

## Measurement of effectiveness of Implementation of Non-pyramid network Marketing (Case study: Zarnegah Parsian Co.)

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### Abstract

*Unconformity between man's needs and the available resources, the principle of competitive market and increasing changes in organizations' environments, have moved man toward new commercial horizons like network marketing. Therefore, understanding network marketing and measurement of its effectiveness is highly important. The present research is a type of descriptive study aims to examine the impact of network marketing on rate of effectiveness among employees and customers of Zarnegah Parsian Co. in 2010. The research instrument is a researcher-made questionnaire and the Cronbach alpha and experts' comments were used to verify validity and reliability. The obtained data was analyzed via descriptive and inferential statistics methods. The obtained findings on network marketing for four effectiveness criteria of 400 samples including decrease of cost effective, customer's satisfaction, speed of services and collective knowledge showed a significant value for the impact of network marketing 12.724, 9.818, 9.293, and 9.293 respectively. According to the impact of network marketing on increase of the company effectiveness, this type of marketing can be a good alternative for common and traditional methods in all public and private Iranian companies for increase of the rate of effectiveness. The main result of the current research is that the network marketing has a direct impact on affectedness. The structural equations modeling measurement showed that the impact of network marketing on decrease of cost effective, speed of services, collective knowledge and customer's satisfaction is meaningful. Also, the results indicated that rating research variables in descending order includes cost effective, speed of services, customer's satisfaction and collective knowledge.*

**Keywords:** Network marketing, effectiveness, relationship marketing.

### Introduction

Perhaps our expectations of the world in which we live and work may seem unattainable. Maybe we work hard for little money and maybe we do not have enough time and/or money. Perhaps time passes slowly for us and we feel we have been involved in the world of hard work. We must work for someone else and we need to continue forever. This saying is the idea of many individuals or companies who are not hoping to improve their work and always follow the environmental conditions of personal and work life, and comply with existing conditions hardly<sup>1</sup>.

What is available today is the international world of network marketing. It can help companies to achieve financial independence and a trade that has shown many people and companies the way in order to achieve real independence. Today, the general principle lead to success in network marketing are taught in universities across the world and now, about two percent of the world population have chosen activities in this field as their main occupation<sup>2</sup>.

In the traditional marketing there are a number of middlemen all of them need to benefit. But in the network marketing you are an intermediary, since as you are a distributor, you will become a consumer and all members are shared in this issue<sup>3</sup>.

Importance of planning for marketing has been developed in recent years. In marketing the identity and characteristics of each customer must individually be specified. Whatever the relationship between you and your client is closer and more intimate, the better you can make them dependent to your organization. to establish this intimate relationship requires detailed information about the customer<sup>4</sup>.

Today, network marketing has become one of the strongest methods of distribution of goods and services and one of the most exciting work patterns and income in the modern economy. it is a strong method for sales, increase of employment opportunities and management abilities for people that even today, many large traditional companies are in an attempt to achieve new ways to find strengths of this method<sup>5</sup>.

The present paper seeks to identify and examine the network marketing factors that leave the highest impact on attraction and retaining of customers in Zarnegah Persians Co. moreover, it is attempted to consider all required points on measurement of the effectiveness of a company's network marketing model and it needs to be explained. Furthermore, the detection methods will be used from similar models to be used by manufacturing and commercial companies in line with selection of marketing method.

**Review of Literature: Theoretical Foundations: Network Marketing:** network marketing or multi-level networks is a system in which a main distributor hires other people as the distributor. The main distributor sells products to other people who are self employed and after the sale, all hired people earn commission.

**Effectiveness:** Effectiveness means doing things correctly with the achievement to the predetermined objectives.

**Cost effective:** in accounting cost effective refers to those costs are resulted due to activity of a specific part of production or services in total operational costs.

**Speed of service:** it means recording receipt of a request for delivering a service or product. The recorded time becomes a basis for measurement of performance in the field due to performance evaluation.

**Collective knowledge:** it means all data, information, experiences and any findings in relation to operational methods in manufacturing and service sections will be transferred either in written or teacher - student form to other employees. This transition creates a balance of knowledge among workers in general.

**Customer satisfaction:** this term today is applied as an index to measure the overall performance of organizations offering products or services used in relation to customers. to measure customer's satisfaction, every organization accepts a set of related wants and needs and how to deliver them to the customer under the name of indicators of customer's satisfaction measurement and through assessment of these indicators, quantitative value of customer's satisfaction is achieved.

**Research Background:** Ramirez, E the present research addresses these issues by examining marketing's nomological network the interconnection of psychometric variables found in the discipline's structural equation models (SEM) using sociometric techniques. Two digraphs containing the interleaved and concatenated results from SEMs during two periods are investigated. The findings suggest that although marketing thought in SEM studies is somewhat fragmented, two dominant research streams emerge one dealing with organizational behavior issues and the other with relationship marketing<sup>1</sup>. Silvia-Elena Iacob this paper referring that Network marketing represents the main force of the direct sales, as it relies on the use of a network marketing system, made up of independent enterprising people to find consumers and to move the products towards the clients. From the perspective of the consumption goods distributed, most companies produce their own products or at least control their production<sup>2</sup>. Yang, Xue, the paper introduced the connotation of network marketing of fresh agricultural products and analyzed the fundamentals of launching the C2C marketing of fresh agricultural products in China. The

fundaments mainly cover the development of e-commerce, the transformation of consumption concept, the change of live style and the features of Chinese agricultural production<sup>3</sup>. Dai, Fu, the study is based on the sample of 194 Chinese immigrants in their adopted host country, Australia. The findings of the survey suggest that the social environment within network marketing organizations positively affects self-efficacy, which in turn positively affects the entrepreneurial actions undertaken by Chinese immigrants in conducting their network marketing business. Social environmental influence impacts positively on their motivation to establish their own network marketing business and social competence<sup>4</sup>. Oren Gil-Or, in this paper, an experiment of the usage of viral marketing in Facebook was used in order to analyze the possibility of generating demand using this approach. The experiment included a promotion of a restaurant group page to a pre-defined group of 20 Facebook users and measurement of the development of this group within a month after the initial promotion. The results indicated a very strong virality of the message that was mostly reactively distributed between the Facebook members and as a result generated 80 members to the restaurant group with a tree that was seven-levels deep<sup>5</sup>. Jacob Goldenberg, in this paper, we describe the database and point to some basic network descriptive that lead to interesting research questions. We believe this database can be of much value to researchers interested in the evolution of social networks over time, as well as the specific evolution of the marketing discipline<sup>6</sup>. The data set described in this paper is maintained by the authors and available through <http://mktsci.pubs.informs.org>. Yang, Jianmei, complex network theory provides a new model for the study of large-scale complex systems, using the latest developments of graph theory and computing techniques. From this perspective, the present paper extends the complex network theory and modeling into the research of general viral marketing and develops a specific spreading scheme for viral marketing and an approach to design the scheme based on a real complex network on the QQ instant messaging system. This approach is shown to be rather universal and can be further extended to the design of various spreading schemes for viral marketing based on different instant messaging systems<sup>7</sup>.

## Methodology

The aim of the present study is practical and descriptive in terms of data collection method. Since the purpose of this study is to describe the examined conditions or phenomena. Because the data collection instrument is a questionnaire, the study is a type of survey study.

The current research is on the subject of marketing management. In other words, the researcher sought to determine factors associated with network marketing in rising sales of Zarnegah Persians Company.

In this research the network marketing of Zarnegah Persians Company in Tehran will be reviewed. Given the scope of the research and since the research will be valid in a specific scope

of time, thus the years 2009 - 2010 is considered as the time period. The main methods of data collection in this study included library research and field studies. And the questionnaire was designed on the basis of a five-point Likert scale.

**Study Population, Sample and Sampling Method:** The population in this study consisted of all the employees and customers that are about 900 people. The  $n$  formula was used for determining sample size. total sample of 270 was determined. However, to obtain more information about samples and generalizing the results of a sample population to the population, 400 questionnaires were distributed and finally 360 questionnaires were collected. Stratified sampling is the sampling method of recent study. In the stratified sampling, the units of population are grouped in categories that are more homogenous in order to minimize changes into the groups. Then some samples were selected from each class.

$$n = \frac{900 \times 1.96^2 (0.5)(0.5)}{(900-1)(0.05)^2 + (1.96)^2 (0.5)(0.5)} = 270$$

**Validity and reliability:** To estimate the validity of the research and the questionnaire, some experts' modifications were applied. In order to increase the accuracy of data and to increase the credibility of the research findings, the researcher-made test consisting of 38 five- choice questions whose content and formal validity were confirmed by the experts were used.

In this study, the Cronbach's alpha coefficient was used to identify reliability. Cronbach's alpha coefficients are presented in table 1. As can be seen, the value of Cronbach's alpha for each scale variables is over 0.75 and the reliability of research is approved.

**Table-1**

**Value of Cronbach's alpha for the research variables**

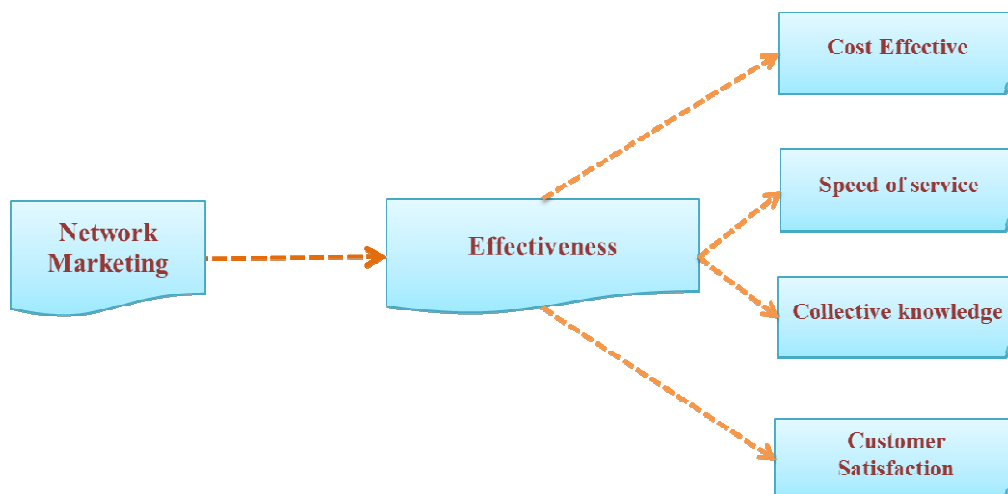
Variables	Items	Cronbach alpha
Network marketing	1-8	0.894
Reduced cost	9-15	0.823
Knowledge of human force	16-23	0.872
Customer's satisfaction	1-8	0.792
Speed of services	9-15	0.853

## Research Hypotheses

**The main hypothesis:** Network Marketing has a meaningful relationship with effectiveness of Zarnegah Parsian Co.

**Minor hypotheses:** i. Network Marketing has a meaningful relationship with reduction of cost effective. ii. Network Marketing has a meaningful relationship with customer's satisfaction. iii. Network Marketing has a meaningful relationship with speed of services. iv. Network Marketing has a meaningful relationship with increased collective knowledge.

**The conceptual model:** The four main features to increase the effectiveness of the company should be considered are cost effective, speed of services, collective knowledge, and customer's satisfaction. Network marketing, if implemented properly, will increase the effectiveness of the company's activities. Increase of effectiveness of the company reduces costs, increases customer's satisfaction, and increase of speed of services and will also increase the collective knowledge<sup>8,9</sup>. These relationships are illustrated in form of the conceptual model (figure 1).



**Figure-1**

**The research conceptual model (process of choosing business partner)**

## Results and Discussion

Descriptive statistics of demographical characteristics of the samples: Table 2 shows descriptive statistics of the samples. Table 3 shows the respondents age.

**Examinations of structural equations:** The procedure involves estimating the structural equation model, modifying the model and test of hypotheses. In the following, stages of structural equations using the LISREL software are presented.

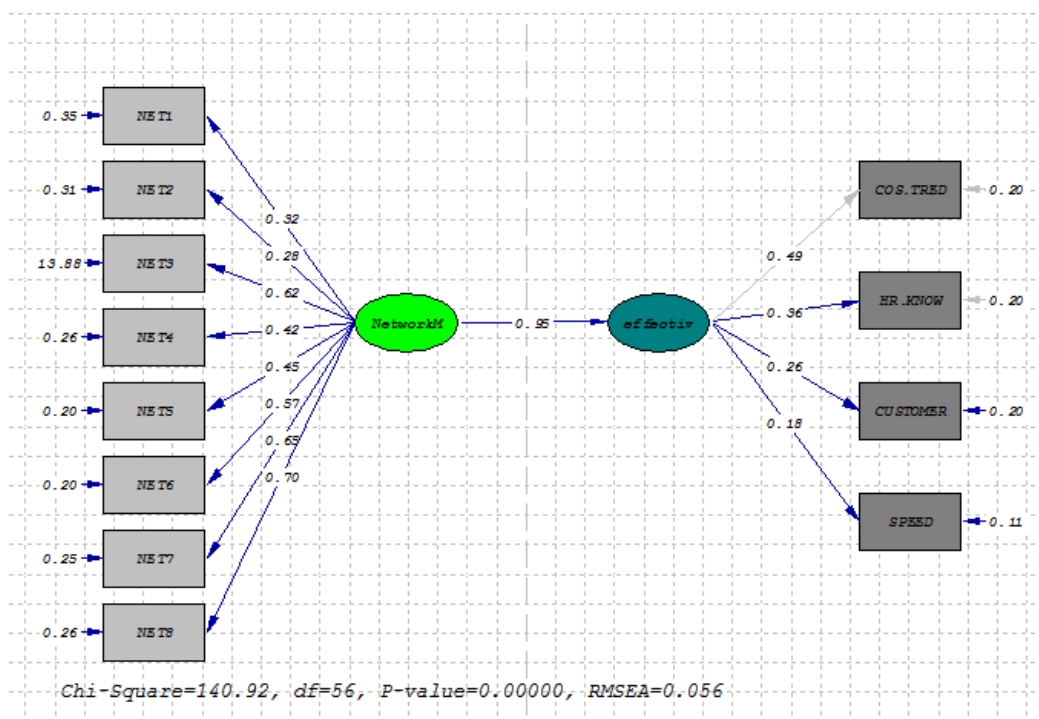
In this model there are two hidden variables including network marketing (independent variable) and the effectiveness of the company (the dependent variable). The next step should check the accuracy of the model measurement. This is done through especial indexes are used for examining chi-square on degrees of freedom ( $<3$ ), value of the root mean square error of approximation ( $<0.08$ ), p value ( $<0.05$ ), the fitted parameters and the adjusted fitted index ( $>0.9$ ). The results computed by the LISREL software are shown in figure 2.

**Table-2**  
**Descriptive statistics of the samples**

Criterion statistic	Diploma	Associate Degree	B.A.	Masters	Ph.D	Single	married
Frequency	170	98	77	12	3	166	194
Percentage	47.2	27.2	21.4	3.3	0.8	46.1	53.9
Cumulative percentage	47.2	74.4	95.8	99.2	100	46.1	100

**Table-3**  
**Frequency and percentage of samples based on their job status**

Age group	frequency	percentage	Cumulative percentage
Younger than 25	12	3.3	3.3
26-30	130	36.1	39.4
31-35	111	30.8	70.3
36-40	58	16.1	86.4
Older than 41	49	13.6	100



**Figure-2**  
**The estimated model**

The appropriateness indexes of the model indicate goodness of measurement model of variables since Chi-square on degree of freedom equals 2.51 and less than accepted value 3. Value of the root mean square error of approximation is 0.08 and P value lower than the accepted value 0.05. The fitness index is 0.92, and value of adjusted fitted index is 0.9, value of comparative fitness index is 0.95 and equal and greater than 0.9. According to the presented indexes and their comparison with the favorite value for a fitted model, the appropriate value of the model is realized. In following, the research hypotheses will be tested. The results obtained by the LISREL software are shown in figure 3.

**The main hypothesis:** There is a meaningful relationship between network marketing and effectiveness of Zarnegah Parsian Co.

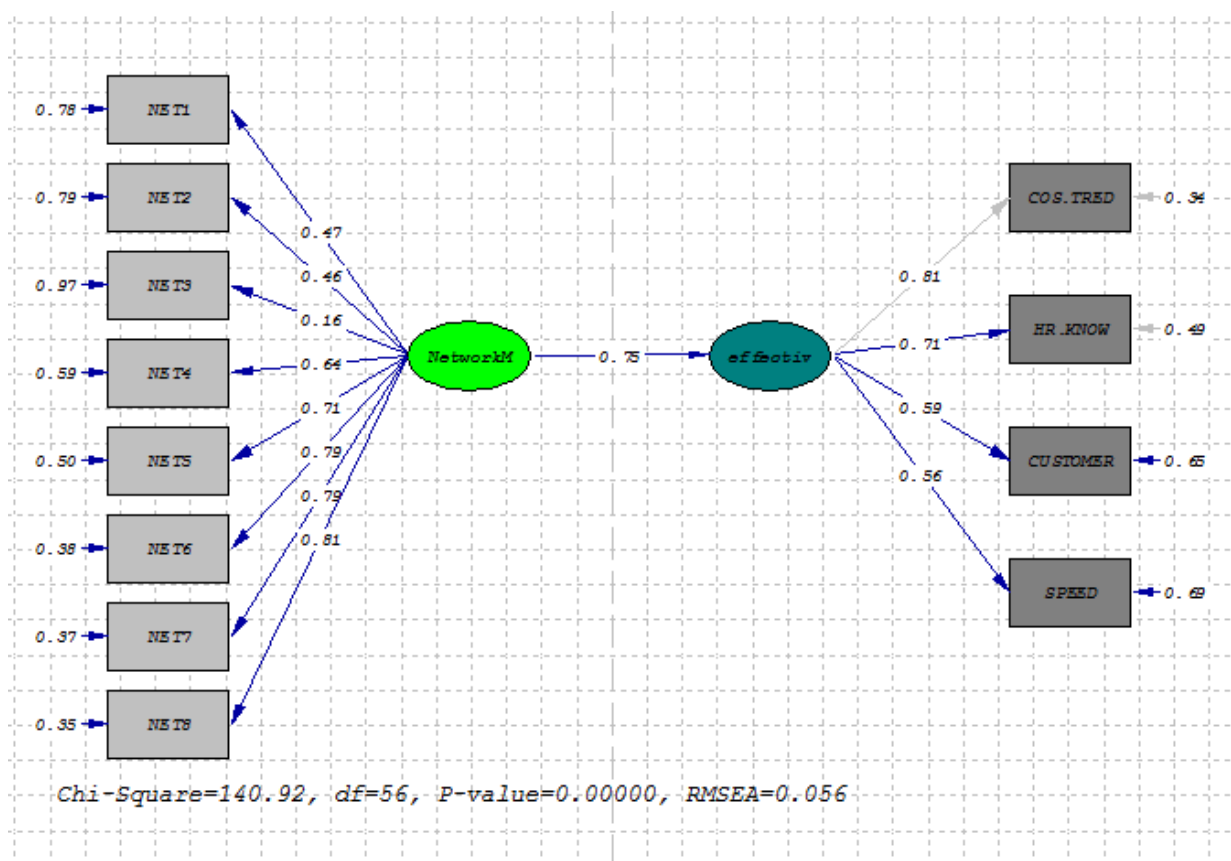
The standard diagram illustrates that the network marketing has a direct impact (0.75). Therefore it can be said that the network marketing has a meaningful relationship with effectiveness of the Zarnegah Parsian Co.

In other words, the network marketing explains about 75 percent of changes in effectiveness of the company and the rest relate to some non-marketing factors are not included in this research.

**The minor hypotheses:** For evaluation of the minor hypotheses the LISREL output was used. Table 4 presents the results of the network marketing impact on each of the research aspects (cost effective, speed of services, collective knowledge, and customer's satisfaction). Computations show that the level of significant is above  $\pm 1.96$ . Therefore, the impact of network marketing on aspects of the current study is meaningful.

**Table-4**  
**Impact of the independent variable on overt dependent variables**

Variable	Coefficient	Sd.	Sig.
cost effective	0.465	0.037	12.724
Speed of services	0.341	0.029	11.375
Collective knowledge	0.166	0.018	9.293
Customer's satisfaction	0.245	0.025	9.818



**Figure-3**  
**The model in standard position**

H1: network marketing has a meaningful relationship with reduction of cost effective.

Considering the LISREL output, obtained level of significant for the impact of network marketing on reduction of cost equals 12.724. Thus, the impact of the network marketing on reduction of cost is meaningful. However, in relation to path coefficient or explanatory coefficient, it should be mentioned that the network marketing explains approximately 47 percent of changes in reduction of cost effective and remaining 53 percent relate to other factors except the network marketing.

H2: network marketing has a meaningful relationship with increase of speed of services.

Considering the LISREL output, obtained level of significant for the impact of network marketing on increase of speed of services equals 11.375. Therefore, the impact of the network marketing on increase of speed is meaningful. However, in relation to path coefficient or explanatory coefficient, it should be mentioned that the network marketing explains approximately 34 percent of changes in increase of speed of services and remaining 66 percent relate to other factors except the network marketing.

H3: network marketing has a meaningful relationship with increase of collective knowledge.

With regard to the LISREL output, obtained level of significant for the impact of network marketing on increase of collective knowledge equals 9.293. Therefore, the impact of the network marketing on increase of human forces knowledge is meaningful. However, in relation to path coefficient or explanatory coefficient, it should be mentioned that the network marketing explains approximately 17 percent of changes in increase of speed of services and remaining 83 percent relate to other factors except the network marketing.

H4: network marketing has a meaningful relationship with increase of customer's satisfaction.

With regard to the LISREL output, obtained level of significant for the impact of network marketing on increase of customer's satisfaction equals 9.818. Therefore, the impact of the network marketing on increase of customer's satisfaction is meaningful. However, in relation to path coefficient or explanatory coefficient, it should be mentioned that the network marketing explains approximately 25 percent of changes in increase of speed of services and remaining 75 percent relate to other factors except the network marketing.

**Rating the research variables:** Due to rating of each of related factors to the Zarnegah Parsian Co., the Friedman test was applied. Table 5 shows the results.

**Table-5**  
**Results of the Friedman test for research variables**

Variable	Mean	Ranking	No.	Chi-square	df	Prob.
Cost effective	2.83	1	360	32.269	3	0.000
Speed of services	2.62	2				
Collective knowledge	2.10	4				
Customer's satisfaction	2.45	3				

## Conclusion

Complex social relations have encountered humans with rapid change of needs, expansion of internal and external relations, development of exchange of sciences, technologies and inventions and new problems. One of these problems is the network marketing. This economic institution has taken various shapes in field of marketing and has displayed many advantages and disadvantages. The term network marketing is used in two separate meanings either the legal and correct form of this method known as network marketing or the wrong and illegal form called pyramid project. the current research, therefore, was an attempt all required points for measurement of effectiveness of a company with network marketing model and its requirements are assessed.

The findings in this study are in accordance with Katler, Sarn, and Kovilo results since they believed that network marketing through decrease of cost of advertising, cost of absorbing customer and elimination of intermediaries contributes to reduction of costs and via centralizing on customers' relation as well as providing different services augment their loyalty and satisfaction. The principal result of this research is that network marketing has a direct impact on effectiveness. Also, results obtained by structural equations modeling indicated that the impact of network marketing on reduction of cost effective, speed of services, collective knowledge and customer's satisfaction is considerable. Moreover, the findings showed that rating variables in descending order are cost effective, speed of services, customer's satisfaction and collective knowledge respectively.

Also The findings in this study are in accordance with Movahedi et al<sup>10</sup>, Kumar Saha et al<sup>11</sup> and Serban et al<sup>12</sup>.

**Recommendations:** i. with regard to the current research findings, training of employees (for making communication with customers) and increase of collective knowledge (to use modern technologies) will be among priorities of increase of effectiveness. ii. considering factors of customer's satisfaction in all fields and respect for the customer's request causes long lasting loyalty and absorbing new customers. iii. increase of speed of services without considering type and value of

shopping by each customer with relying on modern methods to absorb new customers. iv. through using the results of the current research, companies can put the cost effective variables as their first priorities because its decrease due to implementation of network marketing is confirmed in the present study that is a critical factor for development of intelligent strategies of marketing and pricing goods.

**Recommendations for future studies:** i. examination of relationship between organization profitability via implementation of network marketing, ii. examination of relationship between organizational popularity via network marketing, iii. examination of procedures for creation of long term loyalty of customers and increase of their satisfaction.

## References

1. Ramirez E., Meredith E.D. and Brusco M., Marketing's SEM based nomological network: Constructs and research streams in 1987–1997 and in 1998–2008, Elsevier, *Journal of Business Research*, **66(9)**, 1255-1260 (2013)
2. Silvia-Elena Iacob, Constanta Popescu, Constantin-Ciprian Iacob, Network Marketing and Global Communication, Ovidius University of Constantza, Faculty of Economic Sciences, Ovidius University Annals, *Economic Sciences Series*, **XII(1)**, 986-989 (2012)
3. Yang, Xue, The Network marketing of Fresh Agricultural Products in China, USA-China Science and Culture Media Corporation, *Asian Agricultural Research*, **3(4)**, (2011)
4. Dai Fu, Wang, Karen Yuan, Teo, Stephen T.T., Chinese immigrants in network marketing business in Western host country context, Elsevier, *International Business Review*, **20(6)**, 659-669 (2011)
5. Oren Gil-Or, Building Consumer Demand by using Viral Marketing Tactics within an Online Social Network, Advances in Management, *Advances In Management*, **3(7)** (2010)
6. Jacob Goldenberg, Barak Libai, Eitan Muller, Stefan Stremersch, INFORMS, *Marketing Science*, **29(3)**, 561-567 (2010)
7. Yang, Jianmei, Yao, Canzhong, Ma, Weicheng, Chen, Guanrong, a study of the spreading scheme for viral marketing based on a complex network model (2010)
8. Jalali Seyyed Mehdi, Khadem Mojgan and Javidani Masoud , Investigation of the Effective Factors on Brand Loyalty and Repurchase Intention (Case study: Iranian Consumers), *Res. J. Recent Sci.*, **2(2)**, 10-17 (2013)
9. Atazadeh Dadabeyglu Yashar, Iranzadeh Soleyman and Jabbari Khamaneh Hussein, Effective Internal Strategic factors on Customer Satisfaction from the Perspective of Organization's Managers in Tabriz travel agencies, *Research Journal of Recent Sciences*, **2(9)**, 40-46 (2013)
10. Movahedi M.M., Lotfi M.R. and Nayyeri M., A solution to determining the reliability of products, Using Generalized Lambda Distribution, *Res. J. Recent Sci.*, **2(10)**, 41-47 (2013)
11. Manab Kumar Saha and Bidhan C. Patra, Customers Preference for Aquarium Keeping: Market survey, Special Emphasis on Indigenous Ornamental Fishes in four District of West Bengal, India, *Res. J. Recent Sci.*, **2(12)**, 43-53 (2013)
12. Serban C., Iconaru C., Macovei O.I. and Perju A., Modeling Romanian Consumers' Behaviour Case study: Cause-related Marketing Campaigns, *Res. J. Recent Sci.*, **1(10)**, 27-32 (2012)