

Designing a Model for Selecting Internet Marketing Strategies in the International Market

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Abstract: This paper is an exploratory research in which internet marketing strategies are first identified (they are defined in the theoretical literature) and then they are indexed and numerized through using experts opinions to determine numerical value of each strategy. The statistical universe has been defined by information of Stock Exchange Organization. It comprises 50 consistently profitable companies during 2010 to 2012 which possess internet marketing system. Sample number was estimated 44 via Cochran formula. To measure validity, the most credible existing method, i.e. construct validity, has been applied. Cronbach formula has been used to calculate reliability. With regard to the number of companies and the selected indices, Cronbach's alpha coefficient was estimated 0.785 that is higher than 0.7. The tests used in this paper consist of Pearson correlation coefficient, Friedman ranking, and VPLS factor analysis. The main result of this paper is offering a regression model for selecting internet marketing strategies in the international market.

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1. Introduction

In 1989, first commercial transactions were carried out through computer networks. Five years later, the number of computers joined to the internet grew increasingly and provided companies and customers with the opportunity of gaining more value in a business digital environment. Internet was not the first business digital environment; in 1981 the French government implemented Teletel project whose main objective was improvement of telecommunication services. Later by development of technology, users became enabled to purchase their required goods and services online. Once the web was introduced by Berners Lee team and such browsers as Microsoft and Netscape were generated, users were provided with the possibility of faster and easier searching and many companies commenced to register domain and design websites (Jaber, D., 2004). The starting point for achieving success in the electronic marketing like business or marketing strategy is creation of a strategic process that is well defined in order to integrate marketing goals through marketing communications and to design methods for the related goals. Cheston suggests that electronic marketing strategy must be comprised of elements and factors similar to the traditional marketing strategy (Chefi, D., 2004). To sell more and develop the organization activities in the market rationally, a long term planning is required. This plan that is indeed the organization main strategy towards

various effective indices and variables in the web markets must be an overview of all movements and behaviors of the organizations in achieving and controlling the ideals. The general path of strategy formulation can rely upon three bases namely determining a market proper for facilities and capacities of the organization, launching a web site consistent with the expected level and predicted volume of activities, and doing business in the web and pursuing financial and commodity transactions. By a general comparison, it can be stated that in the web, goods are divided into two groups, namely information and physical goods. Information goods are usually applicable for particular users while physical goods are publically applicable. In transaction of physical goods, the goods that are more supplied are approximately applied throughout the world and they can be delivered to all over the globe. Particular customers demand for information goods that are very rare, exclusive and somewhat customized. We are faced with such matters as volume and number for transportation in selling physical goods; while information goods do not have such problems. A similar point that must be taken into account regarding sale of both information and physical goods is that though the stage of direct trade is provided, internet provides a simpler solution for marketing and sale of these goods (Rafi, M., et al., 2002). The word e-business model became prevalent in 2000 and 2001. If the electronic business model is

specified accurately, it can contribute to the enterprises to implement their electronic business strategies. It also permits them to recognize, evaluate, change and even simulate their business.

2. Methods and Materials

The importance of web technology for electronic commercial activities had been widely discussed. Business with companies and customers or electronic transactions can be done through computer networks. Four necessary factors that determine web site success in the electronic commerce are namely quality of information and services, system application, entertainment, and system design quality. Electronic commerce may contribute to the reduction of the organization costs by direct interaction with customers. This can contribute to the output targets of the organization in the competitive market (Kirsner, S., 1994). Different models and approaches have been offered in the field of marketing strategies in the electronic markets. From Nakajiva point of view, ubiquitous networks have offered three different marketing styles. Context marketing; it seeks to design in an optimal manner so as to realize customers demands through sensory abilities and network tracking. Comparative marketing; it encourages online communications of consumers by goods evaluations and quality exchanges. Collective marketing; it involves consumer participation in the process of planning and product development by real messages and so increases consumers loyalty (Nakajiva, H., 2002). Expediting business processes including buy and sale, production, and distribution is the main advantage of electronic business endeavors. These orientations in the electronic business have occurred during several years, and many entities have implemented re-engineering projects to design efficient processes. So the advent of virtual networks has expedited internal processes of companies and their customers (Brooks, R., et al., 2002). Consistent with virtual private networks, development of electronic data interchange (EDI) in 1970s gives the opportunity to the bigger companies to have consensus with other commercial organizations. Nowadays the electronic commerce provides a key method for marketing negotiation contracts and supply chain processes (Porter, M. E., 2001). Future progresses of internet as an electronic commerce depend considerably upon the perception of people who use this communication technology. The major orientation of the internet era is movement towards an integrated marketing. The advent of internet as a ubiquitous tool has facilitated focus on the processes instead of tasks (Peterson, R. A., et al., 1997).

In the following, internet marketing strategies are defined briefly. Four marketing

strategies, namely exchange, database, communication, knowledge-based, are presented.

Exchange marketing strategy is focused on the economic exchanges in which merely goods and services are exchanged between buyer and seller and no data is interchanged. Parties engaged in this exchange are one enterprise as the supplier of goods and services and buyers. Thus the enterprise provides produced goods and services to the market and buyers purchase them without continual personal contacts (Trim Peter, R. J., 2002). In database strategy, the organization uses such tools as data mining, cookies, customers' profiles, etc. to create a profile of customers' information. This profile is applied to implement marketing activates flexibly and to meet customers' needs effectively so as to rise their satisfaction. In fact, database marketing occurs when a company stores customers information or creates a profile of their information in its computer program and then utilizes this information for more effective marketing (Tapp, A., 2001). In the exchange strategy, the organization endeavors to establish a mutual and effective long term relationship with its customers. Communications are non personal and face to face and based on trust and cooperation. So buyer and seller have official or non-official active long term relationships accompanied by mutual trust (Boyd, D., 1996). In knowledge based strategy, knowledge based marketing is defined based on a profile of customers information and establishment of a high level relation with them. In the companies who use the knowledge based strategy, marketing rules are reviewed continuously and they are influenced by technology progress. Intelligence is a key term in knowledge based marketing. Marketing intelligence is the process of knowing what the competitors are and being placed one step higher than them through gathering information applicable to the competitors and applying it in planning short- and long- term strategies (Chasten, I., 2002).

2.1 Research Background

Some Studies carried out regarding internet marketing are presented in the following.

With respect to the main changes created in the nature of internet marketing strategies (Pitta, D. A., et al., 2005), this issue has been taken into account from different aspects including information management, measurement (Mosad, Z., 2000), marketing information (Martin, Ch., 1996), internet markets segmentation, marketing processes management (Eid, R., 2005), internet marketing tools (McCole, P., 2004), consumer decision- making model in the electronic markets (Durkin, M., 2004), strategic positioning (Hamill, J., 1997), internet communities, distribution strategies (Flavian, S., et al., 2005) and so on. On the other hand, consumers

behavior in the internet markets has been studied in the framework of different models such as acceptance – expectation theory (Khalifa, M., et al., 2001), planned behavior theory (Pavlou, P. A., 2001), logical act theory (Lee, S. E., et al., 2005), data flow theory and so on. Some scholars have considered this issue from typology perspective. For example, Boston Consulting Group divided online consumers of the European Union into primary consumers, awake molecules, mean-weights, etc.

2.2 Research Methodology

This paper is an exploratory research in which internet marketing strategies are firstly indentified (they are defined in the theoretical literature) and then they are indexed and numerized through experts opinions to determined quantitative value of each strategy.

The statistical universe has been defined in this paper through using information of Stock Exchange Organization. It comprises 50 consistently profitable companies during 2010 to 2012 which have internet marketing system. The number of sample was estimated 44 by Cochran formula.

$$n_{cochran} = \frac{\frac{P(1-p)z_{1-\alpha/2}^2}{d^2}}{1 + \frac{1}{N} \left(\frac{P(1-p)z_{1-\alpha/2}^2}{d^2} - 1 \right)}$$

$$= \frac{\frac{0.5 \cdot 0.5 \cdot (1.96)^2}{(0.05)^2}}{1 + \frac{1}{374} \left(\frac{0.5 \cdot 0.5 \cdot (1.96)^2}{(0.05)^2} - 1 \right)}$$

$$= \frac{384.16}{13.772} \quad 27.89 \cong$$

To measure validity, the most credible extant method, i.e. construct validity, has been used. In examining the construct validity, hypotheses must be formulated regarding the measured concepts, these

hypotheses must be tested and the correlation of the results with primary measurement must be calculated. If the obtained correlation is high, the construct validity increases; yet if the correlation is not significant, the reason can be attributed to below factors.

1. Data collection has been wrong.
2. Prediction and hypotheses are false.
3. Tools do not measure the related feature.

In the following, (Pearson) correlation coefficient proves the value of the construct validity.

Reliability has been calculated via Cronbach formula. This method is applied to calculate the internal consistency of the measuring tools including questionnaires or tests that measure different features. To estimate Cronbach's alpha coefficient, variance of the scores of each questionnaire sub-questions (or sub- test) and total variance are calculated. Then value of alpha coefficient is calculated by below formula. With regard to the number of companies and selected indices, Cronbach's alpha coefficient was estimated 0.785 which is higher than 0.7.

$$r_a = \frac{j}{j-1} \left(1 - \frac{\sum S_j^2}{S^2} \right)$$

Main hypotheses are defined as below.

1. There is a significant relation between exchange strategy and (internet) international market.
2. There is a significant relation between databases strategy and (internet) international market.
3. There is a significant relation between communication strategy and (internet) international market.
4. There is a significant relation between knowledge- based strategy and (internet) international market.

Validity (construct validity) is measured through Pearson correlation coefficient test. Then strategies are ranked by Friedman test. Main hypotheses are tested and analyzed via PLS structural equations method.

3. Findings

3.1 Pearson Correlation Coefficient Test

The test results are presented in table 1.

Table 1. Correlation coefficients of internet marketing strategies

Strategies	Correlation Coefficient	Sig
Exchange strategy	0.452	0.0000
Databases strategy	0.568	0.0000
Communication strategy	0.654	0.0000
Knowledge- based strategy	0.557	0.0000

As shown, correlation coefficient of exchange strategy, databases strategy, communication strategy, and knowledge based strategy were estimated 0.452, 0.568, 0.654, and 0.557 respectively, and this indicates that all variables have direct relation with human resources empowerment and this relation is approved by 95%

confidence. Also validity of this paper is proved in this section.

3.2 Friedman Ranking Test

Having proved the significant relation of these strategies, Friedman test has been applied to rank the above mentioned strategies. The test results are presented in table 2.

Table 2. The results of ranking effective parameters on efficacy

Efficacy Dimensions	Rating Average
Exchange strategy	4.82
Databases strategy	4.81
Communication strategy	4.17
Knowledge- based strategy	4.04

According to the results, strategies are respectively prioritized as exchange, databases, communication, and knowledge- based strategies.

3.3 Factor Analysis for Main Hypotheses

Factor analysis method based on partial least squares structural equations method is applied to analyze more important coefficients and factors, to estimate coefficients of independent variables, and

even to determine effectiveness of independent variables on each other and appropriateness of each question and in fact its coefficient in explaining the related index. Graphical diagram of VPLS software output containing variables coefficients and their significance (t- statistic) is presented in figure 1.

Strategies (given indices) are dependent variable and international market (point demand) is independent variable.

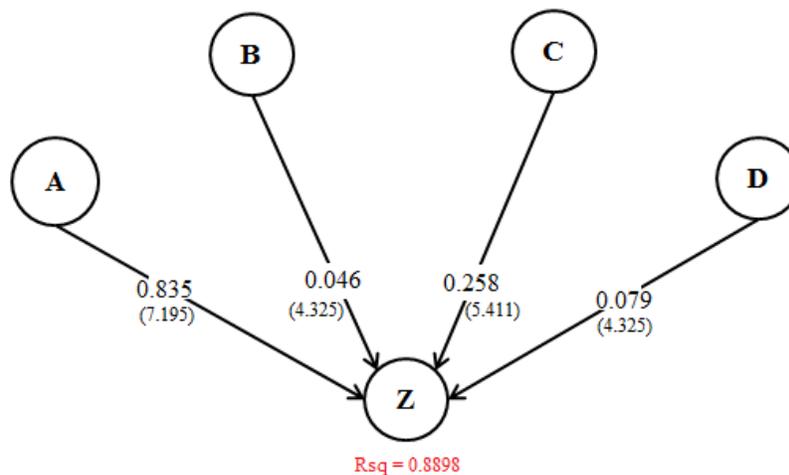


Figure 1- Structural equations of VPLS software output

A (exchange strategy): by the coefficient 0.835 and t-student value 7.195, it has a significant direct relation.

B (databases strategy): by the coefficient 0.046 and t-student value 4.325, it has a significant direct relation.

C (communication strategy): by the coefficient 0.258 and t-student value 5.411, it has a significant direct relation.

D (knowledge- based strategy): by the coefficient 0.079 and t-student value 4.325, it has a significant direct relation.

Analysis of this method shows that,

1. By one unit increase in exchange strategy, point demand of international market increases by 0.835.
2. By one unit increase in databases strategy, point demand of international market increases by 0.046.

3. By one unit increase in communication strategy, point demand of international market increases by 0.258.
4. By one unit increase in knowledge- based strategy, point demand of international market increases by 0.079.

4. Conclusions and Suggestions

With respect to the fixed concepts of (international) marketing, one can state that using electronic and traditional methods is the only difference between the concepts of this paper and similar studies regarding the relation of variables effective on marketing. Since the main objective of this paper is offering a model for selecting internet marketing strategies, conclusions and suggestions are presented by using the results obtained.

By using tests results, the regression model can be offered as per below.

$$Y = a + 0.835x_1 + 0.046x_2 + 0.258x_3 + 0.079x_4$$

Where, 'a' denotes the fixed value (intercept) and x_1 to x_4 denote exchange, databases, communication, and knowledge- based strategies, respectively. And coefficient of each strategy has been obtained by VPLS factor analysis. Since there is no research regarding stock exchange companies active in internet marketing in Iran, it can be concluded that the results of this paper are unique and comparison of them with the results of other similar studies is not possible. Computational coefficients depict development of each internet marketing strategies in the selected companies. With regard to these coefficients, the priority of using any of these strategies is perceivable.

The model offered to be used in the state organizations such as Ministry of Telecommunications (providing the internet and electronic commerce), Ministry of Industries and Mines, Ministry of Commerce (providing the commercial rules and facilitating international trade), and other state bureaus is applicable for planning electronic commerce besides electronic banking. Thus some suggestions are presented in the following.

- Suggestions

- ✓ Strategies ranking reveals that exchange strategy is the most important strategy. So the planning organizations and the legislator are suggested to endeavor to provide the stage of applying this strategy in the Iranian companies.
- ✓ With respect to the macro policies of the country (knowledge based economy), it seems that the organizations administering electronic

banking and electronic commerce must be supported by the related ministries so as to strengthen the country executive facilities in the field of electronic commerce.

- ✓ With regard to the legal restrictions of cash payments within the borders, legal solutions of payments must be reviewed to improve international marketing and facilitate payments process, and some methods, though limited, must be operated for currency exchanges.
- ✓ Other researchers are suggested to consider below items to complete the results of this paper.
- ✓ Investigation of strategic and operational stages for applying electronic marketing in the enterprises.
- ✓ Investigation of the role of enterprises in providing the stage of applying electronic marketing in the enterprises.
- ✓ Investigation of the role of the related state organizations in providing the stage of applying electronic marketing in the enterprises.

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