Full Length Research Paper

Identifying and ranking of Iran tractor manufacturing company's export problems and obstacles

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The purpose of this study is to identify and rank problems and obstacles that prevent Iran tractor manufacturing company (ITMCO) of achieving a desired and appropriate export statistics. Towards that end, using international background research and surveys of company's export officials, a questionnaire in the form of the Leonidou's model general framework has been prepared. The questionnaire was distributed among the ITMCO's export elements and replies were analyzed based on mean tests and Friedman nonparametric test. These analyses were carried out on two levels of hypothesis and indices. The findings showed that among the seven main Leonidou model's factors that are defined as study hypothesis, information factors had very prominent role. In addition, in the level of used indices in questionnaire, "enjoyment of governmental organizations features" index, despite of cession of company's 100% stake in the privatization process, is the main obstacle to the company from achieving a desirable and worthy export statistics.

Key words: Export barriers, export obstacles, export problems, tractor, privatization.

INTRODUCTION

Iran tractor manufacturing company (ITMCO) industrial group includes 12 companies that seven are in Tabriz, a company in Sanandaj, a company in Urmia, and three production lines in the countries of Venezuela, Uganda, and Tajikistan are active. Currently more than 14 types of tractors are produced in various Iran Tractor Manufacturer Company's and are supplied for domestic and foreign markets. The company's main products include single and two differential tractors, ITM285, ITM399, ITM299, ITM800 and three types of garden tractors.

Some factors such as "high production lines capacity of the company in mass production of products, not so desirable demand elasticity of domestic market, export markets with significant demand elasticity particularly in neighboring countries, the necessity of using economic benefits of mass scale production, reducing various government facilities to buy tractor for farmers, reduced import tariffs of tractors to the country" are the factors that have attracted attention of the authorities and managers more than ever to export, and confirmed its undeniable importance in the company's development. This study is an attempt to detect problems and major obstacles that prevent the country's largest industrial northwest unit of achieving a decent and good export statistics.

RESEARCH BACKGROUND

History of studying export problems and obstacles returns to the mid 1960's, the studies started by Groke and Kreidle works in 1967, then a lot of research has been directed to this side. However, serious research efforts occurred in 1980 and 1990, particularly in 1990, with strong attention to the need for compatibility and compliance of the complex results from rapid globalization of world economies at that time (Leonidou, 1995a).

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Caution in the use of research background

Despite a number of valuable insights derived from studying research backgrounds, we should be cautious for a number of reasons in extending the results of these studies on the ITMCO.

1. The nature and intensity of export barriers is "Base specific" and considering that most of these studies were formed in developed countries with the approximately perfect institutional and functional structure, extending their results for companies within a developing economy can be misleading (Robson and Freel, 2008).
2. The nature and severity of export barriers are "country specific" and can be different from one country to another country (da Silva and da Rocha, 2001).
3. The nature and intensity of export barriers are "situation specific" and can be different in various positions and times, even for a company (Leonidou, 2004).
4. The nature and intensity of export barriers are "Industry specific" and can be different from one industry to another, even within one country. According to these reasons we are faced with diverse range of export barriers in studying the research background that varied erratically (Leonidou, 2000) and this issue encounters us with doubts in precipitous extending of the barriers resulting from these studies.

Determine the theoretical framework of research

The number of studies that have tried to reach a comprehensive classification of export problems and barriers, especially in developing countries, by browsing a comprehensive background investigation, is very limited. The research of Leonidou (2004) and Tesfum and Lutez (2006) enjoyed these features, and for that reason, this study is much more favored. Overview of models offered by these two researchers is presented in Figures 1 and 2.

In selection and application of each model, it is necessary that the research is based on features and special time, and place of research subjects; firstly, we select an appropriate model for this research and then localize the model indices proportional with special conditions of research. Considering the results of the primary in-person interviews that was obtained from ITMCO's marketing and export department personnel, special importance of some barriers was emphasized. Comparing these barriers with major obstacles in the models, it became clear that these barriers were more consistent with barriers raised in Leonidou's classification and therefore these categories were used in studying ITMCO's export problems and obstacles.

Hypotheses and research questions

In this study, the overall framework of Leonidou's model is used for developing hypotheses and classifying research indices. Assumptions used in this study are the same seven mentioned obstacles in Leonidou's model that include informational, functional, marketing, procedural, governmental, task and environmental agents. In this study indices of investigation backgrounds were used to compile the questionnaire questions. These indices are based on free interviews with the responsible major export agents of companies and finally approved indices were integrated with native indices, and result of this process was used as study questionnaire.

RESEARCH METHODS

This study applied research according to its objectives and is a descriptive survey study with regard to the data gathering form (non experimental). Descriptive survey research is used to investigate distribution of statistical population characteristics.

Questionnaire characteristics

In this study, the number of questions corresponding to each factor of Leonidou's model category is not the same and this issue makes inevitable using the mean index for comparing the seven factors of Leonidou's model. Options used for all the questions were same and included a 5 rating code. In this rating's encoding, code 1 was assigned to very low choice and code 5 to very high choice. Considering the scale used in the answer sheets (5 choice Likert scale) and encoding used in this study, code 3 were selected as the boundary point that was equivalent to "moderate" choice. According to this concept, higher or equal value of 3 for a factor means that the mentioned factor is an export obstacle or problem in ITMCO and lower values of 3 for a factor means that the mentioned factor is not a export obstacle or problem in ITMCO.

Population and statistical sample

Statistical population of this study included all persons who were active in export activities of Tractor Company and had valuable and useful information in this regard. In order to improve research quality, at least bachelor's degree and work experience of more than three years were considered in terms of polls and questionnaires distribution where about 50 people were diagnosed entitled. It is worth to mention that, in the cases were the numbers of population was not too much and sampling was not necessary, census was used. In general, in statistical analysis if the data is collected through census, it can be seen as a sample of studied population (Sarmad et al., 1997). Considering the limited eligible individuals in this study, sampling was not necessary and inquiry was conducted for all eligible persons to collect data. Accordingly, a final questionnaire was distributed among export factors of company after evaluating the validity and its verification and replies were analyzed.

Data analysis methods

In order to analyze the study data and access to research results, answers were analyzed in two stages. The aim of the first stage has been analysis of the seven hypotheses, and the aim of second stage has been analysis of used indices in research. At first step of the first stage, in order to confirm or reject the hypothesis in the 95% confidence level, a "One Sample T-test" technique was used;
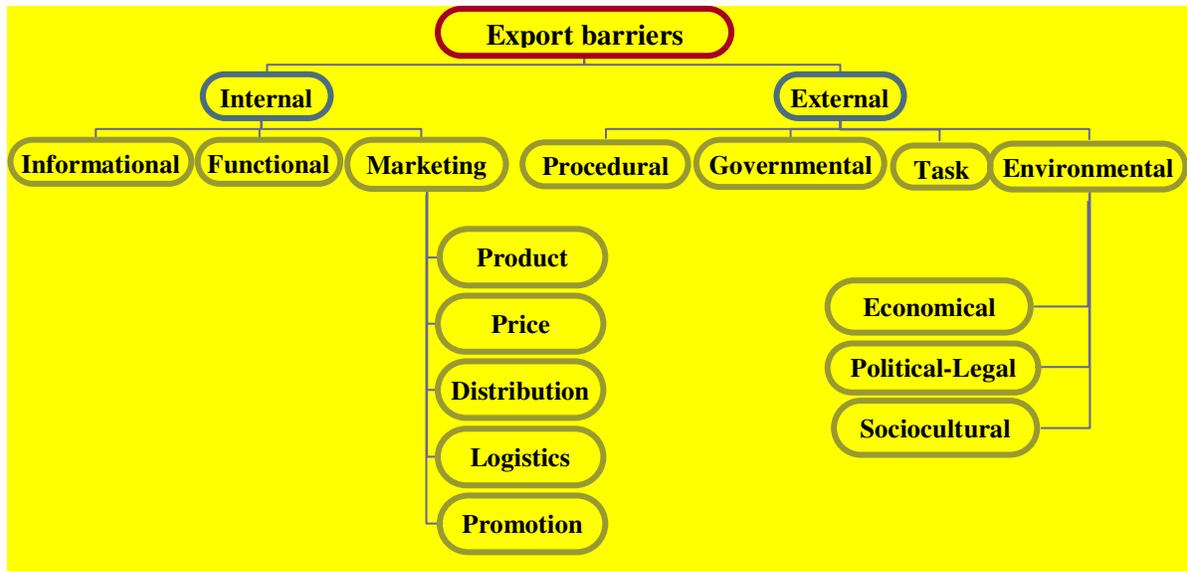
Figure 1. Leonidou's proposed framework for classification of export barriers.
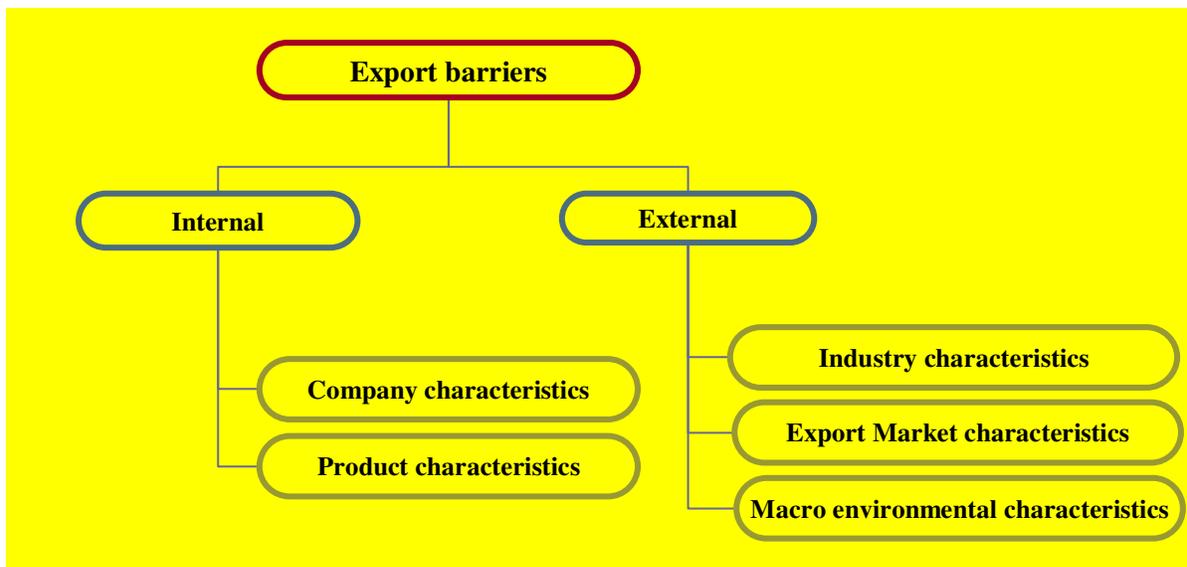

Figure 2. Tesfom and Lutz's proposed framework for classification of export barriers.

and then nonparametric Friedman test was used for hypotheses ranking. In the next step of the first stage "ANOVA" technique coupled with Tukey test were used to investigate significant differences between assumptions mean and binary compare, and classify them under the homogeneous subsets. In the second stage, in order to confirm or reject the indices in the 95% confidence level, a "One Sample T-test" technique was used, and nonparametric Friedman test was used for indices ranking.

RESEARCH FINDINGS

In order to measure reliability of the questionnaire,

Cronbach's alpha test was conducted accordingly, and the Cronbach's alpha coefficiency (0.871) were calculated reflecting the appropriate level of reliability.

Statistical analysis results on the research hypotheses

Based on "One Sample T-test" results in the 95% level of confidence, informational, functional, marketing, governmental and task agents can be considered as ITMCO's exporting problems and obstacles, as shown in

Table 1. Results of "One Sample T-test" and "Friedman test" on research hypothesis (arranged by mean rank).

Factors	One Sample T-test							Friedman test
	N	Mean	Std. Deviation	t	Sig. (2-tailed)	Lower	Upper	Mean rank
Informational	42	4.1429	1.18056	6.274	0.000	0.7750	1.5107	5.98
Functional	42	3.4960	0.45082	7.131	0.000	0.3555	0.6365	4.96
Task	42	3.5595	0.79020	4.589	0.000	0.3133	0.8058	4.71
Marketing	42	3.4286	0.56581	4.909	0.000	0.2523	0.6049	4.60
Governmental	42	3.1000	0.51750	1.252	0.218	-0.0613	0.2613	3.39
Environmental	42	2.7063	0.75870	-2.508	0.016	-0.5301	-0.0572	2.45
Procedural	42	2.2738	0.95127	-4.947	0.000	-1.022	-0.4298	1.90

Table 2. Results of Tukey tests (Homogeneous Subsets).

Barriers category		Subset for alpha = 0.05			
	N	1	2	3	4
Procedural	42	2.2738			
Environmental	42	2.7063	2.7063		
Govermental	42		3.1000	3.1000	
Marketing	42			3.4286	
Functional	42			3.4960	
Task	42			3.5595	
Informational	42				4.1429
Sig.		0.152	0.245	0.105	1.000

Table 1. Accordingly, the effect of procedural and environmental factors was not approved as ITMCO's export problem or obstacle in that confidence level. Friedman test results on the research hypothesis have been included two outputs. The first test output indicates descriptive statistics that shows the mean rank of each factor (Table 1). The meaner ranking of a factor, the more important the factor will be. According to the second output of Friedman test, it can be seen that (Sig <0.05) and for this reason, the assumption of equal rank of research hypotheses will not be accepted in the 95% confidence level. Other information of this outputs include: (N = 42, Chi-Square = 117.075, df = 6, Asymp.Sig = 0.00). In the next step of the first stage, using ANOVA test results on the research hypotheses, significance of hypothesis mean difference was proven (Sig <0.05). The Tukey test has been classified factors without significant difference under the homogeneous subsets in addition to binary compare to research hypotheses and showing significant differences between them as shown in Table 2. it is simply determined that in this output, the mean factors did not have significant differences with each other. According to this output, informational factor was classified as the most important export preventing factor in subset 4; task, functional, marketing and governmental factors in subset 3; governmental and environmental factors in the subset 2; and environmental and procedural factors as the most trivial barriers, respectively under the subset 1.

Results of statistical analysis on research indices

Finally, in order to make practical use of research results, indices that was used in the questionnaire were tested separately from the framework of Leonidou's model categories in 95% confidence level, and confirmed indices as a problem or obstacle of export in ITMCO, were ranked by Friedman test. Indices ranking provide insight for us to know where we should start from and focus on the problematic issues that are to be solved practically. The results of the studied indices help us to get away from abstract concepts and abstraction as possible, and study export barriers and problems of ITMCO more tangible. Based on the "One Sample T-test" results, among the 40 research questionary questions, effect of 33 indices in the 95% confidence level, has been verified as export problem or obstacle in ITMCO, as shown in Table 3. It is worth saying that all variables which are used in Table 3 are defined in Table 4 by details. In addition, based on the results of the Friedman test, among this 33 indices (Table 3), having governmental organizations features index (despite the transfer of 100% stake in the privatization process), it was diagnosed as the most important export problem of

Table 3. Results of "One Sample T-test" and "Friedman test" on research indices (arranged by mean rank).

Indices*	Indices Type	One Sample T-test							Friedman test
		N	Mean	Std. Deviation	t	Sig. (2-tailed)	Lower	Upper	Mean rank
1	Governmental	42	4.7143	0.59615	18.636	0.000	1.5285	1.9001	33.89
2	Functional	42	4.5238	0.77264	12.781	0.000	1.2830	1.7646	31.55
3	Functional	42	4.4524	0.96783	9.725	0.000	1.1508	1.7540	31.26
4	Functional	42	4.3095	0.97501	8.704	0.000	1.0057	1.6134	30.23
5	Marketing	42	4.2381	1.24567	6.441	0.000	0.8499	1.6263	29.19
6	Informational	42	4.1429	1.18056	6.274	0.000	0.7750	1.5107	28.90
7	Marketing	42	4.0714	1.29526	5.361	0.000	0.6678	1.4751	28.46
8	Functional	42	3.9762	0.94966	6.662	0.000	0.6803	1.2721	27.06
9	Functional	42	3.9286	1.29526	4.646	0.000	0.5249	1.3322	26.77
10	Functional	42	3.8810	0.91605	6.232	0.000	0.5955	1.1664	26.00
11	Marketing	42	3.8333	1.10247	4.899	0.000	0.4898	1.1769	25.67
12	Marketing	42	3.7857	0.92488	5.506	0.000	0.4975	1.0739	24.80
13	Task	42	3.6667	1.11894	3.861	0.000	0.3180	1.0154	24.54
14	Marketing	42	3.7143	0.91826	5.041	0.000	0.4281	1.0004	24.29
15	Marketing	42	3.5714	0.96633	3.832	0.000	0.2703	0.8726	23.37
16	Marketing	42	3.6190	1.16770	3.436	0.001	0.2552	0.9829	23.33
17	Task	42	3.4524	0.88902	3.298	0.002	0.1753	0.7294	21.14
18	Governmental	42	3.3810	0.90937	2.715	0.010	0.0976	0.6643	20.68
19	Governmental	42	3.3333	1.09693	1.969	0.056	-0.0085	0.6752	20.26
20	Governmental	42	3.2619	1.14890	1.477	0.147	-0.0961	0.6199	19.37
21	Functional	42	3.2143	1.04848	1.325	0.193	-0.1124	0.5410	19.23
22	Governmental	42	3.1429	0.87154	1.062	0.294	-0.1287	0.4144	18.92
23	Functional	42	3.0952	0.79048	0.781	0.439	-0.1511	0.3416	18.43
24	Environmental	42	3.0238	0.84068	0.184	0.855	-0.2382	0.2858	17.80
25	Governmental	42	2.9286	0.99738	-0.464	0.645	-0.3822	0.2394	17.08
26	Marketing	42	2.7857	1.60085	-0.867	0.391	-0.7131	0.2846	16.62
27	Environmental	42	2.8333	1.20804	-0.894	0.376	-0.5431	0.2098	16.54
28	Functional	42	2.7619	1.10010	-1.403	0.168	-0.5809	0.1047	15.57
29	Marketing	42	2.7857	1.07149	-1.296	0.202	-0.5482	0.1196	15.55
30	Functional	42	2.7143	1.38433	-1.338	0.188	-0.7171	0.1457	15.43
31	Functional	42	2.7381	1.08334	-1.567	0.125	-0.5995	0.0757	15.30
32	Governmental	42	2.5952	1.53113	-1.713	0.094	-0.8819	0.0724	14.73
33	Governmental	42	2.6667	1.09693	-1.969	0.056	-0.6752	0.0085	14.65
34	Governmental	42	2.4524	1.48492	-2.390	0.022	-1.0104	-0.0849	13.58
35	Governmental	42	2.5238	1.17366	-2.629	0.012	-0.8419	-0.1105	13.37
36	Environmental	42	2.2619	1.28897	-3.711	0.001	-1.1398	-0.3364	12.44
37	Functional	42	2.3571	1.07797	-3.865	0.000	-0.9788	-0.3069	12.13
38	Procedural	42	2.3095	1.07040	-4.180	0.000	-1.0240	-0.3569	11.88
39	Procedural	42	2.2381	1.22593	-4.028	0.000	-1.1439	-0.3799	11.31
40	Marketing	42	1.8810	0.94230	-7.696	0.000	-1.4127	-0.8254	8.69

*The indices of this table are indicated in Table 4.

ITMCO.

RESULTS AND DISCUSSION

Considering the weak demand in domestic market, and high capacity of production lines; naturally promoting export statistics can be best strategy to achieve appropriate sales and profit. Hence, despite the efforts carried out in the direction of export statistics promotion over recent years and lack of achieving competent and

Table 4. Detailed descriptions of Table 3 indices.

S/N	Description index
1	Current level of governmental organizations features in company, despite carried out privatization
2	Current level of scientific culture authority in company (the absolute authority of scientific principles and norms in all organizational procedures, from employment or appointment to all other series of common organizational actions)
3	Current level of export culture authority in the company (awareness, knowledge and insight level of personnel and authorities to exports; exports dignity and top manager insistence and commitment to it; perception, thinking, decisions quality and ultimately the quality of their behavioral data output towards the exports phenomenon)
4	Current state of company's marketing and export department from the view point of having experts in marketing or export management.
5	Conformity rate of the company's marketing practices with scientific principles and modern marketing criteria
6	The extent of efficient information in company's marketing and export department to identify, analyze and locate most attractive export markets
7	Current level of Company's capability in the most appropriate marketing strategies selections and their successful implementation
8	Current level of funding allocated to foreign marketing activities
9	Current level of staff motivation and morale, particularly professional, competent, entrepreneurial and key staff of companies
10	Current level of resource efficiency (especially human resources)
12	Current level of products standard and quality
13	The company's ability to offer competetive prices in overseas markets
14	Current level of overseas customer's sensitivity to get credit to buying in this sector of industry
15	The extent of current success in promoting ITMCO's brand in overseas markets
16	Current level of effectiveness of company presence in international exhibitions
17	Current level of efficiency and effectiveness of company's business advisers and representatives in foreign markets
18	Current level of overseas customers sensitivity to receive comprehensive services, especially the after sales service in this field of industry
19	Current level of efficiency and effectiveness of governmental agencies in charge of country's export expanding(for example, business development organization, chambers of commerce, commercial and export developmen banks and business advisors of government in overseas markets)
20	Current level of communication and interaction between universities and other fundamental structures of the country (for example, industries)
21	Competitive rates among country's industries
22	Current level of capability and effectiveness of company's R&D and production engineering units, and rate of creativity and innovation in products development and distinction

Table 4. Continued.

23	Current status of exchange rates, considering the the annual inflation rate in the country
24	Current state of education in the company
25	Current level of sanctions against Iran
26	Non-membership in the WTO and not enjoying the benefits of membership
27	Current level of company exports reliance on government political relations (exports in the shadow of political relations)
28	Overseas nationalities' mentality towards of Iranian goods and products and its trends
29	Current level of foreign languages knowledge among company's marketing and export unit's staff
30	The rate of enjoyment from the principles, techniques and secrets of success in international negotiations, and establishing effective and continuous interaction with overseas customers
31	The current situation of customer oriented culture in the company (emphasis on customer orientation and commitment and responsibility against customers at all levels of the company)
32	Current status of production culture at the company (insistence rates on market-oriented production, namely design and product development in accordance with the financial ability, special needs, customers tastes in target export markets) and the current share of the marketing and export units in directing company's product lines
33	Current level of governmental incentives, awards, and export assistance
34	Current level of membership and participation of country in regional agreement and multilateral cooperation
35	Current level of academic ability of universities and research institutes in the country
36	Business rules of country and their stable rate
37	Current level of international judicial cooperation with the judicial system of Iran
38	Current status of the work culture in the company (for example, employee commitment to the company and their interaction level with each other to achieve organizational goals)
39	Current conditions of export claims gathering in accordance with economic weakness of target export countries
40	Current level of bureaucracy and export official formalities in related offices
41	Current level of insurance and transport costs in the export of tractors from Iran

desired success, we decided to identify the causes of this failure during a survey research. For this purpose, using indices derived from previous research reviews, and experts' point of views, a questionnaire within the Leonidou's model framework for ITMCO was prepared and after distribution, responses were recognized and ranked using the mean and Friedman tests in two levels of "the seven factors of Leonidou's model" and "Questionnaire Indices". The results showed that, among the seven factors of Leonidou's model, informational factores have the highest importance. The role of information factors has been emphasized according to need of companies to locate and analyze foreign markets opportunities in many previous studies repeatedly

(Karafakioglu, 1986; Hook and Czinkota, 1988; Weaver and Pak, 1990; Tseng and Yu, 1991; Moini, 1997; Pavord and Bogart, 1975; Yaprak, 1985). Then in another level, task, functional, marketing, and governmental factors were important respectively, but the role of environmental and procedural factors was not diagnosed worthy in ITMCO. Among the studied indices, the impacts of 33 indices were approved and the role of the seven indices was not proved in this study. Among the indices,"enjoyment of governmental organizations features" index, despite the full implementation of privatization project in this company, it was diagnosed as the most important barriers or obstacles to company's export. This result is certainly an emphasis on the necessity of privatization plan accomplishment pathology in Iran.

Slight hesitant in nature and importance of this index show that it can be the origin of many problems and obstacles in the company's export development, and consequently from researcher point of view, it is impossible to correct other indices inattentive to this index correction.

So modifying other characteristics will be possible only when the organization become private in its real meaning. Organization privatization in this concept is beyond formal transferring of ownership document and in fact requires substantial changes in both macro and micro dimensions of company's environment, as follows:

Macro dimension

A substantial change in macro dimension means to provide social, cultural, political, economic, and legal substructures in the country. All these changes are in order to move the economy toward a free competitive economy so that firms can compete on fair terms. The role of government in this condition will change from ownership and direct management of firms to building the culture, policy making, guidance and supervision.

Micro dimension

The most substantial changes in the micro dimention are in mission and goals of organization. Institutional mission and goals in this transformation are altered from multi-dimensional, ambiguous and unclear mission and goals (especial for governmental agencies) to one dimensional and transparent mission and goals (profit nobility). By changing the nature of organization's missions and goals, organization's management subsequently will be altered in the surrounded political relations management to

market oriented management, and following that human resources and organization's culture will eventually undergo transformation and changes.

The most important recommendation of this study for future research is development and deepening of systematic insight in identification and ranking of problems and obstacles of export. Export in this perspective is highly systematic and affected phenomenon from various inside and outside of organization factors. Internal factors are factors that ultimately specify the potential and innate capabilities of organizations, and external factors, in fact, provide development substructures. Based on this multiplicity of factors affecting export of organizations, it is essential to track their causal relations among multiple export barriers in reasonable course and ultimately devote capital and resources of organizations to delete or modify the effects of difficulties or obstacles that are recognized as main source of problems and barriers of organizations export. Accordingly, only by achivement to this insight, we can hope to efficient for strategies based on this research results planning.

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