capability of individuals to use new technology, enabling them to look forward to the advancements and developments in technology based on the type of product and service, for example, customers usually use high-tech products and services independently, and the customers become the first among their peers to acquire the usage of new technology.

2.2 Self-service technologies, customer readiness and ease of use

While the application of SST is steadily growing within the hotel industry, customers have a growing readiness and acceptance to use SST. Previous research

concluded that there is a significant relationship between customer readiness, the extent of the application, and the ease of use of SST (Shin and Dai, 2022). Torkzadeh, Zolfagharian, Yazdanparast and Gremler (2022) defined customer readiness (CR) as the customer's tendency to use new technologies. Marín-García, Gil-Saura, and Ruiz-Molina (2022) viewed CR as a circumstance or state-owned in which a customer is likely to try new technology, believing that CR can be abstracted as role clarity, motivation, and ability of usage. Furthermore, Banerjee and Sreejesh (2022) agree that CR is customers' tendency (intrinsic and extrinsic motivation) to receive the service to use technology for achieving ease and satisfaction at work or in a home environment and confirm that there is a relationship between role clarity and customer readiness for the recognition of using service technology. Role clarity happens when customers have more information and knowledge about these services, which in turn affects their ease of use. Hence, hotel companies should understand the perceptions and motives that affect customers' readiness of use and customise the use of technology to provide customers with more ease with these applications.

Customisation of service is defined as services that are provided to guests to satisfy their needs according to their lifestyles and preferences. The most important advantage of service customisation is to make guests feel unique and therefore establish hotel brand loyalty (Górska-Warsewicz and Kulykovets, 2020). Hsieh and Chuang (2020) state that "in hotels, the intangible causes such as pleasant, friendly service interactions and knowledgeable service staffs are dominant, even though the tangible elements are important. It is therefore crucial that front-line staff are skilled in providing guests with enjoyable and customised service experiences." However, customisation of service is vital when the customers' needs are unpredictable (Kim, Park, Kim, Kwon, Sohn, Yoon, and Seo, 2021). Consequently, technological innovations that are applied in hotels can facilitate service customisation, e.g., creating a database of

guests' information (guest history) via the collection of data related to guests' preferences, expectations, and other requests that customise the service for them. This database provides valuable information about guests for future reservations and facilitates the check-in process (Nassar, Abdeen, and Hassan, 2017; Njue, 2020; Elsaywy and Eltayeb, 2023). In addition, customisation of service is achievable by using SST, which allows guests to choose from a variety of services and amenities in a streamlined approach and also offers guests additional privacy for their information as it is protected by several layers of security developed by database systems (Cobanoglu, Berezina, Kasavana, and Erdem, 2011).

3. Methodology

3.1. Hypotheses and regression model

Two main hypotheses were formulated for the current research (Fig. 1).

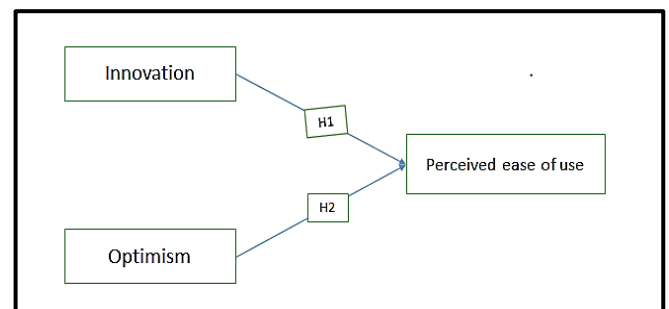


Fig.1. the hypothetical framework of the research.

The two hypotheses of this study are as follows.

H1: Innovation has a positive effect on a customers' perceived ease of use of SST.

H2: Optimism has a positive effect on a customers' perceived ease of use of SST.

To test if innovation and optimism is correlated with the accessibility of using SSTs, regressions are estimated with the ordinary least squares method in the SPSS 23 software. The generalized equation form is as shown in equation (1).

$$(1) \text{ Perceived Ease of Use} = \alpha + \beta X,$$

Where X is the level of innovation or optimism. This model will indicate if a statistically significant correlative relationship is available between the variables exists. The direction of the association is contingent on the sign of the coefficient for the independent variable.

The reliability was determined using Cronbach's alpha measurement. According to the criteria of Hair, Black, Babin, Anderson, and Tatham (2014) and Hayes and Coutts (2020), when the level of reliability exceeds 0.60, it can be perceived as acceptable. The value of Cronbach's alpha for each questionnaire component was estimated in this study (Table 1) and exceeded 0.60 for each construction.

Table 1. Reliability Analysis

Measures	No of Items	Cronbach's Alpha
Innovativeness	7	.829
Optimism	10	.819
Perceived Ease of use	6	.834

3.2. Data collection

The instrument used for data collection involved self-administrated questionnaires. Many scenarios for using SST were offered to the participants of the study before they answered the questions. In these scenarios, participants were asked to select between no choice (people can only use the self-service technology option), limited choice (people can choose between two options: self-service technology and the traditional service outlet), and full choice, where people can choose among three different service modes (Ho, Mulley, and Hensher, 2020). The questionnaire consisted of three sections. The first section collected demographic information such as age, gender, experience, professional status, and marital status. The second section included items to measure the study variables that are affected by using self-service technology: innovativeness, optimism, and perceived ease of use. The third section provided statements pertaining to the customer's perceived SST accessibility. The sample size was 940 respondents, selected from 46 hotels. Sections 3.3 and 3.4 describe the

questionnaire design and the process of sample selection.

3.3. Questionnaire design and administration

A five-point Likert scale (from 1 = *strongly disagree* to 5 = *strongly agree*) was adopted throughout the questionnaire to measure the study variables and test the study hypotheses. The questionnaire was specifically designed to accomplish the objectives of the study and test the study hypotheses. The questionnaire will measure the customers' intention to use self-service technology in five-star hotels in Egypt and is divided into three sections.

Six statements were presented to the survey participants to measure their perceived ease of using SSTs, requiring them to rate their level of agreement with the statements based on a Likert scale (Table 2). The same method was adopted for levels of innovation and optimism in using SSTs (Tables 3 and 4).

Table 2 – Statements interpreting level of perceived ease of use

Statements
PEOU.1 - Learning to operate SST is easy for me
PEOU.2 - I find it easy to get SST to do what I want it to do
PEOU.3 - Usage of SST is clear and understandable
PEOU.4 - I find it cumbersome to use SST
PEOU.5 - It is easy for me to remember how to perform tasks using SST
PEOU.6 - Overall, I find SST easy to use

Table 3 – Statements interpreting level of innovation

Statements
INN.1 - Other people come to me for advice on new technologies
INN.2 - It seems my friends are learning more about the newest technologies than me
INN.3 - I'm among the first in my circle of friends to acquire new technology when it appears
INN.4 - I can usually figure out new high-tech products and services without help from others
INN.5 - I keep up with the latest technological developments in my areas of interest
INN.6 - I enjoy the challenge of figuring out high-tech products
INN.7 - I have fewer problems than other people in making technology work for me

Table 4 – Statements interpreting level of technological optimism

Statements
OPT.1 - Technology gives people more control over their daily lives
OPT.2 - Products and services that use the newest technologies are much more convenient to use specially in hotels
OPT.3 - I like the idea of doing business via computers because I have not limited to regular business hours
OPT.4 - I prefer to use the most advanced technology available in hotel
OPT.5 - I like computer programs that allow me to customize things to fit my own needs
OPT.6 - Technology makes me more efficient in my occupation
OPT.7 - I find new technologies to be mentally stimulating
OPT.8 - Technology gives me more freedom of mobility in hotel
OPT.9 - Learning about technology can be as rewarding as the technology itself
OPT.10 - I feel confident that machines will follow through with what I instructed them to do

3.4. Sampling

The population of the study comprises customers from five-star hotels in Egypt. The hotels were selected on the basis of the SST's extended application. Egyptian Hotel Guide (EHA 2019), edition 33, was used to generate the sampling frame of all five-star hotels operating in Egypt. A sample of about 30% of five-star hotels from five touristic destinations (Cairo, North West Cost, Canal Zone, Sinai, Red Sea, and Upper Egypt) in Egypt. The sampling frame contained 153 five-star hotels, and 46 of them were selected. The sampling technique used to select the hotels from the five destinations was stratified random sampling.

4. Results and discussion

This section presents descriptive statistics for perceived ease of SST use, level of innovation and level of technological optimism; followed by the results of estimating the regression model as defined in Section 3.1.

4.1 Respondents profile

Table 5 shows the characteristics of the sample. It includes respondents' nationality, gender, age, marital status, educational level, occupational level, experience of computer usage and finally the department to which they belong.

Table 5: Respondents profile

Item	Frequency	Percentage
Nationality		
Egyptian	261	27.8
German	226	24.0
English	120	12.8
Ukrainian	47	5.0
Swiss	43	4.6
Russian	39	4.1
Hollanders	29	3.1
Polish	26	2.8
Czech	18	1.9
Other	131	13.9
Gender		
Male	560	59.6
Female	380	40.4
Age		
18-25	286	30.4
26-35	309	32.9
36-45	210	22.3
46-55	88	9.4
56-65	20	2.1
Older than 65	27	2.9
Marital Status		
Single	449	47.8
Married	409	43.5
Divorced	43	4.6
Widowed	39	4.1
Education level (the higher status currently possessed)		
Others (Middle Schools-Secondary Education-Junior High Schools-High Schools-..... etc.)	57	6.1
Sub-school Education	140	14.9
Bachelor's Degree	561	59.7
Master Degree or Doctorate	182	19.4

Item	Frequency	Percentage
Occupation level		
Top management /Professionals	154	16.4
Supervisory /Middle management	277	29.5
Self-employed / own business	61	6.5
Student	234	24.9
Retired	63	6.7
Other (.....)	151	16.1
I haveknowledge about how to use a computer.		
Basic	131	13.9
Average	435	46.3
Advanced	374	39.8
How many times did you stay in this hotel?		
Once	197	21.0
Twice	207	22.0
Three times	172	18.3
More	364	38.7
For how long have you been staying?		
1 Night	62	6.6
2-4 Nights	223	23.7
4-6 Nights	294	31.3
More than a week	361	38.4
Purpose of visit		
Business	153	16.3
Leisure	570	60.6
Other	217	23.1

In relation to the respondents' genders, there is a higher percentage of male respondents (59.6%) than female respondents (40.4%). Regarding the respondents' nationalities, it was found that 27.8% of the respondents were Egyptian, 24% were German, 12.8% were English, 5% were Ukrainian, 4.6% were Swiss, 4.1% were Russian, 3.1% were Hollanders, 2.8% were Polish, 1.9% were Czech, and 13.9% were of other nationalities. It was found that 30.4% of the respondents were aged between 18 and 25 years, and 32.9% were between the ages of 26 and 35 years. As for marital status, the highest percentage (47.8%) were single, while the rest (43.5%) were married.

Regarding the educational level of the respondents, the majority of them were recorded to have a bachelor degree (59.7%), while 19.4% had post-graduate degrees (master degree and doctorate). The occupation levels of the respondents were grouped into six categories, as shown in Table 4.2: top management/professionals (16.4%), supervisory/middle management (29.5%), self-employed/own business (6.5%), students (24.9%), and other positions (16.1%). With respect to experience with computer usage, the respondents were grouped into three categories according to degree of knowledge (see table 5). Of the respondents, 46.3% were recorded as having average knowledge, 39.8% had advanced knowledge, and 13.9% had basic knowledge about using technology in hotels. The results also revealed that 60.6% of respondents visit a hotel for leisure.

4.2 Perceived ease of usefulness

The calculated means and standard deviations of perceived ease of use are presented in Table 6. The basic statements that constitute the ideal perceived ease of use were perceived to be high. The statement with the lowest mean was PEAOU4 at 3.13 ± 1.21 , while the highest was PEAOU2 4.00 ± 0.82 (PEAOU 1 had the same mean but a greater standard deviation of 0.91). The overall averages mean score for this subsection is 3.82 ± 0.61 .

Table 6 – Descriptive statistics for perceived ease of use

Statements	S.D.	Mean
PEOU.1 - Learning to operate SST is easy for me	0.91	4.00
PEOU.2 - I find it easy to get SST to do what I want it to do	0.82	4.00
PEOU.3 - Usage of SST is clear and understandable	0.87	3.88
PEOU.4 - I find it cumbersome to use SST	1.21	3.13
PEOU.5 - It is easy for me to remember how to perform tasks using SST	0.90	3.95
PEOU.6 - Overall, I find SST easy to use	0.85	3.95
Overall agreement regarding the perceived ease of use statement	0.61	3.82

4.3 Descriptive statistics for innovativeness

The responses concerning innovation have relatively high scores (see table 7). It is clear from the results that most five-star hotel customers indicated that they agree to use SST during their accommodation. The overall average means score for innovation is 3.65 ± 0.60 . The lowest mean belongs to INN.2 at 3.12 ± 1.03 . The statement with the highest mean is INN.6 at 4.18 ± 0.87 , showing that the respondents generally enjoyed learning about new technology products.

Table 7 – Descriptive Statistics for level of innovation

Statements	S.D.	Mean
INN.1 - Other people come to me for advice on new technologies	1.02	4.06
INN.2 - It seems my friends are learning more about the newest technologies than me [reverse scored]	1.03	3.12
INN.3 - I'm among the first in my circle of friends to acquire new technology when it appears	0.99	3.18
INN.4 - I can usually figure out new high-tech products and services without help from others	0.99	3.58
INN.5 - I keep up with the latest technological developments in my areas of interest	0.94	3.84
INN.6 - I enjoy the challenge of figuring out high-tech products	0.87	4.18
INN.7 - I have fewer problems than other people in making technology work for me	0.98	3.56
Overall agreement regarding innovation	0.60	3.65

4.4 Descriptive statistics for level of optimism

Responses concerning the optimism statement are fairly balanced across with high

scores. According to the calculated means of the recorded scores (see table 8), the questions that constitute the ideal optimism statement were perceived to be high. The overall mean score is 4.16 ± 0.70 , demonstrating that the hotel customers tend to be optimistic towards technology.

Table 8 - Descriptive statistics for optimism

Statements	S.D.	Mean
OPT.1 - Technology gives people more control over their daily lives	0.86	4.25
OPT.2 - Products and services that use the newest technologies are much more convenient to use specially in hotels	0.86	4.27
OPT.3 - I like the idea of doing business via computers because I have not limited to regular business hours	0.98	4.04
OPT.4 - I prefer to use the most advanced technology available in hotel	0.97	4.25
OPT.5 - I like computer programs that allow me to customize things to fit my own needs	0.88	4.25
OPT.6 - Technology makes me more efficient in my occupation	0.900	4.23
OPT.7 - I find new technologies to be mentally stimulating	1.08	3.89
OPT.8 - Technology gives me more freedom of mobility in hotel	0.90	4.12
OPT.9 - Learning about technology can be as rewarding as the technology itself	0.84	4.11
OPT.10 - I feel confident that machines will follow through with what I instructed them to do	0.86	4.14
Overall agreement toward the optimism statements	0.70	4.16

4.5 Regression results

Sentiment towards innovation explains 20.10% of the variation in perceived technological accessibility (see table 9). Agreements with the innovation statements tend to be correlated positively with the use of SSTs ($\beta = 0.46, p < 0.001$). In other words, the increment in innovation is related to improvement in the degree of perceived ease of use. The implication is that innovation is a statistically significant predictor of perceived ease of use.

Table 9 – Regression Results

Hypothesis	B	P	R-squared
H1	0.46	< 0.001	20.10%
H2	0.47	< 0.001	28.20%

Similarly, optimism towards technology explains 28.20% of the variation in perceived ease of use (see table 8). Agreements with the innovation statements tend to be positively correlated with the use of SSTs ($\beta = 0.47, p < 0.001$). Thus, the increase in optimism is associated with a rise in the perceived ease of SST use. The effect is that innovation is a statistically significant predictor of perceived technological accessibility.

Kim and Qu (2014) agreed that perceived ease of use refers to the customer's view of how simple it is to understand and use new technology. These findings are also in line with prior studies (Abdullah et al., 2016; Elliott et al., 2013; Jung, Kim, & Farrish, 2014; M. Kim & Qu, 2014; Tahar, Riyadh, Sofyani, & Purnomo, 2020). In addition, innovativeness was found to be a strong predictor of perceived ease of use and positively correlated with it. These results line up with prior studies conducted by Walsh, Lemmink, & Streukens (2007), Parasuraman & Colby (2015) and Lundberg (2017). They concluded that innovative people are more critical of technology because they are aware of the most recent advances and potential, and they expect all technology to meet the greatest expectations. In addition, optimism was a significant predictor of perceived ease of use and positively correlated with it. Hence, the increment in the perceived ease of use degree of hotel customers is a function of their degree of optimism. This result is consistent with previous research such as Chang & Chen (2021; Elliott, Hall, & Meng (2013; Kim & Park (2019; Reinders, Dabholkar, & Frambach (2008; Rust & Huang (2012)

5. Conclusion

The hospitality and tourism sectors grow alongside technological innovation. As hotels expand their business, so do the costs of the new technologies they adopt, especially self-service technologies. Therefore, to implement these technologies effectively, examining the consumer base and their capability of using SSTs appropriately is the key. In effect, this study seeks to ascertain the relationship between innovation, customer optimism towards technology, and perceived ease of using SSTs.

The survey participants generally enjoyed learning about new technology products. They were highly optimistic towards the use of technology. The regression results indicate that technological innovation and customer optimism towards technology are

positively correlated with the perceived ease of using SSTs. Consequently, as hotels creatively implement technologies in their businesses and individuals increase their exposure to technology in their daily lives, customers are more likely to use SSTs easily.

There are a significant number of implications that have been derived from this study regarding the use of SSTs in five-star hotels in Egypt, at both theoretical and practical levels. First, this is a pioneering study exploring the customer acceptance of application by using SST in five-star hotels in Egypt, through investigating the main factors that make up the steps to use SST and the several techniques to implement it. Second, the framework for using SST in five-star hotels was developed to determine the customers' acceptance in the hotel industry in Egypt, which would enable hotel managers and decision-makers in the hotel industry to start using SST at their hotels. Third, at the practical level, this study presents a comprehensive insight into SST practices in Egyptian five-star hotels, which would enable hotel managers and decision-makers to understand the great benefits that SST provided to the hotel industry and the general government. Fundamentally, hotels should keep in mind the following recommendations:

1. Hotels should study and review the impact of SST on hotels and customers prior to selecting specific technologies to put into use.
2. When studying and choosing SST, hotels should explore user-friendly SST that works best for the hotels and customers.
3. Survey customers to understand how they feel (fear or happiness) when faced with the choice of using SST.

Additionally, the competitiveness of the hotel industry depends greatly on the supporting industries. Therefore, the availability and quality of suppliers should be a major concern for the Egyptian government bodies. To increase the competitiveness of the hotel sector, the appropriate supporting

industries must be developed. To achieve this goal, government bodies are recommended to:

1. Identify the key supporting businesses in the hotel industry and offer incentives to these businesses to improve the supply of hotel-related self-service technology.
2. The government should provide an education and training programme for hotel managers to understand the benefits of using SST in the hotel industry.
3. The government should create programs and incentives to support the development of hotels that provide technological services to the hotel sector.
4. They should also encourage investors and entrepreneurs to start their own small businesses in touristic areas, which suffer from a lack of SST.

There were some limitations to this research study. Despite statistically significant variables, the R-squared values never exceeded 30%. This issue may have been remedied with additional demographic variables (issues of potential and an inflated R-squared would also have to be examined in this case). Future studies should also seek to further extend models of technology acceptance to involve other important theoretical constructs such as learning and training and changing social environments. This study was done in a rather hierarchical organization. The ongoing trend in organisations is to get away from hierarchical command-and-control structures towards networks of empowered, autonomous teams. Moreover, further research into the characteristics of technology could be analysed for different cultures to determine if there are any shifts between the groups derived from the cultural differences. This could provide a very interesting context to test the technology acceptance models and the organisational and normative factors when the adoption decision becomes more team-based than individual-level.

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