THE FACTORS INFLUENCING THE GROWTH OF EXPORTS IN AUTOMOTIVE INDUSTRY

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A b s t r a c t

In most developed and developing countries, automotive industry is the most important industry. The automobile production is a sign of growth and national identity. This study aimed to investigate the factors promoting exports in automotive companies (case of study: Iran Khodro Company). The study population was consisted of managers and experts (N=140) who were working in this automotive company. The participants of the study were selected via a convenience sampling method. The results of this study showed that production capacity, quality management, technical knowledge, export management skills, resources and financial reports, competitive intelligence, and management commitment, respectively, were the factors contributing to the increase in exports in Iran Khodro Company. On the other hand, political issues, economic issues, banking problems, technical issues, legal and regulatory issues, targeting subsidies, and insurance were among the barriers hindering the promotion of exports in this automotive company. At the end of this paper, we proposed some suggestions and solutions to improve and promote exports in automotive companies.

ФАКТОРЫ, ВЛИЯЮЩИЕ НА РОСТ ЭКСПОРТА В АВТОИНДУСТРИИ

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АННОТАЦИЯ

В большинстве развитых и развивающихся стран автомобильная промышленность является важнейшей отраслью. Производство автомобиля – это признак роста и национальной идентичности. Целью настоящего исследования является изучение факторов, способствующих росту экспорта в автомобильной компании (при изучении: компании Иран Ходро). Популяция исследования состояла из руководителей и экспертов (П=140), которые работали в этой автомобильной компании. Участники исследования были отобраны с помощью стандартного метода отбора. Результаты данного исследования показали, что мощность производства, контроль качества, технические знания, навыки экспорта природных ресурсов, а также финансовых отчетов, конкурентная разведка и управление обязательствами, соответственно, являлись факторами, способствующими увеличению экспорта в Иран Ходро компании. С другой стороны, политические проблемы, экономические проблемы, проблемы в банковском секторе, технические вопросы, юридические и нормативные вопросы, целевое субсидирование и страхование среди проблем, препятствующих увеличению экспорта в этой автомобильной компании. В завершении данной работы мы составили несколько предложений и решений по совершенствованию и стимулированию экспорта в автомобильной компании.

КЛЮЧЕВЫЕ СЛОВА: автоиндустрия, экспорт, экспортный барьер

1. INTRODUCTION

Exports of goods and specially export of non-oil products, which includes the export of all goods manufactured in a country other than oil and raw materials, is one of the most important factors that provide the country with foreign exchange and increase national revenue. The most important and the first result of increase in non-oil exports is that the export of such products helps the county to become independent of a single product export system and secure its economic structure against the negative influence of political and economic markets. In addition, the government can increase its exchange resources and consequently increase the quality of public services in economic sectors. Besides, the government would become able to use new areas to increase the level of employment in agriculture, industrial, and mineral sectors. Among the other results of the development of non-oil exports, we may note the followings: preventing the migration of people from rural areas to urban areas, activating artisans and promoting them to manufacture different products, and fulfilling economic needs of people (Mirbagheri Ganji, 2013).The views toward the automotive industry in every country can be affected either by a retrospective approach, or by a more dynamic and comprehensive approach which covers the interaction between the demand for automotive products and the demands for other economic and social sectors; taking into consideration such a dynamic interaction, the industry can propose the a good vision of the future behavior of these variables. In view of that, people's investment to buy automobile constitute an important part of their life and the subsequently the increase in demand for automotive products provides a good market both inside and outside the country. Consequently, it is of great importance to evaluate the factors that lead to success in the

market and promote exports (Momeni and Nazmi, 2011).

Due to the globalization of markets and the increase in the competitions between companies, the researchers have paid more attention to the factors affecting export performance of companies and hence a lot of research has been carried out in this field. A review of the existing literature on export performance of companies has identified a wide range of factors affecting export activities and related achievements (Zoe and Stan, 1989). In Iran there are much debates and controversy about the effects of economic globalization, and it is considered either as a source of economic success or a path to failure and breakdown. Therefore, to minimize the losses caused by the globalization of the economy in Iran, it is necessary to reach a clear understanding of the situation of the industry in Iran and indentify the industries that are vulnerable.

Iranian automotive industry was established in the first decade of the twentieth century and since then it has experienced many fluctuations. Nowadays, it has a special place in terms of inter-sectoral links in Iran's economy. After the Islamic revelation and as a part of the fourth national development program, many efforts have been made to localize the industry, but it has not made much progress in a global scale. In any case, Iranian automotive industry is facing new outlooks in the market and must face challenging competitions in the global market; thus, the automotive industry must follow proper procedures and strategies to survive in the global market and to offer high quality products with a reasonable price. Hence, in this study, we tied to investigate the factors promoting exports in automotive industry. The results of this study can be utilized by the automotive manufacturers to indentify the factors and their effects and use them to promote the export of their products.

2. METHODS AND OBSERVATION

So far many researches have been conducted to investigate the factors promoting and inhibiting the export of non-oil products, including automobile-related products, but no research has been conducted in Iran to evaluate the factors promoting automobile exports. Hence, this study is one of the first studies that have been carried out in this area. In the following paragraphs we review the studies related to our topic.

Studies have shown that governments can make important contributions and significantly help companies through providing information, tax incentives, insurance, and financial programs (Weaver et al. 1998). Moreover, according to Auxin (1988) the exporters are faced with the complexities of paperwork and this has an inverse relationship with export activities. In a study by Cavsgeil and Zhu (1994), the researchers concluded that high commitment of management allows companies to aggressively look for export market opportunities and thus adopt effective marketing strategies to improve their export performance. According to Tsar (1975), companies that produce goods with unique characteristics are more prone to export activities. Christensen, Dorocha, and Gartner (1987) reported that successful exporters usually focus on quality control and the search for the unique characteristics of their products.

Cunningham and Spiegel (1971) found that design and product quality are the most important factors that affect the performance of the company and contribute to its export success. According to Powered and Burgart (1975), the certificate of registration and efficiency in the distribution are among the factors that can significantly affect exports. Morgan (1997) suggested that the decisions of the managers are based on their previous experience and characteristics; as a result, the perceptions of key decision-makers could affect the process of decision making and

determine how the decisions are implemented.

According to the results of two studies by Cavsgeil and Zhu (1994) and Leonido et al. (2002) the external factors such as industrial competitiveness, business environment, and product features are associated with export performance. Kashani and Seyed Isfahani conducted a study entitled "Designing and explaining a pattern for technology development in the automotive industry in Iran, with an emphasis on export promotion strategy". According to the results of Spearman correlation coefficient test, the findings of their showed that human resource development, organizational culture development, management structure development had a significant relationship with the technology development (Kashani and Seyed Isfahani, 2005). The results of a study by Mohammadian et al (2013) showed that export market orientation had an effect on export performance and competitive advantage. In addition, in their study competitive advantage was set as the mediator variable affecting the relationship between export market orientation and export performance; this mediator variable had also a positive impact on export performance. Based on the results of exploratory factor analysis of export market orientation, the index of export intelligence had the highest weight; in addition, the variable of market differentiation for competitive advantage, and the variable of export performance for export strategy performance had the highest values.

Sadeghi et al. (2012) conducted a study to investigate the factors promoting export from the perspective of exporters; he results showed that the following factors were the most important factors which had a significant impact on export: environmental factors (rules and regulations, culture, special connections, technology, political variables), subsidiary features of product (warranty and after-sales service, distribution channels, product quality, brand, design and packaging), personal factors (public relations, export knowledge, education, work experience), and economic factor (export marketing, governmental subsidies, pricing for export, export markets).

According to the results of other research, the commitment of management, export management skills, production capacity, quality and knowledge management, resources and financial reports are among the factors which are effective in increasing exports.

The research method of the study was based on the quantitative paradigm. This study was applied in purpose and descriptive (non-experimental) in design. It was categorized as a multivariate correlational analysis study. The study population involved all the trade executives and experts of Iran Khodro Company (N = 140). After preliminary analyses and the estimation of the population, all the members were selected as the final sample, and a survey was conducted.

Data were collected using a researcher made questionnaire consisting of four sections. The first section elicited the respondents' personal and professional characteristics, the second section was related to the influential factors in export growth, the third section was associated with the barriers to the growth of export in automotive companies, and the fourth section asked for solutions to increase and promote export.

In order to ensure the validity of the questionnaire, comments and opinions of experts and scholars in the field of automotive industry were elicited, and necessary modifications were made to the questionnaire items accordingly. As for the reliability, the developed questionnaire was distributed among the trade executives and experts of Iran Khodro Company; they filled up the questionnaire, and the Cronbach's alpha values for the sections related to

influential factors in export growth, barriers to export, and proposed solutions were reported to be 95.3, 95.5, and 89.8, respectively; all the values were within the acceptable range, indicating a good level of reliability for the questionnaire. Data analyses were carried out using SPSS.

3. RESULTS

In this section, first descriptive statistics and then inferential statistics will be described. The results of the descriptive statistics applied in the current study are presented in Table 1.

Table 1. Personal characteristics (demographic data) of the trade executives and experts working in Iran Khodro Company

Characteristic	Class	Frequency	Percentage	Cumulative percentage
Gender	Male	108	77.1	77.1
	Female	32	22.9	100
Age	20 – 25 years	9	6.4	6.4
	26 – 35 years	54	38.6	45
	36 – 45 years	57	40.7	85.7
	46 – 55 years	20	14.3	100
	Older than 56	0	0	
Education	High school diploma	4	2.9	2.9
	Associate diploma	22	15.7	18.6
	Bachelor degree	82	58.6	77.1
	Master or higher degrees	32	22.9	0.100

Source: The results of the study

As shown in Table 1, it was found that the majority of the respondents were male (77.1%); their ages ranged from 36 to 45 years (40.7%). In addition, most of the respondents had bachelor's degrees, and only 2.9% of them had high school diploma. The next section presents the factors promoting the growth of export in Iran Khodro Company; the findings are ranked based on their related means, standard deviations, and the coefficients of variation.

Table 2. Prioritizing the factors promoting the growth of export

Variable	Range of responses	Mean	Standard deviation	Coefficient of variation	Ranking
Production capacity	3 - 15	11.40	2.50	21.9	1
Quality management and technical knowledge	4 – 20	16.17	3.77	23.3	2
Export management skills	3 – 15	11.50	2.78	24.1	3
Resources and financial reports	3 – 15	10.94	2.70	24.6	4

Competitive intelligence	4 – 20	15.71	3.82	24.3	5
Management commitment	3 – 15	11.68	3.02	25.8	6

Source: The results of the study

Table 2 reveals that the coefficient of variation of production capacity had the lowest value (21.9), indicating the stronger effect of this component on the export in automotive companies. The second priority involves the component of quality management and technical knowledge with the coefficient of variation of 23.3. The other components, in order of priority, were as follows: export management skills, resources and financial reports, competitive intelligence, and management commitment. Thus, each of the mentioned components is effective in the growth of export in automotive companies. In the next part of the study we used multiple regression test and predicted the components functioning as barriers to the growth of export in automotive companies.

Table 3. Multiple regression statistics and the summary of fitted regression model

Statistics	Value
Multiple correlation coefficient	0.734
Coefficient of determination (R^2)	0.538
Adjusted coefficient of determination (Adjusted R^2)	0.513
Standard error	81.10

Source: The results of the study

As shown in Table 3, R^2 is 0.538. In simultaneous multiple regression, the variables are entered into the equation all at once. Therefore, the obtained R^2 indicates that about 54% of changes in the dependent variable are explained by these seven independent variables.

Table 4. Analysis of variance in multiple regression test

Source	sum of squares	degree of freedom	mean squares	F	significance level
Regression effect	17596.758	7	2513.823	21.481	0.000
Residual	15096.351	129	117.026		
Total	32693.109	136			

Source: The results of the study

Table 4 shows that the regression and the linear relationship between the variables are statistically significant at .99.

Table 5. Line of the best fit regression model for the growth of automotive export

Variable	B	Std.B	Beta	T	Sig
Intercept	10.645	6.637		1.604	0.111
Economic issues	0.168	0.383	0.040	0.439	0.662
Banking problems	0.384	0.367	0.100	1.047	0.297
Political issues	0.844	0.423	0.156	1.99	0.048
Legal and regulatory issues	0.221	0.255	0.093	0.868	0.387
Technical issues	2.075	0.470	0.426	4.413	0.000
Insurance	0.561	0.368	0.145	1.525	0.130
Targeted subsidies	-0.511	0.538	-0.086	-0.949	0.344

Source: The results of the study

The main results of regression test are presented in Table 5. The column headed as β in this table is related to the coefficient used in predicting the value of Y in the regression equation. The general formula of the multiple regression test is as follows:

$Y = \alpha + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \ldots + \beta_n x_n$
where:
Y = the predicted value of the variable Y

α = constant or intercept where the regression line crosses the Y axis

β = regression coefficient or slope

x = the values of the independent variables

Based on the data presented in the column headed as β, the regression equation could be written as follows:

Y = 10.64 + 0.168 (economic issues) + 0.384 (banking problems) + 0.844 (political issues) + 0.221 (legal issues) + 2.07 (technical issues) + 0.561 (insurance) – 0.511 (targeted subsidies)

In this table, the values for individual regression coefficients are also computed, and the related significance levels are shown in the last column. As indicated, only the effects of political and technical issues are statistically significant; the effects of other variables are insignificant as they have a little role in predicting the outcome. Nevertheless, it is necessary to consider all the variables because the overall worth of the analysis of variance in regression has been obtained based on all the variables available in the

equation. However, β (Beta) is used for estimating the role and importance of the independent variables (i.e., the predictors) in predicting the regression equation. As β values are standardized, the relative importance of the variables could also be compared; in fact, the higher the β value, the more important the variable is in predicting the dependent variable (i.e., the criterion). As such, it could be stated that, compared with other variables, the variable related to technical issues has the most predictive power; specifically, if there is a one standard deviation unit change in this variable, the standard deviation of the dependent variable would change by 0.426. In the next part of the study, the factors inhibiting the growth of export in automotive companies were calculated and prioritized according to the related means, standard deviations, and coefficients of variation. The results are presented in Table 6.

Table 6. Prioritizing the factors inhibiting the growth of export in Iran Khodro Company

Variable	Range of responses	Mean	Standard deviation	Coefficient of variation	Ranking
Political issues	4 – 20	17.10	2.87	16.7	1
Economic issues	5 – 25	20.53	3.67	17.8	2
Banking problems	5 – 25	20.16	4.03	19.9	3
Technical issues	4 – 20	15.48	3.29	21.25	4
Legal and regulatory issues	8 – 40	30.69	6.53	21.27	5
Targeted subsidies	3 – 15	12	2.65	22.0	6
Insurance	4 - 20	14.75	4.07	27.5	7

Source: The results of the study

Table 6 indicates that the component of political issues had the lowest coefficient of variation, suggesting that this is the main barrier to the growth of export in Iran Khodro Company. Moreover, the component related to the economic issues, with a coefficient of variation of 17.8, is of second priority, marking economic issues as the second barrier to the growth of export in the company. The other components, in order of priority, include banking problems, technical issues, legal issues, targeted subsidies, and insurance as the barriers to the growth of export in Iran Khodro Company. Therefore, the last research hypothesis is also confirmed, and the above-mentioned factors can be regarded as barriers to the growth of export.

Finally, the proposed solutions to remove the barriers to export in automotive companies were calculated and prioritized according to their related means, standard deviations, and coefficients of variation. The results are presented in the following table.

Table 7. Prioritizing the proposed solutions to the problems of the growth of export in automotive companies

variable	mean (from 1 to 5)	standard deviation	coefficient of variation	Ranking
Diversifying automotives and export markets	4.34	0.84	19.3	1
Enforcing common international standards on domestic products	4.30	0.85	19.7	2
Forming export unions to organize and strengthen export companies	4.14	0.85	20.5	3
Obtaining detailed knowledge of export markets and matching the quality of export products with the specific needs of the market	4.23	0.88	20.8	4
Giving short-term and medium-term financial credits with reasonable interest to the exporters	4.08	0.88	21.5	5
Facilitating foreign investment such as eliminating restrictions on the withdrawal of principal and interest of foreign capital	3.96	0.88	22.2	6
Tax exemption for export earnings	4.13	0.93	22.5	7
Stability of export rules and regulations	4.22	0.97	22.9	8
The import of all equipments required for the production of products must be exempted from payment of customs	4.06	0.95	23.3	9
Cutting red tape and revising the current treaty structure	4.17	1.03	24.7	10
Reducing the number of export and import decision-making centers	3.97	1.01	25.4	11
Creating databases and research centers that provide the exporters with the latest developments in export markets	3.99	1.05	26.3	12
Establishing higher education centers specialized in the field of export	3.98	1.06	26.6	13
The government bears the costs of marketing of export products	3.88	1.14	29.3	14

Source: The results of the study

As evident in Table 7, the results of prioritizing the proposed solutions to the problems of the growth of export in Iran Khodro Company show that diversifying automotives and export markets has the minimum coefficient of variation of 19.3, thus marking it as the first priority of this solution from the respondents' perspective. The second priority relates to making common international standards on domestic production compulsory. The next priority relates to forming export unions to organize

and reinforce export companies. Following these solutions, the fourth priority is the detailed knowledge of export markets and matching the quality of export products with the specific needs of the market. The fifth priority is associated with giving short-term and medium-term credits with reasonable interest to the exporters. The sixth priority is related to facilitating foreign investment such as eliminating restrictions on the withdrawal of principal and interest of foreign capital. Thus, the solutions were prioritized so that, ultimately, bearing the costs of marketing export products by the government was proposed as the last solution by the trade executives and experts in the company.

4. CONCLUSION

In many countries, automotive industry is among the main industries and is a drive for manufacturing in different communities. In Iran, the idea of automotive assembly and manufacturing was first proposed about 40 years ago; nowadays, Iran has achieved more progresses in the field than many countries which are well-known in the automotive industry. In this study, we investigated the key factors promoting the growth of exports in automotive companies. The results of this study indicated that most of the experts and executives working in Iran Khodro Company were male and had a Bachelor degree. In addition, according to the demographic data obtained in the study, most of the people who participated in this study were aged between 35 to 45 years old and most of them did not have and experience of export.

The results of the inferential part of the research showed that the variables of production capacity, quality management and technical knowledge, export management skills, resources and financial reports, competitive intelligence, and management commitment, respectively, were the most important factors promoting the growth of export in Iran Khodro Company. This finding is in line with the

results of the study by Karimi Kashani and Seyed Esfahani (2005).

In addition, the results of multiple regression test showed that the variables of economic issues, banking problems, political issues, legal and regulatory issues, technical issues, insurance, and targeted subsidies accounted for about 53.8% of the barriers to the export of products manufactured by Iran Khodro Company. Eliminating these problems and barriers could help to promote the export of Iran Khodro products. This finding is in line with the results of Sadeghi et al. study (2012).

According to the findings of this study, from the perspective of executives and experts working in Iran Khodro Company, the following items were identified as barriers to the export of products: political issues, economic issues, banking problems, technical issues, legal and regulatory issues, targeted subsidies, and insurance. This finding is in line with the results of studies by are, these results with the results Cavsgeil and Zhu (1994), Leonido et al. (2002), Sadeghi et al. (1391) and Mirbagheri Ganji (2013).

5. RECOMMENDATIONS

Taking into consideration the results of this study, the following items are recommended.

- As the executives and experts working in Iran Khoro Company stated, the production capacity is of great importance to promote the exports. Hence, the automotive manufacturers are recommended to increase the stability of their successful products and manufacture more competitive products for the market.

- As the executives and experts working in Iran Khoro Company stated, quality management and technical knowledge are among the most important factors promoting the growth of exports. Hence, it is suggested to promote the national and international standards for the products and improve the

technical knowledge of the experts to ensure the quality of products.

- As the executives and experts working in Iran Khoro Company stated, export management skills are among the most important factors promoting the growth of exports. Therefore, it is recommended to provide the required trainings about the foreign orders processing and export skills.

- From the perspective of executives and experts working in Iran Khoro Company, resources and financial reports are among the most important factors promoting the growth of exports. Therefore, the automotive companies can attract international investments via issuing financial reports, and thus can promote the export of their products.

- According to the results of this study, competitive intelligence is one of the factors affecting the growth of export. Thus, the automotive companies can make planning and adopt price and product marketing strategies to promote the exports.

- According to the results of this study, management commitment is one of the factors promoting the growth of exports. Hence, in order to promote the exports, the mangers must be orientated toward exporting the products, promote export processes, spend enough time to mange and find international markets, and try to enter such markets.

- According to the views of participants, political issues are among the main barriers to the growth of export in automotive companies. Hence, in order to promote exports it is necessary to eliminate or reduce the sanctions, transfer technology, and motivate the destination countries to but automotive products.

- According to the results, economic difficulties are the second main barrier to the growth of export. Thus, reducing inflation and exchange rates can help to produce more products with better quality, and

consequently increase the rate of exports in Iran Khodro Company.

- Banking problems are among the other barriers to export. To remove this barrier, it is necessary to eliminate unnecessary regulations and red tape and provide low-interest and long-term loans to automotive companies.

REFERENCES

1. Momeni A., Nazemi J., (2011). Forecasting automotive market in Iran based on global automotive market behavior.

2. Sadeghi T., Lashkari M., Esmaeili, Karbalaee H. (2012). Proposing a model of the main factors for the success of export from the perspective of exporters in Iran. Marketing Management Journal. No. 17. PP. 62-82

3. Mohammadian M., Allaverdi M., Salimi A,. (2013). Evaualtion of the effects of export market orientation and competitive advantage on export performance (case study: Best exporters of Iran in 2011). Trade management. Volume 5. No. 4. PP. 61-78

4. Mirghorbani Ganji M. (2013). Evaluation of the barriers to the non-oil exports and determination of factors promoting the export. Intelligent Industry Management. Volume 16. No. 10. Se. 151. PP. 24-29

5. Karimi Kashani A., Seyed Esfahani M., (2005). Designing and explaining a technology development model for the automotive industry in Iran, with an emphasis on export growth strategies. Humanitarian Mentor Quarterly. Volume 9. No. 2. PP. 29 – 58

6. Axinn, N. Catherine (1988). Export Performance: Do Managerial Perceptions Make A Difference. International Marketing Review, Vol.5, No.2, pp.61-70.

7. Cavusgil C and Zou S. Marketing strategy- performance relationship: an investigation of the empirical link in export market ventures. J. Mark. (1994) 58: 1-21.

8. Leonidou A Katsikeas S and Samiee S. Marketing strategy determinants of export performance: a meta-analysis. J. Bus. Res. (2002) 55: 51-67.

9. Tesar, George (1975). Empirical Study of Export Operations Among Small and Medium-Sized manufacturing Firms. P.H.D. Thesis, Graduate School of Business Administration, University of Wisconsin-Madison.

10. Zou, haoming and Simona Stan (1998). The Determinants of Export Performance: A Review of the Empirical Literature Between 1987 and 1997 international Marketing Review. Vol. 15, No.5, pp.333-356.

11. Weaver K., Mark, David Berkowitz and les Davies (1998). Increasing the Efficiency of National Export Promotion Programs: The Case of Norwegian Exporters, Vol.36, No.4, pp.1-11.

12. Cunningham, M.T. and R.T. Spiegel (1971), A Study in Successful Exporting, British Journal of Marketing. Vol.5, spring, pp.2-12.

13. Christensen. H. Da Rocha Angela and Automativel (1987). The Export Experience of a Developing Country: A Review of Empirical Studies of Export Behavior and the Performance of Brazilian Firm, in S.T. Cavusgil, and C. Axinn (Eds.). Advances in International Marketing, JAI press, Greenwich, CT, Vol.6, pp.111-142.

14. Morgan, R.E. (1997). Decision Making for Export Strategy. Small Business and Enterprise Development. Vol.4. pp.73-85.