The Determinants of Export Potential: A Case of Ankara Manufacturing Sector

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Summary

The objective of this paper is to analyse the export potential of Small and Medium Enterprises in Turkey and to ensure competitiveness of the firms both in domestic and international free market economies. The data used in this article is derived from questionnaires distributed to firms that operate in the manufacturing sector in Ankara at the OSTIM and Ivedik Organised Industrial Regions. Regression analysis are employed to determine the relationship between the firms export potential and the firm size, age, quality standards, and research and development expenditures. The results indicate that a positive relationship exist between export potential and firm size, age and the level of quality standards. On the other hand, the impact of the research and development on export performans turn out to be insignificant.

1. INTRODUCTION

Exports play an important role in a country's economy and in turn its economic growth. However, in order for exports to achieve the expected benefit to the country's economy, it is essential that firms manufacture exportable products. Therefore, in order to keep entrepreneurship thriving and to increase economic development and international competitiveness, it is important that SMEs export potential should be increased since they make up 99.5% of the Turkish economy.

In general, one of the main problems in exportation is that SMEs consider exporting as an operation that only large scale firms undertake and give insufficient importance to exporting (Blankson and Stokes, 2002). This approach also herewith brings in other issues, such as lack of knowledge about the international markets, the lack of mechanisms and tools to reduce the entry risks to international markets and a general lack of cooperation between the SMEs. Also, some other well-known factors that affect SME's export potential in a negative way are the insufficient capital due to the size of SMEs, the shortage of skilled labour and distribution channels, the incompetency in the price setting process and the lack of promotional activities.

The export decision making and implementation process in SMEs is a complex period that results in the interaction of other factors including the firm's own features, their interaction with each other and many other factors (Koçak 1997; Westhead 1995). The complexity of this process affects the SME's export potential. According to Westhead (1995) and several other researchers exporting is a significant component for the SMEs quest to survive and grow. At the same time the ability to export a significant part of their sales is used as competition performance criterion for SMEs.

Since the early 1980s Turkey has attempted to develop strategies in order to adjust to policies designed to specifically increase the competitiveness of its firms in international markets and as a result has managed to achieve approximately 31 billion USD export levels by 2001 (Ulas, 2004). In addition to this, when we look at the export figures during the last ten years, a steady increase in exports has been achieved as a result of international market conditions and the economic policies that have been implemented. Overcoming challenges would allow SMEs to contribute to exports more and lead them have more domestic support. SMEs are important because make up 99.5% of the Turkish economy.

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Many researchers have focused on the problems of Turkish SMEs during exporting. Among them Ay & Talasli (2007), Ozdemir & Karaca (2007), Ozkanlı, Benek & Akdeve (2006), Ulas (2004), Karadal (2001), Diken (1998) can be listed. However, there is not enough research on the factors affecting the SME's export potential employing empirical methods using market data. Thus, this paper aims to analyse the problems of SMEs during the export process using both internal and external factors by relying on a dataset obtained by a survey conducted. Regression analyses were employed to investige the relationships. The results indicate that export potential of firms is effected by the firm's size, age and the quality certificates held by the firm.

The rest of the paper is outlined as follows: In Section 2 within the context of a comprehensive literature review, the factors affecting the export potential of SMEs are discussed and hypotheses are determined. In Secton 3 the methodology is outlined and the properties of the data are determined. In Section 4, the basic findings are reported and finally, Section 5 concludes.

2.   THEORETICAL APPROACH AND HYPOTHESIS

In recent years, in the literature the factors affecting the export potential of the firms have been analysed by using different variables, such as the firm scale and firm's age (Katsikeas et al., 2000; Sousa, 2004). The growing importance of this topic became apparent as economies globalised and the research points out that exports are not only necessary for the firms to survive but a significant factor for firms to gain increased competitiveness and growth (Leonidou, 1995; Davidson, 1980; Erramilli, 1991).

During the internalisation process, exporting is a simplest method to enter into the foreign markets. In addition to that, SMEs export performance especially depends on the existence of financial, managerial and organisational resources. Therefore, the export performance is directly related to the existence of these resources, their usage and, even, the expert perspective of the firm's management of resources. For this reason, to determine the relationship between the resources that the firms possess and their export performance arises as a determining factor for SMEs to gain export competitiveness and to adjust to changing conditions observed in globalisation.

In the literature, the determination of SME's export performance is evaluated from two different point of views. First, the export activities are defined as a tool to increase firm performance and as a result the firms' success relates to their economic performance (Contractor et al., 2003). Some researchers claim a significant positively relationship between those two variables (Jung, 1991; Kobrin, 1991), On the other hand, researches like Calof (1994), Moen (1999) and Zuchella (2001) suggest exactly the opposite. On the other hand, Geringer, Tallman & Olsen, (2000); Lu & Beamish (2001) identified a negative relationship between these stated variables. Second, the export activities are defined as a significant step in the globalisation process. The firms who export as a market entry strategy gain experience in international markets and overcome uncertainties relating to overseas market (Johanson & Vahle, 1977; 1990). This approach views exporting as a learning process and upholds that the firms gain experience in international markets within that process and achieves a substantial gain in terms of organisational resources.

Within all these approaches the importance of the export process is evaluated from different perspectives and the most significant issue within this evaluation is to measure/quantify the export performance. The main reason for this is that export performance has multiple and different dimension (Shoham, 1998). For this reason the researchers have used different variables to measure firm export performance (Cavusgil & Zou, 1994; Leonidou & Katsikeas, 1996; Sousa, 2004; Zou & Stan, 1998). Some researchers evaluated the export performance based on the economic values, sales, profits or market shares (Shoham et al., 2002). Another group of researchers, on the other hand, used more subjective determinants, such as, 'the firm manager's perception of export activities and satisfaction' to measure export performance (Woodcock et al., 1994).

The data used in the analyses are from a questionnaire applied to 40 firms operating in construction sector in Ankara Ostim and Ivedik Industrial Region in 2010. I attempt to estimated the following linear relationship by regression analyses.

$$EP = \alpha_0 + \alpha_1 FS + \alpha_2 FA + \alpha_3 QS + \alpha_4 RD + \varepsilon \qquad (1)$$

where the export performance (EP) is determined as the ratio of last five years export figures to last 5 years sales figures. This measure is both a common measure in literature (Katsikeas et al., 2000) that allows the results of this article to be compared to other research and also brings a different perspective to the empirical research based on the SME's export performance in Turkey.

FS is the firm size.   Even though researchers, such as, Moini (1995); Wagner (1995); Bonaccorsi (1992); Moen (1999) fail to find any relation between the firms size and export performance Pattblanda (1995) found a negative impact of FS on the export performance. Thus, the following hypothesis will be tested:

H1: There is a positive relation between a firm's size and its export performance

FA is the age of firm. As previously stated one of the subjective indicators that is often used to measure firms' export performance is the firm's experience gained in foreign markets via exporting. Since it is difficult to to directly measure the experience gained in foreign markets by the firms, the firms' age is used in analyses as a porxy for experience. In other words, a firm that operates in a market longer than other firms is supposed to have more experience and knowledge. Chen & Martin (2001) and Balabanis & Katsikea (2003) utilize this data as a proxy in their export performans model. However, some researchers (Balabanis & Katsikea, 2003) are not agree with the utilization of this data in the export performans researches. In this context, the following hypothesis will be tested:

H2: There is a positive relation between the firms' export performance and their age.

QS stands for quality standarts of a firm. In order to increase a firm's competitiveness in the global market, it is necessary to establish a minimum quality control system not less than by the standards implemented by competitive firms and countries. In order to achieve this, traditional systems and approaches should be abandoned and modern approaches and management perspectives should prevail. Nowadays, many countries in the international markets make it compulsory to have various quality certificates to be present for the goods and services that will enter their borders (Kozlu, 2000). For the relationsip between export performans and quality standards, the following hypothesis will be tested:

H3: There is a positive relation between the firms' export performance and quality certificate held.

RD represents research and development. As stated before, with the impact of globalization, technological innovations progress rapidly. And also, any innovation that has been manufactured anywhere is certain to be copied. Thus, in order for the firms to gain a competitive advantage in exporting, they need to constantly innovate and bring these to market. For this to occur the share of research and development as a proportion of total expenditure should be higher or at least sufficient (Doğan and Marangoz, 2000). The hypothesis attempt to test for RD is the following:

H4: There is a positive relation between a firm's export performance and their research and development expenditure.

The variables and their relationship with the export performans is depicted in the diagram below:
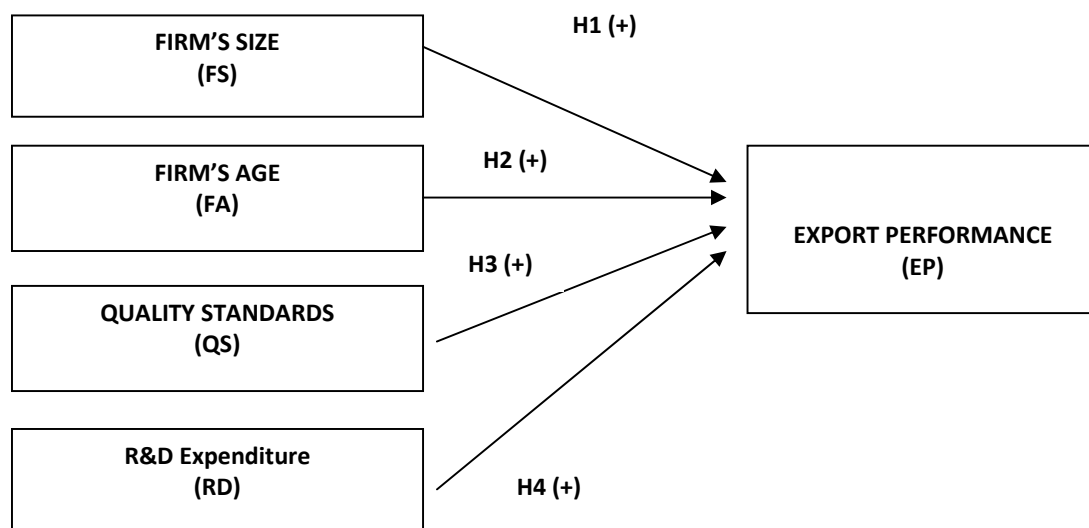
3. THE SURVEY METHOD

The survey was conducted in Ankara Ostim and Ivedik Organised Industrial Regions, Ankara, Turkey. The reponse rate was approximately 95 percent since only two firms rejected the questionnaire among the 40 firms. The sample was selected among the small-sized manufacturing firms operating in the construction machinery sector. The usualy sample selection method was employed so that it can represent the whole sector in both regions. The survey was implemented by "face to face interview" method. The data was loaded to the SPSS software and all the estimations and diagnostic tests were performed in it.

The questionnaire was comprised of four different sections. The first section gathers the firm's general information, that is, 'the number of employees, number of years since establishment, last five years sales, imports, exports and research and development expenditure.' In the second section of the questionnaire information regarding the export activities of the firms is gathered and scrutinised. In the third section the firm's internal resources, such as research and development, quality standards and managerial process are evaluated. In the last section, the firm's required training and consultancy needs in order to increase export performance are scrutinised. Apart from the questions about the firm's general information during the first section, the remaining questions were evaluated by using a Likert scale from 1 to 5. On this scale 1 is absolutely disagree with 5 representing absolutely agree.

3.1. Data Analysis

Before it was proceeded with estimations, It is appropriate to test the reliability of the questions included in the questionnaire by using SPSS 13.0 statistical package. Crombach's Alpha values are calculated. As it is known, a coefficient of 0.70 or above is sufficient for the reliability of the questions (Nunally, 1978). The table below shows the Cronbach's Alpha values that belong to the question sets in order to test the hypothesis where the selected variables exist. As seen in the Table 1, the Alpha Values for all questions is ranging from 0.703 to 0.835. It is concluded that the questionnaire has saticfactory internal validity, as high majority of questions has α >0.7.

Table 1. Relabiability Analysis

Variables	Question No.	CRONBACH'S ALPHA		N
		α	α	
EXPORT PERFORMANCE (EP)	1	0.801	0.835	38
	2	0.805		38
	3	0.815		38
	4	0.811		38
	5	0.828		38
FİRM'S SIZE (FS)	1	0.810	0.810	38
FIRM'S AGE (FA)	1	0.678	0.760	38
	2	0.738		38
	3	0.710		38
QUALITY STANDARDS (QS)	1	0.586	0.703	38
	2	0.517		38
	3	0.514		38
RESEARCH AND EVELOPMENT EXPENDITURE (RD)	1	0.779	0.750	38
	2	0.781		38
	3	0.766		38
	4	0.771		38
	5	0.759		38

3.2. Results

The mean values and standard deviation of the variables are in Table 2. All variablers has relatively similar standart deviations with the exception of quality standards which has 0.922, the highest value among all Table 2, also, shows the Pearson Correlation coefficients for each variable.

Table 2. Variables Interjacent Correlation Matrix

Variables	Mean	Standard Deviation	EP	FS	FA	QS	RD
EP	3.660	0.759	1	-0.251**	0.015	-0.336*	-0.266
FS	2.689	0.689	- 0.251**	1	0.334**	0.171	0.017
FA	2.407	0.745	0.015	0.334**	1	0.187	-0.167
QS	3.611	0.922	-0.336*	0.171	0.187	1	-0.162
RD	2.737	0.675	-0.266	0.017	-0.167	-0.167	1

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

OLS Regression Analysis results are reported in Table 3.

Tablo 3. Regression Analysis

	Beta Katsayısı	T	Sig.
(Sabit)			
FS	0.345	3.430	0.002**
FA	0.125	1.289	0.001**
QS	0.246	2.678	0.009**
RD	-0.128	-1.362	0.177
R square	0.435		
Adjusted R Square	0.317		
F	29.635		0.000

**. Correlation is significant at the 0.01 level

The results show that it is failed to reject all hypotheses except H4. Obviously, the research and development is not in the agenda of the manufacturing firms in Ankara. This results is understandable since it is kown that R&D has never taken place in the budget of the small size firms in all over the country. One another reason could be that exported products are mainly based on agricultural goods or traditional production lines, none of which requires research and development. Firm size, firm age, quality standarts have positive and siginificant impact on the export performans. The estimated coefficients are 0.345, 0.125 and 0.246, respectively. Since R&D is not a distinguishing factor for the export performans, it must be some factors that directly related to the production. The size indicates tha scale of the firm and the age implies the knowladge about production. Both are significant internal factors for the export performans in Ankara manufacturing sector.

4. CONCLUSION

Based on the findings of this article, the relation between the firm's size, age, possession of quality certificates and research and development expenditures and the firm's export performance is tested via multiple regression analyses. The result indicates that there is a positive relation between the firm's size, age and the quality certificates held by the firm and their export potential. On the other hand, no meaningful relation is found between the firm's share of research and development expenditure within total expenditure and their total expenditure.

As a result, the importance of exporting by the SMEs under global competition rules which produce with the nation is an indisputable fact. However, the entrance strategies of SME's to global markets varies based on the size of the firm, experience in the market and the degree of control of their resources. In this respect, SMEs with limited resources should implement different strategies in order to be able to enter foreign markets. At the same time, it is natural that SMEs are reluctant to develop their activities in overseas markets since they lack information and experience about them. Other factors including, financial problems, high transportation costs, intensive competition and lack of suitable distribution channels also have an effect on an SME's export potential.

REFERENCES

Ay, H.M and Talasli, E. (2007). Türkiye'de KOBİ'lerin İhracattaki Yeri ve Karşılaştıkları Sorunlar, *Journal of Selçuk Üniversitesi Karaman İ.İ.B.F Dergisi*, Special Edition, pp.173-184 (In Turkish).

Balabanis, G. I., and Katsikea, E. S. (2003). Being an entrepreneurial exporter: Does it pay? *International Business Review*, 12, pp.233–252.

Blankson, C. and Stokes, D. (2002). Marketing practices in the UK small business sector, *Marketing Intelligence & Planning*, 20, pp.49-61.

Bonaccorsi, A. (1992). On the relationship between firm size and export intensity, *Journal of International Business*, 23, pp.605–635.

Calof, J. L. (1994). The relationship between size and export behaviour revisited, *Journal of International Business Studies*, 25, pp.367–398.

Cavusgil, S. T., and Zou, S. (1994). Marketing strategy–performance relationship: An investigation of the empirical link in export market ventures, *Journal of Marketing*, 58, pp.1–21.

Chen, R., and Martin, J. M. (2001). Foreign expansion of small firms: The impact of domestic alternatives and prior foreign business involvement, *Journal of Business Venturing*, 16, pp.557-574.

Contractor, F. J., Kundu, S. K., and Hsu, C. C. (2003). A three stage theory of international expansion: The link between multinationality and performance in the service sector, *Journal of International Business Studies*, 34, pp.5–18.

Davidson, W. (1980). The location of foreign direct investment activity: Country characteristics and experience effects, *Journal of International Business Studies*, 11(2), pp.9–22.

Diken, A. (1998) "KOBİ'lerin İhracat Sorununun Çözümünde 'Sektörel Dış Ticaret Şirketleri'nin Rolü", *Atatürk Üniversitesi İ.İ.B.F Dergisi*, 12, pp.1–2 (In Turkish)

Doğan, Ö. and Marangoz, M. (2002), "KOBİ'lerin Dış Pazarlara Açılmada Karşılaştıkları Sorunlar ve Çözüm Önerileri ve Bir Uygulama", *Dış Ticaret Dergisi*, 24, pp.105-152 (In Turkish)

Erramilli, M. K. (1991). The experience factor in foreign market entry behaviour of service firms. *Journal of International Business*, 21, pp.479–501.

Geringer, J. M., Tallman, S., and Olsen, D. M. (2000). Product and international diversification among Japanese multinational firms, *Strategic Management Journal*, 21 (1), pp.51-80.

Johanson, J., and Vahlne, J. E. (1977). The internationalisation process of the firm. A model of knowledge development and increasing market commitment, *Journal of International Business*, 8, pp.23-32.

Johanson, J., and Vahlne, J. E. (1990). The mechanism of internationalisation, *International Marketing Review*, 7, pp.11–24.

Jung, Y. J. (1991). Multinationality and profitability, *Journal of Business Research*, 23(2), pp.179–187.

Karadal, H., (2001). KOBİ'lerin Uluslararası Pazarlara Açılmasını Etkileyen Faktörler Üzerine Bir Araştırma, *1.Orta Anadolu Kongresi Bildiriler Kitabı*, KOSGEB, Ankara (In Turkish)

Katsikeas, C. S., Leonidou, L. C., and Morgan, N. A. (2000). Firm-level export performance assessment: Review, evaluation and development, *Journal of the Academy of Marketing Science*, 28(4), pp.493–511.

Kobrin, S. J. (1991). An empirical analysis of the determinants of global integration, *Strategic Management Journal*, 12, pp.17–37.

Koçak, A. (1997), "Experimentation of export decision process model for Turkish firms", *The Faculty of Political Science Review*, 52, pp.1-4 (In Turkish)

Kozlu C., (2000). *Uluslararası Pazarlama (İlkeler ve Uygulamalar)*, Yedinci Basım, İş Bankası Yayınları, İstanbul. (In Turkish)

Leonidou, L. C. (1995). Export barriers: Non-exporters'perceptions, *International Marketing Review*, 12, pp.4–25.

Leonidou, L. C., and Katsikeas, C. S. (1996). The export development process: An integrative review of empirical models, *Journal of International Business*, 27, pp.517–551.

Lu, J. W., and Beamish, P. W. (2001). The internationalization and performance of SMEs, *Strategic Management Journal*, 22, pp.565–586.

Moen, Ø. (1999). The relationship between firm, size, competitive advantages and export performance revisited, *International Small Business Journal*, 18, pp.53–72.

Moini, A. H. (1995). An inquiry into successful exporting. An empirical investigation using a 3 stage model, *Journal of Small Business Management*, 33(3), pp.9–25.

Ozdemir, Ş. and Karaca, Y. (2007). KOBİ'ler için Dış Ticaret Yöntemleri ve İhracat Problemleri: Afyon İli Doğal Taş Sektöründe Bir Araştırma, *C.Ü İktisadi ve İdari Bilimler Dergisi*, 8(1) (In Turkish)

Özkanli, Ö., Benek, S. and Akdeve, E. (2006), Export Barriers of Small Firms In Turkey: A Study of Ankara-Ivedik Industrial District, *International Research Journal Problems & Perspectives in Management*, 4(3), pp.78-90.

Shoham, A. (1998). Export performance: A conceptualization and empirical assessment, *Journal of International Marketing*, 6(3), pp.59-81.

Shoham, A., Evangelista, F., and Albaum, G. (2002). Strategic firm type and export performance. *International Marketing Review*, 19(3), pp.236-258.

Sousa, C.M.P. (2004). Export performance measurement: An evaluation of the empirical research in the literature, *Academy of Marketing Science Review*, 9, Available: http://www.amsreview.org/articles/sousa09-2004.pdf.

Ulaş, D. (2004). KOBİ'lerin Yabancı Pazarlara Açılmada Kullandıkları Stratejiler, *Gazi Üniversitesi İ.İ.B.F Dergisi*, 6(3), pp.179–204 (In Turkish)

Wagner, J. (1995). Export, firms, size, and firm dynamics, *Small Business Economics*, 7, pp.29-39.

Westhead, P. (1995). Exporting and non-exporting small firms in Great Britain: A matched pairs comparison, *International Journal of Entrepreneurial Behaviour & Research*, 1(2), pp.6-36

Woodcock, C. P., Beamish, P. W., and Makino, S. (1994). Ownership-based entry mode strategies and international performance, *Journal of International Business Studies*, 25(2), pp.253–273.

Zou, S., and Stan, S. (1998). The determinants of export performance: A review of the literature between 1987 and 1997, *International Marketing Review*, 15(5), pp.333-356.

Zuchella, A. (2001). The internationalization of SMEs: Alternative hypotheses and empirical survey. In Multinational firms, *Strategic Management Journal*, 21, pp.51-80.