

Observing the Relation between Entrepreneurial Orientation and the Effectiveness of the Steel Export Markets in Iran

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Abstract

The present study would determine the relation between entrepreneurial orientation and the effectiveness of the steel export markets in Iran (case study: Steel industry) with a view to marketing management science. The statistical population of the study is all steel industry managers and in access sampling method was used. After collecting data, the questionnaire was provided and by using descriptive statistical methods like mean, standard deviation, frequency distribution, settlement, charting and calculation of indices, the data status was described and parametric inferential statistic also was used to gain Cronbach alpha reliability to respond to five hypotheses of study. Also by using Confirmatory factor analysis (CFA) , Structural equation modeling(SEM) and Partial least square method(PLS)and by using LISREL software , the data have been analyzed. The results of the study indicated the impact of entrepreneurship orientation, product development potentials discovery, related foreign markets potentials discovery and new product discrimination on the effectiveness of the export markets.

Keywords: Entrepreneurial orientation, product development potentials discovery, related foreign markets potential discovery, export markets effectiveness, new product discrimination

Introduction

According to massive economic development and export promotion, the special share of non-oil exports in decision-making and active participation in national production and also per capita income seems more noticeable. Due to the existence of affective internal and external factors, export real position in Iran couldn't have gained properly. Therefore, recognition of reasons leads to the success of countries and use them to remove the growth obstacles and foreign trade development seem necessary. In most of the developed countries; especially the industrial countries, vast activities have been done in this field led to proper scientific and practical strategies.

Nowadays, because of revolutions due to changing patterns of global consumption, collapse of trade and economic borders, globalization of the economy and emergence of the economic integration term rather than economic domination in international trade relations, exports of goods and services issue seems important. Also the attempt of the countries to have more shares of the world trade would be normal, since by gaining more shares from the world trade, they could reach the

optimum level regarding the economic power. The present article is to observe the effective factors on non-oil export from the perspectives of the university professors and experts in this field to take a proper step in promotion of non-oil export in Iran.

Literature

Now, at the beginning of the third millennium, the world is experiencing a new era. The world today is the world of rapid and vast changes in different perspectives. Occurring changes in world trade isn't the exceptions. Any of the actors in international field is to fix and improve its potential and capacities. Therefore, the survival necessity in today's competitive economy and changing environment would be wiser, harder and faster performance than before.

Islamic Republic Of Iran doesn't have the desirable position regarding export. In spite of existing young trained generation and expansion of higher education due to inconsistency between macroeconomic policies and research and innovation policies and also gap in demand-driven entrepreneurship and innovation, the top position of Iran in export isn't gained yet. Therefore, to fight the economic sanctions and fulfillment of goals in future perspectives, taking proper entrepreneurial policies to grow and enhance export to create proper bed stone to expand innovative activity demands in export and create profit and change should be done. Nowadays, major industrial and advanced countries in the world not only are utilizing the sources and capital of their countries properly and optimally in different fields in the light of entrepreneurial orientation, but use the technique and production leverages for development and growth, so could gain some innovations in this movement lead to growth and development acceleration in the country. Totally, Iran owns inconsiderable share in this market among the competitors. Such status also could be seen in the field of domestic market. Some of the companies and institutes due to having production of specific products, monopolies and excessive demand of market for their products never tried to utilize scientific and modern marketing management methods, so by changing the market faced problems. Some of these companies are still using Traditional and non-scientific methods of sale and accordingly take measures to produce, distribute and price.

In this regard, conducted researches include a wide range of variables.

- Ardakani, Yazdani and Gilanpoor(2009)in a study observed Iran's non-tariff barriers on exports of agricultural main products using the gravity model. The results indicated: The non-tariff barriers are having the negative impact on export of pistachio and shrimp and it is more than the impact on the export of these products. On the other hand, the export of raisin wasn't affected by non-tariff barriers.

- Kazemi(2009)in a study observed the impact of Iran's foreign rival export subsidies on exports of crude steel in the framework of business strategy and stackelberg market structure . The results indicated:

- 1 Due to the fact that Iran in this competition is considered as the leader government, the paid subside of foreign competitor has no impact on the export of Iran. In spite of mentioned subside affected the profit of Iranian corporation.

- 2 The paid subside of Iran to the export product could have the negative impact on the export and profit of foreign competitor, as the foreign competitor is considered as the pursuant government due to less export.

- EsmailiTodshaki et al (2015) in a study observed the impact of major macroeconomic variables on the export and import of steel in Iran. In the mentioned study by using Johansen long term co-integration test and Granger causality test, the type of relationship and influence of macroeconomic variables in Iran(GDP, oil prices, population and domestic steel production) with exports and imports of steel has been analyzed from 1975 to 2011. The results of the estimations in study indicated the meaningful and positive relation of exporting the raw steel with gross domestic product, global oil prices, population and domestic steel production rate statistically. Also positive and meaningful relation could be found between exporting raw steel with gross domestic product, global oil prices, population and domestic steel production rate statistically. Also the results of Granger causality test indicated the mutual meaningful statistical relation between exporting and importing raw steel and macroeconomic variables in Iran.

- Faizi(2014) in a study observed the entrepreneurial orientation on export performance of companies in the field of export in Ardabil province . The results indicated the existence of optimum level of entrepreneurial orientation variables and export performance. Also generally factor model fitting was ideal and hypotheses in the study have been considered. Among the subsidiary hypotheses, the positive and meaningful impact of pioneering and aggressive competition on export performance has been confirmed, while the meaningful impact of innovation and risk-taking on export performance due to being in the critical values in the range of assumptions has been rejected. Also the main hypothesis of the study (the positive and meaningful impact of entrepreneurial orientation on export performance in the observed society have been confirmed.

- Server and Anderson observed the export of soy bean in

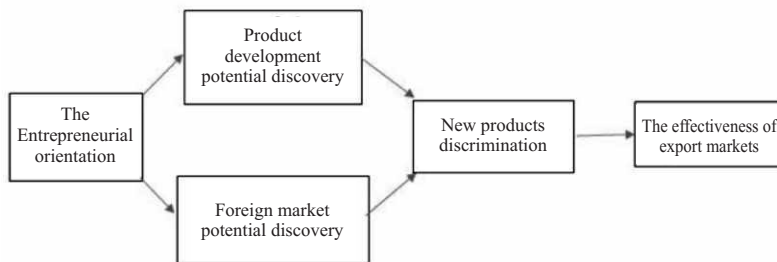
the period of 1955. Totally, the studied pattern had 4 demand function, a supply function and an equilibrium condition. In this observation, three-stage least squares method was used for the simultaneous estimation of export demand and supply equation coefficients. Also the equations with the ordinary least squares method were assessed and the results of two patterns were compared. The results indicated: Commodity prices, income, production and pricing of competing products could considerably affect the export of soy products in America. Also the real exchange rate fluctuations had a significant impact on demand for soybean exports of America.

- Paul2002 observed the factors affecting export supply and also income instability factors from export earnings. The required data in this study were collected in time series from 1970 to 1989. The negative

covariance between price and amount considered the demand fluctuations in coffee, tea, cotton products as the main reason of instability. Regarding sugar and tobaccos the mentioned relation was positive indicated the existence of fluctuations as the main reason of instability in income gained through the export.

- Wermolen et al 2006 in a study showed: according to the importance of standards of quality and food safety in developed countries, fruit export from developing countries to these countries is restricted. Therefore, he focused on the observation of favorable impact of exclusive standards on the quality of food and the income of farmers. The results indicated the proper use of standards to produce fruits in the farm and packaging inside, while the next stages from the supply chain could lead to product spoilage and reduction in producers' incomes.

The conceptual model of study



Based on the research model Dionysis Skarmeas, et al, 2011

Research hypotheses

The positive impact of entrepreneurial orientation on product development potential discovery could be seen

The positive impact of entrepreneurial orientation on foreign market potential discovery could be seen

The positive impact of product development potential discovery on new product discrimination could be seen

The positive impact of foreign market potential on new product discrimination could be seen

The positive impact of new product on the effectiveness of export markets could be seen

Research method

As the present study is to develop the functional knowledge, regarding the functional goal and data collection could be considered descriptive. Also due to the fact that present study is to observe and recognize the affecting factors on the effectiveness of export markets could be considered correlational. Due to observing the distribution of statistical population specifications, could be considered survey. Also due to collecting the data in a specific time interval, it could

be considered cross sectional.

Research findings

In present study to calculate the reliability rate, Cronbach's alpha coefficient was used. In this method first the score variance of each questionnaire and total questionnaire were calculated. Then alpha coefficient was calculated by using the following formula:

$$\alpha = \frac{n}{n - 1} \left(1 - \frac{\sum si^2}{S^2} \right)$$

n=the number of questions

a=Cronbach's alpha coefficients

si=I question standard deviation

S=the standard deviation of whole questionnaire

In present study SPSS 20 was used to calculate Cronbach's alpha coefficients. In this regard, the gained Cronbach's alpha which was more than 0/7 in an acceptable rate showed that research questionnaire owns sufficient reliability and related results could be trusted, as to be reused, the same results would be gained.

Table1- the results of descriptive statistics

percentage	frequency		
55.3	120	Male	Gender
44.7	97	Female	
100.0	217	Total	
24.4	53	Single	Marital status
75.6	164	Married	
100.0	217	Total	
15.6	34	<30	Age
60.6	132	30-40	
20.8	45	40-50	
3.1	7	>50	
100.0	217	Total	
1.4	3	Lower than diploma	Education
8.9	19	Diploma	
56.4	122	B.A	
33.3	72	M.A	
100.0	217	Total	
14.7	32	<5	work experience
39.4	85	5_10	
22.5	49	10_15	
10.0	22	15_20	
13.3	29	>20	
100.0	217	Total	

Testing hypotheses

Descriptive observation of research variables

In present study five main variables were chosen and observed based on a conceptual model. Among the research variables, a dependent variable (the effectiveness of export markets) and three mediator variables (product development potential discovery, foreign market potential discovery and new product discrimination and an independent variable (Entrepreneurial orientation) describing the variables is important as the results of research hypotheses testing would be extracted based on the data and indexes of these variables. The research data own the interval scale. To describe the research variables, the central and distributive indices were used as following:

Describing the research variables: these variables own the interval scale with 217 observations and data zero is lost. The research data are collected by using first hand data sources with ratio scale. To describe the variables of research, the central and distributive indices were used as following. According to the selection of 5-point Likert for questionnaire forming questions, the gained rate from the respondents should be observed to see whether the mean of gain responses is less than 3 or not (the middle number of Likert scale) in the case that gained average rate is less than 3, it indicates that studied population assessed undesirably in that status index. The results shows: assessing individuals through the variables of present study was higher than average and also the proportional satisfaction from the model variables.) in all variables, the average rate of responses was more than 3).

Table2- indexes of central orientation and dispersion of research variables

Stretching	Skewness	SD	Mean	Average	Number	Research variables
-0.577	-0.352	1.008	3.4	3.26	217	Entrepreneurial orientation
-0.711	-0.182	0.986	3.2	3.169	217	Product development potential discovery
-0.602	-0.182	0.951	3.4	3.327	217	Foreign market potential discovery
-0.747	-0.15	1.03	3.2	3.16	217	New product discrimination
-0.418	-0.386	0.932	3.6	3.513	217	Export markets effectiveness

Inferential analysis of results:

"Kolmogorov - Smirnov" test results:

To observe the normality of patterns` factors, Kolmogorov - Smirnov test was used and in all tests, the statistical hypothesis is as following:

H0: The data are normal (the data are taken from the normal population)

H1: The data aren`t normal (the data aren`t taken from the normal population)

Table 3 - Kolmogorov - Smirnov test results

Normality result	P-value	Z statistics	Research variables
Normal	0.096	1.233	Entrepreneurial orientation
Normal	0.296	0.976	Product development potential discovery
Normal	0.328	0.949	Foreign market potential discovery
Normal	0.253	1.016	New product discrimination
Normal	0.19	1.084	Export markets effectiveness

It could be seen that , P-value in model variables is more than 0/05 error value, so, zero hypothesis in less than 0/05 error value wouldn`t be rejected and as a result , the normality of research variables in less than 0/05 error value would be supported. It is considerable to mention that normality of variable distribution is taken from the assumptions underlying the use of parametric tests. Of course distribution normality isn`t compulsory and in case of having large sample size and lack of severe skewness , it would be justified.

The convergent validity, mix reliability and goodness of fit index

It shows the indexes of reliability, validity and model fitting. The convergent validity is used in present study. It means the structural indexes finally could provide appropriate differentiation in terms of measuring relative to other structures models. In other words, each index could measure own structure and the combination is in the way that all studied structures are with the average extracted variance higher than 5/0. Composite reliability (CR) and Cronbach's alpha indexes were used to test reliability. All of these coefficients are higher than 7/0 and shows the reliability of the measuring instruments.

Table4- Reliability, validity and model fitting indexes

AVE	\sqrt{AVE}	(5)	(4)	(3)	(2)	(1)	The latent variables
0.788	0.888					1	Entrepreneurial orientation
0.794	0.891				1	.386**	Product development potential discovery
0.823	0.907			1	.342**	.493**	Foreign market potential discovery
0.811	0.901		1	.417**	.424**	.496**	New product discrimination
0.793	0.891	1	.404**	.443**	.393**	.434**	Export markets effectiveness

Model fitting indexes**Table5- model fitting indexes**

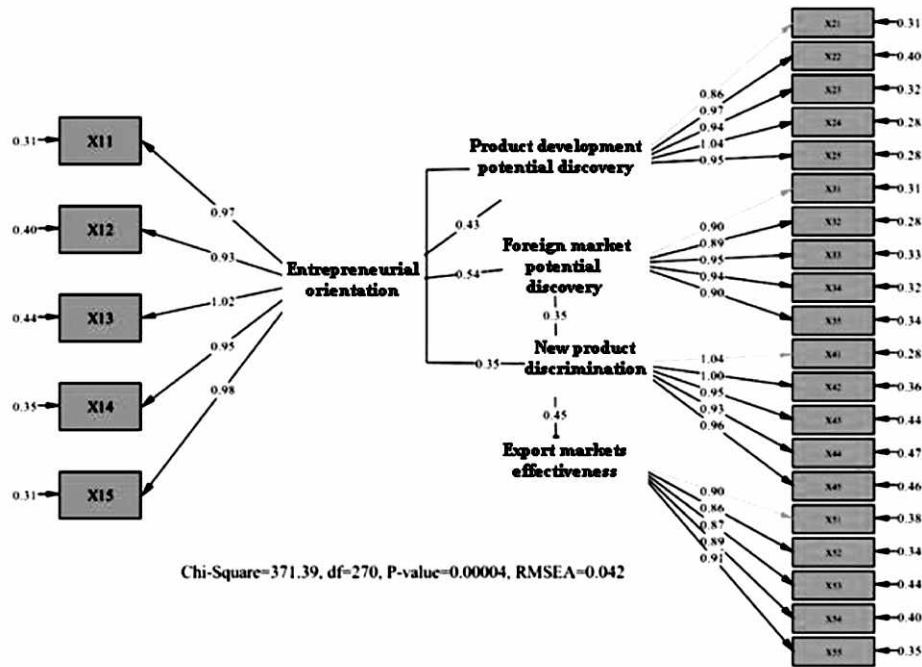
Extent permitted	Initial	The name of indexes
Less than 3	1/376	(Chi-square on the degrees of freedom)
Higher than 0/8	0/88	Goodness of fit index(GFI)
Higher than 0/8	0/85	Adjusted goodness of fit index(AGFI)
Less than 0/1	0/042	root mean square error (RMSE)
Higher than 0/9	0/99	Compensatory fitness index (CFI)
Higher than 0/9	0/97	Normal fit index(NFI)
Higher than 0/9	0/99	Non-Norma Fit index(NNFI)
Higher than 0/9	0/99	Increased fitness indicator(CFI)

After performing the done reforms on research model data with the factor structure and theoretical foundation, the study owns the proper fitting and it indicates the question

conformity with the theoretical structures. As a result it could be said that research model is confirmed.

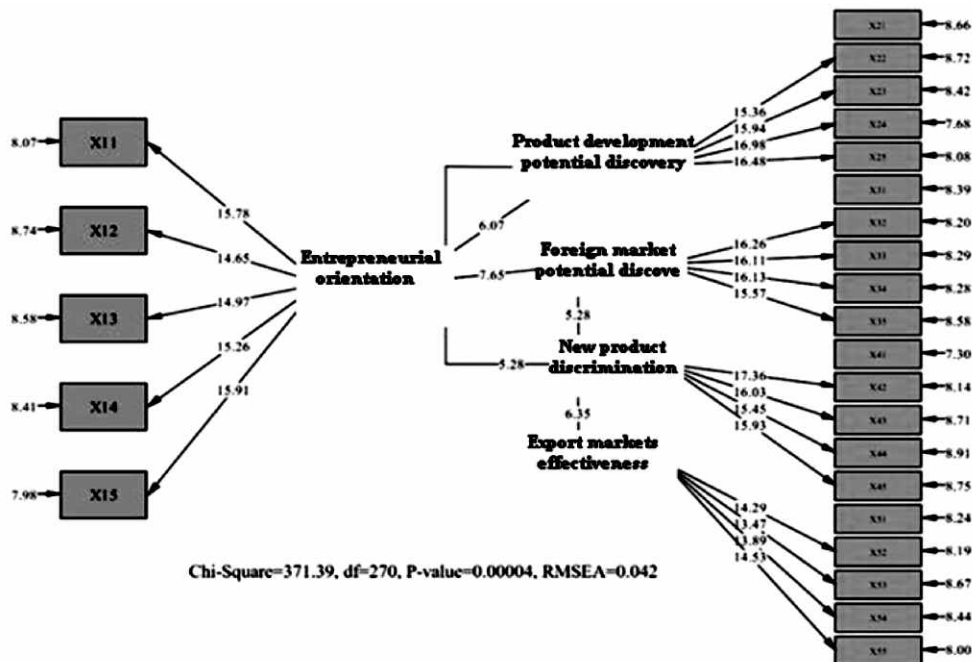
Observing the research diagram (model testing and estimation):

Diagram 1) research model in standard coefficient estimation mode



In this model of entrepreneurial orientation (Independent) is exogenous and variables such as product development potential discovery, foreign market potential discovery, new product discrimination, are mediator and export markets effectiveness (dependent) is endogenous. In this diagram the numbers or coefficients would be divided in tot two

categories. The first category is titled the measurement equation is the relation between the latent variables (oval) and observed variables (rectangle) and is called loading factor. The second category is titled structural equation that is the relation between latent and latent variables used for the hypotheses testing and is called path coefficient.



This model would test all measurement equations (the loading factor) and structural equations by using t statistics. According to this model, the path coefficient and loading factor are significant in % 95 confidence levels, if out of range t statistics is -1/96 to +1/96. The calculated t value for each loading factor would be more than 1/96. Therefore, the questionnaire alignment to measure concepts in this level

would be valid (Hooman 2009) in fact the above results indicated: whatever researcher was supposed to get from the questionnaire, was fulfilled through this instrument, so the relation between the structures or the latent variables would be attributable. The indexes with the higher loading factor would have more importance than the other indexes.

Conclusion and recommendations

Path coefficient, t statistics and the results of the research hypotheses

Equation direction	Hypotheses status	R ²	t	Beta	Research hypotheses
+	confirmed	0.19	6.07	0.43	development potential discovery
+	confirmed	0.29	7.65	0.54	market potential discovery
+	confirmed	0.31	5.28	0.35	Product development potential discovery→ New product discrimination
+	confirmed		5.28	0.35	product discrimination
-	confirmed	0.21	6.45	0.45	markets effectiveness

Results from the first hypothesis

The first hypothesis is accepted, i.e. entrepreneurial orientation could have the significant impact on the product development potential discovery statistically.

Results indicated the significant change in product development potential discovery could be due to any change related to entrepreneurial orientation.

Results from the second hypothesis

The second hypothesis is accepted i.e. entrepreneurial orientation could have the significant impact on foreign market potential discovery statistically.

Results indicated the significant change in foreign market potential discovery could be due to any change related to entrepreneurial orientation.

Results from the third hypothesis

The third hypothesis is accepted i.e. product development potential discovery could have the significant impact on new product discrimination statistically.

Results indicated the significant change in new product discrimination could be due to any change related to product development potential discovery.

Results from the fourth hypothesis

I.e. Foreign market potential discovery could have the significant impact on new product discrimination statistically.

Results indicated the significant change in new product discrimination could be due to any change related to foreign market potential discovery.

Results from the fifth hypothesis

The fifth hypothesis is accepted i.e. new product discrimination could have the significant impact on export markets effectiveness statistically.

Results indicated the significant change in export markets effectiveness could be due to any change related to new product discrimination.

Recommendations of the researcher to the studied organization:

According to the results of present study, seven recommendations could be offered as following:

- 1) Using the appropriate, comprehensive, accurate and easy to understand catalog to encourage the current and potential buyer to buy the product. It could fulfill the manager's expectation regarding the effectiveness of market.
- 2) Using experts to produce differentiated and high quality products
- 3) Using different appropriate marketing forms regarding the structure of each country, such as electronic marketing, viral ,integration ,etc. in order to explore foreign markets potential
- 4) Presenting gift to the customers after sale, so the customer would remind it and the relatives would see and get familiar with the name, address and number. Also to create such gifts, some jobs would be created too.
- 5) Using the appropriate, comprehensive, accurate and easy to understand catalog to encourage the current and potential buyer to buy the product. It would fulfill the management's expectation to increase the export.
- 6) Expanding the communications networks, constituency associations among the exporting companies to expand exports.
- 7) Using mass production in order to capture the market and product development in all markets

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