

## ASSESSMENT OF THE ENGINEERING SERVICE EXPORT BARRIERS: A CASE STUDY

Seyed Hossein Jalali\*

### Abstract

*This study aims to provide explanation about barriers which faced with engineering service companies of developing countries. The qualitative explanatory approach adopted as the research strategy. The findings show that six factors, including strong international competition, quality standards, corporate image, business associated risk, lack of government assistance and shortage of working capital are the most important barriers of the engineering service exporting. Strategic alliance and a clear defined export strategy are the main suggestions for engineering service companies to eliminate the stated barriers.*

**Key Words:** Engineering Service Export, Export Barriers, Qualitative Explanatory Approach.

### INTRODUCTION

Exporting has been the fastest growing mode of international market entry for both of service and physical product sectors, but there has been little research on service export in comparison to manufactured goods export (Chan & Coulthard, 2005). Service sector has identified as an area with potential growth that covers a wide range of service from health and education systems, tourism, financial services, transportation, business or government administration and consulting, entertainment, information services and also engineering service. Engineering service has a rapid growth in recent years; many countries provide engineering service along with their production of industrial product as the global demand for engineering service is increasing, especially in less developed regions. There are different definitions of what the field of engineering services encompasses, which complicated by the lack of data to quantify the industry. The International Standard Industrial Classification (ISIC) of all economic activities

classified by the United Nations refers to this category as "architectural and engineering activities and related technical consultancy". The North America Industry Classification System (NAICS) refers to engineering services and the classification of the industry for international trade purposes proposed by the OECD and European Union under the Extended Balance of Payments Services Classification (EBOPS) is "architectural, engineering and other technical services" (Fernandez-Stark, Bamber & Gereffi, 2011). Even though the potentials of Middle East region for engineering service, little companies from this region operate to supply the demands of this region and also international market. So, this study devoted to provide an explanation about the barriers faced with Middle East-based companies to develop their market from national boundaries to regional and international market of engineering services.

### THEORETICAL BACKGROUND

Export barriers can be defined as the attitudinal, structural, operational and other constraints that hinder a firm's ability to initiate, develop or sustain international operations (Koksal and Kettaneh, 2011). Export barriers waste the resource of firms and threaten the efficiency and effectiveness of a firm's operations. The negative impact of export barriers on medium and small enterprises' performance in global market has attracted the attention of many researchers in international business (Jalali, 2012). But as stated before, there has been little research on service export in comparison to manufactured goods export. Chan and Coulthard indicated that poor planning, low commitment, inefficiency of guaranteeing, risk, trade and regulation based obstacles, technical standards, inexperienced and uneducated human resource, perceived image of company, low quality and culturally insensitive services are the main challenges for the service exporters based on service properties (Chan & Coulthard, 2005). It is important to note that some barriers which cited in the literature are inappropriate with the service content.

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\* Corresponding author. Contact [jalalimba@gmail.com](mailto:jalalimba@gmail.com),  
Faculty of Management and Accounting, Allameh  
Tabatabai University, Tehran, Iran.

One of the outstanding works to describe the export barriers did by Leonidou. He classified export barriers in six groups, include corporate resource constraints, environmental differences, export bureaucracy and legislation, government apathy, foreign market entry and operating difficulties and competitive pressures; and then stated that export competitiveness problems, including the existence of keen competition abroad and inability to offer satisfactory prices, had the greatest obstructing effect (Leonidou, 2000). In other paper in 2004, Leonidou analyzed the literature and developed a new set of barriers, consisted of internal barriers (informational, functional and marketing) and external barriers (procedural, governmental, environmental and task-related). In the recent study, he ranked the limited information to locate and analyze markets, inability to contact overseas customers, identifying foreign business opportunities, difficulty in matching competitors' prices, excessive transportation and insurance costs, different foreign customer habits or attitudes, poor and deteriorating economic conditions abroad and political instability in foreign markets as the barriers with most negative impact on exporting. Ortega's work (2003) on Spanish exporters and non-exporters, involving only small and medium sized enterprises, is the other research that introduced lack of resources, strong foreign competition and lack of export knowledge as export barriers (Ortega, 2003). The research that was done in Lebanon by Ahmed et al. (2004) is the other study that investigates the problems and difficulties of exporting. These researchers interviewed 61 exporters and non-exporters to identify export barriers. Five factors are highlighted in their study's conclusion: lack of government assistance, competition from firms in overseas markets, pricing and promotion policies, high foreign tariffs and lack of financial capital (Ahmed et al., 2004). According to Mahoney et al. government assistance plays a key role in service exporting (Mahoney et al., 2001). Government policies can assist exporters to overcome trade barriers by providing information about overseas markets and host country partners, and by educating managers to design and implement proper export marketing strategies (Mavrogiannis et al., 2008).

Altinas, Tokol and Harcar found that the procedural barriers have the most impact on export performance, followed by the competition in foreign market factor. Procedural barriers consisted of bureaucratic requirements and high tariff and non-tariff barriers (Altinas, Tokol & Harcar, 2007). It should be indicated that the tariff barriers may not be applicable to engineering services export; many governments voluntary use tender offers to outsource their projects and bring international engineering expertise in their boundaries. Kneller and Pisu (2011) stated that changes in consumer's preferences, the presence of middlemen and agent representatives, import tariffs, problems in finding a trustworthy distributor in the target country, exchange rate fluctuations, risk of losing money in the foreign market, and quality and safety standards are potential export barriers. While distribution is a critical factor for physical product, it seems to be inappropriate in explanation of service export barriers. There are a few studies in international business literature which focused primarily on developing countries, both in manufactured goods and services. Jalali investigate the barriers which threaten the commercial relationship between Iran and Greece as developing countries and found that operational factors include non-competitive prices, limited information about foreign markets, unfamiliar foreign business practice and insufficient production capacity have the most destructive effect on export performance (Jalali, 2012). Alike with tariff barriers and distribution difficulties, insufficient production capacity related to manufacturing industry and in engineering service sector should be replaced with the ability of companies to handle parallel projects.

## **METHODOLOGY**

The aim of this study is to provide an explanation about barriers and challenges which facing with engineering service exporters, especially in Middle East region. The Middle East region is known as a developing area which suffers from insufficient infrastructure such as dams, powerhouses, transportation facilities, extractive industries and factories. Many western engineering service companies target this region because of huge natural resources such as minerals, oil and gas and their market

share in this region is more than local companies. The main question of this study is that why those local companies in Middle East could not gain more market share, especially beyond their national boundaries. Given that this study wanted to explore in depth, a qualitative explanatory approach adopted (Zikmund, 2000). The case study method was used as a suitable and appropriate exploratory research technique that could concentrate on singular or small number of individual instances.

Interviews used to elicit most of information, even though there were possible problems of bias, reliability and validity to be addressed throughout the interview. Since the research objectives focused primarily on the challenges faced through export activities by engineering service companies, the interviewees were chosen from those who are decision makers in charge of exports and international activities in their companies. The interviewer used a semi structured set of questions, developed from previous reading, research and experience by the researcher. The interviews documented and in each company where possible, multiple interviews undertaken to gain more accurate information. The sample of the study comprised of three engineering service companies that located in Iran. The selection is based on their export capability, export experience and the ongoing engineering projects abroad. The major expertise of these companies is in energy and construction sub sectors. The names of these companies removed from the research by request of their managers and the letter X, Y and Z used instead of their names.

## **RESULTS & DISCUSSION**

From the interview process, some challenges which faced with the engineering service exporters identified. These challenges described as below.

### **Strong International Competition**

As Rezamand and Jalali (2012) stated, the competition is a major threat for service exporter in developing countries. The international engineering service market depended on new technology, machinery and equipment; many

developing countries based companies don't have access to new technology in both forms of hard technology (machinery and equipment) and soft technology (engineering knowledge). This situation resulted in weak competitive capability in comparison to global competitors in the estimated cost and time of engineering projects. Non-competitive prices hinder companies to succeed in tender offers. While X and Z Companies believe that the negative effect of non-competitive prices could be decreased by strategic alliance with local companies, the Y Company believes that this barrier relates to the foreign exchange risks and need better financial management in engineering projects. Strong competition cited in works of Leonidou (2000, 2004), Da Silva et al. (2001), Ortega (2003), Ahmed et al. (2004), Altintas et al. (2007), Koksall & Kettaneh (2011), and Jalali (2012); but majority of these researches focused on exporting of manufactured goods.

### **Quality Standards**

Some quality standards needed to do engineering projects; safety, durability and delivery of service are very important elements. Quality of engineering services comprised of engineer's quality (expertise, experience, commitment) and engineering quality (process, procedures, equipment). In the X Company, managers believed that the human factor plays more important role in quality of their service than other factors, so the human resource department widely influenced the strategy of the company. On the other hand, Y and Z seek quality from the hard perspective and try to improve quality through renewal of engineering processes and procedures. It is notable that as all of companies received ISO certificates; the culture of continuous improvement in quality was valued by all of interviewees. The quality standards referred in previous studies as an export barriers, some researchers viewed this construct from human resource quality (Crick, 2002), some viewed from technological quality (Owusu-Frimpong & Mmeh, 2007); while others regarded it as combined construct (Rezamand & Jalali, 2012).

### **Corporate Image**

Once engineering service companies were established in the overseas market, should build a good and reputed corporate image. The corporate image of engineering service companies increase their competitive capabilities and also enable them to offer higher prices for their projects. Koksai & Kettaneh (2011) indicated that a strong corporate image in international markets offers opportunities for capitalizing on economies of scale, developing global markets and helping to establish a firm's visibility and position in the minds of international market. As the engineering project contracts usually valued million dollars, the corporate image creates trust, sense of quality and tightens the competitive position of the firm. Instead of the importance of corporate image, no clear strategy was found to build a strong brand in the X, Y and Z. The corporate image importance is referred earlier by Leonidou (2004) and Koksai & Kettaneh (2011).

### **Business Associated Risk**

The risk factor is derived from different sources. The Y Company managers emphasized on the financial dimension of the risk and introduced the fluctuation of exchange rate as one of the most threatening challenges in their international operations. This situation could be resulted of economic instability in the host country, therefore insurance covers is an essential tools to overcome on this type of risk. The crisis in the Middle East region is the other source of operational risk; the Arab spring, Persian Gulf challenges, clashes in West Bank and Gaza and Iran nuclear programs increase the business risk in the Middle East region, but this risk have both of negative and positive effects. It is notable that along with the increase of business risk many global companies decrease their operations in the Middle East; so, an opportunity provided for local companies to gain more market share. The X Company reported many new projects in the region due to these events. The risk factors cited by nearly all of previous researchers.

### **Lack of Government Assistance**

The engineering service exporter needs support and assistance from their government. The

frequent form of required assistance is linking with overseas governments. The government agencies could be a median to aware companies about provided assistance by national government. It seems that government assistance facilitate the exporting, but the Z Company managers believed that government provide assistance but may have some expectations which are not economical for companies such as reduce the prices or perform extra tasks after project completion. Engineering service companies advised government to establish semi-government agencies that provide professional assistance, especially in identifying foreign opportunities and negotiation about them. Empirical evidences about lack of government assistance as export barrier could be found in the study of Rezamand and Jalali (2012) as well as works of Leonidou (2000, 2004), Crick (2002), and Ahmed et al (2004).

### **Shortage of Working Capital**

Engagement in exporting often requires extensive expenditures in finding overseas opportunities, negotiation with stakeholders, adapting the export strategy and so on. The working capital is a criterion to choose an engineering service company because working capital determines the ability of company to perform engineering projects. Leonidou classified shortage of working capital as an element with moderate impact (Leonidou, 2004). The managers in X, Y and Z stated that their companies lost some projects each year due to the shortage of working capital. It may be resulted of financial crisis in the world that influenced all of industries and governments from external perspective and also resulted from weak financial management from internal perspective. In the literature, Leonidou (2000, 2004), Crick (2002), Ahmed et al. (2004), and Jalali (2012) cited this element as an effective export barrier.

### **CONCLUSION**

Many challenges which cited by different researchers are not applicable to the service sector; this is because of the service content. Current study devote to the engineering service export barriers, the rapid growth of engineering service demand provides an excellent

opportunity for international expansion of engineering service companies. The main barriers which identified in this study are strong international competition, quality standards, corporate image, business associated risk, lack of government assistance and shortage of working capital. These barriers hinder engineering service companies to operate in international markets, but the perception of these factors and their effects could be different according to the competencies and capabilities of the company.

Engineering service companies form Middle East region could benefit from the concept of networking or strategic alliance. Strategic alliances empower them to operate in global scale, as well as western companies. Advantages of networking enable them to cover the business risk and provide enough working capital. The other suggestion is about export strategy which is not clearly defined in observed companies. Export strategy integrated the efforts of engineering service companies and also could be regarded as an efficient mechanism to working capital management. The export strategy is the foundation of export competitiveness, which essentially needed for Middle East based companies. The current study has some implications for company managers, policy makers, and governmental agencies to benefit from the market opportunities in Middle East region. On the other hand, there are some limitations to the present study. First of all, very small numbers of engineering service companies studied. Second, samples come from Iran and cannot be generalized easily to fit companies from all of the Middle East or other developing countries. Future studies based on samples from various countries would be able to generalize the findings of the current research.

## REFERENCES

Ahmed, Z.U., Craig, J.C., Baalbaki, I., & Hadadian, T.V. (2004). Export barriers and firm internationalization: A study of Lebanese entrepreneurs. *Journal of Management and World Business Research*, 1(1), 11-22.

Altintas, M.H., Tokol, T., & Harcar, T. (2007). The effects of export barriers on perceived export performance: An empirical

research on SMEs in Turkey. *EuroMed Journal of Business*, 2(1), 36-56.

- Chan, D.C.Y., & Coulthard, M. (2005). The challenges facing service exporters: Lessons from the Victoria based transportation and travel sectors. Working Paper, Monash University, Department of Management.
- Crick, D. (2002). The decision to discontinue exporting: SMEs in two UK trade sectors. *Journal of Small Business Management*, 40(1), 66-77.
- Da Silva, P.A., & Da Rocha, A. (2001). Perception of export barriers to Mercosur by Brazilian firms. *International Marketing Review*, 18(6), 589-610.
- Fernandez-Stark, K., Bamber, P., & Gereffi, G. (2011). The offshore services value chain: Upgrading trajectories in developing countries. *International Journal of Technological Learning, Innovation and Development*, 4(1), 206-234.
- Jalali, S.H. (2012). Export barriers and export performance: Empirical evidences from the commercial relationship between Greece and Iran. *South-Eastern Europe Journal of Economics*, 10(1), 65-78.
- Kneller, R., & Pisu, M. (2011). Barriers to exporting: What are they and who do they matter?. *The World Economy*, 34(6), 893-930.
- Koksal, M.H., & Kettaneh, T. (2011). Export problems experienced by high and low performing manufacturing companies: A comparative study. *Asia Pacific Journal of Marketing and Logistics*, 23(1), 108-126.
- Leonidou, L.C. (2000). Barriers to export management: An organizational and internationalization analysis. *Journal of International Management*, 6(2), 121-148.
- Leonidou, L.C. (2004). An analysis of the barriers hindering small business export development. *Journal of Small Business Management*, 42(3), 279-302.
- Mahoney, D., Trigg, M., Griffin, R., & Pustay, M. (2001). *International Business: A Managerial Perspective*. Prentice Hall, New South Wales.
- Mavrogiannis, M., Bourlakis, M.A., Dawson, P.J., & Ness, M.R. (2008). Assessing export performance in the Greek food and beverage industry: An integrated

- structural equation model approach. *British Food Journal*, 110(7), 638-654.
- Ortega, S. (2003). Export barriers: Insights from small and medium sized firms. *International Small Business Journal*, 21(4), 403-419.
- Owusu-Frimpong, N., & Mmeh, S. (2007). An evaluation of the perceptions and marketing practices of non-traditional exporters in Ghana. *Thunderbird International Business Review*, 49(1), 57-76.
- Rezamand, P. & Jalali, S.H. (2012). Identifying and ranking the barriers of the technical and engineering services export in Iranian contracting companies. *Proceeding of the 10<sup>th</sup> International Management Conference (In Persian)*, Iran, Tehran: Sharif University of Technology.
- Zikmund, W. (2000). *Business Research Methods*. Harcourt College Publishers, Sydney.