RELATIONSHIP BETWEEN FOREIGN TRADE AND FINANCIAL PERFORMANCE OF COMPANIES*

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ABSTRACT

Imports and exports affect the financial performance of firms. Studies show that this effect occurs in very different ways. The ranking is usually 1) companies which import and export 2) only import companies, 3) exports only companies, and 4) neither export nor import companies. The second and third rows change from time to time. There are also different effects between the internationalization rate and financial performance of firms that are both importing and exporting firms. In this context, the study of firms in our country from both perspectives is the subject of this study. The sample of the study has been determined as the companies that are traded on the stock market Istanbul Star market and the SMEs market. Statistical analysis methods are used for the analysis of the data.

Keywords: Export, Import, Financial Performance, Internationalization.

DIŞ TİCARET İLE FİRMALARIN FİNANSAL PERFORMANSLARI ARASINDAKİ İLİŞKİ

ÖZET

İthalat ve ihracat firmaların finansal performanslarını etkilemektedir. Yapılan çalışmalar bu etkinin çok farklı şekillerde ortaya çıktığını göstermektedir. Finansal performans açısından firmaların etkilenme düzeylerinde sıralama genellikle 1) hem ihracat hem de ithalat yapan firmalar 2) sadece ithalat yapan firmalar, 3) sadece ihracat yapan firmalar ve 4) ne ihracat ne de ithalat yapan firmalar şeklinde olmaktadır. 2 ve 3. sıra zaman zaman değişmektedir. Ayrıca hem ithalat hem de ihracat yapan firmaların uluslararasılaşma oranı ile finansal performansları arasında da farklı etkiler mevcuttur. Bu bağlamda ülkemizdeki firmaların her iki açıdan incelenmesi bu çalışmanın konusu olmaktadır. Çalışmanın örneklemi Borsa İstanbul Yıldız pazarı ve Kobi pazarında işlem gören firmalar olarak belirlenmiştir. Verilerin analizi için istatistiki analiz yöntemleri kullanılmaktadır.

Anahtar Kelimeler: İhracat, İthalat, Finansal Performans, Uluslararasılaşma.

1. Introduction

Depending on technological innovations, improvements in communication and transport channels offer opportunities for businesses to operate in a wider area. The effects of globalization have caused significant increases in the number of firms operating in the country's markets. In this context, today there is considerable competition among companies. Firms are trying to increase the market share and number of customers for high profitability. At this point, for the continuity of the business, local markets may be inadequate and cross-border activities may be necessary.

The importance of international activities is increasing day by day in terms of profit maximization and cost minimization. Due to the positive impact on country development and growth, governments are implementing foreign trade and especially export promoting policies. In this direction, businesses are more concerned with foreign trade activities in order to reach their targets.

Some companies, especially because of the cost advantages of raw materials and materials, are only engaged in import activities while some companies are only interested in export activity to achieve higher profitability and sales level. However, some companies are importing and exporting. Preferences related to export and import activities have an impact on the level of internationalization of companies.

According to Linder (1961), which argues that both the potential export goods and the import goods of a country are determined by domestic demand, the export of a product is dependent on the demand of the domestic market of that product, which is called "representative demand". Domestic producers tend to produce primarily products that are demanded in the domestic market and profitable. In general, products are not initially produced to be offered in foreign markets. Any product can reach a saturation point in the domestic market after a certain period. In this case, businesses start searching new markets for products and front to cross-border markets. However, if the businesses cannot supply the products needed by the domestic market, the import trend starts (Yılmaz, 2010: 223).

One of the motivations for enterprises to turn to foreign markets is scale economies. According to the approach we can explain with the theory of scale economics put forward by Krugman (1980: 950); when firms address large markets, they can achieve higher sales by making more production. This situation causes the unit costs to decrease, especially with the effect of fixed costs. The decline in costs can create both resource savings and competitive advantage for businesses. This will make it easier for businesses to enter new markets. Scale economics; represents the cost savings provided by large-scale production.

According to Krugman (1979: 469), companies operating in large markets have the opportunity to address the market by increasing production. These businesses, which can reduce unit costs in the context of scale economies, need more input for their increased production. This can provide the opportunity to obtain resources at a lower cost, with the impact of market and business size. As a result, input costs will tend to decrease. After capacity change, the fact that increase in production is more than the increase in input amount is expressed as "decreasing cost". (Bayraktutan, 2003: 182).

Generally, businesses operate in foreign markets for economic reasons. In some cases, businesses may engage in cross-border trade activities due to political factors or policies and practices of governments. Businesses can be found in international activities in different ways. For example, export-import, foreign direct investment, partnership with foreign companies, etc.

2. Literature and Method

There are studies that examine the relationship between firms' international activities or the level of internationalization and firm performance. It is observed that different findings have been reached in these studies. In some studies, it is determined that there is a positive linear relationship between these two variables (Jung, 1991; Grant et al., 1988), while in some studies a curvilinear (quadratic) interaction was observed. However, there are studies in which the results of cubic relationship form are found. In this context, Table 1 summarizes some similar studies and related findings in the literature.

Ruigrok and Wagner (2003: 71-78) have examined the relationship between internationalization and performance. According to 1997 sales figures, this study covers 84 companies with direct foreign capital which sales of over $ 100 million among Germany's largest 500 manufacturing firms. The data of these 84 German manufacturing companies was examined through cross-sectional and longitudinal statistical analyses during the 5-year period 1993–1997. In this context, the statistical results unambiguously indicate a significant non-linear relationship between companies' degree of internationalization and return on assets (ROA) as a financial performance criterion. The relationship shows an increasing positive slope for companies with high degree of

internationalization. In addition, the results of regression analysis show a relationship of standard-U form between internationalization and performance.

In a similar study conducted in Germany, Capar and Kotabe (2003: 345) examined the relationship between international diversification and firm performance. This study covers of 81 major German service firms. As a result of the analysis using the two-stage regression model, was found a U-shaped curvilinear relationship between international diversification and performance.

Lu and Beamish (2004: 598) focused on Japanese firms to investigate the relationship between multinationalism and performance (return on assets). Data on 1,489 Japanese firms during 1986-1997 period show a consistent horizontal X S-shaped X (cubic) relationship between multinationalism and performance. In another study, Lu and Beamish (2001: 580) examined 164 Japanese SMEs. Direct foreign investment was selected as an indication of internationalization. In addition, the intensity of exports has been added to the moderator variable. As a result of the analysis, a nonlinear (U-curve) relationship was determined between the level of FDI activity and firm performance. It has been determined that the increase in the intensity of exports influenced this effect negatively.

In some studies, nonlinear negative (inverse U-form) relationships were found between firm's international activity level and firm performance. In this context, Hitt et al. (1997: 767) focused on 295 manufacturing companies, which reached average annual sales of $ 100 million between 1988 and 1990. The sample for the study was drawn from the Standard & Poor's COMPUSTAT database. Low and moderate levels of international diversification are positively related to firm performance (ROA), however, further international diversification is likely to produce negative performance effects.

Gomes and Ramaswamy (1999: 180-184) have found a similar relationship in their work involving US multinational firms in four key sectors (chemical, drug and pharmaceutical, computers and office equipment, electrical and electrical products) in the 1990-1995 period. The pooled cross-section/time series regression analysis was used as a method. For the analysis, a composite index encompassing three dimensions (the ratio of foreign sales to total sales, the ratio of foreign assets to total assets, the number of foreign countries of operation) was developed as a measure of firms' multinational level. As a result of the regression analysis, there is a curvilinear relationship (inverse U) between the return on assets as a financial performance indicator and the firm's multinationalism level.

Contrary to the general literature, Wan (1998: 205-210) did not find a relationship between international diversification and firm performance (profitability). This study included the largest 81 firms (excluding utilities, banks and investment firms) listed on the Stock Exchange of Hong Kong in terms of market capitalization as of the end of 1990.

Shin et al. (2015: 1) used a data set of 1082 Spanish service mMNEs over an eight-year period. The findings show a non-linear, inverted S-shaped (quadratic) relationship between multinationalism and financial performance. According to empirical results, knowledge-intensive firms exhibit an inverted U-shaped M-P relationship, while capital-intensive firms present a U-shaped relationship.

On the other hand, Tunahan et al. (2014: 102) examined the effects of the export intensity of firms in Turkey on profitability. According to the results of the study, it has been determined that the profitability of the firms that exports at high rates has decreased.

Table 1: Summary of Literature on the Relationship Between The Level of Internationalization and Firm Performance in Enterprises

Writer(s)	Scope of Research	Finding
Lu & Beamish (2004)	1489 Japanese Company	Cubic (horizontal S-shaped) relationship
Lu & Beamish (2001)	Japan – 164 SMEs	Non-linear U-curve relationship-positive
Jung (1991)	USA - Multinational companies	Linear positive correlation
Hitt et al. (1997)	295 manufacturing companies in the S & P Compustat database	Non-linear inverse U-form relationship-negative
Gomes & Ramaswamy (1999)	USA - Multinational 95 manufacturing company	Non-linear inverse U-form relationship-negative
Ruigrok & Wagner (2003)	Germany - 84 manufacturing companies	Non-linear U-curve relationship-positive
Capar & Kotabe (2003)	Germany - 81 service companies	Non-linear U-curve relationship-positive
Qian (2002)	USA - Emerging 71 SMEs	Non-linear inverse U-form relationship-negative
Endo & Ozaki (2011)	Japan - 300 major service companies	Non-linear U-curve relationship-positive
Bae et al. (2008)	USA - 672 manufacturing companies	Cubic (horizontal S-shaped) relationship
Shin et al. (2015)	Spain - 1082 small multinational firms	Cubic (horizontal S-shaped) relationship

Wan (1998)	81 large companies listed in Hong Kong stock exchange	No relationship.

2.1. Purpose and Hypotheses of Research

The purpose of this study is to determine the effect of import and export activities on the financial performance of firms in Turkey. This research consists of two phases. In the first stage, financial performances are ranked according to the foreign trade situations of firms. Then, the relationship between the rate of internationalization of companies and financial performances is tried to be determined.

In this context, the two basic hypotheses for the research are as follows;

H_1: Foreign trade activities of companies have a positive effect on their financial performance.

H_2: There is a non-linear relationship between the rate of internationalization and financial performance.

2.2. Sample of Research and Analysis Method

Sample of research is 120 companies listed in the Borsa İstanbul (BIST) Star and SME market (excluding financial institutions). In addition, the number of companies with a very high rate of internationalization in these markets is very small. Therefore, 18 companies with high rate of internationalization have been added to the dataset and the total number of companies has reached 138.

The variables used to test the hypotheses are listed below.

Return on Assets (ROA): Profit Before Tax / Total Assets

Internationalization Rate (IR): Export / Net Sales

The number of companies that only import or exports among the companies listed in the Stock Exchange Istanbul are very low. Companies in Turkey usually perform both activities together. For this reason, the dataset is divided into two groups as foreign trade firms and non-trade firms in order to examine the effect of foreign trade.

Companies: 1) Both exporting and importing companies; 2) non-trading companies (companies that only trade in national markets)

On the other hand, the following variables have been added to the data set to reduce the effects of other factors.

Asset Value (AV): Total Assets

Operate Area (SECTOR): 1) production, 0) other,

Age of the company (AGE): The period since establishment,

Company Type (CT): 1) Holding, 0) other

In order to test the first hypothesis, independent sample t-test was conducted to determine whether there was a significant difference between the groups. For the second hypothesis, regression analysis was performed and the direction and form of the effect on the financial performance of internationalization was tried to be determined.

2.3. Preliminary Tests of Research

In order to be able to perform the analysis with the determined hypotheses and analysis method, the data set needs to fulfil certain conditions. In this context, first of all, there should be no problem of heteroscedasticity in equations. According to Breusch-Pagan / Cook-Weisberg test results, Chi2 value is 0.25 (P: 0.615). This result indicates that there is no problem of heteroscedasticity.

In addition, if there is a problem of multicollinearity between the independent variables, the analysis results will be incorrect. First, the correlation coefficients between the independent variables are examined.

Table 2: Correlation Coefficients Between Independent Variables

	IR	AV	SECTOR	AGE	CT
AKT	0,138				
SECTOR	0,021	0,017			
AGE	0,055	0,080	0,138		
CT	0,039	-0,007	0,009	0,131	
CONSTANT	-0,261	-0,613	-0,571	-0,694	-0,120

In statistical analyses, a high degree of correlation between independent variables (e.g. 80%) may be indicative of the problem of multicollinearity (Gujarati, 2009: 336). At this point, there is no high correlation between any variables, as seen in the above table.

To determine this problem, Variance Inflation Factor (VIF) method can also be used. In this case, it can be said that the problem of multicollinearity exists if the obtained VIF values are greater than 10 (Gujarati, 2009: 339). The results of VIF analysis are shown in Table 3.

Table 3: Results of Variance Inflation Factor (VIF)

Variables	IR	AV	SECTOR	AGE	CT	Mean
VIF	1,06	1,09	1,11	1,03	1,21	1,10

All values are lower than 10, as seen in the table. For this reason, it can be said that there is no "multicollinearity problem" in the data set.

2.4. Analysis of Data

After the preliminary tests, the necessary assumptions for analysis are provided. In this context, first, independent samples T-test was performed for the test of the H1 hypothesis. The results obtained are given in the table below.

Table 4: Performance Difference Levels of Companies According to Foreign Trade Status

Variables	Mean	T-Statistic	Significance Level
Companies doing foreign trade	0,056	2,250	0,026**
Companies not doing foreign trade	0,008		

*** $P<0,01$; ** $P<0,05$; * $P<0,10$

According to the results of the table, it is determined that the companies doing foreign trade have much higher investment profitability. Therefore, H_1 hypothesis has been accepted.

In addition, the results of multiple regression analysis conducted to determine the relationship between export intensity and firms' financial performances are given in Table 5.

**Table 5: The Impact of Internationalization Level on Financial Performance**

Descriptive Variables	Standardized β	T-Statistic	Significance of Model	
			F-Statistic	Adjusted R^2
IR	,637	2,140**		
IR^2	-,596	-2,018**		
ASSET	-,032	-0,386		
SECTOR	,005	0,059	2,15**	% 4,8
AGE	,204	2,379**		
CT	-,019	-0,220		
Constant	-0,17	-0,323		

*** $P<0,01$; ** $P<0,05$; * $P<0,10$

According to the analysis results, there is a quadratic (inverse U-form) relationship between return on assets and the level of internationalization. In this context, as the level of firms' internationalization increases, it has a positive effect on the return on assets, up to a certain point. After this point, the increase in the level of internationalization has a negative impact on return on assets.

As shown in Figure 1, the direction of relationship between the two variables is primarily positive, then negative. According to these results, the H2 hypothesis is also accepted.

Figure 1: Relationship Between Level of Internationalization and Assets on Return
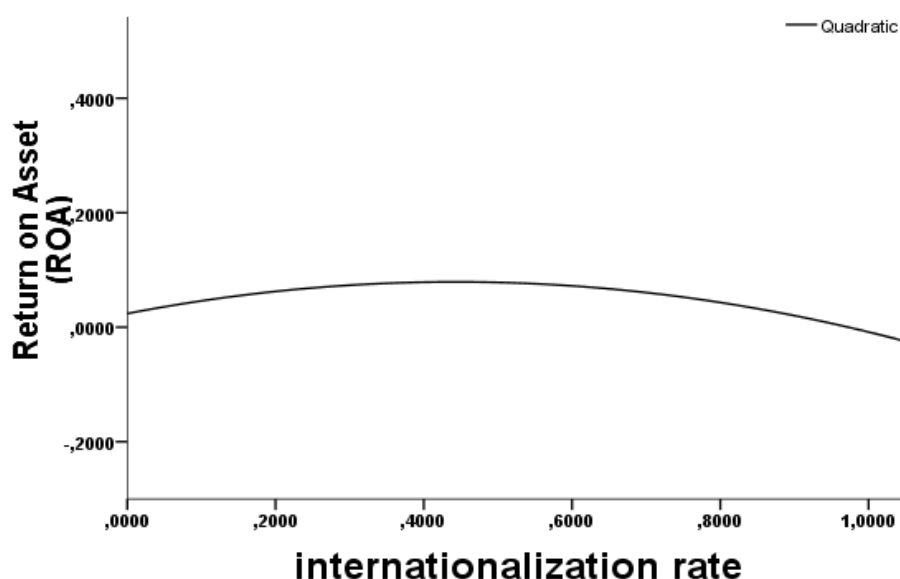
3. Conclusion

Our study shows that there is a non-linear relationship (inverse U-form) between the level of internationalization and firm performance (ROA). According to this result, international activities initially have a positive effect on firm performance. The continued increase in the level of internationalization, after a certain point, cause a negative effect on firm performance.

These results are consistent with the results of studies conducted by Hitt et al (1997), Gomez and Ramaswamy (1999), and Qian (2002). The positive effects of the international activities of the companies in the early periods can be interpreted in the context of economies of scale. Businesses operating in new markets may cause unit costs to decrease, with increased production. Due to the increase in the level of internationalization, the continuation of the increase in production may lead to the emergence of new costs and the increase of costs again.

In addition, management of international activities in the wider environment or at a higher may be difficult for businesses. Such management problems can also cause costs to increase. Thus, the positive effect of international activities can begin to disappear. This may be a sign that firms are not able to reduce their costs by specializing in international activities. It is also understood that the management of international activities is very important for businesses.

The constraint of this study is that only companies listed on the Stock Exchange Istanbul are subject to analyse. In future studies, the relationship between variables can be examined taking account of such factors as the number of countries in which businesses operate product variety, and the use of technology. The factors that can change the direction of the interaction between the level of internationalization and firm performance can be tried to be determined.

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