CSJ
The Caspian Sea Journal

The Caspian Sea Journal

A Survey of the Effect of Network Knowledge on Business Relationship Value of Small and Medium Exporting Companies in Required Foreign Market

Maedeh Janmohammadi
Department of management, Babol branch, Islamic Azad University, Babol, Iran
Email: janmohammadi_maedeh@yahoo.com

ABSTRACT─ This study is aimed to determine the effect of network knowledge on business relationship value in small and medium exporting companies in required foreign market. This paper evaluates the relationship between experience and high business relationship in foreign market. This study formulates a set of relevant hypotheses about the effect of international experience, experiential knowledge and importance of customer and knowledge of competitor in business relationship value in a foreign market. The study population is all managers and experts of 29 small and medium exporting companies (SME). The data are collected based on the study of previous research of 169 study samples by stratified random method. The conceptual model test is performed using structural equations modeling using LISREL software. The results showed that experiential knowledge of network, importance of customer about knowledge and importance of competitor's knowledge had positive and significant effect on business relationship value in foreign market. Also, the positive and significant effect of knowledge about customers in network on importance of knowledge about competitors is supported. Other results of study showed that international experience had positive and significant effect on experiential knowledge of network in foreign market. Finally, it was shown that international experience had positive and significant effect on importance of knowledge about competitors in foreign market network.
KEYWORDS: International experience, Network knowledge, knowledge about customer, business in foreign market, small and medium companies (SME).

Introduction

To perform mission and achieving the goals, organizations have various resources and assets. Some of these resources and assets are very valuable and strategic with important role to achieve competitive advantage of organization. Knowledge is for all these organizations including these resources and assets as the theorists consider knowledge as the final alternative of production, wealth and monetary capital [1]. Indeed, knowledge is the only source in organization not being reduced by using and knowledge is important if it is turned into valuable services and products. Now, the changing world is toward the knowledge-based community. In this society, knowledge is the main source for a person and for the economy generally [2]. It is important to say that knowledge doesn't produce anything alone and it is effective, if it is used in practice. The previous studies show that knowledge networks can be used in various forms as projects teams, professional associations, experiential associations to help the progress of different companies namely SME ones [3]. SME companies are the most effective factors on growth and development of economic systems of each country. Thus, they are considered by authorities of countries namely developed countries. Generally, industries in each country are divided into some forms: Big, medium and small depending upon the special conditions of each country. According to a definition of industrial units classification by most organizations in Iran, the units with lower than 10 employees are micro, 10-49 employees "small", 50-99 employees "medium" and above 100 employees as big organization. Based on this definition, the present study evaluates the organizations with 1-99 employees in organization. It is worth to mention that this study considers environmental and peripheral conditions of organizations. More than 95% of total manufacturing units are in small and medium industries, these enterprises have not achieved considerable share in GDP and value-added. Also, marketing power of these companies in Iran is weak compared to the foreign markets due to the weakness in marketing to sell products due to the lack of adequate information of the needs of market in the country and these enterprises are encountered with demand shortage for their products and this reduces their sale and profit. The survival of SME organizations is guaranteed with launching knowledge networks in these organizations and awareness of performance of knowledge networks [3]. Knowledge network is responding the necessity of a human center to know who knows what and what are learnt in organization [4]. The progress in data processing and network technologies has increased the access to data and information via internet at any time and place around the world. The increase of market demand to reduce the entrance of product to market, high flexibility and high quality in the lowest cost play important role in creating new topics in knowledge [5]. Here, the role of knowledge network is defined in current organizations. The knowledge networks as the most efficient and effective solution to manage knowledge, in problems with structural complexities and different view of beneficiaries can increase using norm systems namely in managerial

issues. As it was said, we can find about the significance of the evaluation of the effect of network knowledge on business relationship value of small and medium exporting companies in required foreign market.

Theoretical framework
International marketing: International marketing is a set of production and sale operation of goods and services in more than one country, without exporting goods from the main borders of a country. Sometimes, international marketing is called multi-national marketing. Thus, the difference of international marketing and internal marketing is regarding their activity field.
Network knowledge: With network knowledge, the organizations have a tool by which knowledge is created and disseminated [3]. When networks provided the organizations with access to knowledge, resources and technology, they are recognized as key source to achieve competitive achievements [6].
Experiential knowledge of network: Experiential knowledge is created as the result of experiential operation of companies regarding other factors in network and it is accepted gradually. The experience achieved by companies leads to experiential knowledge and wide experiential knowledge of network of other networks of some other markets paves the way to that organizations know the business opportunities, reflect and develop it [7].
Knowledge about customer: Indeed, relationship development with wide range of customers and ability of relationship with them and retention of this relationship.
Knowledge about competitor: There is high relationship between managers of different enterprises namely SMEs and most of these managers claim that they know the personality of their competitors and they have no doubt of using their help and counseling.
**International business relationship:** The enterprise globalization and entrance to global markets based on Porter theory means dispersion of value chain of enterprise at the world level [8].

Review of literature
• Sydow et al., (2010): They conducted researches about TV producers of US and German entering Hungary market. The results of this case study showed that when the company enters Hungary market, it applies a collective network strategy. These data achieve evidences in which most companies apply a network strategy as by this method, the government is dominant on foreign markets [9].
• Sullivan & Weera wardena, J. (2006): performed interviews with the main decision makers in six Australian companies with high technology industry and low technology establishing for globalization. Their findings showed that network capability was a mediating variable affected by behavioral features and affected rapid internalization of knowledge-based products [10].
• Dantas (2006) in a study "The development of knowledge networks in latecomer innovation systems: the case of PETROBRAS in the Brazilian offshore oil industry" showed that organizational factors and technology had provided motivations to create knowledge networks and company capabilities in each stage formed the responses. These factors led into the improvement of capabilities turning into new forms of networks over the time. These relationships were formed in the relationship between capabilities and knowledge network over time. On one hand, the existing capabilities of different networks were limited and on the other hand, these networks were helped in development of capabilities [11].

Conceptual model
The researches in topic of study show that all variables of the model of study are used in wide range of local and international studies. Based on the study purpose, we can investigate effective variables on improvement of SME exporting companies in Figure 1.
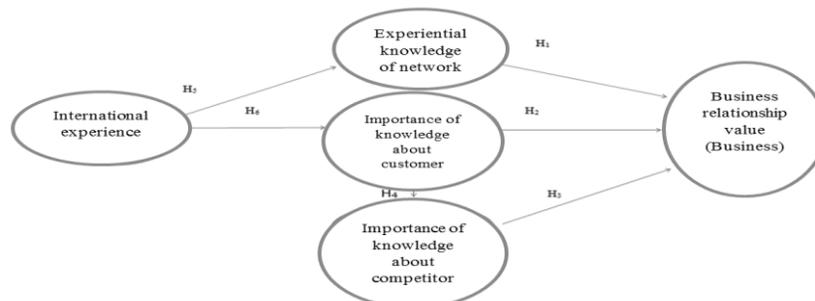
Figure 1. Conceptual model of Hohenthal jukk . Johanson jan . Johanson martin [12]

Study hypotheses
Main hypothesis
- Network knowledge has significant impact on business relationship value in foreign market.

Sub-hypotheses
- Experiential knowledge of network has significant effect on business relationship value in foreign market.
- Importance of knowledge about customer has significant effect on business relationship value in foreign market.
- Importance of knowledge about competitor has significant effect on business relationship value in foreign market.
- Importance of knowledge about customer in network has significant effect on importance of knowledge about competitors.
- International experience has significant effect on experiential knowledge of network in foreign market.
- International experience has significant effect on importance of knowledge about competitors in foreign market network.

Study method
This study is applied design in terms of purpose and is descriptive-survey in terms of study method. The study population includes all experts, top managers and middle managers, operating managers and board of Mazandaran province as experts to achieve the required goals. The study population is 301 computed by Cochran's formula (Equation 1) and sample size is 169.

$$n = \frac{N \times t^2 \times p \times q}{d^2 \times (N-1) + t^2 \times p \times q}$$ Equation (1) Cochran's formula

n=Sample size (169)   p=A ratio of population without definite attribute (men population)(0.5)
N=study population sample (301)   q=A ratio of population without definite attribute (women population)(0.5)
t=The standard error percent of acceptable confidence interval (1.96)   d=Confidence degree or good probable accuracy (0.05)
Data collection method is library and field study. In the studies in which the aim is testing special model of relationship between variables, structural equations or causal models are used. In this model, the data are as matrix of covariance or correlation and a set of regression equations between variables is formulated. The causal models analysis is done via Lisrel software as structural equations model and these software are complete and complex gradually.

In this study, to be sure of content validity of questionnaire, some questionnaires are given to supervisor and some academic lecturers in management specialized fields to express the opinion and complete each of the items.

To evaluate reliability of questionnaire, a pre-test is performed. At first, 25 questionnaires are distributed in the required population and after collection and entering data, reliability coefficient (Cronbach's alpha) is computed. The coefficient for total scale is 0.94. As computed alpha is bigger than 0.7, we can say reliability of questionnaire is acceptable (Table 1).

Table 1. Cronbach's alpha coefficients of study variables

Component	Questions	Samples	Cronbach's alpha
International experience	6	25	0.8860
Experiential knowledge of network in foreign market	5	25	0.9179
Importance of knowledge about customers in foreign market network	6	25	0.8789
Importance of knowledge about competitors	6	25	0.9249
Business relationship value in foreign market	7	25	0.9172
Total questionnaire	30	25	0.9440

Data analysis
After data collection and entering data in SPSS software, at first descriptive survey is performed and then by Lisrel software, study hypotheses are investigated.

Inferential statistics
To analyze data, LISREL software is used. In the present study, after plotting an analytical model of study based on data by Lisrel software, the measurement model is achieved and in this mod el by B coefficients and t-test, hypotheses are tested. Fitting indices of model are computed automatically by Perlis software. Lisrel or structural equations modeling is a multi-variate analysis technique of multi-variate regression family enabling the researcher to test at set of regression equations at the same time. Exactly, extension of "linear model" is general. Structural equations modeling is a comprehensive approach to test hypotheses about observed and latent variables as called covariance structural analysis, causal modeling and Lisrel but the dominant term in these days is structural equations modeling (SEM)(The result is shown in Table 2).

Table 2. The evaluation of fitting indices of study model

Fitting index	Sign	Standard values	Estimated values
Degree of freedom	DF	------	399
Chi-square	Chi-Square	It is not a good criterion due to dependence on sample size	956.79
Chis-square to degree of freedom	Chi-Square/DF	3	2.40
Root Mean Squared Error	RMSEA	0.05	0.091
Normalized fit index	NFI	0.9	0.93
Non-normalized fit index	NNFI	0.90	0.95
Comparative fit index	CFI	0.90	0.95
Residual mean root	RMR	0.05	0.13
Standard residual mean root	SRMR	0.05	0.095
Goodness of fit index	GFI	0.90	0.72
Adjusted goodness of fit index	AGFI	0.90	0.68

As shown in the above Table (Table 2), goodness of fit indices are at relatively acceptable level.

Hypotheses test
First hypothesis: Experiential knowledge of network has positive and significant effect on business relationship value in foreign market.

Table 3. The results of standard coefficients and t-statistics of first hypothesis of study

Independent variable	Dependent variable	Estimated coefficients	T statistic	Result
Network experiential knowledge	Business relationship value in foreign market	0.28	2.67	Supported hypothesis

As shown in Table 3, the effect of independent variable on dependent variable is supported by data and the path relating these two variables is positive and significant (it is significant at error level 5%) and there is a positive and significant relationship between network experiential knowledge and business relationship value in foreign market.

Second hypothesis: The importance of knowledge about customer has positive and significant effect on business relationship value in foreign market.

Table 4. The results of standard coefficients and t-statistics of second hypothesis of study

Independent variable	Dependent variable	Estimated coefficients	T statistic	Result
Importance of knowledge about customer	Business relationship value in foreign market	0.24	2.03	Supported hypothesis

As shown in Table 4, the effect of independent variable on dependent variable is supported by data and the path relating these two variables is positive and significant (it is significant at error level 5%) and there is a positive and significant relationship between importance of knowledge about customer and business relationship value in foreign market.

Third hypothesis: The importance of knowledge about competitor has positive and significant effect on business relationship value in foreign market.

Table 5. The results of standard coefficients and t-statistics of third hypothesis of study

Independent variable	Dependent variable	Estimated coefficients	T statistic	Result
Importance of knowledge about competitor	Business relationship value in foreign market	0.28	2.79	Supported hypothesis

As shown in Table 5, the effect of independent variable on dependent variable is supported by data and the path relating these two variables is positive and significant (it is significant at error level 5%) and there is a positive and significant relationship between importance of knowledge about competitor and business relationship value in foreign market.

Fourth hypothesis: The importance of knowledge about customers has positive and significant effect on importance of knowledge about competitors.

Table 6. The results of standard coefficients and t-statistics of fourth hypothesis of study

Independent variable	Dependent variable	Estimated coefficients	T statistic	Result
Importance of knowledge about customers	Importance of knowledge about competitors	0.60	6.74	Supported hypothesis

As shown in Table 6, the effect of independent variable on dependent variable is supported by data and the path relating these two variables is positive and significant (it is significant at error level 5%) and there is a positive and significant relationship between importance of knowledge about customers and importance of knowledge about competitors.

Fifth hypothesis: International experience has positive and significant effect on experiential knowledge of network in foreign market.

Table 7. The results of standard coefficients and t-statistics of fifth hypothesis of study

| Independent variable	Dependent variable	Estimated coefficients	T statistic	Result
International experience	Experiential knowledge of network in foreign market	0.75	8.49	Supported hypothesis

As shown in Table 7, the effect of independent variable on dependent variable is supported by data and the path relating these two variables is positive and significant (it is significant at error level 5%) and there is a positive and significant relationship between international experience and experiential knowledge of network in foreign market.

Sixth hypothesis: International experience has positive and significant effect on importance of knowledge about customers in network in foreign market.

Table 8. The results of standard coefficients and t-statistics of sixth hypothesis of study

Independent variable	Dependent variable	Estimated coefficients	T statistic	Result
International experience	Importance of knowledge about customers	0.82	9.04	Supported hypothesis

As shown in Table 8, the effect of independent variable on dependent variable is supported by data and the path relating these two variables is positive and significant (it is significant at error level 5%) and there is a positive and significant relationship between international experience and importance of knowledge about customers in foreign market network.
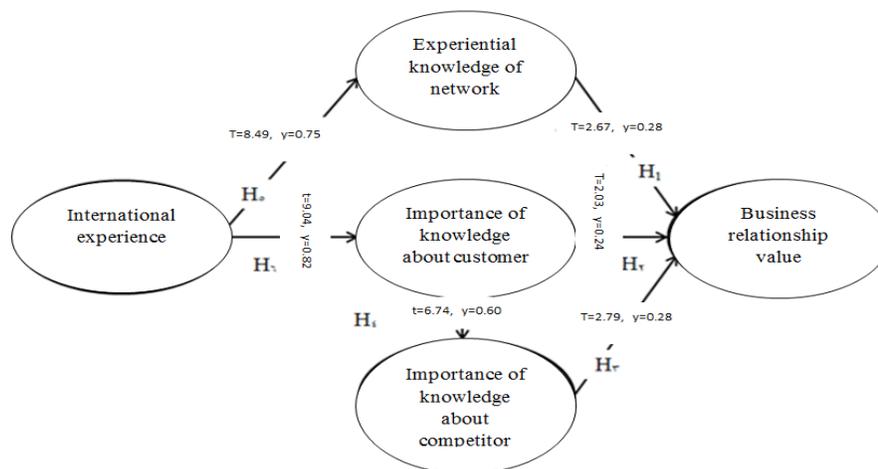
Figure 2. The result of study of path coefficients and t-statistics in conceptual model of study

Discussion and Conclusion
The discussion and comparison of the results with other studies

Result of first hypothesis test: Experiential knowledge of network has positive and significant effect on business relationship value in foreign market.
The analysis of the study data shows that there was a positive and significant relationship between experiential knowledge of network and business relationship value in foreign market. In a similar study performed by Hohenthal [12] the results were consistent.

Result of second hypothesis test: The importance of knowledge about customer has positive and significant effect on business relationship value in foreign market.
The analysis of data shows that there is a positive and significant relationship between importance of knowledge about customer on business relationship value in foreign market and the above result is consistent with the results of study done by Hohenthal [12].

Result of third hypothesis test: The importance of knowledge about competitor has positive and significant effect on business relationship value in foreign market.
The analysis of study data shows that there is a positive and significant relationship between importance of knowledge about competitor and business relationship value in foreign market. In a similar study consistent with the results of study of Hohenthal [12].

Result of fourth hypothesis test: The importance of knowledge about customers in network has positive and significant effect on importance of knowledge about competitors.
The analysis of study data shows that there is a significant and positive relationship between importance of knowledge about customers in network and importance of knowledge about competitors. It is consistent with the results of study in foreign countries as Hohenthal [12].

Result of fifth hypothesis test: International experience has positive and significant effect on experiential knowledge of network in foreign market. The analysis of data shows that there is a positive and significant relationship between international experience and experiential knowledge of network in foreign market. It is consistent with the results of study of Hohenthal [12]. Sullivan [10] found consistent results with the study.

Result of sixth hypothesis test: International experience has positive and significant effect on importance of knowledge about customers in foreign market network.
The analysis of study data shows that there is a positive and significant relationship between international experience and importance of knowledge about customers in foreign market network. Also, it is consistent with the results of study of Sullivan [10].

Recommendations for further studies
Extensive researches have been conducted regarding the effect of experiential knowledge of network on business relationship value in foreign market and based on the statement of problem and analyzes in this paper, the following recommendations for further studies are presented:
1- The conceptual model test of present study in exporting companies in other provinces and their comparative comparison with the findings of present study.
2- Evaluation of different moderating variables in model
3- In the present study, for data collection, a questionnaire is used. It is proposed to other researchers to use questionnaire, interview and other data collection techniques in data collection and measures. Namely, they can interview with people with high experience in export.
4- It is recommended in further studies to evaluate the effect of network knowledge on achieving competitive advantage.
5- It is recommended that in further studies in evaluation of the effect of experiential knowledge of network and business relationship value, the moderating variable role of competitive climate is considered.
6- The study of the topic at national level with the aim of comparative analysis between different regions and cities.

References
1. Toffler, A. (1990), Power shift: knowledge, wealth and violence at the Edge of the 21st century, New York: Bantam Books.
2. Drucker P. (1992).The new society of organizations. Harvard business Review.70(5),95-104.
3. Johnson, J. David (2009), Managing Knowledge Networks, Cambridge University Press
4. Earl, M. (2001). Knowledge management strategies: toward a taxonomy. Journal of Management Information Systems, 18: 215–233.
5. Bokma, F, Mönkkönen , M.(2000). The mid-domain effect and the longitudinal dimension of continents. Trends in Ecology & Evolution 15 (7), 288-289.
6. Inkpen, A. C., and Tsang, E.W. K. (2005), Social capital, networks, and knowledge transfer, Academy of Management Review, 30: 146–165.
7. Eriksson, K., Johanson, J., Majkgard, A., & Sharma, D. (2000). Effects of variation on knowledge accumulation in the internationalization process.International Studies of Management and Organization, 30(1), 26–44.
8. Por ter, M.E (1986). Changing Patterns of International Competition. CaliforniaManagement Review, 28, 9-40.
9. Sydow, J., Windeler, A., Wirth, C., & Staber, U. (2010).Foreign market entry as network enty: A relational-strutcturation perspective on internationalization in television production. Scandinavian Jornal of Management .26(1).13-24.
10. Sullivan Mort, G., & Weera wardena, J. (2006).Networking capability and international entrepreneurship: How networks function in Australian born global firms.International Marketing Review,23(5).549-572 .
11. Dantas, Eva (2006), The development of knowledge networks in latecomer innovation systems: the case of PETROBRAS in the Brazilian offshore oil industry, Thesis (Ph.D.), University of Sussex, UK.
12. Hohenthal.jukk. Johanson.jan. Johanson.martin. Network knowledge and business-relationship value in the market. International Business Review 23 (2014) 4–19.