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Identifying the Effective factors in Marketing using E-mail: A Case study of Clothing Industry

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Abstract

Email marketing is a powerful tool through which it is possible to talk directly to the customers about today's goods and future successes. The advantage of email is in creating conventional methods, which is possible through direct post, therefore by improving management system for communicating with customers, internet network and increasing customer's trust; email marketing can be developed and replaced with the traditional method of marketing. In the present article an attempt has been made to evaluate direct and indirect effects of variables on email marketing using path analysis method. In order to achieve such goal, a questionnaire consisting of 40 questions was prepared, and based on the resulted data from the questionnaire and also using path analysis method; the direct and indirect effects of these variables on email marketing were evaluated. According to T-value the internal variables, which affect directly email marketing, were separated from external variables, which are indirectly effective, and the final model for path analysis is determined. The results show that internet network system, customer relationship management, customer's trust, after sale services and comprehensive advertisement have significant effect email marketing and there was not a significant relationship between teaching and learning with email marketing.

Keywords: Email marketing, customer relationship management system, information system based on computer and trust.

Introduction

Internet and virtual networks have accounted for a large part of the information age. Computer technologies have changed the method of communications although the application and use of these techniques are not yet fully understood. The internet has become the information superhighway which is found anywhere in the world. It acts as a superhighway which has increased the speed of access to data using a computer and a modem, and bridged the gap between production and consumption markets. Meanwhile, email provides us with some services requiring no physical presence.

Since 2007 up to now, Email marketing has developed in developing countries. Researchers have carried out a lot of studies in regard with factors affecting the development of Email marketing in which it has mostly been emphasized that Email marketing is a managerial process establishing the relationship between the organization and the customers[1]. The previous studies have mainly focused upon customer satisfaction and their loyalty through optimizing electronic messages in accordance with their tastes[2]. Erik and Platinum[3] regard researching and awareness of customers' needs along with sending electronic messages in accordance with their tastes in no time and as fast as possible as the secret of success in internet markets. In Iran, a wide range of research has been conducted into internet marketing but limited studies have been done on Email marketing which is a method in E-marketing. This study examines a wide range of variables including customer relationship management, computer-based information systems and customer confidence in Email marketing. Given the development of Email marketing in developed countries, lack of enrichment and weakness in computer-based information systems, weakness in establishing customer relationship management software along with weakness in culturalization and customers' awareness of Email marketing has not allowed this software to develop as much as possible in Iran. As Darwin states an organization will remain in the competitive world which can provide the best services in order to maintain loyalty in the current customers and attract potential customers[4]. Therefore, organizations are able to produce distinct products by spending minimum resources with the development of Email marketing, have return on investment as soon as possible and increase the speed of relationship with their customers which leads to their satisfaction and loyalty. This study aims to show that there is a significant relationship between customer relationship management and Email marketing - there is a significant relationship between computer-based information systems and Email marketing, and there is a significant relationship between customer confidence and Email marketing. Thus, this article consists of the following sections in order to investigate the impact of these variables upon Email marketing: in section two and after introduction, related literature review is given. The research conceptual and theoretical model is given in section three. Section four deals with the research methodology and data collection methods. In section five, the model is

estimated and its results along with testing hypotheses are presented. Summary, conclusion and suggestions for further research fall into the final section of the article.

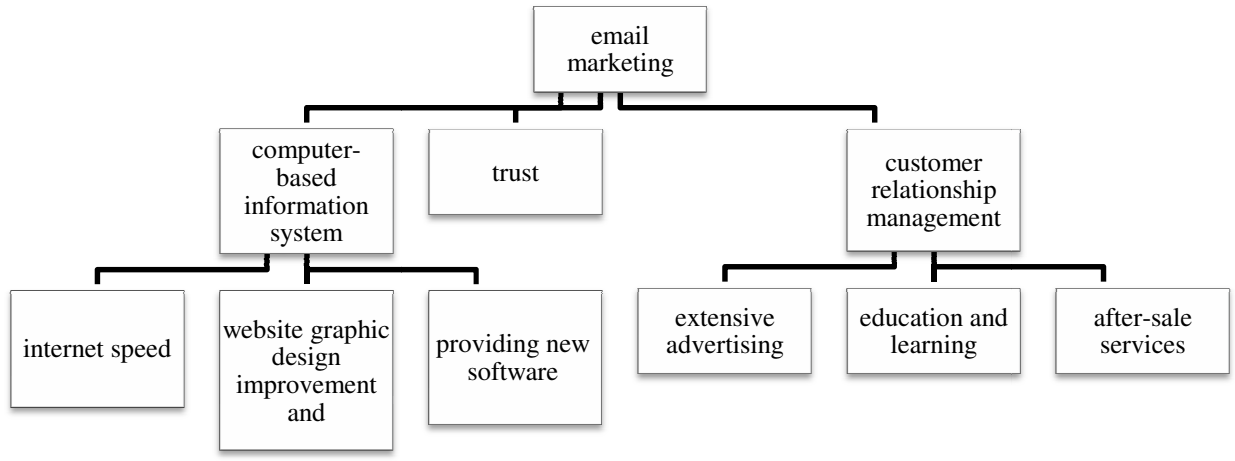
As stated in the former section, a number of studies have addressed this issue. Based on the results of these studies, the most important factors influencing email marketing include the following: i. The optimization of email marketing and designing it based on the taste of customers and providing the products via email. ii. Using specialized software applications to increase internet speed, and iii. Increasing the customers' trust to order and purchase the product via email. The most important studies delivered on this subject as well as their results are put in table-1.

Email marketing is divided into three categories. First category is Customer Relationship Management (CRM) which is a method for business, and as a result leads to the increase of income via increasing customer satisfaction[14]. Customer relationship management includes three subcategories, namely after-sale services, education and learning and extensive advertising. The second category is trust. Trust is considered as a very important element of internet marketing in different studies. Based on Chen [15], trust means attaching to an exchange partner whom you trust. The third category is Computer Based Information System (CBIS) which is based on hardware and software technology to process the information. Computer based information system is divided into three subcategories including providing new software, website graphic design improvement and internet speed. A brief structure of this study conceptual model is provided in the figure-1.

Table-1
A brief history of the previous studies on the factors influencing the improvement of email marketing

Researcher	Result
Elahi[5]	After finding the target buyers with respect to their held values, they start to define benefits that fit the customers' interests
Hoffman and Novak[6]	New marketing replaces one -many activities with many-many activities
Daylie [7]	Email marketing prompts non-verbal communication and improves quality service
Mahdavi[8]	A good design of emails is a means of successful email marketing for different companies
Mayer[9]	The mist important in email marketing is customers trust. Buyers like to use a well-known store to buy their goods.
Fornell[10]	In electronic marketing, trust is defined in three levels including: trust in the website, trust in the information provided in the email and trust in the service provision
Eid[11]	In email marketing, the prices of transportation and product delivery should be updated
Maleki[12]	The information provided in the email should be brief, useful and covering all points that are within the interests of customers. They should also be easily provided
Kotler[13]	The implementation of relationship with customers have 3 stages including the determination of customers' demands, identifying their needs and sustaining a long relationship with them

Source: different sources



Source: Erik and Platinum[3]

Figure-1
The conceptual model and the relationship between the variables

Methodology

This was an applied research using descriptive-survey method. The statistical population of this research included those clothing producers in Tehran that use email marketing to communicate with their customers (300 stores). Stratified and random sampling was used to choose samples. The sample population consisted of 169 individuals. Therefore, 169 questionnaires were distributed during 2 months among managers and employees of these stores. 150 questionnaires were then returned. To gather the research general information, books, articles, magazines and theses on the subject were analyzed. The questionnaire questions were designed by professors and experts of email marketing. The questionnaire had 40 closed-ended specialized questions ranked on the scale of 1-5 based on Likert Scale. 1 represented full disagreement, and 5 showed full agreement. The first part of the questionnaire included 33 questions to measure 9 variables if this research. 2 questions addressed customer relationship management (questions 1 and 2); 5 questions measured after-sale services (3, 4, 5, 6 and 7); 4 question were for extensive advertising (7 and 10); 3 questions for education and learning (11, 12 and 13); 2 questions for computer based information system (14 and 15); 3 questions for the provision of specialized software applications (16, 17, 18 and 19); 5 questions for the unique design of emails (20, 21, 22, 23 and 24); 4 questions for internet speed (25, 26, 27 and 28), and 5 questions targeted the customer's trust (29, 30, 31, 32 and 33). In the second part of the questionnaire, a number of questions were asked about demographic information of managers, employees. This information included some information about their profession, their way of communication with customers and how long they have used email marketing. To determine the reliability, after designing the basic form of the questionnaire and making sure about its validity, 30 questionnaires were randomly distributed as a pretest among a limited number of our population. After collecting the questionnaires, they were analyzed with respect to the variables. To fulfill this objective, internal consistency method or Cronbach's alpha was used. In the present study, the reliability of the questionnaire was estimated as 87% using Cronbach's alpha.

Results and Discussion

To analyze the data, parametric and non-parametric methods were used. The description of data war done by using frequency tables. The used method was structural equation system, and Lisrel software was made use of. After preparing the questionnaires, the extracted data were monitored and categorized. The results of descriptive statistics of demographic variables of this questionnaire could be observed in table-2.

As could be observed from table 2, sales clerk participated more in answering the questionnaires in comparison with other staff (more than 28% of respondents). The least participation was shown by managers. The number of employers in most companies ranged from 70 to 100. The above table also shows that employers are not normally distributed in the companies.

One assumption for doing a regression analysis is data normality. Hence, in this section and before doing a regression, we first need to evaluate the normality of our data. To test the data normality in this research, we made use of Kolmogorov-Smirinov test and Minitab software. Based on this test, if the significance level is higher than the error level of 0.05, the zero hypothesis is approved, and data are distributed normally, otherwise the zero hypothesis is rejected, and data are not distributed normally. The results of hypothesis test are brought in table-3.

Table-2
Descriptive statistics of demographic variables

Title		Frequency	Percentage
Job	Sale employee	48	28.4
	Sale manager	20	11.8
	Marketing manager	18	10.7
	IT manager	28	16.6
	Others	55	32.6
The number of employees	Less than 50	28	16.6
	51-70	41	24.3
	70-100	55	32.5
	More than 100	45	26.6
The length of using email marketing	Less than 2 years	31	18.3
	2-4 years	74	43.8
	4-6 years	63	37.3
	More than 6 years	1	0.6
Frequency of using internet to know the needs of customers	Always	38	22.5
	Sometimes	75	44.4
	Rarely	47	27.8
	Never	9	5.3

Table-3
The results of Kolmogorov- Smirinov test for the research variables

Variables	Z-statistics	Significance level	Result of hypothesis evaluation
Email marketing	1.351	0.053	Normal
Customer relationship management	1.086	0.189	Normal
Internet network system	0.825	0.304	Normal
Customer trust	1.211	0.091	Normal

Source: Test Results

According to table-3, all of the variables in this research are normally distributed. Therefore, there is no problem with delivering regression estimation. After the observed modifications, structural equations were derived for the purpose of electronic marketing as shown in diagram 1. All of the research variables are categorized into two groups of latent and manifest variable which are respectively shown in the oval and rectangular figure. Manifest variables are directly observable and measurable by the researcher, while latent variables cannot be directly observed and measured. Latent variables are measured indirectly by using manifest variables. Any variable of structural equations could be considered as both endogenous and exogenous. Endogenous variable is determined under the influence of other variables of the same equations whereas exogenous variables are predetermined. Having these definitions in mind, in this study, customer relationship management and its indices, network systems and customer trust are exogenous variables, and email marketing is endogenous variable.

When the model-implied covariance matrix is equivalent to the covariance matrix of observed data (i.e. when the remaining matrix and its elements are close to zero), the model is proportional to a series of observed data. In fact, this proportion depends to the approximation method, model, features of the observed data and the like.

From among different tests that have so far been proposed, chi-square test is the most suitable for the analysis of the model proportion. However, the use of this test demands observing a set of assumed prerequisites that could be violated on some occasions. With a surge in outlining the shortcomings of chi-square test, a number of secondary indexes were generated.

The most important difference between a chi-square test and secondary indexes is that chi-square test shows the model lack of proportion. The less it is, the more proportionate the model becomes. On the other hand, secondary indexes such as GFI and AGFI are the indexes of model proportion thus the more value assigned to them, the more proportionate the model is. Table 4 shows the limits of model proportion and their first and second approximation in the first and second order.

Considering the results of table-4, the estimated first and second order models indicate the goodness of fit models.

The analysis basis in Lisrel program is variance-covariance matrix between dormant and manifest variables. In this analytical framework, it is supposed that one reason for the existence of relationship between dormant variables is the correlation between them. Correlation coefficient is a statistical means for the determination of the type and degree of relationship between quantitative variables. Correlation coefficient is a criterion used for determining the correlation between two variables. Correlation coefficient shows the intensity and the type of relationship (i.e. direct or inverse). In other words, this criterion analyzes how a dormant variable is capable of explaining the index variance of its manifest variables. For the purpose of convergent validity, Fronell and Lacker suggest the use of Average Variance Extracted (AVE) standard. If AVE equals 0.5, the convergent reliability of the indexes is suitable. In this study, correlation coefficient is determined for the existing variables of the model, and results are shown in table-5.

Table-4
Limits of model proportion and their first and second approximation in the first and second order

Index	First-order model approximation	Second-order model approximation	limit
Chi-square degrees of freedom	2.798	2/798	Less than 3
Goodness of fit Index (GFI)	0.90	0.90	More than 0.9
Root Mean Square Error of Approximation Index (RMSEA)	0.083	0.95	Less than 0.1
Comparative fit index(cfi)	0.95	0.95	More than 0.9
Normed fit index (nfi)	0.93	0.93	More than 0.9
Non-normed fit index (NNFI)	0.97	0.97	More than 0.9

Source: Model Estimation

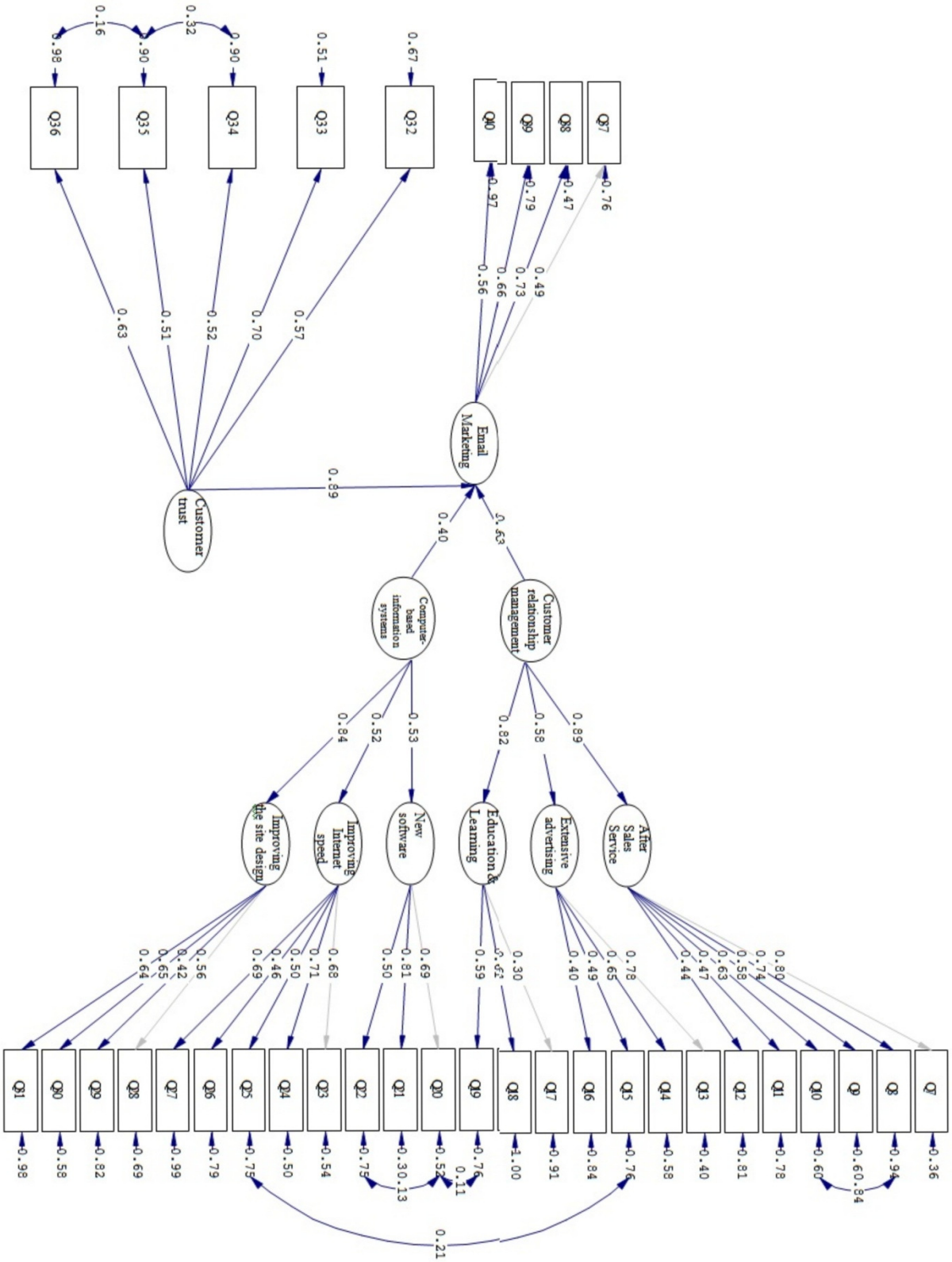


Diagram-1

The second order structural equation modeling after the approximation of standard coefficients

Goodness of fit Statistics: Chi-Square=1279.51, DF=509, (χ^2/df=2.513), RMSEA=0.095, GFI=0.90, CFI=0.95, NFI=0.93, NNFI=0.97, IFI=0.94, RFI=0.91

According to table-5 and based on the test statistics, the hypothesis that all research variables enjoyed convergent validity was approved. As was mentioned in the former section, we analyzed the relationship between dependent and independent variables by using Lisrel program and structural equation method. We also managed to test our hypotheses. The results of model estimation are show in table-6.

The most important results of hypothesis evaluation are put in table-6 which are stated in the following: From the 6 variables in this study, only education and learning had no significant relationship with email marketing. Other variables are effective; however the level of their impact differs depending on their coefficient. It should be noted that customer trust was the most important variable (coefficient= 0.89), and the least important variable was advertising (coefficient =0.28). Internet network system, customer trust and after sale services were effective in email marketing with a coefficient of 99%; customer relationship and extensive advertising had a coefficient of 95%. The complementary results as well as research hypotheses and the model coefficient interpretation are brought in the following.

There is a significant relationship between customer relationship management and email marketing. Based on the results of coefficient path and t statistics which are in table-6, customer relationship management has a significant influence on email marketing with a confidence level of 0.99% (the research hypothesis was approved with the confidence level of 0.99%). This positive coefficient could be ascribed to the fact that the type of relationship is positive and in the same direction. Therefore, in the confidence level of 0.99, it can be expected that the rise of customer relationship management level concur with the increase of email marketing and vice versa. Moreover, as mentioned in the former section, customer relationship management includes three aspects (extensive advertising, after sale services, and education and learning. For our hypothesis to be significant, one aspect of customer relationship management needs to be effective in the independent variable (email marketing). The results show that from these 3 aspects, extensive marketing and after sale services were effective with the confidence level of 95%. Therefore, zero hypothesis of this analysis is approved.

There is a significant relationship between computer-based information and email marketing. According to the results of model estimation which are put in table-6, with the confidence level of 99%, the rise of computer-based information causes an increase in email marketing and vice versa.

There is a significant relationship between customer trust and email marketing. According to table-6, customer relationship management, with the confidence level of 99%, had a significant impact on email marketing. The type of relationship was positive and in the same direction. With respect to minor hypotheses, the same analysis could be made. However due to the table and for the sake of brevity, we do not repeat them here.

Table-5
The average variance extracted (AVE) and the covariance matrix between the dormant variables

Research variables	(1)	(2)	(3)	(4)	(5)	(6)	Average Variance Extracted (AVE)
Email marketing	0.35						0.62
After Sales Service	0.51	1					0.63
Extensive advertising	0.39	0.80	1				0.51
Education and learning	0.48	0.67	0.63	1			0.66
Internet network system	0.45	0.83	0.74	0.63	1		0.56
Customer trust	0.58	0.86	0.69	0.69	0.80	1	0.56

Source: Model Estimation

Table-6
Path coefficients, t-statistics and the results of the research hypothesis evaluation

Hypothesis	Path coefficient (β)	T test	Significance level	The evaluation result
internet network system → email marketing	0.40	3.22	0.99	approved
Customer relationship	0.63	2.44	0.95	approved
Customer trust → email marketing	0.89	4.19	0.99	approved
After sale service→ email marketing	0.66	3.04	0.99	approved
Extensive advertising → email marketing	0.28	2.17	0.95	approved
Education and learning → email marketing	0.17	1.74	No significance	rejected

Source: Model Estimation

In this study, due to reasons such as a few dependent variables (i.e. customer relationship management, computer based information system, customer trust and email marketing), the qualitative nature of the independent variable (clothing industry) and the subdivision of independent variable (i.e. the independent variable had more than two subgroups), we used one-way analysis of variance (ANOVA). Based on this test, if mean k of different groups is comparable with each other, zero hypotheses can be formulated as follows:

H0: the ideas of all groups were the same.
H0: at least one group has different ideas in comparison with the others.

If zero hypotheses is approved, it can be claimed that in 95% of confidence level, the condition of variables is the same in all stores. However, if the zero hypotheses is rejected, it can be formulated that there is significance difference between the conditions of variables in the two groups which are under study.

For customer trust and email marketing, significance was less than 5%. Therefore, there is a significant difference between at least two groups of the study. Based on the results, the highest level of customer trust was for Grad store, and the lowest was for Mango store. Shahrvand store had the highest level of email marketing and the lowest was for Eco store. With relation to computer-based information systems and customer relationship management, was not a significant difference between the under-study stores.

Conclusion

This study aimed at finding the most important factors in the improvement of email marketing. To fulfill this purpose, an analytical model was used in which 3 factors were regarded as effective in email marketing. Based on structural equation model and standardized path coefficients, 78% of these coefficients had influence on email marketing and the remaining impacts were about the research errors or other interfering factors. According to the hypothesis test delivered by structural equation method and standardized path coefficient, customer trust had the most significant influence on the development of email marketing. To enhance this variable the following suggestions taken from other research and this study are made. i. the name and the call information of the company or store should be written in the email so that the customers are able to contact the company. ii. The cost of goods and their transportation expense should be referred to in the email. iii. The availability of following the product via email and the time of receiving the product. iv. Showing the necessary certificates to the buyers so that they feel secure to order and pay. 5: creating a secure payment system. These could have an important influence on the improvement of email marketing. Based on the delivered tests, had impacts on the improvement of email marketing. Therefore the enhancement of customer relationship management could lead to the development of email marketing. To fulfill this objective these suggestions are made: i. The identification of customers demand and satisfying them via email; for example, mango store categorized its customers, and it consequently send them email based on their taste and likes. ii. Using public media to advertise extensively; TV and radio could have a massive influence on culturing and educating the customers. iii. The distribution of magazines and brochures to inform the customers of email as a way of communication with the company. For instance, NIKE store used this method to inform the customers about this means of communication with the company. iv. Companies should obtain customers' emails if they like so that they are informed about the new products. It should be noted that email is personal information therefore customers' attention and satisfaction should be done under their permission. v. Giving prizes and lotteries to those customers who use this method to order and purchase a product. Moreover, according to hypothesis test and standardized coefficient analysis, computer-based information system variable had less impact on email marketing than other variables. Therefore, this article proposes the following solutions for the development of computer-based information. i. Using moving icons to motivate the customer to read their emails. ii. Updating electronic messages in accordance with the customers' needs and tastes. iii. The availability of a means for inviting the customers to talk to the managers about their difficulties and criticisms. iv. Designing emails suitable to the brand values. With respect to this, it is suggested that each store put its logo on top of every email. v. Designing emails and website for the disabled to motivate them to use this technology. Finally, it should be pointed out that due to the novelty of this method, lack of necessary infrastructures, lack of customers' knowledge, newness of e-shopping and defects in providing services, some of these web services are not available in Iran. For example, page ranking, which is provided by Yahoo and Google, could be scarcely operated in Iran. Services such as social networks that play an important role in communication among customers have real access difficulties in Iran.

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