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## **NILE CRUISES FOOD ORDERING APPLICATION USING QR CODE: REASONS, BENEFITS AND DRAWBACKS**

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### **ABSTRACT**

*This research aims to underline the importance of new technologies that help to decrease physical contact and maximize operations and services to benefit the hospitality industry and its guests. The research applies a quantitative method by designing a questionnaire, including four categories, to collect data concerning the current use of QR codes as a new technology, guest satisfaction, and the benefits and drawbacks of using QR codes. To test the hypotheses, 375 questionnaires were distributed to the guests of five-star Nile cruises. The data analyzed indicates that QR codes can influence guests' satisfaction and shows that QR codes have been used a lot and have provided health information and a good experience. This research helps managers of the hospitality industry further realize the significance of applying QR codes at a destination as a beneficial marketing method for getting information and satisfying guests' potential.*

**KEYWORDS:** QR code, Nile Cruises, Covid-19, Food Ordering, and Guests' Satisfaction.

### **INTRODUCTION**

Initially, Nile Cruises have emerged as a significant aspect of Egypt's tourism industry, gaining international recognition as a prominent form of tourism activity (Helmy & Soliman, 2022). Furthermore, the application of ordering food at hotels by using QR code technology is a real time ordering that manages the order process for hotels. This app enables guests to order without waiting for the waiters to serve those (Nikose *et al.*,

2023). In this respect, service betterment is noteworthy for Nile Cruises which deal with guests to increase the number of guests and retain sustainability. Moreover, satisfaction with guests is something that should be a concern of Nile cruises (Helmy & Soliman, 2022).

On the other hand, contactless hospitality services are also effective in creating a better sense, feel, think, act, and relate experience, this way improving customer happiness (from meeting a need or reaching a goal) and information sharing (Chen *et al.*, 2021). However, the hospitality industry has traditionally been focused on the warmth of "human contact," raising some concerns about the usefulness of the contactless service (Skift, 2020).

Therefore, this application has been grown to supply an electronic ordering system using mobile and tablet for guests in order to increase the hotel productivity. By using this application, hotels' guests can order food from their rooms by just capturing QR Code available on the table of their rooms. After placing an order, it will be sent through to the kitchen. By using their smartphones, People can effortlessly scan the QR code. This new way of ordering will definitely save time for the waiter to receive orders and improve the process of taking the order from guests (Nikose *et al.*, 2023). In addition, the owner hotel can add or manage their food menus and receive notification about the ordering food has been sent to the guests.

Despite the increasing popularity of contactless service in the hospitality industry and the growing demand in academia to analyze its ROI, knowledge, relatively few studies have empirically investigated contactless hospitality service (Kim *et al.*, 2021). It is noteworthy to mention that the current system is using a traditional way which is to take an order system using paper, because the order is missing and not managed properly to record the orders of guests. The traditional ordering system seems inconvenient to both staff and guests, as it requires a lot of manual work. Furthermore, the manual system is a waste of time, energy and waits for the order to be submitted (Nikose *et al.*, 2023). They do not have a suitable ordering system to support and make the ordering process go smoothly. Nowadays, smartphones and tablets are widely used in our daily life. By having this ordering application, the time of placing order has been reduced (Adithya *et al.*, 2017).

As a result, Hao and Chon (2022) advocated for empirical research on the ROI of contactless hospitality services in order to shed light on successful management and marketing strategies. So, the current research focuses on

the study Nile cruises food ordering application using QR code: reasons, benefits and drawbacks.

On the other hand, the current research aims to achieve the following objectives: To analyze the current system features and problems before developing the new proposed system. Provide Nile Cruises operators with operational and promotional strategies to sustain their business. To examine the efficacy of the food ordering system using QR Code by the client in Nile Cruises to ensure that requirements have been fulfilled.

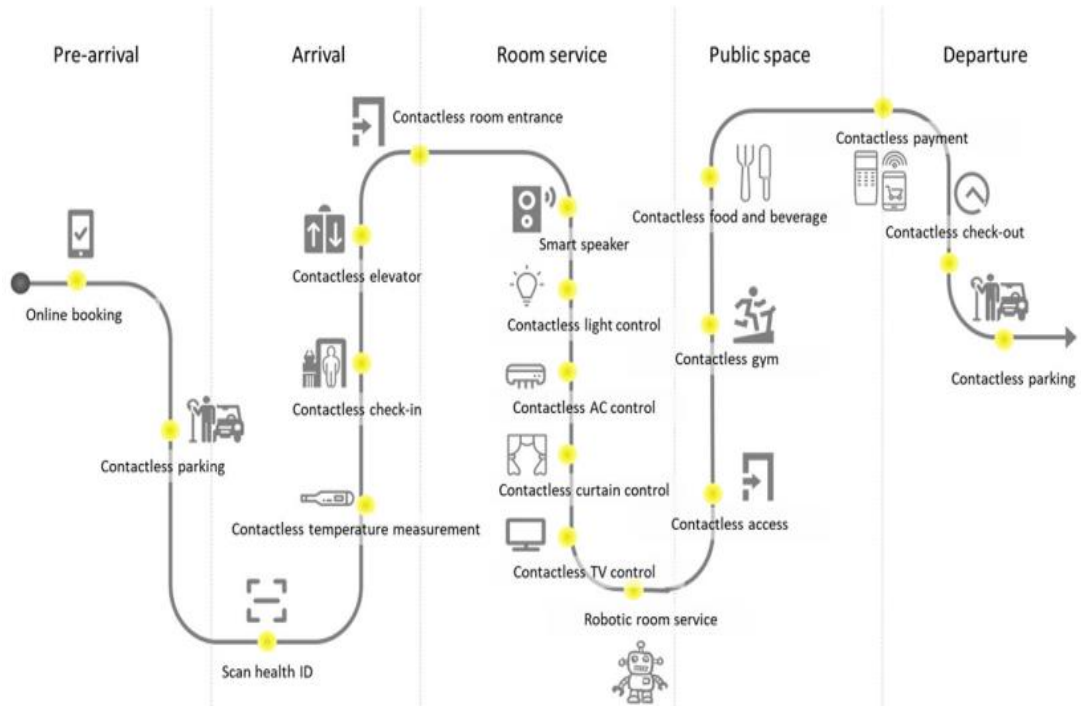
## **2. LITERATURE REVIEW**

### **2.1. CONTACTLESS HOSPITALITY SERVICES**

The COVID-19 widespread disease has led to basic changes to customer experience design in the hospitality industry. One of these changes is the large-scale implementation of contactless appliances and services (Manisty *et al.*, 2021). Furthermore, guests' cautious fears regarding social distance, hygiene, health, and sustainability are among the most focal shifts to the hospitality sector as a result of the COVID-19 epidemic (Hao *et al.*, 2020). In this respect the COVID-19 epidemic has accelerated contactless technology adoption in the hospitality industry (Gursoy *et al.*, 2020; Hao *et al.*, 2020).

In general, contactless service is defined as a technology-enabled “contactless and fully disinfected service procedure and environment are using a combined package of self-service, robotic services, and internet of things (IoT)-based implements” (Hao & Chon, 2022, p.2). Contactless services include check-ins, housekeeping services, technological UV light options, and electrostatic spraying appliances are being used by the hotel sector to suit customers' growing demand for hygiene, cleanliness, and safety procedures (Chen *et al.*, 2021).

In this respect, leading hotel brands, worldwide have made important investments in contactless facilities and services (All-China Federation of Industry and Commerce, 2020). Figure 1 illustrates how contactless services are used in the hospitality industry at various stages of the customer journey.



**Fig (1) Contactless hospitality services** Source: Hao & Chon, (2022)

## 2.2 THE QR CODES IN HOSPITALITY INDUSTRY

Initially, the term "QR code" (Quick Response code) initially appeared in Japan in 1994 (Khamidullin *et al.*, 2019). Furthermore, Quick response (QR) codes are two-dimensional, machine-readable matrix barcodes created and produced by Denso Wave Incorporated in 1994 for valid and quick log inspections (Denso, 2011). Although QR codes were first employed in industrialized countries, their application in the tourism industry has rapidly spread to various regions of the world (Vuksanović *et al.*, 2021). In this concern, QR codes are also utilized to facilitate mobile ticketing, event advertising, and tourism by providing location-based services (Canadi *et al.*, 2010). They are also commonly applied in governmental offices to distribute instructions and varied information, assist applications for documents and permits, and ease ordinary work procedures (Hossain *et al.*, 2018).

On the other hand, People nowadays rely heavily on cellular services as a result of the success of several mobile phone businesses, smartphone applications which have grown in popularity (Vuksanović *et al.*, 2021). As

a result, QR codes have been actively employed in our lives for more than 20 years (Khamidullin *et al.*, 2019). Meanwhile, Hotels leverage mobile technologies, adapt their websites to comply with such technological devices, and enhance their mobile applications to advantageously compete for marketing (Kirlar *et al.*, 2017).

It is worth noting to mention QR codes are vastly used in various industries together with tourism, particularly in the lodging, transportation, and food and beverage industries, in addition to some cultural institutions like museums and exhibition rooms (Vuksanović *et al.*, 2021). The most popular application of QR codes in tourism appears to be the display of the codes on notice boards with data concerning the location (Pillai *et al.*, 2017). Furthermore, QR code solutions might provide several businesses with a competitive advantage (Demir *et al.*, 2015). Finally, Much research on QR codes has been conducted, including those on advertising (Ertekin and Pelton, 2015), marketing (Demir *et al.*, 2015), security (Narayanan, 2012), and tourism (Lou *et al.*, 2017).

### **2.3. USING QR CODES FOR ORDERING FOOD AND GUEST SATISFACTION**

In general, dining comes at the top of five tourist interests on leisure vacations (Pizam *et al.*, 2004), and it is an important part of the travel experience because all tourists must eat while traveling (Vu *et al.*, 2019). In this respect, the epidemic has revolutionized restaurant service and catalyzed the contactless dining experience (Vig & Agarwal, 2021). As a result, the emergence of technology-enabled contactless devices to minimize indirect association with virus-contaminated areas in some places such as restaurants or hotels is one of the most significant shifts in the hospitality industry triggered by the COVID-19 epidemic (Hao & Chon, 2021). Furthermore, food service companies must embrace technological advancement (Chuah *et al.*, 2022). Furthermore, Contactless service addresses fundamental difficulties in the hotel industry, such as sanitizing communal facilities and places, auto-detection of body temperature, keyless access, touchless smart rooms, and robotic appliances (Hao *et al.*, 2022).

Contactless hospitality services are technologically enabled, creative services that are battling the COVID-19 pandemic (Hao & Chon, 2021). The high-technology-enabled contactless devices implies a touchless and sterilized systematic services throughout the client experience by combining self-service, robotic services, and IoT-based technologies (Hao *et al.*, 2020). For example, throughout the time of epidemic, touchless entry (i.e. automatic sliding doors), mobile payments and digital menus (Vig & Agarwal, 2021), self-ordering digital kiosks (Cavusoglu, 2019),

and robotic services (Chuah et al., 2022) were implemented. Furthermore, restaurant operators are urged to adopt technology, such as QR codes (Chaveesuk & Piyawat, 2021), which are shown in payment via cellularity and digital menus (Chuah et al., 2022).

In this respect, adopting QR codes expands the value of the client participation and streamlines the activities they involve in (Shadaksharappa & Kumar, 2018). Furthermore, A QR code is a way for enhancing methods of contentment in both transaction and travel (Gao & Lai, 2015). Finally, these codes were utilized in the travel industry to make data available for guests (Katlav, 2020), make marketing (Celtek, 2017), and increase tourist satisfaction (Tardivo et al., 2015). Likewise, Pillai et al. (2017) confirmed the use of QR codes in the tourism industry extent to improve tourists' experiences. Evidently, using QR codes to provide guests with faster and easier guidance and services leads to higher customer satisfaction in the hotel business (Cinnioglu, 2019).

Based on the above, the current research will verify the validity of the following hypothesis:

***H1. There is a statistically significant effect of using QR code for ordering food on guest satisfaction.***

#### **2.4 THE BENEFITS OF USING QR CODES FOR ORDERING FOOD AND GUEST SATISFACTION**

In general, contactless service is becoming increasingly used by the hospitality industry as a way to reduce Covid-19 transmission and offer the safest experience while keeping good service quality (Min, 2020). Furthermore, contactless hospitality services can give clients with a more secure and comfortable experience, improving their assessment of hedonic value and service quality (Li et al., 2022).

In regarding the QR code, one advantage of QR codes is their adaptability. They can be applied to almost any tangible or intangible object, from advertisements to magazine pages to billboards, music posters, and entertainment events (Kuyucu, 2019). Furthermore, QR-coding systems are now employed as effective means for information transfer, information protection, such as in medicine, and implementation of any scale payments, with a considerable number of works devoted to each (Deineko et al., 2022).

In this respect, **According to Baker (2010), listed the advantage of QR code are Following:**

- The prime benefit of a QR code is its versatility.
- QR codes can be applied greatly and variously.
- Almost free and economical, can embed many types of media, easy to use.
- Writing down important details is not needed anymore.
- A simple scan captures the required data.
- Eliminating printing assignment sheets is another advantage.
- Provides quick access to additional data.
- Understanding of writing code is not needed.
- Type out a long URL is not required, could help serve students who are visually impaired.
- A fun and efficient way of delivering updated data directly.
- They are also useful for both customers and businesses. For example, a business saves money and advertising costs by distributing a QR code to their website or URL.
- A customer can scan this QR code and that enables them to store the data for future reference.

In this respect, using QR codes allows tourists to make payments and acquire data more rapidly, allowing them to gather data food practices habits and schemes, restaurants with special precautions about as allergens and kosher (Vuksanović *et al.*, 2021). Likewise, most clients believe that contactless solutions enabled by technology make them feel safer while dining out (Chuah *et al.*, 2022). According to Hossain *et al.* (2018), customer satisfaction with QR codes positively influenced buy demands and satisfaction in online buying, and if the QR code was helpful, practicable, and admissible, it would work to stimulate customers. Based on the above, the current research will verify the validity of the following hypothesis:

***H2. There is a statistically significant effect of the benefits of using QR code for ordering food on guest satisfaction.***

## **2.5. THE DRAWBACKS OF USING QR CODES AND GUEST SATISFACTION**

According to Han *et al.* (2019), in the cruise industry, cruise quality is widely considered the key factor in ensuring customer satisfaction and fostering a positive relationship between the cruise company and its guests. If guest satisfaction is lacking, it can lead to a decline in cruise sales and ultimately result in operational failure.

Despite its adaptability and usefulness, QR code scanning has drawbacks in addition to positives. Furthermore, QR code readers are not available on all mobile phones or mobile operating systems. Augmented reality delivers more interactive experiences that are user-friendly and immersive. Despite the high production costs of augmented reality, it offered a more favorable return on investment, especially if the desired result was achieved (Kuyucu, 2019)

**According to Hicks and Sinkinson (2011), listed the disadvantage of QR code are following:**

- Using a phone with a camera and the correct reader software is a must
- Smart phones are not available for everyone,
- Some people are not aware of or familiar with the QR code
- QR code can be distorted or not read properly
- Possible interface issues, directs to a site that is not best for mobile phone use, abuse of technology
- Exclusion of non-cell phone using patrons, low usage of QR codes, not everyone has a QR reader
- Camera quality and the need to use a URL shortened

Although previous studies have shown that the risk of contracting COVID-19 in restaurants has become a cause for notable changes in customers' tendencies and behaviors toward adopting more suitable feasible risk-reduction behaviors, there are some notable gaps within the travel context to understand how international tourists the recognize the contemporary risk and how this influences their options and acceptance of restaurants with contactless payment systems (Yasami *et al.*, 2022). Therefore, the current research explores the significance of innovative technologies that help to minimize physical contact and maximize operations and services in Nile Cruises to offer a direct benefit to hospitality businesses and their customers.

Based on the above, the current research will verify the validity of the following hypothesis:

***H3. There is a statistically significant effect of the drawbacks of using QR code on guest satisfaction.***

### **3. METHODOLOGY**

The hypotheses were checked, using a questionnaire that includes four categories in order to collect data about the current using of QR code,



guest satisfaction, the benefits of QR code and drawbacks. The first category of questions is assigned to the common inquires, which can show that the respondents have the habit and the experience of using QR

The second Category of questions are concerned with the guest satisfaction. The third part contained the benefits of using QR code, the last part include the drawbacks of QR code. The research variables with multiple items based on a seven point Likert scale (1 = strongly disagree and 7 = strongly agree) were adopted and modified.

According the Egyptian hotels Guide (Year 2016) five-stars (n=189) These Nile cruises are mainly owned and managed by 4 companies; Travco Nile cruises; Spring tour, Nile exploration, and Seti first. For instance, while Travco Nile cruises. The absorptive capacity (15000 guest) A random sample of Nile cruise tourists (375), with a rate of (2.5%) from a community of (15,000) tourists, at a level of significance (0.05) and a level of confidence (95%), a standard error rate of (6.3%) Johnson & Christenson,(2008).

## **7. RESULTS AND DISCUSSION**

### **7.1. THE RESEARCH SAMPLE SIZE**

Cochran's formula used to calculate the research sample size as follow (The researchers applied a Cluster sample in luxor aswan) (Shkeeb, p., 2014)<sup>1</sup>:

$$n = \frac{Z^2 \sigma^2}{e^2}$$

Where:

$\sigma^2$  : Variance of community       $Z$  : Standard degree       $e$  : Maximum allowed error

From the previous formula the researchers calculated a convenient sample size for this research, where the maximum allowed error ( $e$ ) was 0.05, this value is suitable for discrete data (Shkeeb, p., 2014), standard degree ( $Z$ ) was 1.96 and the variance of the sample ( $\sigma^2$ ) was 0.244. Applying these values to the Cochran's formula reveals that the appropriate sample size for this research is 375 participants.

## 7.2. Questionnaire Response Rate

**Table (1): Questionnaire response rate**

	No. of questionnaire
Number targeted	400
Number returned and valid	375
Response rate	93.75 %

## 7.3 RELIABILITY ANALYSIS

**Table (2): Reliability analysis of the independent variables used in the research**

The Axis	No. of statements	Alpha Coefficient
Using QR code	4	0.785
Guest satisfaction	7	0.903
The benefits of using QR code	11	0.84
The drawbacks of using QR code	7	0.79

Table (2) indicated that each item has more than 0.7 Cronbach's Alpha, this means that all items are valid (Henson, 2001).

## 7-4 THE USING OF QR CODE

**Table (3): The Sample Characteristics Statistics**

Variable	Response	Frequency	Percent	Rank
Gender	Male	174	46.4	2
	Female	201	53.6	1
	<b>Total</b>	375	100	-
Age	From 20 to 35 years	93	24.8	3

	More than 35 to 45 years	156	41.6	1
	More than 45 years	126	33.6	2
	<b>Total</b>	375	100	-
Level of education	Less than secondary school	5	1.3	5
	Secondary or technical education	58	15.5	3
	intermediate qualification	142	37.9	1
	University education or high institute	126	33.6	2
	Postgraduate studies	44	11.7	4
	<b>Total</b>	375	100	-

### 7.5 THE USING OF QR CODE

In this part, the questions were designed to assess the level of using of QR code.

**Table (4): The using of QR code**

Using QR Code	M	S.D	P	Sig.	R
I use QR code a lot during my trip	4.07	0.25	81.33	0.35	3
QR code ordering food application makes it more effective	4.43	0.767	88.64	0.93	1
I use QR code to get health information during my trip	4.33	0.702	86.51	0.41	2
I use QR code application because provides menu information that I want	3.91	1.101	78.29	0.22	4
<b>Overall</b>	4.18	0.821	83.7	0.13	

*S.D* = standard deviation *M* = mean *P* = percentage *Sig.* = Significance level *R* = Ranking

The research pointed to the results of the role of the current use of QR code application. The results show that there is a positive effect of using QR code ( $\text{sig} > 0.05$ ). However, the study showed that 88.64%, of respondents indicated that using a QR code makes the trip more effective. The results pointed out that using QR code helps to get health information during the trip by percentage of 86.51%. This study pointed out that QR codes were heavily by guests by percentage 81.33%. 78.29% of respondent indicated that using QR provides menu information that they want. The *Sig.* value was greater than 0.05 (0.13), indicating that there is no Significant difference between the utilizing QR codes in hotels and the standard levels, implying that the use of QR codes in the hotel business is becoming more popular across various subjects and nations.

**7.6 GUEST SATISFACTION WHEN USING QR CODE**

**Table (5) the level of guest satisfaction when using QR code**

<b>Guest satisfaction</b>	<b>M</b>	<b>S.D</b>	<b>P</b>	<b>Sig.</b>	<b>R</b>
I feel satisfied when using QR code during my trip	4.51	0.46	90.2	0.073	1
I have good experiences when using QR code	4.27	0.44	85.3	0.12	6
I Content because I decided to use QR codes to obtain health information during my travels	4.43	0.49	88.5	0.081	3
My overall evaluation on this trip experience is positive	4.41	0.94	88.2	0.61	4
My overall evaluation on this trip experience is favorable	4.02	1.03	80.3	0.32	7
I am satisfied with this tourism experience	4.46	0.49	89.2	0.29	2
I am pleased with this tourism experience	4.34	0.47	86.7	0.11	5
Overall	4.29	0.69	85.8	0.58	

The results Showed the role of QR codes in enhancing the transaction satisfaction, which can highly influence the whole process of This study showed that 90.2% of the respondent indicated that they satisfied when using QR code during my trip and 85.39% have good experience when using QR and 88.59 % satisfied with the decision of using QR to get health information. the results in the table appear that 89.2% of respondent satisfied with tourism experience ,88.27% evaluate overall the trip experience is a positive ,86.72 % indicated that they are pleased with this tourism experience, 80.37% of respondent answered that the trip is favorable. The Sig. value was greater than 0.05 (0.58), indicating that there is no Significant difference between the guest satisfaction when using QR code and the standard levels, implying that the QR codes can be useful as a tool that can influence guests satisfaction and increase their purchase intention or interest.

### 7.7 THE BENEFITS OF USING QR CODE

**Table (6): The benefits of using QR code**

<b>The benefits of using QR code</b>	<b>M</b>	<b>S.D</b>	<b>P</b>	<b>Sig.</b>	<b>R</b>
using QR code ordering food Application is more effective	3.7	0.638	74.08	0.33	12
the application is easy to read	4.57	0.756	91.36	0.075	5
ordering using an application better than manual Ordering	4.46	0.499	89.28	0.105	9
QR code application provides menu information that you want	4.63	0.483	92.64	0.073	3
using this application minimize errors in ordering food	4.53	0.5	90.61	0.23	7
ordering food using this application make your order time shorter	4.66	0.603	93.23	0.41	1
using the application in ordering food add to your new experience	4.57	0.837	91.47	0.76	4
the use of this application make you comfortable so that you feel like going back to the Nile cruise trip	4.66	0.71	93.12	0.16	2
The main advantage of a QR code is its versatility.	4.48	0.91	89.65	0.39	8
QR codes can be used for anything and everything.	4.55	0.772	91.04	0.92	6

Almost free and Inexpensive, can embed many types of media, easy to use.	4.41	0.944	88.27	0.32	11
There is no need to write vital details down a simple scan captures the desired information	4.43	0.496	88.59	0.057	10
<b>Overall</b>	4.47	0.91	89.4	0.602	

The previous table illustrated that 93.23% of respondents using this application make food order time shorter, 93.12 % agree with use of this application make food order comfortable and feel like going back to Nile Cruise trip, 92.64% respondents agreed that they used QR codes during the trip to get information that they want, 91.47 % of the respondent considered QR Code as a tool for getting information and improving the expectations using the application in ordering food add new experience. Therefore, this study has shown that the respondents agree with the QR code application is easy to read (M 4.57), The findings from a previous study QR codes can be used for anything and everything the respondent are agree with this average mean (4.55), 90.61% of respondent clarifying that using the application minimize errors in ordering food, 89.28% of the guests in positive agreement with that the main advantage of a QR code is its versatility, Most of the Nile Cruise use QR codes to provide customers with details and show the information and 88.56% of the respondent indicated that there is no need to write vital details down a simple scan captures the desired information.

Finally, the respondent indicated that Almost free and Inexpensive, can embed many types of media, easy to use with average mean 4.41. and 74.08% agree with using QR code ordering food application is more effective. The Sig. value was greater than 0.05 (0.602), indicating that there is no significant difference between the benefits of using QR code and the standard levels, stating that when it comes to using QR codes, most respondents believed that using QR codes during a journey provides numerous benefits.

**7.8. DRAWBACKS OF USING QR CODE**

**Table (7) Drawbacks of using QR code**

<b>Drawbacks of using QR code</b>	<b>M</b>	<b>S.D</b>	<b>P</b>	<b>Sig.</b>	<b>R</b>
It requires phone with camera which makes it costly for the common users to afford	4.43	0.717	88.64	0.221	5

It requires installation of QR code reader software or application in order to scan the QR code image. This is not possible in all the types of mobile phones	4.86	0.346	97.23	0.104	1
Must use phone with a camera and the correct reader software that can scan the image of the QR Code	4.81	0.396	96.11	0.082	2
Not everyone has a smart phone	4.76	0.569	95.15	0.357	4
lack of awareness and familiarity of the QR code among people	4.31	0.527	86.13	0.441	7
QR code can be distorted or not read properly	4.76	0.426	95.25	0.308	3
possible interface issues, directs to a site that is not best for mobile phone use, abuse of technology	4.38	0.706	87.63	0.841	6
Overall	4.62	0.53	92.3	0.409	

97.23% of respondent indicated that QR code reader requires installation software or application in order to scan the QR code image this is not possible in all the types of mobile phones, 96.11% of sample of this study clarifying that must use phone with a camera and the correct reader software that can scan the image of the QR Code , as well as in other industries, which would provide a better insight of the application of technology facing some limitations one of this limitations QR code can be distorted or not read properly 95.25% of respondent agree with. 95.15% indicated that not everyone has a smart phone, 87.63% of the Nile cruise guests indicated that possible interface issues, directs to a site that is not best for mobile phone use, abuse of technology and Finally, 86.13% of respondent indicated that lack of awareness and familiarity of the QR code among people is one of drawbacks of using QR code.

The Sig. value was greater than 0.05 (0.409), indicating that there is no significant difference between the drawbacks of using QR code and the standard levels, indicating that there are certain limits to employing QR codes that can be considered in the future.

### **7.9. TESTING OF HYPOTHESES**

Based on the presented literature review, the following hypotheses were set:

H<sub>1</sub>. There is a statistically significant effect of using QR code for ordering food on guest satisfaction.

H<sub>2</sub>. There is a statistically significant effect of the benefits of using QR code for ordering food on guest satisfaction.

H<sub>3</sub>. There is a statistically significant effect of the drawbacks of using QR code on guest satisfaction.

**7.9.1 TEST OF THE FIRST HYPOTHESIS**

***H<sub>1</sub>: There is a statistically significant effect of using QR code for ordering food on guest satisfaction.***

**Table (8): The effect of using QR code on guest satisfaction**

Dependent Variable		Independent Variable
		Using QR code
Guest satisfaction	R	0.856
	R <sup>2</sup>	0.732
	Sig.	0.000
	Constant	0.175
	B.	0.921

The previous Table showed that there was a strong significant correlation between using QR code and guest satisfaction (R=0.856), as well as R Square (R<sup>2</sup>) referred to the determination coefficient was (0.732). Moreover, the sig. value was (0.000) less than (0.05) suggested that, The study rejected the null hypothesis and supported the alternative hypothesis, indicating that the independent variable (Using QR code) had significant effects on the dependent variable (Guest satisfaction).. Furthermore, the statistical constant (α) equal 0.175 with significance level less than 5%, whereas (B) equal 0.921, with significance level less than 1%. From the previous result, the following equation was suggested:

**Guest satisfaction = 0.175 + (0.921 \* Using QR code)**

**7.9.2. TEST OF THE SECOND HYPOTHESIS**

***H<sub>2</sub>: There is a statistically significant effect of the benefits of using QR code for ordering food on guest satisfaction***



**Table (9): The effect of the benefits of using QR code on guest satisfaction**

Dependent Variable		Independent Variable
		The benefits of using QR code
Guest satisfaction	R	0.953
	R <sup>2</sup>	0.908
	Sig.	0.006
	Constant	0.431
	B.	0.806

The previous table showed that there was a strong significant correlation between the benefits of using QR code and guest satisfaction ( $R=0.953$ ), as well as R Square ( $R^2$ ) referred to the determination coefficient was (0.908). Moreover, the sig. value was (0.001) less than (0.05) suggested that, The study rejected the null hypothesis and supported the alternative hypothesis, indicating that the independent variable (the benefits of using QR code) had significant effects on the dependent variable (Guest satisfaction).. Furthermore, the statistical constant ( $\alpha$ ) equal 0.431 with significance level less than 5%, whereas (B) equal 0.806, with significance level less than 1%. From the previous result, the following equation was suggested:

**Guest satisfaction = 0.431 + (0.806 \* The benefits of using QR code)**

**7.9.3. TEST OF THE THIRD HYPOTHESIS**

**Table (10): The effect of the drawbacks of using QR code on guest satisfaction**

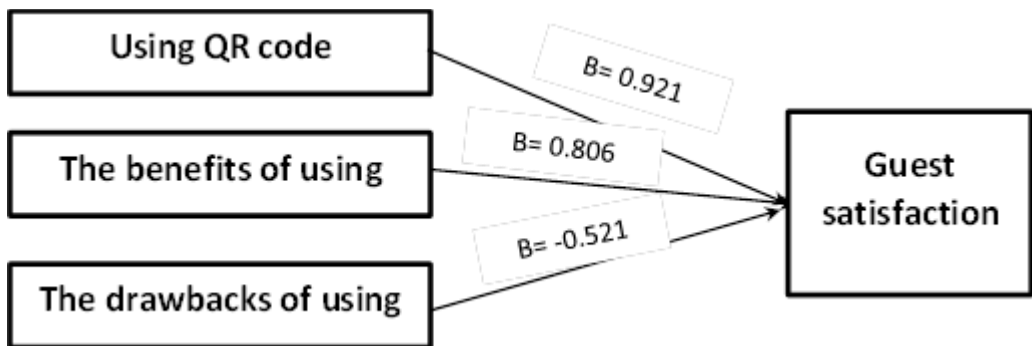
Dependent Variable		Independent Variable
		The drawbacks of using QR code
Guest satisfaction	R	0.701
	R <sup>2</sup>	0.491
	Sig.	0.03
	Constant	3.74
	B.	- 0.521

**H<sub>3</sub>: There is a statistically significant effect of the drawbacks of using QR code on guest satisfaction**

The previous table showed that there was a strong negative correlation between the drawbacks of using QR code and guest satisfaction ( $R = -0.701$ ), as well as R Square ( $R^2$ ) referred to the determination coefficient was (0.491). Moreover, the sig. value was (0.03) less than (0.05) suggested that, The study rejected the null hypothesis and supported the alternative hypothesis, indicating that the independent variable (the drawbacks of using QR code) had significant effects on the dependent variable (Guest satisfaction).. Furthermore, the statistical constant ( $\alpha$ ) equal 3.74 with significance level less than 0.05, whereas (B) equal -0.521, with significance level less than 0.05. From the previous result, the following equation was suggested:

**Guest satisfaction = 3.74 - (0.521 \* the drawbacks of using QR code)**

**7.10. RESEARCH FRAMEWORK**



**8. CONCLUSIONS**

The research has revealed that QR codes can be functional as a means to influence guests satisfaction and maximize their buy intention, but According to the discussion, it can be deduced that it is essential to increase the awareness of the QR codes and to conduct effective marketing campaigns which include QR codes. In addition, using QR codes is preferable in Nile cruise, in the paper, it is deduced that even though there are many probabilities for the application of QR codes, there are also some obstacles, including the shortage of awareness about QR code technology.

## **9. RECOMMENDATIONS**

1. All competent authorities, such as Nile Cruise, hospitality establishments and restaurants, must encourage customers to use the QR code, in order to take advantage of the multiple benefits that are available in the use of the QR code.
2. The need for those in charge of restaurants on the Nile Cruise to facilitate the process of using the QR code.
3. It is important to provide complementary services to use the QR code , such as the availability of the Internet in place.
4. Continuous evaluation of the use of the QR Code service by Nile Cruise customers in order to identify any problems they may encounter and for the purpose of continuous development of the service.
5. Expanding the use of the QR code service on all Nile Cruises in order to benefit from the reflection of providing this service on increasing customer satisfaction.
6. Also, traditional menus should be available for customers who are unable to use the QR code, such as the elderly.
7. Any difficulties that may encounter using the QR service on Nile Cruise must be overcome, such as the availability of the food application for all types of phones.
8. It is necessary to raise the awareness of QR codes and to design efficient marketing campaigns which include QR codes.

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