



Investigation of the Effect of Internet Marketing Mix on Improving the Performance of Internet Companies

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Abstract

The growing trend of using internet and electronic equipment and their resulting profit lead to essential variation of business processes in different organizations, and institutions. Marketing as the main core of the organization is very important in internet markets. Nowadays, the role and importance of marketing strategies in prosperity or defeat of an organization are known to all. The advent of information technology and its growing speed have thoroughly changed marketing strategies. Lots of manufacturing and service organizations influenced by these technologies design and codify their marketing strategies such that benefit its resulting competitive advantages. On the other hand, electronic marketing strategies are efficient and low cost tools for entering the novel markets and prepare the fields for easy, low cost, and with low risk entrance to foreign markets. Thus, in this article, considering the importance of this issue, the effect of internet marketing mix with 4S approach is studied on the performance improvement of internet companies. Results indicate that all four elements of internet marketing mix (scope, site, synergy, and system) are effective in improving the performance of internet companies.

Keywords: Internet marketing mix, marketing, performance improvement.

Introduction

The revolution of information technology and communications is the main characteristic of human life in the beginning of third millennium and this variation has affected different areas. The variation rate is so high that human being as its inventor has not been able to coordinate his/her various life elements with this steep change. Different parts of culture, like family, education, women, and their role have not been protected from these variations and this means universal variations. Trade is widely affected by this revolution and the need for re-defining its main elements has been intensified. Market, exchange, buyer, seller, marketing, etc. all are required to vary their conventional definitions to conform to new facts¹.

Model of internet marketing mix by combining the vital elements of internet marketing and following the strategic, operational, and organizational concerns of electronic trade, presents a mixed model for synchronization with technological developments and improvement of organizational performance. This model is an appropriate foundation for strategic planning of marketing. It was first designed for planning for presence of virtual internet companies and it was used for development of electronic activities of single-product and service companies¹.

Steps of model of internet marketing mix are¹:

Strategic approach step: In this step, model of internet marketing mix of strategic issues and topics required for

establishing a flexible and prosperous electronic commerce company are identified. The emphasis of this model is on the fact that internet activities should be performed based on related strategic goals and also a specific policy should exist based on coordination and cooperation between these activities. The other noteworthy point in this step is the need for highest matching level between virtual and non-virtual solutions. This issue is accomplished for maximum use from competitive power and strength of a company¹.

Operational planning step: The result of doing this step of the model is designing a stable system based on reality. The first goal of operational planning is to promote internet activities for developing the market and flexible and unique presence¹.

Organizational planning step: The goal of executing this part of the model is creating an appropriate infrastructure composed of organizational structure, human power and knowledge. Recognizing the points which have the highest Composition level between electronic commerce and present infrastructures of the company, can lead to highest profitability between virtual and non-virtual commerce and increase the efficiency and effectiveness of the company considerably¹.

Cooperation step: After the mentioned three main sections, model of internet marketing mix state the need for cooperation with complementary companies for more progress in internet competition of the company. The discussion of complementary companies was stated by Shapiro and Varian. They added this

issue as the sixth force to the competitive five-force model of porter. The goal was thorough realization of competition power and competitive position of activity of companies¹. Finally, it should be mentioned that issues related to technology and management have backup role for electronic commerce and this model identifies and mentions these issues¹.

A method for planning internet marketing and electronic commerce in four steps was mentioned. In the 4S model of internet marketing mix, these steps are named scope, site, synergy, and system, respectively. The content of each step relies on its previous step. Also, the feedback of these contents is essential during planning period for optimal utilization in each step. This article is written in four sections. In the first section, opinions of marketing experts regarding internet marketing mixes are investigated. In the second section, model of internet marketing mix with 4S approach is explained. In the third section, the research methodology is presented and in the fourth section research findings are illustrated.

Review of Literature: The concept of marketing mix was initially introduced by Neil Borden in 1950s and was recognized as 4P². The most prevalent definition of marketing mix for proper position finding in target market is proffering appropriate product in suitable position with proper cost and in convenient time³. Philip Kotler defines marketing mix as a set of controllable variables of marketing in which the company Integration them for responding to the target market⁴. Marketing mix encompasses all the works in which the company can do to affect the amount of demand for its products. These works can be classified in four variables known as 4P. With the advent of internet and novel marketing philosophy, and with interactive communications properties, marketing mix requires re-definition. In this regard, various studies are performed which in this article some of the most important opinions of marketing experts is stated:

Model of internet marketing mix with 4S approach: 4S

internet marketing mix specifies four vital, strategic, operational, and technical factors which include scope (strategic concerns), site (operational issues), synergy (Composition with non-virtual procedure), and system (technical concerns)¹².

Scope: Content of scope is a strategic solution and articulates the decisions in four groups which are¹²: Strategic and operational scopes of internet field, Defining and identifying the market, evaluation of internal power of the market, and recognizing and classifying the strong competitors, visitors and customers of website. The preparation level of considered organizations for electronic commerce. Strategic role and significance of electronic commerce for the organization.

Site: Site is like the relation between the company and customer. It is the first source for internet experience of the customer. Consequently it is the most important communication element of electronic commerce¹². Site is a method for virtual presentation of a product and price. It is an advertising element and a principle for sale and distribution. Also, website is considered as the policy of trading and communicating performance with the customers¹². The main duty of the site is creating interaction in virtual environment, communicating with considered markets, and depicting the virtual structure of the company. After this general duty, based on strategic roles, site can provide a combination of commercial purposes and also non-commercial purposes like employing workers, shareholders' information, etc. Some of the goals and general duties of the site are¹²: Communicating and advertising the properties, results, and services of the company. Presenting information of the company to the customers and all stakeholders. Creating effective communication between virtual and non-virtual advertising activities. Presenting improvement of service performance for maintaining customers. Presenting information regarding sale, customer and market. Making association of customers in creating online contents possible. Making direct sale and electronic payment possible.

Table-1
Internet marketing mixes

Authors	Year	Internet marketing mixes
Capon and Hulbert ⁵	2001	Selection, custom manufacturing, compatibility, ease of access, customers, variation of information.
Skyrme ⁶	2001	Position finding, packaging, personalizing, advancement, electronic payment, processes, performance.
Kalyanam and McIntyre ⁷	2002	Product, price, distribution, custom manufacturing, confidentiality of information, customer support services, site, security, advancement of sale.
Mohammed ⁸	2002	Interaction communications, custom manufacturing, brand, distribution, population of the customers, communications, price, and product.
De Groote ⁹	2002	Individuals, product, advancement, price, distribution, partners.
Arnott and Bridgewater ¹⁰	2002	Product, price, advancement, distribution, customer relations.
Karayanni and Bridgewater ¹¹	2003	Emphasis on designing a site with interactive, multimedia navigation, speed, providing information, data visualization, presenting information to the customer, and gathering information of the customer properties.

Synergy: Synergy is the necessary method of merger for recognizing the goals of virtual organizations. The synergy is performed between virtual and non-virtual organizations. The synergy factor includes a wide variety of issues which can be divided into three sections: company managers, workers, and other stakeholders¹².

System: System specifies and identifies concerns related to technology, and also issues related to services which should be followed up by management. Situations where systematic decisions (related to system) are taken; include¹²: Website management, maintenance, and service. Hosting provider server

and choosing the company of providing web services. Site structure. Content management. Site security. Transactions performance. Providing, performing, and distributing site traffic and transactions information. System support

Finally, the technical management of site in synergy with advertising manager should regularly recognize and evaluate the technologies and new products which are effective on site performance, customers' experience and economy¹². Experts' opinions regarding components of internet marketing mix based on 4S approach are presented in table 2.

Table-2
Study of opinions regarding electronic marketing mixes

Mix	Authors	Opinions	Year
Scope	Palmer and Griffith ¹³	Emphasizes on the necessity of alignment of scopes and strategies of company with the principles of competition in internet space.	1998
Scope	Abels et al ¹⁴	Having strategies appropriate with internet space including on-time and up-to-date informing and competitive pricing causes motivation in customer behavior.	1999
Scope	Liu and Arnett ¹⁵	Coordination between resources and internal values of organization and values governing internet space is a factor for development of internet businesses.	2000
Scope	Voss ¹⁶	Pointing the necessity of responsiveness of organizations in internet space, considers providing custom services with high added value as the strategic role of internet and introduces it as a factor for increasing the trust of customers.	2000
Site	Rice ¹⁷	States that appearance, content, accessibility, noticing, security, and other properties of a commercial website can increase the shopping satisfaction and brings about a pleasurable experience from internet shopping for customers.	1997
Site	D'Ambra and Rice ¹⁸	Preparation, attraction, information, shopping cost, difficult information, amusement, social effect, identification control, and utilization control are effective factors in evaluation of customers from websites of companies.	2001
Site	Lee and Kim ¹⁹	Convenience in gathering information, pleasure in ordering, simple and stable user interface and safety of website are factors of increasing satisfaction and loyalty of customers in internet shopping.	2006
Site	Constantinides ¹²	Applicability, bilateral activity, security, study of appearance and appropriate marketing are among the properties of superior websites in electronic business.	2007
Site	Cyr et al ²⁰	Layout, access to information of product, professional design, and logical survey of product information, page design, conduction, order, depicting product properties, and availability of product are effective in electronic marketing.	2008
Synergy	Fink ²¹	Introduces internet as a factor for development of relation with customers, and more access to different markets.	2009
Synergy	Huizingh ²²	Points the important role of internet in electronic marketing and states that providing backup services using internet space results in development of electronic marketing.	2009
Synergy	Yeung and Law ²³	Point the role of communications, and interaction with customers as the key factors in internet marketing.	2008
Synergy	Hong and Kim ²⁴	Strength dimension: Internal reliability, external security for structural strength. Tool dimension: Useful content, applicability. Attractiveness dimension: Attractiveness of system interface, attractiveness of communication interface. The above dimensions are known as effective dimensions in increasing electronic shopping.	2010
System	Ahuja and Webster ²⁵	Point the role of technical infrastructures in launching websites and mention high security of service providing systems a factor for enhancing the trust of users.	2011
System	Hassan and Li ²⁶	Point the security of electronic payments in internet space and mention that security in electronic payments results in trust enhancement of customers and increase their loyalty level.	2010

Presenting the proposed model: Explaining the proposed model: In this article, for investigating the effect of internet marketing mix on improving the performance of internet companies, 4S model is used. In this model, the effect of four internet marketing mix on improving the performance using structural equation method is studied (figure-1). 4S internet marketing mix specifies four vital, strategic, operational, and technical factors which include scope (strategic concerns), site (operational issues), synergy (Composition with non-virtual procedure), and system (technical concerns).

In the proposed model, the effect of these four factors on improving the performance is analyzed. Performance improvement is also occurred by improving the efficiency and effectiveness. Indeed, the proposed model states that scope-orientation which is studied by having specific strategies for electronic commerce is effective on performance improvement of internet companies. Launching the site, and presenting information and on-line services to the customers affect performance improvement. Also, the proposed model states that synergy mix is effective on performance of internet companies by dynamic interaction among all stakeholders of the organization. Finally, system mix which is studied by security management, content, and support of system is effective on the performance of internet companies.

Variables of the proposed model are: Independent variables: Scope: Having strategies appropriate with internet space including on-time and up-to-date informing and competitive pricing causes motivation in customer behavior. Site: States that appearance, content, accessibility, noticing, security, and other properties of a commercial website can increase the shopping satisfaction and brings about a pleasurable

experience from internet shopping for customers.

Synergy: Introduces internet as a factor for development of relation with customers, and more access to different markets.

System: Points the role of technical infrastructures in launching websites and mentions high security of service providing systems a factor for enhancing the trust of users.

Dependent variable: Performance: Indicates the quality of doing activities. It is studied by two factors of efficiency and effectiveness.

This model states that internet marketing mixes by affecting two variables of efficiency and effectiveness result in improvement of the performance of the company.

Methodology

In order to investigate the effect of internet marketing mixes on improving the performance of internet companies, a standard questionnaire based on 4S model was prepared and distributed among the experts of internet companies. Since size of the studied population was unknown, using Cochran formula, the volume of unknown population was estimated. Sample volume was estimated as 384.

Based on the proposed model, the research assumptions are: Scope mix leads to improvement of organization performance. Site mix leads to improvement of organization performance. Synergy mix leads to improvement of organization performance. System mix leads to improvement of organization performance.

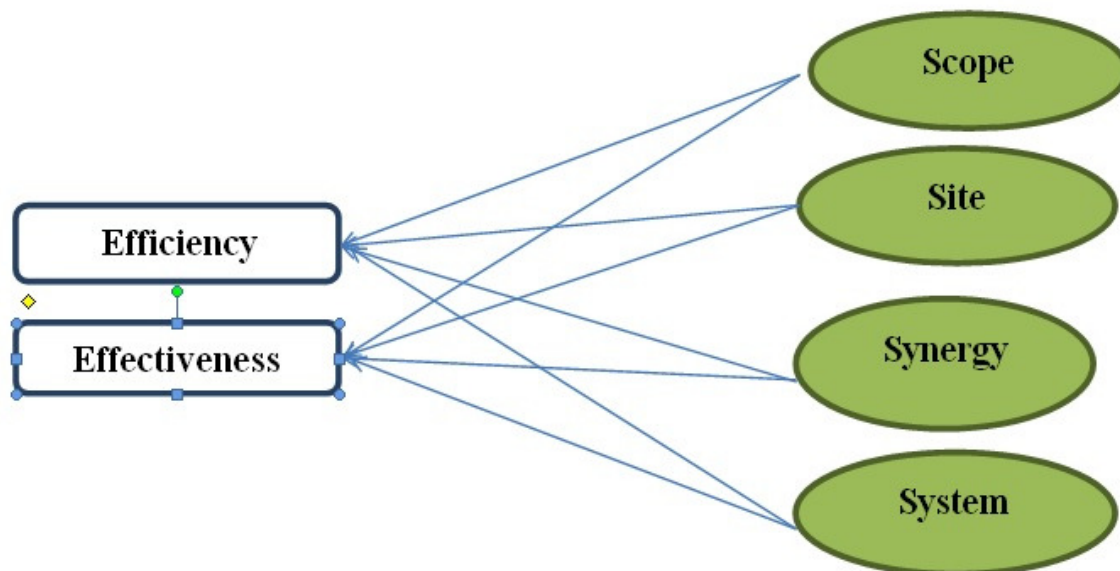


Figure-1
Conceptual model of the research

The relation between research variables is analyzed using structural equations. Structural equations are one of the most strong and appropriate methods of analyzing the researches in behavioral and social sciences. Since the nature of these issues is multi-variable and it is not possible to solve them with two-variable method (in which in every case an independent variable with a dependent one is considered). The multi-variable analysis is predicated to a set of analyzing methods which the main property of them is simultaneous analysis of K independent and n dependent variables. Analysis of covariance structures, or casual modeling or structural equations model is one of the main methods of analyzing of complex data structures. It means the analysis of different variables which in a theoretical-based structure shows the simultaneous effects of variables on each other. This method is a complex mathematical and statistical combination of factor, regression, multi-variable analyses and path analysis which are gathered in a complex system to analyze the complex phenomena.

Consequently, structural equations point a set of general models which include confirmative factor analysis, classical simultaneous structural models, path analysis, multivariate regression, and variance analysis and other techniques. Structural equation modeling is a comprehensive statistical approach for testing the hypotheses regarding the relations between observed variables (like questions of the questionnaire) and latent variables. Also, a thorough model of structural equations includes two components:

Measurement model: It specifies how the latent variables (factors) are evaluated based on related sensible variables

(variables) and how much their share and credit are.

Structural model: It is a part of structural equation model which shows the relations between latent variables. Investigation and analysis of measurement models in the initial steps of studies was a suitable confirmation, since it can help the evaluation of research tools and development of structures.

Results and Discussion

Results of research based on structural equation modeling include two major steps of model codification and model test. In model codification, using all related hypotheses, available research and information, the model is designed. In this step, model is casual relations between described variables. Relations between variables can be indicator of hypotheses which have analyzed the casual relations between evident and latent variables in theoretical space.

The other point in model production is its fitting. Since the complete model of structural equation includes two observed and unobserved variables, the model parameters should be evaluated using the link between variances and covariance's of observed variables as specified by researcher. Thus, equations (and matrixes) for calculating estimations of predicted covariance matrix of population based on the assumed model and several dimensions for fitting of estimated model with sample data are used. Fitting indexes are employed for determining the fitness and reliability of designed models. Based on results of structural equations, the final model of the research is presented in the figure-2.

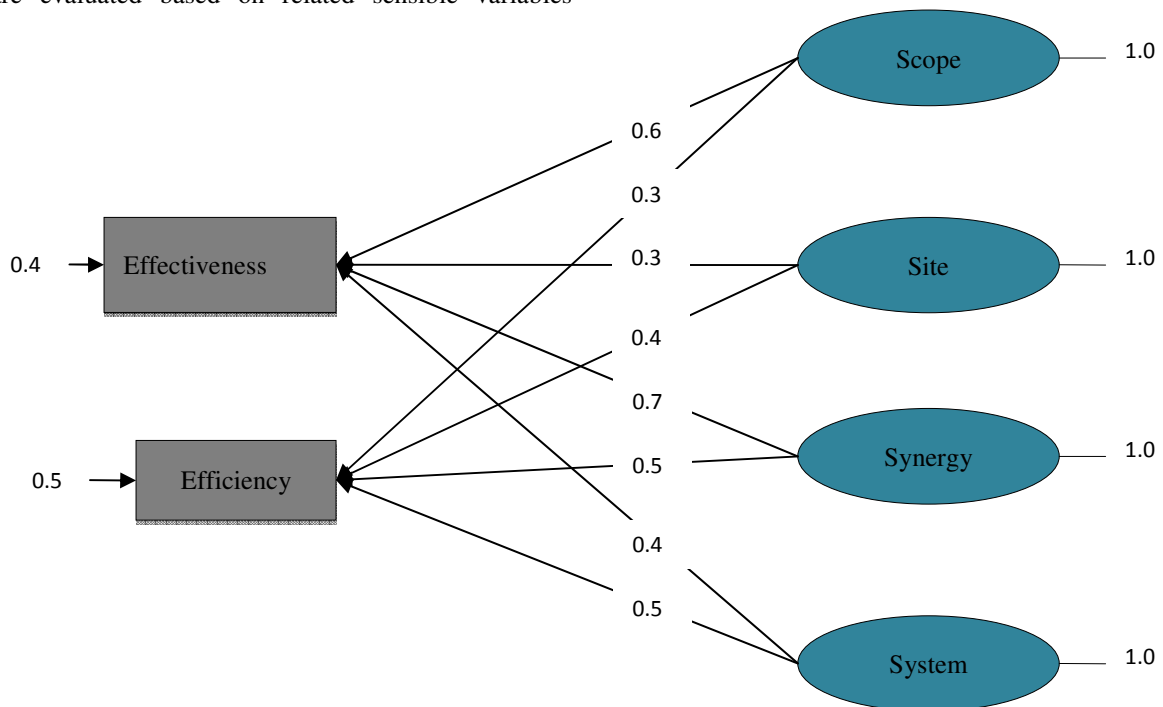


Figure-2
 Final model of the research

Table-3
Summary of structural equation model results for the general model of the research

Direct effect		Influence coefficient in standard condition	Influence coefficient in meaningful condition	Confirmation or denial of hypothesis
Scope effect	Efficiency improvement	0.39	6.78	Approved
	Effectiveness improvement	0.61	9.43	Approved
Site effect	Efficiency improvement	0.44	8.22	Approved
	Effectiveness improvement	0.33	9.42	Approved
Synergy effect	Efficiency improvement	0.57	5.43	Approved
	Effectiveness improvement	0.73	10.32	Approved
System effect	Efficiency improvement	0.54	9.83	Approved
	Effectiveness improvement	0.45	7.64	Approved

In order to confirm the relation between variables and confirm the proposed model, it is necessary for influence coefficient to be higher than 0.3 and 1.96 in standard and meaningful conditions, respectively. Structural equations analysis show that the quad dimensions of internet marketing mix result in performance improvement of organization by affecting the efficiency and effectiveness. Results of structural equations analysis show that influence coefficients on efficiency using scope mix equal 0.39 and 6.78 in standard and meaningfulness conditions, respectively. It shows confirmation of this relation. Furthermore, the effect of scope mix on improving the effectiveness is approved and influence coefficients equal 0.61 and 9.43 in standard and meaningfulness conditions, respectively. Moreover, the effect of other internet marketing mixes (site, synergy, and system) on improving the efficiency and effectiveness is confirmed. The summary of structural equations model results for the general model of the research indicates the effect of four internet marketing mixes on improving the performance of internet companies. For investigating the model fitting quality, results of table 4 illustrate the fitting desirability of proposed model. A model with appropriate condition in three indexes of fitting desirability is a favorable model. In this condition, desirability of model fitting is approved. In this regard, four indexes from indexes of fitting desirability are used which all of them have been in a favorable condition and indicate the fitting desirability of proposed model.

Conclusion

Nowadays, the advent of information technology and the rate of its progress have changed marketing strategies. Lots of manufacturing and service organizations influenced by these technologies design and codify their marketing strategies such that benefit the resulted competitive advantages. On the other hand, electronic marketing strategies are very efficient and low cost tools for entering the novel markets and prepare the conditions for easy, low cost, and with low risk entering to the

foreign markets. Consequently, this article investigates the effect of internet marketing mixes on improving the performance of internet companies. Internet marketing mix model by Composition vital elements of internet marketing and following strategic, operational, and organizational concerns of electronic commerce, presents a combined model for synchronization with technological developments and improving the organizational performance. This model is an appropriate basis for strategic planning of marketing. This model was first designed for planning for presence of virtual internet companies. Afterwards, it was used for developing electronic activities of single-product and service companies. 4S internet marketing mix specifies four vital, strategic, operational, and technical factors, which include scope (strategic concerns), site (operational issues), synergy (Composition with non-virtual procedure) and system (technical concerns). Results indicate that each four internet marketing mix factors (scope, site, synergy, and system) have been effective in improving the performance of internet companies. It is necessary for internet companies to focus on these elements and pay special attention to them for continual improvement of their services. Furthermore, effect of internet marketing mixes on improving the performance of internet companies can be classified in the following significance order: Synergy, system, scope, and site.

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Table-4
Desirability of model fitting indexes

Index	Index concept	Index amount	Favorable condition	Conclusion
The ratio of K2 to degree of freedom	Indicates desirability of model fitting.	2.66	Below 3	Fitting desirability
GFI	Model fitness index	0.905	Above 0.9	Model fitness
AGFI	Model fitness index	0.913	Above 0.9	Model fitness
RMSEA	(Route mean square of estimation error) Indicates fitness of model.	0.033	Below 0.08	Model fitness

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