

The Impact of electronic customer relationship management on customer loyalty with an application on Misr Travel

تأثير إدارة العلاقات الإلكترونية مع العملاء على ولاء العملاء من خلال تطبيق على شركة مصر للسياحة

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Abstract

During covid-19 pandemic, the electronic customer relationship management (e-CRM) has gained high significance and high growth rate on online platforms. E-CRM is considered as one of the most important business systems, it serves as a means of widespread communication and a powerful platform. For that reason, the main purpose of this research is to highlight the implementation of electronic customer relationship management (e-CRM), and examine the impact of e-CRM on customer loyalty in the tourism sector in general and evaluate the current situation in Misr Travel during the covid-19 pandemic in particular, in order to find out new methods for improving organization performance. Moreover, the research provides some essential information for decision makers in Misr travel.

The research identifies the meaning of e-CRM and clarifies the critical success factors in implementing e-CRM. In addition, the research identifies the meaning of customer loyalty and its measures, which is a very important issue for the organization. The literature review, books and journals are used to describe the theoretical part, and help in analyzing the practical part.

Finally, the most important result of the research conducted is the positive significant relationship between e-CRM and customer loyalty. In addition, this research presents some recommendations to the officials in the tourism sector in general and the officials in Misr travel in particular to provide a better understanding of the importance of implementing e-CRM which helps in the decision making process.

Keywords: E-CRM - Customer Loyalty - Tourism sector - Digital platforms

المستخلص:

اكتسبت إدارة علاقات العملاء الإلكترونية أهمية كبيرة في جميع المنصات الرقمية وخاصة خلال جائحة covid-19. حيث تعتبر من أهم أنظمة الأعمال وأكثرها فاعلية. ولهذا السبب، فإن الهدف الرئيسي من هذا البحث هو دراسة إدارة علاقات العملاء الإلكترونية واثرها على ولاء العملاء في قطاع السياحة بشكل عام وتقييم الوضع الحالي في شركة مصر للسياحة أثناء جائحة covid-19 على بشكل خاص، وذلك من أجل اكتشاف المشكلات التي تواجه الشركة وتقديم بعض التوصيات والتي من شأنها يمكن ان تساهم في تحسين الأداء.

تم مراجعة الأدبيات والكتب والمجلات لوصف الاطار النظري والتي تساعد أيضًا في تحليل الجزء العملي. واخيرا فان فإن أهم نتيجة للبحث هي وجود علاقة قوية ذات دلالة إيجابية بين إدارة علاقات العملاء الإلكترونية وولاء العملاء. كما يقدم هذا البحث بعض التوصيات للمسؤولين في قطاع السياحة بشكل عام والمسؤولين في شركة مصر للسياحة بشكل خاص لمساعدتهم على اتخاذ قراراتهم .

الكلمات المفتاحية: إدارة علاقات العملاء الإلكترونية، ولاء العميل، قطاع السياحة، المنصات الرقمية.

Introduction

Most of the organizations realize that the customer is considered as an important reason for their success and survival, so these organizations have to apply new management strategies to ensure their survival, growth and existence in the market.

These strategies depend on using new technology to build strong communication channels with customers. Electronic customer relationship management (e-CRM) is considered as the most important business system that focuses on building a healthy relationship between organizations and customers. This system enables organizations to provide the services in real-time, reduce costs, improve customer service and satisfy customers' needs.

Covid-19 is a global pandemic which has a great effect on commerce, business, health, markets, travel, and societies. During this period, the electronic customer relationship management (e-CRM) has gained high significance and high growth rate on online platforms especially in the tourism sector.

Therefore, this research aims to investigate the impact of e-CRM on customer loyalty in the tourism sector in general and evaluate the current situation in Misr Travel in particular. Also this search provides some recommendations and suggestions for researchers and interested parties as well as decision makers in the tourism sector.

To address these objectives, the research started with literature reviews on e-CRM and customer loyalty, followed by explaining the problem statement, research hypothesis, data analysis, research findings, and the recommendations.

Literature review

First: Electronic customer relationship management (e-CRM)

This expression emerged in 1990, it is considered as a new management strategy which is adopted by many organizations to build strong relationship with customers (Buttle, 2008). Many researchers defined CRM in different ways, (Scott, 2011) defined it as business policies and processes developed in order to retain and provide service to the customers. Also (Khory, 2005) define it a strategic use of processes, information, technology and costumers to build relationship with customers. Nowadays most of CRM depends on information technology which offers better, effective customer relationship management and measures customers' attitudes and profitability (Kaldeen& Thowfeek, 2020). E-CRM is considered as a new technique used to collect, analyze and utilize information about current customers in the

organization and prospective customers as well. (Fjermestad & Romano, 2003) define e-CRM as a system which helps organizations to win, retain customers and increase their loyalty; this system allows focusing on the profitable customers.

(Gebeyehu, 2019), (Van & Pham, 2016), (El Essawy, 2012) identified the critical success factors in implementing e-CRM can be classified as follows:

- 1- Information technology infrastructure. The IT infrastructure, communications network and system are considered as the important factors that have a direct impact on improving the quality of customer information and the success of e-CRM.
- 2- Organizational culture, according to (Gebeyehu, 2019), the cultural factors of an organization play significant role in the success of the e-CRM implementation.
- 3- Organization strategy. The e-CRM strategy should align with the organization strategy which aims at reaching the customers, engaging them in the organization decisions and creating healthy customer relationships.

Second: Customer loyalty

Customer loyalty is considered an essential issue in any organization, it is the greatest asset of each organization which guarantees its success and improves the level of profitability.

(Gefen, 2002) defines customer loyalty as repeated purchase behavior with retaining existing customers. Also (Aaker, 1991) defined it as customers emotional attitude toward a brand. (Oliver, 1999) says that customer loyalty is the commitment to rebuy the service/product consistently in the future. (Keller, 1998) argued that it is a behavioral sense more than an economic sense.

(Kabiraj & Shanmugan, 2011), (Yoon & Uysal, 2005) and (Ball & others, 2004) has agreed upon the measures of customer loyalty and classified them into two main measures:

- 1- Behavioral loyalty: views customer loyalty as repeated share of purchases or frequent purchase.

- 2- Attitudinal loyalty: it is based on customer preferences or intention to buy, it concern with the positive and continuance relationship between the customers and the organizations.

Third: The impact of e-CRM on customer loyalty

There are many researches that have been conducted on electronic customer relationship management (e-CRM) and explained its effect on other areas such as marketing, customers, and economy. Some researchers have proved theoretically that e-CRM has impact on customer satisfaction and behavior, the research of (Romano and Fjermestad, 2001) reviewed about 369 conference papers and journal articles, they found in their research that the most popular researches were about four areas: e-CRM markets, e-CRM technology, e-CRM knowledge management and e-CRM human factors. Also the research of (Kumar and Saurabh, 2018) uses the literature review of e-CRM to find out the success factors for effective e-CRM. The research of (Zakari, Usman Musa and others, 2012) discusses the positive and negative impacts of electronics customer relationship management, and the consumer's behaviors in an electronic market. The researches of (Jamali, Mehdi and others, 2017) and (Khabala, Oumar T. and others, 2017) evaluated the relationship between electronic customer relation management and customer loyalty with application on commercial banks. The research of (Kaldeen and Thowfeek 2020) finds solutions that can help the banking sector to enhance competitive advantages.

Problem statement

As a result of the rapid technological development and the Covid-19 crisis, there is an urging need to implement electronic customer relationship management (e-CRM) in businesses in general and in the tourism sector in particular. Moreover, nowadays, customer loyalty has become a critical factor for success, future development and sustainability in any organization. According to the literature review, e-CRM has been examined and analyzed from several perspectives. However there were few of research efforts applied on Arab development countries. And according to the researcher's knowledge, there is no study has been conducted on the tourism sector in Egypt in general, and during covid-19 pandemic in particular. Considering this research gab and the significance of tourism sector to the country, this research

examines how e-CRM can enhance the customer loyalty especially during the crisis of covid-19.

The core question of this research is: to what extent does e-CRM have an impact on customer loyalty during the crisis of covid-19 applied on the tourism sector in Egypt?

Research Importance

This research stems its importance from dealing with an important issue which is the impact of e-CRM on customer loyalty during covid-19. Moreover, this research is important to the academics who are interested in studying the tourism sector. In addition, this research presents some results to the officials in tourism organizations to help them in the decision making process.

Conceptual Framework and Hypotheses

The design of this study has both of descriptive part which is found in the theoretical part and a quantitative part which is found in the applied study. Theoretically, the researcher adopted the analytical approach to define the main concepts and find out the importance, and components of both e-CRM and customer loyalty. Also the researcher used the applied study to investigate the correlations between the e-CRM and customer loyalty. In order to accomplish the objectives of the applied study, the researcher set out the following hypotheses:

The main hypothesis of this study is:

There is a significant positive relationship between the e-CRM and customer loyalty.

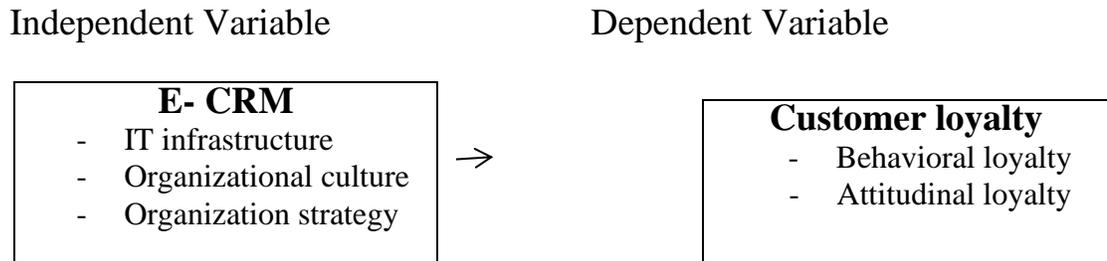
The sub-hypotheses are:

H1: There is a significant positive relationship between the e-CRM and behavioral loyalty.

H2: There is a significant positive relationship between the e-CRM and attitudinal loyalty

The research variables

The following figure illustrates the dependent and independent variable:



Population, Sample:

First: the population of the research:

The population for the research consists of the clients of Misr Travel Company; Misr travel is the national travel company of Egypt, the company is recognized by the Ministry of Tourism - Government of Egypt. The company has more than 80 years of experience in the travel domain. Moreover, Misr Travel is considered as the leading conferences and event management company for its vast experience, excellent execution, in conference and event management. The company is ranked among the top ten tour operators in Egypt and the Middle East.

Second: the sample size:

The sample size of the research assuming infinite population is determined according to the following formula.

$$n_0 = \frac{z_{\alpha/2}^2 * p * (1-p)}{e^2}$$

Where $Z\alpha$ is the critical value of the Normal distribution at α (e.g. for a confidence level of 95%, α is 0.05 and the critical value is 1.96), and p is the percentage of

specific phenomena and set to be 0.5 as it gives the highest value for sample size, e is the margin error and set to be 0.05 (this acceptable margin of error for the researcher). Then the sample size is 384 persons. To avoid non-response rate 400 questionnaires are collected.

Data Analysis Techniques

- 1. Building indicators:** statistical technique to combine group of related questions (or factors) in one indicator. The indicators are composed by using equal weights method. That is each indicator is calculated by adding the scores of questions which are related to this indicator, and then this sum is divided by the number of related questions. These created indicators in the row form are used in answering the hypotheses.
- 2. Alpha- Cronbach:** The internal consistency coefficient (Cronbach's Alpha) reflects the reliability of a scale. It captures the proportion of total variance that is common to all items that form the scale, which presumably corresponds to the underlying construct being measured. Cronbach's alpha takes values between 0 and 1. The nearer the Cronbach's alpha to 1, the better the stability of the questionnaire is. More precise we say that the questionnaire is stable if Cronbach's alpha are greater than 0.7.
- 3. Correlation Analysis:** correlation analysis aims to know the direction and the strength of a relation between two variables. In this research Pearson correlation coefficient is used to measure the correlation between two numerical variables. When the coefficient is positive the relation is direct while when it's

negative then there is inverse relation. It takes values between -1,1. the relation is weak if absolute value of coefficient between 0,3 and moderate if it is between 0.3,0.6 and strong if it is greater than 0.6. we decide if there is significant relation at 95% confident or not if the p-value is less than 0.05.

4. **Simple linear Regression analysis:** regression analysis aims to test the significant effect of the dependent variable on independent variables. As any model, regression model has assumption. This assumption is Normality of dependent variables assumption must be checked before fitting the model. Normality assumption is one of the most important assumptions of regression analysis assumptions. To test this assumption One-Sample Kolmogorov-Smirnov Test which is non-parametric test for testing normality of data is used, Null hypothesis of this test is "variable is follows normal distribution", so if p-value is greater than 0.01 or 0.05 then we do not reject normality of the dependent variable.
5. **Regression analysis:** regression analysis aims to select all the independent variables that are believed to have significant effect on the dependent variable to be included in the model. The mathematical representation to the model used to describe the relationship between the dependent variable and other independent variables depend on the nature of the dependent variable. The multiple linear regression model is used when the dependent variable is of ratio scale; the multiple linear regression model is used to test the effect of each of the independent variables on the dependent variable. The estimated model provides the direct effect of each independent variable on the dependent variable. Such effect is the net effect after fixing all effects of other independent variables included in the model. The multiple linear regression model seeks the best model that minimizes the vertical distance between the fitted line and the observed value of the dependent variable. Step wise regression is used to determine which variables have significantly effect on the dependent variable. This is done by using the ordinary least square (OLS) (Chatterjee and Hadi, 1988). As any model, regression model has assumption, **which are:**

- a- Normality of dependent variables assumption must be checked before fitting the model. Normality assumption is one of the most important assumptions of regression analysis assumptions. To test this assumption One-Sample Kolmogorov-Smirnov Test which is non-parametric test for testing normality of data is used, Null hypothesis of this test is "variable is follows normal distribution", so if p-value is greater than 0.01 or 0.05 then we do not reject normality of the dependent variable.
- b- No Multicollinearity: Multicollinearity defined as a linear relation between explanatory variables, and can be checked through Variance Inflation Factor (VIF). Multicollinearity is suspected if the VIF value is greater than 10.
- c- Linearity is also one of the assumptions of regression model. The linearity can be checked visually by plotting standardized residuals versus predicted values. If the scatter plot is random around zero then the linearity is confirmed. If the scatter points show pattern then the linearity is suspected. Note that linearity means there is linear relation between dependent and all independent variables, i.e. it does not measure for each independent variable.

Creating indicators

6 indicators are created in this research; these indicators represent the research variables. Each indicator is created by averaging the questions which measure this question. The following table represents the created variables:

Table (1): Created variables of the study

Variable	Number of Questions measure the variable
IT infrastructure	5
Organizational culture	4
Organization strategy	6
<u>E-CRM</u>	Average of the 3 above indicators
Behavioral loyalty	4
Attitudinal loyalty	6

Analysis of Constructs Validity and Reliability

In this subsection the results of Cronbach's alpha measure to measure reliability and average inter-item correlation to measure intrinsic validity, are presented. The following table presents the result of Cronbach's alpha measure and average inter-item correlation. From the following, table it is clear that the questionnaire is reliable as the Cronbach's alpha and average inter-item correlation coefficient for all items greater than 0.5. More precise the researcher can say that the questionnaire is stable.

Table (2.): Reliability of questionnaire in each category by using Cronbach's Alpha coefficient.

	<i>Cronbach's Alpha</i>	<i>Average item correlation</i>
IT infrastructure	0.969	0.864
Organizational culture	0.970	0.891
Organization strategy	0.961	0.803
E-CRM	0.987	0.831
Behavioral loyalty	0.891	0.672
Attitudinal loyalty	0.939	0.718

Sample Characteristics (Demographic and Professional Characteristics of Respondents):

Table (3) provides some descriptive statistics of the sample to give a general view of the demographic and professional characteristics of respondents.

Table (3): Sample Description according to the Basic Characteristics of Respondents

Variable	Gender		Age				Education			Total
	Male	Female	Less than 30	30-40	40-50	More than 50	High school	University graduates	Post grad.	
Number	123	277	80	138	106	76	67	293	40	400
Percentage	30.8%	69.3%	20%	34.5%	26.5%	19%	16.8%	73.3%	10%	100

1-

Variable	Number of using services from the company			Total
	1	2	3	
Number	68	261	71	400
Percentage	17%	65.3%	17.8%	100

The previous table indicates that the sample consists of 123 males and 277 females, and 80 aged less than 30 while 138 aged 30-40, 106 aged 40-50, and 76 aged 50 years and above. Regarding the education 40 are post graduates while 293 are University graduates and only 67 are high school.

Descriptive Statistics of variables of the study

In this section, the descriptive statistics of the variables of the study are described. The descriptive analysis is comprised of the following: Mean minimum, maximum, and Standard Deviation, C.V for each question.

From the following table, we can conclude that the average of all variables are around 3 and 4 which mean respondents are tend to neutrally agree and agree to most of the statement that measure these variables. The variable with highest agreement is the organization strategy, while the variable with least agreement is the behavioral attitude.

Table (4): Descriptive Statistics of variables of the study

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
IT infrastructure	400	1.0	5.0	3.723	.9685
Organizational culture	400	1.00	5.00	3.980	1.07383
Organization Strategy	400	1.00	5.00	4.00	0.98
Behavioral loyalty	400	1.00	5.00	3.448	.85649
Attitudinal loyalty	400	1.00	5.00	3.81	0.88

Correlation Analysis:

In this subsection the correlation analysis between the variables of the study is presented.

From the following table it is clear there is positive strong (as all coefficients are positive and greater than 0.7) significant correlation between each of behavioral

loyalty and attitudinal loyalty this with confident 95%, as the p-value associated with them less than 5%. Also it is clear that behavioral loyalty have higher relationship with each other variables than attitudinal loyalty.

Table (5): Correlations Between the variables of the study

Correlations		
	Behavioral loyalty	Attitudinal loyalty
E_CRM	.891**	.866**
IT infrastructure	.861**	.832**
Organizational culture	.873**	.848**
Organization Strategy	.888**	.867**

** . Correlation is significant at the 0.01 level (2-tailed).

Regression analysis.

Four regression models will be used to assess the independent variable against the dependent variables. 2 multiple regression models, and 2 simple regression models. The following 4 models that will be estimated

$$Behav. Loyalty = \beta_0 + \beta_1 * E - CRM + \varepsilon$$

$$Attiud. Loyalty = \beta_0 + \beta_1 * E - CRM + \varepsilon$$

$$Behav. Loyalty = \beta_0 + \beta_1 * IT + \beta_2 * culture + \beta_3 * strategey + \varepsilon$$

$$Attiud. Loyalty = \beta_0 + \beta_1 * IT + \beta_2 * culture + \beta_3 * strategey + \varepsilon$$

Where

β_0 : is the constant term

β_i : is the regression coefficient for independent variable I

ε : is the regression residual term

As mentioned before normality must be checked before estimating the regression models.

Normality test

Table (6): One-Sample Kolmogorov-Smirnov Test

		Behavioral loyalty	Attitudinal loyalty
N		400	400
Normal Parameters ^{a,b}	Mean	3.4488	3.807083
	Std. Deviation	.85649	.8762577
Most Extreme Differences	Absolute	.256	.217
	Positive	.132	.111
	Negative	-.256	-.217
Test Statistic		.256	.217
Asymp. Sig. (2-tailed)		.000 ^c	.000 ^c

a. Test distribution is Normal.

b. Calculated from data.

c. Lilliefors Significance Correction.

The tests results, shown in the above table. , revealed that the both of the dependent variables are not normally distributed because the significance value of these variables are below 0.05. However, since the valid collected sample is 400 responses hence, according to (Sekaran ,(2003), a research study sample size which is above 30 to 50 participants can run parametric tests especially in multivariate research. Moreover, running a parametric test when the data variables are normally distributed can be violated if the study's sample size is large or moderate and results can still reflect precision and accuracy.

Results of multiple regression models.

1- First Model

$$Behav.Loyalty = \beta_0 + \beta_1 * IT + \beta_2 * culture + \beta_3 * strategy + \varepsilon$$

ANOVA Test Results

ANOVA results are summarized in the following table According to the listed results, The p-value equals 0.000 which is significant (less than 0.05). This means that the proposed model predicts the dependent variable better than the intercept-only model (model with no predictor). That is there is at least one significant variable

that has effect on Behavioral loyalty from the 3 previous independent variables in model 1. These significant variables are illustrated below.

Table (7) : results of Anova test

	Sum of Squares	df	Mean Square	F	Sig.
Regression	234.005	3	78.002	526.263	.000 ^b
Residual	58.694	396	.148		
Total	292.699	399			

Coefficients Summary

The following tables summarize the included and excluded variables listed with significance and coefficients. The significance of the included variables is less than 0.05 which indicates that all variables have significant influence on the behavioral loyalty, this with confident 95%.

- *IT infrastructure* has positive impact on behavioral loyalty, this with confident 95%. This is because p value is 0.029 (less than 0.05) and β coefficient equals 0.138, given that all other independent variables are constant.
- *Organizational culture* has positive impact on behavioral loyalty, this with confident 95%. This is because p value is 0.008 (less than 0.05) and β coefficient equals 0.172, given that all other independent variables are constant.
- *Organizational Strategy* has positive impact on behavioral loyalty, this with confident 95%. This is because p value is 0.000 (less than 0.05) and β coefficient equals 0.470, given that all other independent variables are constant.

- From the standardized coefficients it is clear that organizational strategy has the highest effect on behavioral loyalty, while IT infrastructure has the lowest effect.
- VIF for all variables are less than 10 which support that there is no multi-collinearity problem.

Table (8): The Regression Coefficients

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	.370	.082		4.492	.000		
IT infrastructure	.138	.063	.157	2.197	.029	.971	1.030
Organizational culture	.172	.065	.216	2.656	.008	.939	1.065
Organization Strategy	.470	.071	.536	6.589	.000	.944	1.059

Regression Model Summary

As shown in the following Table, using a stepwise multiple regressions on the collected sample resulted in the following:

- Adjusted R^2 value of 0.798 indicates the fit of the model. The proposed model could infer 79.8% of the total variance in the behavioral loyalty.
- From the value of Durbin Watson it is clear that there is no serial autocorrelation between residuals, as the value is near to 2. No serial autocorrelation is one of the assumptions of the regression model.

Table (9) : summary of the stepwise regression model

R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
.894 ^a	.799	.798	.38499	1.825

To be sure that model results are reliable we must check the Linearity assumption, from the graph below it is clear that points are random then linearity satisfied.

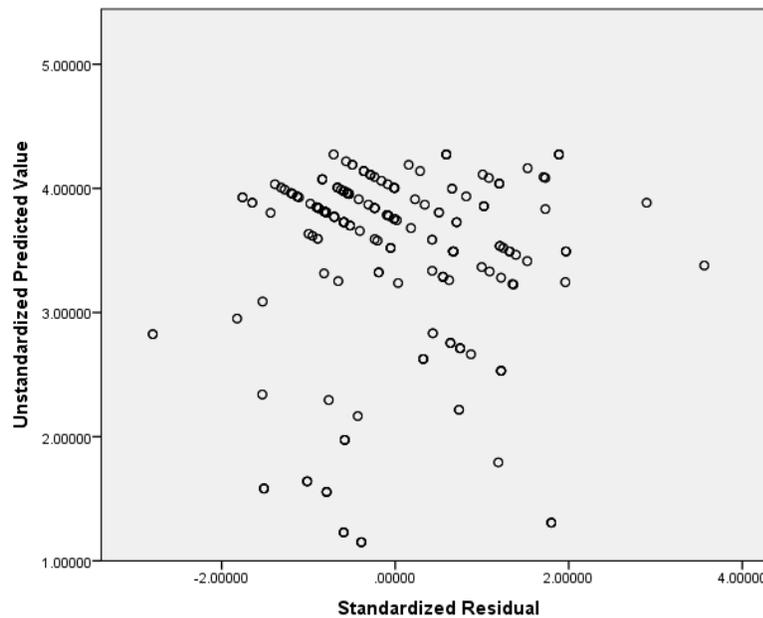


Figure (10): Linearity assumption for regression models (behavioral loyalty).

2- Second Model

$$Attitud.Loyalty = \beta_0 + \beta_1 * IT + \beta_2 * culture + \beta_3 * strategy + \varepsilon$$

ANOVA Test Results

ANOVA results are summarized in the following table According to the listed results, The p-value equals 0.000 which is significant (less than 0.05). This means that the proposed model predicts the dependent variable better than the intercept-only model (model with no predictor). That is there is at least one significant variable that has effect on attitudinal loyalty from the 3 previous independent variables in model 1. These significant variables are illustrated below.

Table (11) : results of Anova test

	Sum of Squares	Df	Mean Square	F	Sig.
Regression	232.330	3	77.443	414.239	.000 ^b
Residual	74.033	396	.187		
Total	306.363	399			

Coefficients Summary

The following tables summarize the included and excluded variables listed with significance and coefficients. The significance of the included variables is less than 0.05 which indicates that 2 out of 3 variables have significant influence on the attitudinal loyalty, this with confident 95%.

- IT infrastructure has insignificant impact on attitudinal loyalty, this with confident 95%. This is because p value is 0.290 (larger than 0.05) given that all other independent variables are constant.
- Organizational culture has positive impact on attitudinal loyalty, this with confident 95%. This is because p value is 0.008 (less than 0.05) and β coefficient equals 0.162, this means given that all other independent variables are constant.
- Organizational Strategy has positive impact on attitudinal loyalty, this with confident 95%. This is because p value is 0.000 (less than 0.05) and β coefficient equals 0.539, this means given that all other independent variables are constant.
- From the standardized coefficients it is clear that organizational strategy has the highest effect on attitudinal loyalty, while IT infrastructure has the lowest effect.
- VIF for all variables are less than 10 which support that there is no multi-collinearity problem.

Table (12) – The Regression Coefficients

	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Collinearity Statistics	
	B	Std. Error				Beta	Tolerance
(Constant)	.730	.092		7.894	.000		
IT infrastructure	.075	.071	.083	1.059	.290	.971	1.030
Organizational culture	.162	.073	.198	2.221	.027	.939	1.065
Organization Strategy	.539	.080	.601	6.731	.000	.944	1.059

Regression Model Summary

As shown in the following Table, using a stepwise multiple regressions on the collected sample resulted in the following:

- Adjusted R² value of 0.757 indicates the fit of the model. The proposed model could infer 75.7% of the total variance in the attitudinal loyalty.
- From the value of Durbin Watson it is clear that there is no serial autocorrelation between residuals, as the value is near to 2. No serial autocorrelation is one of the assumptions of the regression model.

Table (13): summary of the stepwise regression model

R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
.871 ^a	.758	.757	.4323809	1.845

To be sure that model results are reliable we must check the Linearity assumption, from the graph below it is clear that points are random then linearity satisfied.

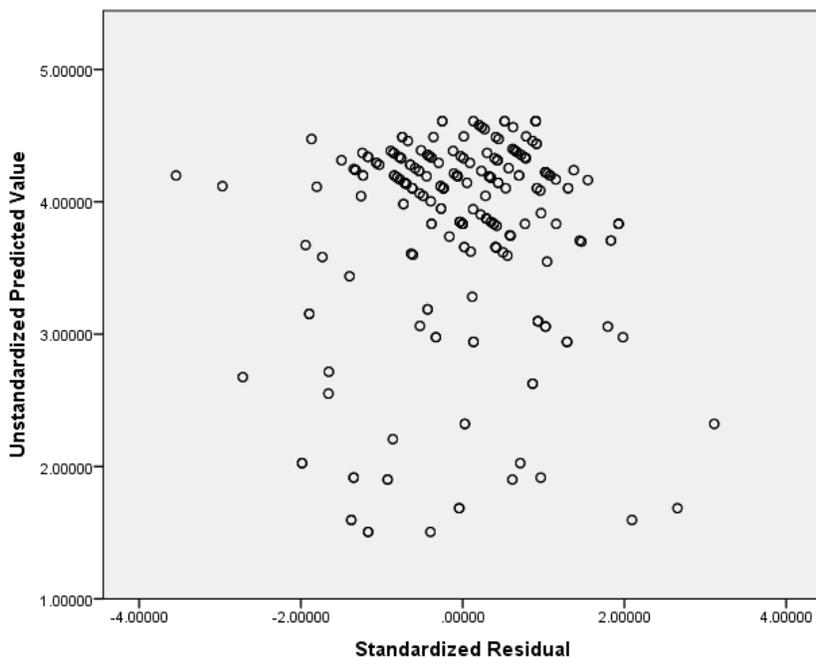


Figure (14): Linearity assumption for regression models (attitudinal loyalty).

Simple regression Models:

Table(15) presents the results of simple regression

Model	Dependent variable	constant	p-value.	B	p-value.	Adjusted R Square
1	Behavioral loyalty	0.432	0.000	0.774	0.000	0.795
2	Attitudinal Loyalty	0.809	0.456	0.769	0.000	0.750

E-CRM has significant positive effect on behavioral Loyalty at confidence level 95%, as the coefficient = 0.774, and p-value = 0.000. Also, from adjusted R squared it noticed that E-CRM has the ability to explain about 79.5% from the variation in behavioral loyalty dimension.

- E-CRM has significant positive effect on attitudinal Loyalty at confidence level 95%, as the coefficient = 0.769, and p-value = 0.000. Also, from adjusted

R squared it noticed that E-CRM has the ability to explain about 75% from the variation in attitudinal loyalty dimension.

Conclusion:

In conclusion, the current research broadens our horizons and extends our understanding by using a literature review. First, the research provides a full understanding of e-CRM and its importance, also the critical success factors in implementing e-CRM. Second, the research identifies customer loyalty and its measures. The empirical study examines the impact of e-CRM on customer loyalty in the public tourism sector in general and evaluates the current situation in Misr Travel in particular.

Results:

The primary objective of this research is to examine the impact of e-CRM on customer loyalty; the results of the survey indicate in general that there is a significant positive relationship between e-CRM and customer loyalty, which accepts the main hypothesis of the research.

According to the sub-hypotheses which are:

- 1- The result of research analysis accepts that there is a significant positive relationship between the e-CRM and behavioral loyalty.
- 2- The result of research analysis accepts that there is a significant positive relationship between the e-CRM and attitudinal loyalty.

The findings of the literature review align with the results of empirical study of this research. The research has reached a number of important results that can be used to develop the performance of the tourism sector in general and Misr travel in particular. The following points summarize the results of this research:

- The tourism sector in Egypt has a great support from the Egyptian government and it has increased since the outbreak of the covid-19 pandemic.

- The e-CRM has become greatly important in the tourism sector during the covid-19 pandemic.
- In light of the importance of various digital platforms, the Ministry of Tourism plans a framework to develop, raise efficiency, and enhance and attract diverse segments of followers.
- Within the framework of the Ministry of Tourism has decided to allow 74 nationalities around the world to obtain a tourist visa electronically in order to enhance tourism.
- The portal for obtaining a tourist visa is supported electronically in 8 languages, and it also allows answering the various inquiries of tourists, with the advantage of secure electronic payment for the payment of the value of the tourist visa.
- Misr travel has signed a contract with Microsoft company to manage and develop social networking sites and the authority's website, in order to enter the field of e-tourism.
- Nowadays, and during the covid-19 crisis, Misr travel depends on implementing e-CRM for solving problems on the long run.
- There are great opportunities and potentials for marketing tourism services electronically and Misr travel is trying to achieve them.

Recommendations

The analysis of this research can be used to provide some recommendations:

- 1- The Ministry of Tourism needs to promote its IT infrastructure to be able to develop e-CRM applications on a broader range to cover more customers.
- 2- As a result of the increased use of technology, Misr travel should pay more attention to establishing an independent administration department for e-CRM and to the administrative procedures and structure.
- 3- Misr travel should concentrate in the quality of the data given on the websites; the data should be accurate and updated.
- 4- Misr travel needs to focus on training its employees, and improving their efficiency to use modern technologies in a sound, scientific manner.

- 5- Misr Travel should adopt continuous and effective communication with customers to identify their desires and needs, to improve their positive attitude towards the company.

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Appendix

Questionnaire Questions

Dear Sir/Madam: Many thanks for finding time to participate in this study. My name is Dr. Marwa Sayed , I am lecturer at Modern Academy . This questionnaire aims to study the impact of Electronic Customer Relationship Management on Customer Loyalty with application on Misr Travel, Kindly mark the most appropriate answer in front of each statement. Your participation is highly appreciated. Please note that all the information provided by you will be treated with strict confidentiality.

First: Demographic Data:

Personal data:

Sex	Male	
	Female	
Age	Less than 30	
	From 30 to 40 years	
	From 41: 50 years	
	More than 50 years	
Educational level	High school	
	University graduates	
	Post graduate	
Number of years dealing with the company	Less than 1 year	
	From 1 to less than 5 years	
	More than 5 years	

Second: About the reality of implementing E-CRM

No	Sentence	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
1- IT infrastructure						
1	The company has several electronic channels which help to communicate with customers					
2	There is an integrated system to register customers and follow up on them.					
3	Customers' information a constantly updated from time to time.					
4	There is a supporting team to help customers.					
5	The company is interested in updating the electronic channels to increase communication with customers.					
2- Organizational culture						
6	The company's management cares about customers' opinions.					
7	The company is interested in improving its relations with customers.					
8	Dealing with the company electronically is easy.					
9	The company takes care of electronic customer complaints.					
3- Organization strategy						
10	The company is interested in offering new services to satisfy customers.					
11	The company seeks to serve customers electronically.					
12	The company responds quickly to solve problems or complaints.					
13	E-CRM creates healthy customer relationships.					
14	The company treats each customer differently.					
15	There is support from management to improve customer management electronically.					

Third: Customer Loyalty

No	Sentence	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
1- Behavioral loyalty						
1	The company is my first choice because it always meets my needs.					

2	I have been dealing with the company for a long time.					
3	I intend to deal again with the company in the future.					
4	I don't care about competitors' offers.					
2- Attitudinal loyalty						
5	I wish to continue dealing with the company.					
6	Whenever I hear a talk about the company, I feel like I belong to it.					
7	I will deal with the company even if the service fees increase.					
8	I feel proud to be one of the company's clients					
9	I advise all my acquaintances to deal with the company.					
10	I will always mention the positive aspects of the company to others.					