

INTERNATIONALIZATION AND FINANCIAL PERFORMANCE: AN EMPIRICAL ANALYSIS ON LISTED COMPANIES IN TURKEY

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Deniz Ozbay¹, Fulya Tasel²

¹Maltepe University, Faculty of Business and Management Sciences, İstanbul, Turkey.

denizozbay@maltepe.edu.tr, ORCID: 0000-0003-4643-7577

²Maltepe University, Faculty of Business and Management Sciences, İstanbul, Turkey.

fulyatasel@maltepe.edu.tr, ORCID: 0000-0001-6959-5776

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ABSTRACT

Purpose- The purpose of the study is to examine the impact of internationalization on financial performance.

Methodology- Based on early studies, four different models which includes linear, squared, cubed and fourth power forms of the degree of internationalization (DOI) have been composed. The full sample includes 35 listed companies and 243 firm years between 2012-2018. Panel data regression analysis has used to test the relationship between DOI and financial performance.

Findings- Our results support an inverted horizontal S-shaped relation between internationalization and financial performance.

Conclusion- In academic literature there are numerous studies about the effect of internationalization of firms and entering new markets on the businesses. The results of the studies examining the relationship between internationalization and financial performance are also very different. In earlier studies, a linear relationship is accepted between internationalization and financial performance, but newer studies are usually based on a curvilinear relationship.

Keywords: Internationalization, financial performance, multinational companies.

JEL Codes: L25, P45

1. INTRODUCTION

Due to the increasing globalization and competition in the world markets, international trade and internationalization of companies are increasing its importance day by day. Along with internationalization, the aim of the companies is to increase their participation in international markets and to maximize the benefit. It's generally assumed that the financial performance of firms improves with internationalization. But when the literature is analyzed, clearly seen that the relationship between internationalization and financial performance can have very different forms. Early studies have provided mixed evidence on the relationship between internationalization and firm financial performance. While some studies have identified a linear relationship between internationalization and financial performance, the results of many studies support a non-linear relationship such as "U", "horizontal S" or "W" shaped. Although there have been many studies in the world, the number of empirical studies in our country has been limited. The aim of this study to examine the relationship between internationalization and financial performance in Turkey listed companies.

2. LITERATURE REVIEW

There are numerous studies in literature about internationalization. Johanson & Vahlne (1977) defined the internationalization of companies as a process in which companies gradually increase their international participation (Johanson & Vahlne, 1977). Çavuşgil et al. stated that internationalization refers to the tendency of systematic increase of the international dimension of commercial activities for companies (Çavuşgil, Knight, & Riesenberger, 2014). Dunning's Eclectic paradigm is another important study in literature. According to this approach, the tendency of multinational companies for international production increases when the advantages of Ownership, Location and Internalization are met. The multinational companies decide to internationalize with foreign direct investment according to these three conditions (Güngördü & Yılmaz, 2016). Another important approach is Porter's Diamond Model. Porter's diamond model is an important approach to understand how globally competing companies can develop. According to Porter, the competitiveness of a nation depends on the capacity and innovativeness of the industry. Porter emphasized that there are four important factors that will determine the national

competitive advantage. These are factor conditions, demand conditions, related and supporting industries and strategy, structure and rivalry (Mutlu, 2008).

It is generally expected that the relationship between the level of internationalization and financial performance will be positive. In fact, the reason behind the attempts of businesses to open up to new markets by enduring different cost factors outside their own countries is generally related with financial returns. However, there are some other studies supporting the opposite findings. While some studies determine a linear positive or negative relationship, in some studies the direction of the relationship is curved and it is expressed in different shapes such as U, inverted U, horizontal S, inverted S and W. Because of the initial learning costs of internationalization (Contractor, Kundu, & Hsu, 2003), U shaped model suggests an initially negative effect of internationalization on financial performance before the positive returns. Some empirical studies support this argument (Contractor, Kumar, & Kundu, 2007; Assaf, Josiassen, Ratchford, & Barros, 2012). On the other hand, inverted U shaped model suggest that internationalization positively affects financial performance to a certain level. After this level, the increased costs exceed the increasing benefits (Geringer, Beamish, & daCosta, 1989; Hitt, Hoskisson, & Kim, 1997; Qian, 2002). According to 3 stage theory (horizontal S-shaped), in the firm entry into the international arena, costs exceed the benefits up to a certain level; then in the second level benefits rise up (Stage 2), after than financial performance declines again (Stage 3) (Osorio, Colino, Martin, & Vicente, 2016; Xiao, Jeong, Moon, Chung, & Chung, 2013; Bobillo, Iturriaga, & Gaite, 2010; Contractor, Kundu, & Hsu, 2003).

3. DATA AND METHODOLOGY

3.1. Methodology

Based on early studies, four different models which includes linear (model A), squared (model B – U shape), cubed (model C – horizontal S shape) and forth power (model D – W shape) forms of the degree of internationalization (DOI) have been composed in this study to examine the relationship between internationalization and financial performance.

To test the impact of internationalization on firm financial performance (Hypotheses 1), the following equation was estimated.

$$ROA_{it} = f(DOI, Growth, Lvg)$$

$$= \beta_0 + \beta_1 DOI_{it} + \beta_2 DOI_{it}^2 + \beta_3 DOI_{it}^3 + \beta_4 DOI_{it}^4 + \beta_5 Growth_{it} + \beta_6 Lvg_{it} + \epsilon_{it}$$

We hypothesize that:

H_1 = Internationalization has a significant impact on firm financial performance

3.2. Data

The degree of internationalization has been mostly measured in terms of ratios of foreign sales to total sales (Grant, Jammie, & Thomas, 1988; Geringer, Beamish, & daCosta, 1989; Tallman & Li, 1996; Qian, 2002; Contractor, Kumar, & Kundu, 2007) or foreign assets to total assets (Eckert, Dittfeld, Muche, & Rassler, 2010; Assaf, Josiassen, Ratchford, & Barros, 2012; Kirca, Fernandezb, & Kunduc, 2016). Besides these ratios, direct foreign investments (Michel & Shaked, 1986; Collins, 1990; Keller & Yeaple, 2009), The ratio of foreign participation income to total sales income (Geringer, Tallman, & Olsen, 2000); number of countries operated (Gomes & Ramasway, 1999; Mudambia, Mudambia, Khurshedb, & Goergen, 2012), and total export to total sales (Xiao, Jeong, Moon, Chung, & Chung, 2013) are some other widely used variables of the degree of internationalization. In this study we used the ratio of total export to total sales to measure the degree of internationalization. Internationalization data were obtained from the Turkish Exporters Assembly Database.

We collected financial data for 2012- 2018 from the Bloomberg Database. Similar to the literature, ROA was used as a measure of financial performance. In addition, growth and leverage were added to the model as control variables.

Turkish Exporters Assembly Database explains the top 1000 companies exporting data every year. However, the name of many of these companies is not disclosed. On the other hand, listed companies are also limited in the database. For this reason, the number of samples considerably narrowed. Listed companies that disclosure export data between 2012 and 2018 are included in the sample. The full sample included 35 firms and 243 firm years.

Table 1: Variables and Measures

Variables	Measures
Dependent Variable	
ROA	Return on Assets EBIT (earnings before interest and taxes) divided by total assets.
Independent Variables	
DOI	Degree of Internationalization
DOI2	Degree of Internationalization ²
DOI3	Degree of Internationalization ³
DOI4	Degree of Internationalization ⁴
Control Variables	
Growth	Percentage increase in sales
Lvg	Leverage Total liabilities divided by total equity

3.2. Analysis and Results

Panel data model was used to test the hypothesis. First we performed the Hausman specification test to choose between a fixed - effects and random – effect for each models. Table 2 shows Hausman specification test results for each model.

Table 2: Hausman specification test results

Hausman Specification Test				
	Model A	Model B	Model C	Model D
Prob>chi2	0.1989	0.0490	0.1661	0.5307

According to Hausman specification test results, while the hypothesis was rejected for Model A, Model C and Model D, the hypothesis was accepted for Model B. For this reason, the most appropriate model for Model A, Model C and Model D is random - effect, while the fixed – effect model for Model B.

There are various assumptions that need to be tested before running the model. The results of the autocorrelation, heteroscedasticity cross section dependence tests are summarized in Table 3.

Table 3: Assumption Tests Results

Heteroscedasticity				
	Model A	Model B	Model C	Model D
Breusch-Pagan Lagrangian Multiplier Test Prob>chi2	0.0000		0.0000	0.0000
Modified Wald Test Prob>chi2		0.0000		
Autocorrelation				
	Model A	Model B	Model C	Model D
Durbin-Watson	1.3560	1.3779	1.3781	1.3800
Baltagi-Wu LBI	1.7305	1.7378	1.7379	1.7392
Cross Sectional Dependence				
Pesaran Test	Model A	Model B	Model C	Model D
Pr	0.0000	0.0000	0.0000	0.0000

After fundamental assumption tests we decided which method of analysis should be used. While we used Driscoll and Kraay Test in fixed effect model, we used Prais – Winsten Regressions, correlated panels -correlated standard errors (PCSEs) in random effect models, because the number of time periods was relatively small than the number of observations (Tatoğlu, 2018). Results of tests are summarized in Table4.

Table 4: Panel Regressions Results

ROA	Model A ¹		Model B ²		Model C ¹		Model D ¹	
	z	P>z	t	P>t	z	P>z	z	P>z
Independent Variables								
DOI	-1.32	0.187	-1.31	0.200	1.72	0,085*	0.75	0.456
DOI2			2.09	0.044**	-2.30	0,021**	-0.51	0.611
DOI3					2.51	0,012**	0.13	0.899
DOI4							0.17	0.867
Lvg	-5.77	0.000***	-10.97	0.000***	-5.42	0,000***	-5.35	0.000***
Growth	1.52	0.129	0.38	0.707	3.46	0,001***	3.92	0.000***
R ²	0.1346		0.1004		0.1517		0.1525	
Number of obs	243		243		243		243	
1 = Prais – Winsten Regressions, correlated panels -correlated standard errors (PCSEs) 2 = Driscoll and Kraay Test								
*represent statistical significance at 10 percent levels ** represent statistical significance at 5 percent levels *** represent statistical significance at 1 percent levels								

According to Model A results, while financial leverage has significant effect on profitability (ROA) at 1 percent levels, we didn't find any significant relationship between ROA, DOI and Growth. Similarly, in Model B, while leverage at 1 percent levels, and also DOI2 at 5 percent levels have significant effect on ROA; there was no significant relationship between ROA, DOI and Growth. Additionally, no significant

relationship was found between DOI variables and ROA in Model D. Consequently, according to the results of the analysis, a linear, U-shaped or W-shaped relationship have not been empirically proven between ROA and DOI. On the other hand, all of the independent variables in Model C have significant impact on ROA. According to results of our analysis, while ROA increase in earlier period of internationalization, it declines in second stage, and financial performance (ROA) rise again in third stage of internationalization. So, similarly some early studies (Contractor, Kundu, & Hsu, 2003; Göker & Uysal, 2017) our results support an inverted horizontal S-shaped relationship between internationalization and financial performance.

4. CONCLUSION

When the literature is analyzed, we can clearly see that studies which examines the relationship between internationalization and financial performance have many different results from each other. In earlier studies, a linear relationship is accepted between internationalization and financial performance, but newer studies are usually based on a curvilinear relationship. We found an inverted horizontal S-shaped relation between internationalization and financial performance. According to results, in the first stage of internationalization, financial performance increases due to the increase in sales. But, in the second stage, costs increase more than revenues depending on the field of activity expanding. Because being an important player in international markets requires more costs than initial entry stage. On the other hand, in the last stage, financial gains of internationalization exceed the costs of internationalization due to strengthened business networks, increasing market recognition and experience.

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