

T.C.
MARMARA ÜNİVERSİTESİ
SOSYAL BİLİMLER ENSTİTÜSÜ
İŞLETME (İNGİLİZCE) ANA BİLİM DALI
MUHASEBE-FİNANSMAN (İNGİLİZCE) BİLİM DALI

**THE IMPACT OF FOREIGN DIRECT INVESTMENT ON
FIRM FINANCIAL PERFORMANCE, EVIDENCE FROM AN
EMERGING MARKET: TURKEY**

Yüksek Lisans Tezi

ASLI AYBARS

İstanbul, 2009

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Danışman: PROF. DR. ALİ OSMAN GÜRBÜZ

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Marmara Üniversitesi
Sosyal Bilimler Enstitüsü Müdürlüğü

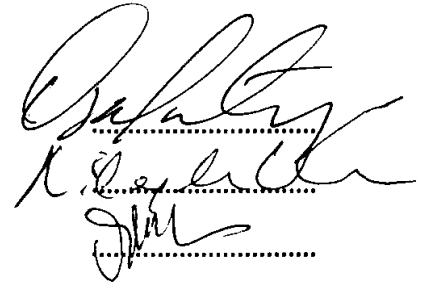
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ÖZET

DOĞRUDAN YABANCI YATIRIMLARIN ŞİRKETLERİN FİNANSAL PERFORMANSI ÜZERİNE ETKİSİ: TÜRKİYE ÖRNEĞİ

Doğrudan yabancı sermaye yatırımları geliştirmekte olan ülkeler için önemli finansman kaynaklarıdır. Son otuz yılda uluslararası sermaye hareketlerindeki artış nedeniyle, doğrudan yabancı sermaye yatırımlarının şirketlerin finansal performansı ve dolayısıyla ekonomi üzerindeki etkileri daha da önemli hale gelmiştir. Bu tezin amacı İstanbul Menkul Kıymetler Borsası'nda (İMKB) işlem gören firmaların finansal performanslarının yabancı payından ne şekilde etkilendiğini ortaya koymaktır. Ampirik analiz bölümünde, 2005-2007 yılları arasında İMKB'de işlem gören ve reel sektörde yer alan 205 şirket üzerinde panel veri analizi uygulanmıştır. Bu tezin diğer çalışmalardan farkı, yabancı payının şirketlerin finansal performansı üzerine etkisini 4 ayrı model seti ile incelemesidir. Ayrıca, geniş bir kontrol değişken grubu içermesi ve nedensellik konusuna da değinmesi bu tezin diğer çalışmalardan farkını göstermektedir. Yapılan analizler yabancı payının şirketlerin finansal performansını belli bir noktaya kadar artırdığını fakat bu noktadan sonra yabancı payının artmasının şirketlerin finansal performansını olumlu yönde etkilemediğini ortaya koymuştur. Başka bir deyişle, sahiplik yapısındaki dominant faktör yerli yatırımcı iken, yabancılar tarafından yapılan ilave yatırımların şirketlerin finansal performansı üzerinde anlamlı ve pozitif bir etkisinin olmamasıdır. Yaşanan son finansal krizin uluslararası sermaye hareketlerini azaltacağı açıkça ortada olduğundan, bu konuyu kriz öncesi dönemde incelemek, bu akışların olası eksikliğinin 2009 ve ilerleyen yıllarda şirketlerin finansal performansını ne yönde etkileyeceğini görebilmek adına önemlidir.

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ABSTRACT

THE IMPACT OF FOREIGN DIRECT INVESTMENT ON FIRM FINANCIAL PERFORMANCE, EVIDENCE FROM AN EMERGING MARKET: TURKEY

The inflows of foreign direct investment are important sources of finance for developing countries. Due to the increase in international flows of capital over the last three decades, the possible impact of foreign direct investment on the performance of corporations and thus the economy has gained increased attention. The purpose of this thesis is to explore how the financial performance of the companies listed on the Istanbul Stock Exchange (ISE) is affected by foreign ownership. In the empirical analysis section, panel data analysis is conducted on a sample of 205 non-financial listed companies covering the time span of 3 years over the 2005-2007 period. This thesis is unique because it runs four sets of models, each employing a different dependent variable, to capture whether the existence of shares that are held by foreigners affects the performance of the firms. Inclusion of a large set of control variables and taking the issue of causality into account also adds to the uniqueness of the study. The overall results of the analyses indicate that foreign ownership improves firm performance up to a certain level, beyond which additional ownership of shares by foreigners does not add to firm profitability. In other words, when the dominant factor in the ownership structure of the firm is the domestic investor, additional investments by foreigners do not have a positive and significant impact on firm performance. As it is obvious that the recent financial crisis will reduce the amount of international movement of capital, it is important to analyze the case prior to the crisis to be better able to gauge the possible impact of the lack of these inflows on companies in 2009 and onwards.

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İstanbul, 2009

Aslı AYBARS

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ABBREVIATIONS

<i>DPT</i>	State Planning Organization of Turkey
<i>FDI</i>	Foreign Direct Investment
<i>FPI</i>	Foreign Portfolio Investments
<i>GDP</i>	Gross Domestic Product
<i>GNP</i>	Gross National Product
<i>ISE</i>	Istanbul Stock Exchange
<i>IMF</i>	International Monetary Fund
<i>M&A</i>	Merger and Acquisitions
<i>MNEs</i>	Mutinal Corporations
<i>OECD</i>	Organization for Economic Cooperation and Development
<i>R&D</i>	Research and Development
<i>ROA</i>	Return on Assets
<i>RTAs</i>	Regional Trade Agreements
<i>STATA</i>	Data Analysis and Statistical Software
<i>TNCs</i>	Transnational Corporations
<i>UNCTAD</i>	United Nations Conference on Trade and Development
<i>VAR</i>	Vector Autoregression Model

SECTION 1

1. INTRODUCTION

The world economic system has been restructured by the increase in the international flows of capital that take the forms of foreign direct investments (FDI), foreign portfolio investments (FPI) and loans. It has been observed that direct exports are gradually being replaced by the sales of foreign affiliates in host countries. This phenomenon leads to the replacement of international trade by FDI.

Due to the significance of the share of FDI among the other forms of international flows; many studies have been conducted in literature, each investigating some different aspect of the topic. Most of the studies have followed a macro perspective with the emphasis usually on the home and host country effects and determinants of FDI. The spillover issues have also gained much attention. However, studies that employ a micro perspective focusing on individual companies have been less abundant in previous literature. Therefore, this study aims to fill a gap; especially in the case of emerging markets.

The inflows of foreign direct investment are important sources of finance for developing countries. Therefore, the possible impact of FDI on the financial performance of corporations and thus the economy must be analyzed to enable policymakers to follow the right course of action. Certain factors make Turkey an important case study. First, the share of developing countries as recipients of foreign flows has been gaining importance, especially over the last three decades, and Turkey has been an important player among developing nations due to the size of its economy and potential. The second factor relates to the health and stability of the Turkish economy. The inflows of FDI to Turkey are projected to be relatively more stable than those of other emerging markets in the near future as a result of the precautionary actions taken after the financial crisis in 2001.

This thesis is organized as follows. At the beginning of Section 2, different forms of international capital flows are introduced and described. Then, different categories of FDI are determined. Indeed, the primary focus of this thesis is these long-term flows of capital.

Section 3 is dedicated to the determinants of FDI. Each subsection is focused on a determinant and thoroughly analyzed by referring to previous studies conducted in literature.

The effects of FDI on the home and host countries are provided in Section 4. This topic is evaluated from two perspectives, one relating to the effect of outward FDI on the home country and the other relating to the effect of inward FDI on the host country. The subsections in each category are analyzed by reference previous empirical analysis just as in Section 2.

A detailed literature review relating to the relationship between multinationality and firm financial performance is provided in Section 5. This part is crucial in that the methodology of this thesis is developed depending largely on a synthesis of the empirical works provided in this section.

The first part of Section 6 gives highlights about the FDI trends in the world and Turkey. Comparisons are provided to gain a better understanding of Turkey's status among the other developing nations. Later, the impact of the recent financial crisis on world FDI flows is studied focusing especially on the Turkish economy.

In Section 7, an empirical analysis is conducted on a sample of 205 non-financial companies listed on the Istanbul Stock Exchange (ISE) covering a time span of 3 years over the 2005-2007 period. This thesis is unique in that it runs many different models by using panel data analysis on a large dataset. It also deals with the issue of causality which has been neglected by most of the previous studies. Furthermore, the data used in this study relates to the period prior to the recent financial crisis. It is important to analyze the case prior to the crisis to be better able to gauge the possible impact of the lack of these inflows on companies in 2009 and onwards.

Finally, a conclusion is made based on the results of the empirical analysis conducted in Section 4 together with reasoning for the findings.

SECTION 2

2. INTERNATIONAL CAPITAL FLOWS

2.1. Introduction

The free flow of capital, resulting from the globalization of markets, is one of the most significant economic developments of the twentieth century. Especially after the 1980s, the scope of international transactions changed substantially, influencing the degree of international economic involvement of national economies. According to Feldstein, there are three important advantages of international flows of capital. First, the diversification of lending and investment activities of the owners of capital results in a reduction of risk. Second, the UK-US forms of corporate governance, accounting standards and legal traditions, which can be regarded as best practices, are widely applied because of the integration of capital markets in the global arena. Third, the propensity of governments to pursue poor policies is reduced as a result of the global mobility of capital (Feldstein, 2000, p.1).

International capital flows can be categorized in three types; foreign direct investments, foreign portfolio investments, and loans (Razin and Sadka, 2007, p.1).

2.1.1. Foreign Direct Investment

According to the report of the State Planning Organization of Turkey (DPT), the movement of investable resources from one country to another by real or legal persons is defined as foreign investment. Investments that take the form of full ownership by one or more international investors or partnerships with one or more domestic firms are defined as foreign direct investments. The purchase of shares of companies by another country or the institutions of countries is defined as portfolio investment and is not in the scope of foreign direct investment (DPT Dođrudan Yabancı Sermaye Yatırımları Özel İhtisas Komisyonu Raporu, 2000, p.1).

The Turkish Treasury defines foreign direct investment as (1) the establishment of a company or a branch office by foreigners with:

- Cash capital in the form of convertible currency purchased and sold by the Turkish Central Bank,
- Corporate stocks,
- Machinery and equipment,
- Industrial and intellectual property rights,
- Other rights relating to reinvestable profit, proceeds and pecuniary claims or investments with financial value,
- Rights relating to exploration and extraction of natural resources,

(2) the ownership of the shares of private companies or (3) a 10% or greater participation in a public company or any percent of shares that gives a 10% or greater voting right (Başbakanlık Hazine Müsteşarlığı Yabancı Sermaye Genel Müdürlüğü Yabancı Sermaye Raporu, 2005, p. 1).

Both of these definitions provide a certain amount of insight into the definition of FDI. However; a standardized definition, which was first issued in 1983, is provided by the Organization for Economic Cooperation and Development (OECD). It has to be noted that this definition is fully compatible with that of the International Monetary Fund (IMF). According to the OECD definition, for an investment to be regarded as FDI, it has to be made by a resident enterprise in one economy (direct investor) to acquire a lasting interest in an enterprise (the direct investment enterprise) operating in a different economy. A long-term relationship, in which the direct investor has an effective voice in the management of the direct investment enterprise, is built with this cross-border investment. In line with this definition, ownership of at least 10% of the

voting power¹ of the enterprise in the other economy constitutes the effective voice concept (OECD Benchmark Definition of Foreign Direct Investment, 2008).

Table 2.1 below depicts the method for the calculation of FDI flows with respect to the OECD recommendations. This procedure provides valuable insight for the determination of international direct investment flows. However, the calculation of FDI is complicated by the differences in the laws and regulations of the countries.

Table 2.1
OECD Benchmark Definition of FDI

Foreign Direct Investment	
equals	Retained earnings (i.e. direct investors share of earnings / losses)
plus	Direct investors purchase less sales of enterprises' shares
plus	Net increase in long and short term loans, credit and other amounts given by the direct investor to the overseas enterprise
minus	Overseas enterprise borrowing of money from host country or from their own

Sources: Walker, J. (1983) and Office for National Statistics (1996) quoted by Jones J. and C. Wren. 'Foreign Direct Investment and Regional Economy'. 2007, p.9.

2.1.2. Foreign Portfolio Investment

The category of international investment that comprises investments in equity and debt securities, other than instruments categorized as direct investment and reverse assets, is defined as portfolio investments. Foreign portfolio investment also encompasses lending in the form of tradable bonds (Razin and Sadka, 2007, p.2).

There are several important distinctions between FPI and FDI. One of them is the difference between the volatility of the two types of investments. When there is a negative output shock in the form of changes in Gross Domestic Product (GDP) per capita, portfolio investment flows have been found to be more volatile than foreign direct investments (Guerin, 2006, p.206). Direct investors are less likely to withdraw capital invested in another economy during periods of financial or monetary crisis because of the relatively stable nature and longer time horizons of their investments.

¹ Generally, ordinary shares are identical to voting power but there can be situations in which voting power is not represented by ordinary shares

Furthermore, during the global financial crises that occurred in Latin America in 1982, Mexico in 1994 and East Asia in 1997, the inflows of FDI remained relatively stable compared to the inflows of portfolio investment (Lipsev, 2001, pp.6-9). Another difference is related to the repayment terms of the principle amount and the receipt of proceeds. If portfolio investments are in the form of equity, the terms of interest and repayment of the principle amount are determined in advance. However, the proceeds of FDI differ depending on the profitability of the direct investment enterprise and the restrictions that the foreign governments impose on the transferability of the gains (Batmaz and Tunca, 2005, p.7). One other notable distinction is that direct investors bring not only capital but also know-how, managerial skills and production technology to the economy that they invest in. Conversely, portfolio investors only bring capital (Arikan, 2006, p.12). Another significant difference is related to the identity and nature of the investor. While portfolio investments can be generated by real persons who have available funds for investment, almost all FDI activities are conducted by multinational corporations (Candemir, 2006, p.19).

2.2. Categories of FDI

2.2.1. Categories Based on the Motive for Investment

FDI can be classified into four categories based on the motive for investment:

- (Natural) Resource-seeking,
- Market-seeking,
- Efficiency-seeking,
- Strategic-asset-seeking.

The motive behind the initial entry of a foreign company in a host economy can be represented by either resource-seeking or market-seeking investments. Resource-seeking investments are the ones that are driven by the motive to reach physical and human resources while market-seeking investments are driven by the motive to reach regional or domestic markets.

Established foreign investors can expand by either efficiency-seeking or strategic-asset-seeking investments. These two categories can be referred to as sequential investments. Efficiency-seeking investments occur when Multinational Corporations (MNEs) want to improve the efficiency of their regional or global activities through product or process specialization. Strategic-asset-seeking investments are driven by the motivation of investors to sustain or develop their core competencies with the acquisition of resources or capabilities in regional or global markets (Dunning, 2002, pp.232-233).

The benefits of FDI that accrue to recipient countries depend on the type of the investment. Table 2.2 below depicts some of the contributions of different categories of FDI on the recipient economies. As can be seen from the table, each type of investment provides advantages, some of which are common to several categories and others that are unique. However, it should be noted that the age of the investment and the host government's choice of strategies and policies also play a significant role on the effect of these investments to host countries.

Table 2.2
Some Likely Contributions of Different Kinds of FDI to the Upgrading of Competitiveness of Host Countries

1. Natural-resource-seeking	(a) Provides complementary assets (technology, management and organizational competence) (b) Provides access to foreign markets (c) May or may not lead to local spin-off effects on industrial customers, e.g. secondary processing activities (d) Raises standards of product quality (e) May or may not foster clusters of resource-based-related activities
2. Market-seeking	(a) As 1(a) above (b) Fosters backward supply linkages and clusters of specialized labor markets and agglomerative economies (c) As 1(d) and also raises domestic consumers' expectations of indigenous competitors (d) Stimulates local entrepreneurship and domestic rivalry
3. Efficiency-seeking	(a) Improves international division of labor and cross-border networking; entices comparative advantage of host country (b) Provides access to foreign markets and/or sources of supply (c) As 2(b) above (d) As 1(d) and 2(e) above (e) Aids structural adjustment
4. Strategic-asset-seeking	(a) Provides new finance capital and complementary assets (b) As 1(b) above (c) As 2(d) above (d) As 3(a) above

Source: Dunning, 2002, p.235

2.2.2. Categories Based on the Entry Mode of Investment

Two basic decisions have to be made by MNEs when they are considering expansion into foreign markets through FDI. First, the company has to choose between full ownership and a joint venture regarding the degree of control it wants to exert over the investment. Second, it must determine whether to acquire an existing local firm or set up a new plant by a greenfield investment.

Each mode of entry has certain advantages and drawbacks. Even though acquisitions represent the fastest way of establishing existence in a foreign market, problems may occur in determining the proper price, evaluation of the assets and dealing with cultural problems. On the other hand, greenfield investments take a long-time to establish and require a great deal of know-how. However, the degree of control that can be exerted is highest with these kinds of investments. In joint ventures, the

resources of a local party can be utilized and risks can be reduced. However, problems can arise while dealing with another party (Chang and Rosenzweig, 2001, p.748).

Many studies have been conducted in literature investigating the factors that affect the choice among these alternative modes of entry. In her work, Harzing summarizes these factors and their effects on the choice between greenfield and acquisition as can be seen in Table 2.3 below.

Table 2.3
Factors Influencing the Choice between Greenfields and Acquisitions

Characteristic	Effect*	Support found by (only studies with significant results are included)
R&D intensity	-	Andersson et al., 1992; Andersson and Svensson, 1994; Brouthers and Brouthers, 2000; Cho and Padmanabhan, 1995; Hennart and Park, 1993; Hennart et al., 1995; Kogut and Singh, 1988; Larimo, 1996; Padmanabhan and Cho, 1995
Degree of product diversification	+	Andersson et al., 1992; Brouthers and Brouthers, 2000; Caves and Mehra, 1986; Larimo, 1996; Larimo, 1998; Wilson, 1980; Zejan, 1990
	-	Barkema and Vermeulen, 1998; Larimo, 1993
Foreign experience	+	Andersson et al., 1992; Andersson and Svensson, 1994; Caves and Mehra, 1986; Forsgren, 1984; Larimo, 1993
	-	Barkema and Vermeulen, 1998; Brouthers and Brouthers, 2000; Larimo, 1996; Larimo, 1998; Wilson, 1980
Cultural distance	-	Singh, 1988; Larimo, 1996; Larimo, 1998; Padmanabhan and Cho, 1995
Relative size of investment	+	Brouthers and Brouthers, 2000; Caves and Mehra, 1986; Hennart and Park, 1993; Kogut and Singh, 1988; Padmanabhan and Cho, 1995
Time of investment	+	Andersson et al., 1992; Andersson and Svensson, 1994; Barkema and Vermeulen, 1998; Larimo, 1996; Larimo, 1998; Wilson, 1980; Zejan, 1990

Source: Anne-Wil Harzing, 2002, p. 225

* + Increases the probability of acquisition

SECTION 3

3. DETERMINANTS OF FDI

3.1. Introduction

There are several factors that play crucial roles in determining the amount of foreign direct investment inflows to a specific country. In order to better understand the differences among economies in terms of the ability to attract FDI, the United Nations Conference on Trade and Development (UNCTAD) analyzed the host country determinants of FDI. A better understanding of these factors will enable policymakers to pursue the appropriate policies to capture the adequate amount of inbound investment.

Overleaf, Table 3.1 shows the host country determinants of FDI based on the 1998 World Investment Report released by UNCTAD. The host country determinants are categorized into three groups, namely Policy Framework for FDI, Economic Determinants and Business Facilitation. Furthermore, Economic Determinants is divided into three subcategories based on Market-seeking, Resource/asset-seeking and Efficiency-seeking motives for investment. The host country determinants of FDI are identified based on these categories and subcategories.

Due to the significance of the topic, many studies in literature have focused on the driving forces behind FDI. As a result, a wide range of empirical work has been published concerning the potential determinants and their related effects on the inflows of FDI. Table 3.2 displays some of the studies together with the empirical results relating to the impacts of these factors on foreign flows.

Table 3.1
Host Country Determinants of FDI

Determinant Groups	Investment Motives	Host Country Determinants
1. Policy Framework for FDI		<ul style="list-style-type: none"> .economic, political and social stability .rules regarding entry and operations .standards of treatment of foreign affiliates .policies on functioning and structure of markets (especially competition and M&A policies) .international agreements on FDI .privatization policy .trade policy (tariffs and NTBs) and coherence of FDI and trade policies .tax policy
2. Economic Determinants	A. Market-seeking	<ul style="list-style-type: none"> .market size and income per capita .market growth .access to regional and global markets .country-specific consumer preferences .structure of markets
	B. Resource/asset-seeking	<ul style="list-style-type: none"> .raw materials .low-cost unskilled labor .skilled labor .technological inventory and other created assets (e.g. Brand names), including as embodied in individuals, firms and clusters .physical infrastructure (ports, roads, power, telecommunication)
	C. Efficiency-seeking	<ul style="list-style-type: none"> .cost of resources and assets listed under B, adjusted for productivity for labor resources .other input costs, e.g. transport and communication costs to/from and within host economy and costs of other intermediate products .membership of a regional integration agreement conducive to the establishment of regional corporate networks
3. Business Facilitation		<ul style="list-style-type: none"> .investment promotion (including image-building and investment-generating activities and investment-facilitation services) .investment incentives .hassle costs (related to corruption, administrative efficiency, etc.) .social amenities (bilingual schools, quality of life, etc.) .after-investment services

Source: UNCTAD, World Investment Report 1998, Trend and Determinants, New York Geneva: United Nations, Table IV.1, 1998, p.91.

Table 3.2
The Effect of Certain Determinants on FDI

Potential Determinants of FDI	Observed Effect of FDI in Different Studies		
	Positive	Negative	Insignificant
1. Market Size	Bandera & White (1968) Schmitz & Bieri (1975) Swedenborg (1979) Lunn (1980) Dunning (1980) Root & Ahmed (1979) Kravis & Lipsey (1982) Nigh (1985) Schneider & Frey (1985) Culem (1988) Papanastassiou & Pearce (1990) Pearce (1990) Wheeler & Mody (1992) Sader (1993) Tsai (1994) Shamsuddin (1994) Billington (1999) Pistoresi (2000)		
2. Labor Cost	Caves (1974) Billington (1999) Nankani (1979) Wheeler & Mody (1992)	Goldsbrough (1979) Saunders (1982) Flamm (1984) Schneider & Frey (1985) Culem (1988) Shamsuddin (1994) Pistoresi (2000)	Owen (1982) Gupta (1983) Lucas (1990) Rolfé & White (1991) Sader (1993) Tsai (1994)
3. Trade Barrier	Schmitz & Bieri (1972) Lunn (1980)	Culem (1988)	Beurdeau (1986) Blonigen & Feenstra (1996)
4. Growth Rate	Bandera & White (1968) Lunn (1980) Schneider & Frey (1985) Culem (1988) Billington (1999)		Nigh (1988) Tsai (1994)
5. Openness	Kravis & Lipsey (1982) Culem (1988) Edwards (1990) Pistoresi (2000)		Schmitz & Bieri (1972) Wheeler & Mody (1992)
6. Trade Deficit	Culem (1988) Tsai (1994) Shamsuddin (1994)	Torissi (1985) Schneider & Frey (1985) Hein (1992) Dollar (1992) Lucas (1993) Pistoresi (2000)	
7. Exchange rate	Edwards (1990)	Caves (1988) Contractor (1990) Froot & Stein (1991) Blonigen (1995) Blonigen & Feenstra (1996)	Calderon & Rossell (1985) Sader (1991) Blonigen (1997) Tuman & Emmert (1999)
8. Tax	Swenson (1994)	Hartman (1984) Grubert and Mutti (1991) Hines & Rice (1994) Loree & Guisinger (1995) Guisinger (1995) Cassou (1997) Kemsley (1998) Barrel & Pain (1998) Billington (1999)	Wheeler & Mody (1992) Jackson & Markowski (1995) Yulin & Reed (1995) Porcano & Price (1996)

Source: Avik Chakrabarti, 'The determinants of Foreign Direct Investment: Sensitivity Analyses of Cross-Country Regressions, 2001, Kyklos, Vol. 54, p.91.

3.2. Market Size

The size of the market is an important determinant of the investment decision because the existence of a large market will enhance the ease of attainment of scope and economies of scale. Thus, the absolute and the relative measures, which can be calculated in relation to the size and income of the country's population, can be important economic indicators of foreign flow receipts.

The size of the national market is an especially important investment stimulant for Transnational Corporations (TNCs) operating in the services sector because most services cannot be exported. Therefore, these companies can reach foreign markets by investing abroad.

Gross National Product (GNP) is one of the variables that can be used as a proxy for market size. The investor will prefer FDI over exports when the GNP of the country in question is large enough for the market to reach economies of scale (Candemir, 2006, p.70).

Market size can be proxied by other variables as well. Examples include the size of the population, the level of GDP, and GDP growth of the host country, which provides an insight about local market growth (Nunnenkamp, 2002, pp.16-17).

As a part of their study, Nonnemberg and Mendonça perform a causality test on a sample of 38 developing countries covering the years between 1975 and 2000 to capture the direction of the relationship between FDI and GDP. They find that causality exists with GDP leading to FDI (Nonnemberg and Mendonça, 2004, pp.13-15).

Mottaleb conducts an empirical study covering a sample of 60 low-income and lower-middle income countries between the years 2003 and 2005. The result of the analysis reveals that countries with large domestic markets proxied by GDP and GDP growth rate attract more FDI than the others (Mottaleb, 2007, pp.4-6).

A study performed by Edwards between the years 1971 and 1981 covering a sample of less developed countries including Turkey reveals that the size of the economy and the potential extent of scale economies proxied by each country's real

GDP have a positive and significant effect on the foreign capital inflows (Edwards, 1990, pp.9-15).

3.3. Labor Cost

As can be seen from the results of the studies in literature shown on Table 3.2, labor cost is one of the most controversial determinants of FDI. High labor costs distort the competitive strength of companies in both national and international markets because of the resulting increase in the price of products. Therefore, when there is a rise in the cost of labor, an outflow of FDI will be observed. However, the nature of production has become more capital intensive causing a decline on the emphasis put on the cost of labor (Batmaz and Tunca, 2005, pp.21-22). Thus, it can be stated that the educational background and the efficiency of employees are also important from the point of view of investors.

In their study covering the period from 1994 to 1998, Bevan and Estrin present evidence that unit labor cost is significantly and negatively related to FDI receipt. They calculate the unit labor cost as the ratio of annual average wage in the manufacturing sector to annual GDP per capita (Bevan and Estrin, 2000, pp.12-16).

The results of the study conducted by Hatzius on Britain and Germany denote a positive relationship between unit labor costs and FDI outflows in the 1980s. Furthermore, this effect is found to be more pronounced in high-FDI industries (Hatzius, 2000, pp.120-131).

Zhang analyzes 29 provinces in China from 1987 to 1998 including labor cost and labor quality as determinants of FDI. He uses the average wage rate of manufacturing workers as a proxy for labor cost and the quality of labor is measured by the share of secondary school students in the population of each province. The results show that the quality of labor is positively and significantly related to FDI while the coefficient of labor cost is not significant. The insignificance of this variable means that wage differentials between provinces are not important once the decision to invest in China is made (Zhang, 2001, pp.340-343).

Buch and Taubal argue that the controversy on the effect of labor cost as a determinant of FDI results from the different motives for investment. For example, the driving force behind the decision of vertical multinationals, which perform production in geographically fragmented stages, to invest abroad is the reduction of production costs. However, horizontal multinationals, which provide the same kinds of goods and services across countries, make investments in other countries to avoid costs associated with trade. Thus, types of investment are important in explaining the different views on labor cost (Buch and Toubal, 2003, p.601).

3.4. Trade Barriers

When trade barriers or the taxes on goods imported are increased in a country, multinationals will prefer to expand their production in those countries through their subsidiaries. Higher tariffs, which can be regarded as trade barriers, will result in an increase in the amount of FDI to the country. As a result of these tariffs, domestic products will have a competitive advantage over foreign products. Thus, FDI will be the preferred choice over exports. In the same manner, a rise in tariffs in an alternative market will result in a decline in FDI in the host country especially if the FDI has an important commercial intercourse with that alternative market (Batmaz and Tunca, 2005, pp.22-23). Asiedu also reports that when it is difficult for foreign companies to import their products to local markets, they establish subsidiaries in the host country according to the tariff jumping hypothesis. The existence of trade restrictions has a positive effect on the amount of FDI (Asiedu, 2002, p.111).

An example can be given to further explain the issue. When the US limited the amount of automobiles exported by Japan with a voluntary export restraint during 1981-1986, Japan directly invested in the US to avoid the trade barrier (Swamidass and Kotabe, 1993, p.84).

The divergence between the theory of the expected effect of trade barriers on FDI and the empirical results of the studies in literature can be attributed to the different investment motives just as in the case for labor cost. Buch and Toubal state that the existence of tariffs and other trade barriers in the host country will increase the inflow

of horizontal FDI as these investments try to avoid the trade costs associated with exporting. On the other hand, the case is different for vertical FDI. If trade barriers are low, both vertical FDI and flows of trade will be increased (Buch and Toubal, 2003, pp. 601-602).

3.5. Growth Rate

Economies with high growth rates provide the opportunity for high profit generation when compared to low growth rate or stagnant economies. Also, the growth rate of the host country can be interpreted as an indicator of future market size. Therefore, FDI will be diverted to economies with the potential for high profits. However, there is a bidirectional relationship between FDI and economic growth. This means that while economic growth attracts FDI, the resulting inflow of FDI can further enhance economic growth.

Erdal and Tatoglu investigate the location-related determinants of FDI by analyzing the level of FDI inflows to Turkey between the years 1980-1998. The real GDP growth rate is used as a proxy for the attractiveness of the domestic market and is found to have a positive and significant effect on the level of FDI inflows (Erdal and Tatoğlu, 2002, pp.4-5).

The causality of the relationship is studied by Li and Liu. They use real GDP per capita as a proxy for growth of the country on a sample of 84 countries covering 1985-1999. They confirm the existence of a positive and significant relationship between FDI and economic growth. Furthermore, an indirect relation between FDI and growth is determined besides the direct promotion of economic growth by FDI. While economic growth increases the amount of FDI inflow, the inflow of FDI causes economic growth (Li and Liu, 2005, pp.397-400).

3.6. Openness

Chakrabarti hypothesizes that the openness of a country is an important element of the investment decision based on the view that the tradable sector attracts most of the investment projects. He measures the openness of a country by the ratio of exports and imports to GDP and concludes that countries with a high degree of openness to trade are likely to receive more inflows of FDI (Chakrabarti, 2001, p.99 and p.108)

Edwards reports that countries which pursue strategies to have open economies, will be able to capture more of the FDI inflows from other economies. In his work, he measures the degree of openness as the ratio of foreign trade to GDP (Edwards, 1990, p.27).

Asiedu analyzes the effects of FDI determinants to both sub-Saharan Africa (SSA) and non-SSA countries. She discovers that openness to trade draws FDI to SSA and non-SSA countries. However, this determinant has a more pronounced effect on non-SSA countries (Asiedu, 2002, p.115).

In their study, Fernandes-Arias and Hausmann analyze the probability of a currency crisis in a country depending on FDI and non-FDI liabilities with openness and income per capita used as control variables. They find FDI to be safer than non-FDI liabilities and also argue that there is a strong and negative relationship between the degree of openness and the probability of a crisis (Fernandes-Arias and Hausmann, 2000, p.7).

3.7. Trade Deficit

The trade balance is an important indicator of the state of a country's economy. A country with a trade surplus can be regarded as having a well-functioning economy, which will probably induce FDI. Therefore, a negative relationship is expected between a country's trade deficit and its attractiveness for FDI.

Park and Park conduct an analysis using FDI statistics from 24 OECD countries to 50 host countries covering the period of 1982-1999 to investigate the

relationship between the regional trade agreements (RTAs) and FDI. The results of the study show that being a member of a RTA has a positive and significant impact on FDI inflows and that a complementary relationship exists between trade and FDI (Park and Park, 2008, pp.555-564).

3.8. Exchange Rate

Theories regarding the link between FDI and exchange rates were first studied in the 1970s and 1980s. However, no consensus has been reached either in theoretical or empirical studies. The data constraints and model specification problems faced by the researchers prevent them from reaching uniform results (Phillips and Ahmadi-Esfahani, 2008, pp. 506-507).

In their work, Froot and Stein follow an imperfect capital markets approach to examine the relationship between exchange rates and FDI including a comparison of the relationship with other forms of capital inflows. They find that FDI is the only kind of capital flow significantly and negatively related to the value of the dollar, especially in the manufacturing sector. Depreciation of the value of host country currency increases the wealth of the foreigners, making it easier for them to acquire assets (Froot & Stein, 1989, pp. 18-21).

Blonigen studies Japanese acquisitions in the US covering the years 1975-1992 and finds a strong correlation between the periods when the dollar depreciates and higher levels of Japanese acquisition FDI. This shows that the asset valuations are affected by the changes in the value of the currency and the weakening of the host country currency increases the inflows of FDI (Blonigen, 1997, p. 463).

Chen, Rau and Lin find that investment motives of firms affect the relationship between FDI and exchange rates by using panel data on Taiwan's outward FDI into China. They state that weakening of the host country currency increases the FDI outflow of cost-oriented firms while it reduces the FDI outflow of market-oriented firms (Chen, Rau & Lin, 2006, p.282).

3.9. Tax

One of the most important policy instruments by which governments can influence the amount of FDI that they receive is the tax rate. The literature relating to the issue of tax has revealed that taxes have been driven down to low levels due to the competition between municipalities for mobile firms (Davies, Ellis, 2007 pp.1423-1424). Furthermore, the stability of government policies regarding tax rules are more important for FDI than for portfolio investments as the former is more difficult to alter once made (Feldstein, 1994, p.13).

Even though there is a vast literature of empirical work showing the negative effect of high corporate income tax rates on FDI, limited work has been conducted analyzing the association between indirect taxes and FDI. There are three important ways in which the impact of indirect taxes on FDI is different from those of income taxes. First of all, indirect taxes are not dependent on income that will be reported and are thus not related to the use of FDI for tax-purposes or transfer pricing. Second, firms are affected more by income taxes to reduce their capital/labor ratios (therefore FDI) than by indirect taxes. Lastly, because American firms do not have the right to claim foreign tax credits for their payments of indirect tax, they do not give as much emphasis to differences in indirect tax rates as local firms. However, the empirical analysis shows that all types of taxes are related negatively to levels of FDI (Desai, Foley, Hines, 2004, pp. 2728-2729)

A study conducted by Blonigen and Davies analyzing the effect of bilateral tax treaties on the promotion of FDI reveals that FDI activity may be reduced in the short run due to the uncertainty and risk that will be introduced on behalf of the partners of the treaty. However, when the treaty has been fully implemented, investment will be promoted (Blonigen, Davies, 2002, pp.21)

Görg, Molana and Montagna investigate the link between FDI and tax competition from a social welfare perspective. They use panel data for 18 OECD countries for the period of 1984-1998 and find that FDI is not necessarily reduced by corporate taxes if the revenue from taxes is used for public goods that enhance the

environment that the multinational enterprise operates in (Görg, Molana, Montagna, 2009, pp. 36-37).

3.10. Other Determinants

Several other factors have been analyzed in literature to determine whether they affect the level of FDI in a given country. Policymakers should understand the dynamics of the relationship between these factors with FDI in order to apply appropriate policies to attract investment to their countries.

There are several recent studies that investigate the link between environmental pollution and inflows of FDI. The analysis conducted by Hoffmann, Lee and Ramasamy is different in that it examines the existence of a casual relationship between these two variables. They proxy FDI and pollution by the net inflow of FDI and CO₂ emission, respectively. As a result of their empirical work covering a data set of 112 countries for the period 1971 to 1999, they find a positive and significant relationship between these two variables, with high levels of CO₂ attracting more FDI in low income countries. However, the direction of the relationship is just the opposite for middle income countries. When the analysis is conducted for high income countries, no causality is found. The fact that higher pollution attracts more FDI may be due to the tendency of profit driven companies to escape from costly environmental regulations (Hoffmann, Lee and Ramasay, 2005 p.315).

Another study conducted by Blanton and Blanton explores the relationship between human rights and FDI. They use the Political Terror Scale as a tool to proxy the conditions relating to human rights in a country and find human rights to be positively and significantly related to FDI flows after controlling for several other determinants of FDI. They also conclude that education and life expectancy are positively and significantly related to FDI, evidencing the tendency of investors to be diverted towards host countries with better conditions of education and health (Blanton and Blanton, 2007, pp. 149-150).

The state of a country's infrastructure can also be an important determinant for investors' decisions. In their work regarding Turkey, Erdal and Tatoglu find that better

infrastructure leads to increased inflows of FDI and rationalize this by stating that most of the investments are in physical form. They approximate the level of infrastructure development of Turkey by the share of transportation, energy and communication expenditure in GDP (Erdal and Tatoglu, 2002, pp.4-5).

Cultural differences also play a role in determining the destination of FDI flows. Gao states that the closeness of the cultural ties of China to regional sources of FDI increases the attractiveness of the country as a place for investment (Gao, 2005, p.164). Another study performed by Shane evidences that culture has an explanatory power over internationalization decisions and finds cultural distance to be associated with entry modes in which higher control can be exerted (Shane, 1994, p.640).

Membership in an economic integration can also influence FDI flows due to the ease of trade among member nations and the perception that the countries are economically qualified to be a member of such a union. In their study, Bevan, Estrin and Grabbe conclude that the announcement of accession to the EU increases the amount of FDI inflows due to the perception that those countries will improve economically and become proper places for investment. As expected, the authors find that delays in the accession process reduce FDI flows creating a vicious cycle as the lower FDI flows lead to reduced probability of accession (Bevan, Estrin and Grabbe, 2001, pp.1-2).

SECTION 4

4. EFFECTS OF FDI

4.1. Introduction

The effects of FDI can theoretically be analyzed in two main categories. The first deals with the effects of FDI on the home country while the second refers to those on the host country.

FDI can have positive and negative consequences to both countries. The opponents to globalization argue that the multinationals disturb the dynamics of the home country in terms of wages and employment by establishing production facilities in other countries. The wages in the host countries are also depressed as the multinationals take advantage of the workers there. Furthermore, as domestic firms are unable to match the technology of the newcomers, they are driven out of the market and host country growth is reduced (Lipsey, 2002, p.1).

The OECD countries and the developing world agree that the host countries benefit from the inflows of FDI, especially through the transfer of technology and management expertise from the investing firm. They also argue that FDI is the sole method for firms, which produce goods and services that are difficult to trade due to their intangibility or high costs of transfer, to compete on a global basis (OECD, 1998, p.53).

Policymakers in emerging economies believe that inflows of FDI will be beneficial to their countries from several perspectives. First, the domestic firms in these economies will have to engage in strategic restructuring in order to be competitive in the market. The participation of foreigners in domestic firms will enable them to generate the funds necessary to update outdated machinery and methods of production. Second, spillovers of know-how and technology from foreigners will again be beneficial to domestic companies. However, if the average production costs of domestic

firms are increased as a result of a decline in production due to increased competition, these positive externalities can be overshadowed by the negative effect of competition (Konings, 2000, pp.3-4).

4.2. The Effect of Outward FDI on the Home Country

4.2.1. Home Country Exports

In literature, many studies have been conducted investigating the relationship between the production of a country's firms abroad and that country's exports. These studies emphasize the investing firms, the industries they are in or the overall country. No universal relationship has been discovered as there are different situations in which exports have increased or decreased as a result of producing abroad. By analyzing the controversy on the topic, it can be concluded that the overall effect depends on the type and industry of the investment, the state of the country and the economies of scale. Furthermore, trade is influenced by other factors, such as the dynamic production advantages of the countries. Because it is primarily the intellectual capital that is transferred rather than the physical capital or capacity, foreign production has a minor influence on exports (Lipsev 2002, p.13-14).

In his work, Ari Kokko focuses on the effect of FDI outflows on home country production structure and exports. He states that even though investing firms benefit from outward investment, the overall impact on developed home country exports and production is small, depending on the type of the project and the business environment in both countries. He also states that the developing home country effects are similar to the developed host country effects, even though they can be smaller in size and significance (Ari Kokko, 2006, p. 30).

A paper summarizing the research on Swedish outward investment reveals that there is either no change or a small increase in the amount of home country exports due to Swedish investment abroad. Some of the home exports of finished goods are substituted by production abroad. However, the exports of intermediate goods make up for the lost amount due to the larger market share that has been captured by the foreign affiliate (Blomström, Kokko, 1995, pp. 14-26).

4.2.2. Home Country Factor Demand

Outward FDI can result in a change in the production structure of the home country by the tendency of the investing firms to outsource their labor-intensive operations to countries where the cost of labor is lower and keep their advanced and capital-intensive operations at home (Kokko, 2006, p.1). Therefore, factor demand and prices can be affected by FDI and the multinational firms' home production can have lower labor input per unit than those of non-multinationals (Lipsey, 2002, p.15).

Slaughter investigates whether MNE transfer, which can be defined as the shift of activities from the parent to the foreign affiliates in percentage terms, results in an increased demand for skilled labor within the industry and thus affects real wages. Analyzing 32 industries within a period of 14 years, he concludes that MNE transfer does not result in skill upgrading within US industries and has an imprecise and small effect on labor demand in the US (Slaughter, 2000, p.467).

4.3. The Effect of Inward FDI on the Host Country

4.3.1. Host Country Wages

There is a controversy about how multinational production affects wages and conditions in the workplace. The opponents to globalization argue that multinational firms exploit the workers in developing countries by paying them low wages and making them work in unhealthy and unsafe conditions. The logic behind this negative perception is the fact that labor costs represent only a small fraction of a product's selling price. Thus, it is stated that the multinationals can afford to pay higher wages to employees (Brown, Deardorff, Stern, 2003, p.2-51).

Lipsey and Sjöholm find that the wages paid by foreign-owned firms are higher than those paid by privately-owned domestic firms. The results of the empirical analysis reveal that the wages of blue-collar and white-collar workers are 12 and 22 percent higher in foreign plants in Indonesia, respectively (Lipsey and Sjöholm, 2001, pp. 11).

An analysis conducted by Feenstra and Hanson to test the impact of FDI inflows on employment and wages for skilled labor in Mexico in the 1980s reveals that

FDI explains over 50 percent of the increase in the share of wages of skilled labor among overall wages in Mexico. Thus, FDI is found to be positively related with the demand for skilled labor (Feenstra and Hanson, 1997, pp. 387-392).

There are several reasons for foreign firms to pay a higher price for labor compared to domestic firms despite no difference in quality. One reason relates to the regulations of the host country. There can be rules imposed by the authorities in those countries for the payment of a certain level of wages. A second reason is that foreign firms have to pay higher wages to make up for the tendency of the workforce to work in local firms. Third, the foreign firms try to keep employee turnover at a minimum level to prevent their technological know-how from spreading to domestic firms. Another reason for them to pay higher wages is because they are not as accustomed to the labor market as domestic firms (Lipsey, 2002, pp. 21-22).

4.3.2. Host Country Exports and the Introduction of New Industries

The inflows of FDI can transform the export patterns and production composition of, and introduce new industries to, the host economy. In Southeast Asian countries, the share of labor-intensive industries, namely food and textiles, declined while that of chemicals and machinery rose. Furthermore, the share of R&D intensive industries in the composition of exports more than doubled. These developments over the last two decades can be explained by the entry of foreign firms into these countries (Lipsey, 1999, pp. 17-18).

Sousa, Greenway and Wakelin investigate the tendency of domestic firms to engage more in exports as a result of the export spillovers from subsidiaries of MNEs operating in the United Kingdom. They observe a positive and significant relationship between the importance of foreign firms in UK production, their R&D and exporting activities, and the propensity of a domestic firm to export in the period from 1992 to 1996. They conclude that the main reason of this phenomenon is the increase of competition in the domestic market (Sousa, Greenaway, Wakelin, 2000, pp. 12-14).

Pacheco-Lopez explores the causal relationship between FDI and exports in Mexico using an annual data set from 1970-2000. The results indicate a causal

relationship with exports attracting inflows of FDI and the resulting FDI inflows increasing exports (Pachero-Lopez, 2005, p.1169).

4.3.3. Host Country Growth

The advantages that accrue to the host economies associated with MNEs are not only limited to direct effects of investment, employment and production but also to the spillovers to domestic firms (Jones and Wren, 2007, p.72). In order to analyze the effect of inward FDI on the economic growth of the host country, the spillovers from foreign to domestic firms have to be studied (Lipsey, 2002, p.54).

Alfaro, Chanda, Kalemli-Özcan and Sayek investigate the significance of domestic financial markets on the ability of FDI to generate host country growth with backward linkages. The results indicate that the increase in the inflow of FDI in countries with developed financial markets will result in higher growth rates than the ones with less developed markets. Furthermore, the effect of growth is more strongly pronounced when goods of foreign firms and domestic ones are substitutes (Alfaro, Chanda, Kalemli-Özcan, Sayek, 2006, pp. 34-35).

An analysis conducted on a data set of 25 Central Eastern and former Soviet Union transition countries during 1990-1998 reveals the positive and significant impact of FDI on host country economic growth (Campos and Kinoshita, 2002 pp.21-22).

A recent study explores the link between FDI, domestic investment and economic growth using quarterly time-series data in the period 1988-2003 in China. The results indicate a bi-directional relationship between GDP and domestic investment and one-way relationships from FDI to domestic investment and from FDI to GDP. FDI is found to be in a complementary relationship with domestic investment and to have a positive effect on long-run economic growth (Tang, Selvanathan, Selvanathan, 2008, pp.1307-1308).

4.3.4. Host Country Productivity

Productivity spillovers occur when the productivity of local firms is increased with the entrance of a MNE into the domestic economy (Jones and Wren, 2007, p.72). If

foreign firms are more efficient than their domestic counterparts, their productivity may spillover to domestic firms in the same, or related, industries. Local firms can replicate the way foreigners do business willingly or be forced to improve their efficiency to succeed in the now, more competitive, environment. Many studies have been conducted in literature relating to host country productivity and the associated spillovers by foreign firms. Efficiency has usually been defined in these studies as the value added per unit of labor input, value added per unit of labor and capital input, value of output per unit of labor, or capital and intermediate product input (Lipsey, 2002, pp. 34-35).

A study examining the effects of trade policy on productivity, proxied by the value added to employment, shows that productivity is higher in foreign firms and that spillovers of productivity are likely to occur if trade regimes are inward-oriented. When these regimes are not outward-oriented, foreign firms import new technologies that the domestic firms do not possess in order to be able to compete in the local market (Kokko, Zejan, Tansini, 2001, p. 146).

Aslanoğlu investigates the spillover effect of FDI on the manufacturing industry in Turkey covering the period 1988-1993. He concludes that foreign firms perform better than domestic ones in some industries; namely, the manufacture of transport equipment, rubber products, tobacco, and fabricated products other than machinery. By using several spillover models, he finds that the productivity of domestic firms does not increase as a result of the existence of foreign firms. (Aslanoglu, 2000, pp. 1127-1129).

A panel study, which analyzes Venezuelan plants between 1976 and 1989, reveals an increase in the productivity of small plants with foreigner participation in equity and a decline in the productivity of plants of wholly domestic firms. When these two effects are taken into account, a small impact of FDI on the overall economy is observed in the case of Venezuela (Aitken and Harrison, 1999, pp. 615-617).

A recent study evaluates the relationship between productivity and international linkages by using a panel data for the manufacturing plants in Turkey. International linkages are defined as FDI, exports, imports, and licensing. The empirical

analysis evidences that international linkages are positively and significantly related to the productivity of the plants in the years 1990-1996. However, the impact of FDI on productivity is found to be strongest (Yasar and Paul, 2007, pp.385-387).

SECTION 5

5. THE RELATIONSHIP BETWEEN MULTINATIONALITY AND FIRM FINANCIAL PERFORMANCE

5.1. Literature Review

As a result of the increase in the amount of overseas investment in the world economy, many scholars have been investigating the relationship between multinationality and the financial performance of firms for over three decades. However, no consensus has been reached in spite of the vast amount of empirical work. According to Gomes and Ramaswamy, the reason for the lack of consistent findings relates to the fact that the costs of internationalization have been ignored by the early researchers and that the relationship has not been analyzed across time (Gomes and Ramaswamy, 1999, p.178). The individual strategies of firms also add to the complexity of the relationship (Kotabe, Srinivasan, Aulakh, 2002, p.4). In their work, Geringer, Beamish and daCosta show that the diversification strategy of the firm affects its performance. Specifically, related diversification leads to superior performance. Furthermore, the results indicate that a threshold exists beyond which the increase in the degree of internationalization no longer results in better performance (Geringer, Beamish, daCosta, 1989, p.117). The remainder of this section is dedicated to previous empirical research that was instrumental in the development of the model that forms the analytical core of this thesis.

Chhibber and Majumdar emphasize that the nature of the relationship regarding the decision to license, franchise, take part in a joint venture or entirely own a foreign company is an important strategical choice (Chhibber and Majumdar, 1999, p.210). As a result of their empirical analysis, they conclude that foreign firms with a 50 percent or greater foreign shareholding perform better than firms with minority foreign shareholdings and domestic firms in terms of return on sales and return on assets (pp.225-226).

Yudaeva, Kozlov, Melentieva and Ponomavera analyze the productivity of Russian firms with regard to the differences between the ones that are fully domestically-owned and at least partially foreign-owned. The results of their study indicate that foreign firms are more productive than domestic ones. They reason that the difference in efficiency can be due to the benefits that accrue to those firms from their foreign owners in terms of managerial experience, Research and Development (R&D) investments and distribution networks. The ease of access to foreign credit markets is defined as another factor that contributes to the productivity of foreign-owned firms. However, they also conclude that there is no statistically significant difference between the productivity of firms based on the percentage of foreign ownership (Yudaeva, Kozlov, Melentieva, Ponomareva, 2003, p.392-398).

A study conducted by Globerman, Ries and Vertinsky in 1994 assesses the performance of domestic and foreign-owned establishments in Canada. As a result of their empirical work, they conclude that there is no significant difference between the productivity of these two types of establishments once factors like size and capital intensity are controlled for. However, they state that the efficiency and income levels in Canada are increased by FDI because of the tendency of foreign firms to pay higher wages to production workers (Globerman, Ries, Vertinsky, 1994, p.154). In another paper, Globerman explores the indirect advantages of foreign direct investment on domestically-owned Canadian firms. He investigates the spillover effects and finds a positive relationship between the amount of foreign ownership within an industry and the labor productivity of domestically-owned firms (Globerman, 1979, p.53).

Boardman, Shapiro and Vining analyze the profitability differences between domestic firms and MNE subsidiaries in Canada from the perspective of agency costs. They find foreign subsidiaries to be more profitable and productive than their domestic counterparts (Boardman, Shapiro, Vining, 1994, p. 307). Upon further analysis they conclude that the effects of agency are the sources of the performance premium, with more concentrated ownership leading to improved performance (pp.313-314).

A research study performed by Gedajlovic, Yoshikawa and Hashimoto evaluates the impact of ownership structure on the financial performance and

investment behavior of firms in Japanese manufacturing industries. They assert that foreign ownership, which is approximated by the percentage of outstanding shares held by foreign investors, is positively and significantly related to dividend payout. They further conclude that there is a negative and marginally significant relationship between foreign ownership and capital expenditures. However, no relationship is observed between ROA, as an indicator of profitability, and foreign ownership (Gedajlovic, Yoshikawa, Hashimoto, 2001, pp.21-23).

Dimelis and Louri perform an empirical analysis to examine the effect of different levels of foreign ownership on the labor productivity of manufacturing firms, proxied by output per worker. As a result of the empirical study, which employs quantile regression analysis, they conclude that majority ownership by foreigners does not have a significant effect on output per worker for the very productive or least productive firms. However, majority ownership is found to be positively and significantly related to output per worker in the middle-productivity range (Dimelis and Louri, 2002, p.462).

Oulton investigates whether manufacturing and non-manufacturing foreign-owned companies are more productive than domestically-owned companies in the UK. The results indicate that productivity is increased by US ownership in both the manufacturing and non-manufacturing companies by 26% and 34%, respectively. A rise in production is also noticed by non-US foreign ownership with a 14% increase in manufacturing and a 31% increase in non-manufacturing companies (Oulton, 1998, p.10).

Konings uses firm level panel data to explore whether the financial performance of foreign-owned subsidiaries is better than that of domestic firms in three emerging economies. Log of output is used as an indicator of performance and the results of the analysis reveal that foreign firms do not perform better than domestic ones in Bulgaria and Romania. However, a positive and significant effect of foreign ownership on firm productivity is observed in Poland. This finding is explained by the time it takes for foreign ownership to have an impact on performance due to delays in restructuring (Konings, 2000, pp.16-21).

Barbosa and Louri conclude that performance of firms in Portugal is not affected by foreign ownership after controlling for firm and industry specific characteristics. However, they find ownership by foreign investors to have a positive and significant effect on the profitability of firms in Greece measured by gross return on assets in the upper quantiles of the profitability measure (Barbosa and Louri, 2005, pp.97-99).

Douma, George and Kabir analyze the effect of foreign ownership on the financial performance of Indian corporations with a distinction between foreign institutional and foreign corporate shareholders. They find that foreign firms perform better than domestic ones in terms of Return on Assets (ROA) and Tobin's Q. Upon further analysis, they conclude that ownership by foreign corporations has a positive and significant impact on both performance measures. When the results for foreign institutional investors are analyzed, no significant relationship is observed in terms of ROA. However, these investors have a positive and significant impact on Tobin's Q and this impact is larger than that of foreign corporate shareholders. Thus, the researchers conclude that foreign institutional investors may be investing in firms that are already better in terms of market returns (Douma, George, Kabir, 2006, pp.649-651).

Munday, Peel and Taylor conduct a panel data analysis covering the period between 1994 and 1998 to compare the profitability of domestic firms and foreign subsidiaries in the UK. Two profit variables, namely, return on total capital employed and profit margin, are employed to assess the performance of the firms. The results evidence the relatively poor profit performance of foreign subsidiaries in the manufacturing sector with the Japanese being the worst performers (Munday, Peel, Taylor, 2003, pp. 514-516).

Wiwattanakantang evaluates the impact of controlling shareholders on the financial performance of firms in Thailand. As a result of the analysis, he concludes that firms with controlling shareholders are better performers in terms of accounting-based measures, namely ROA and sales-assets ratio. However, no significant difference in performance is observed in terms of Tobin's Q. They further compare the performance of the firms with an emphasis on different types of controlling shareholders. This

comparison finds empirical evidence that family-owned companies, foreign-controlled companies, and firms with more than one controlling shareholder are better in terms of ROA than firms without controlling shareholders (Wiwattanakantang, 2001, p.18).

Gugler tests the association between firm profitability and ownership structure by focusing on the effect of ownership concentration and identity on a sample of non-financial Austrian companies. The results indicate a significant and negative relationship between ownership concentration and profit margin. However, foreign ownership is found to improve firm profitability (Gugler, 1998, p.303).

Blomström and Sjöholm explore the differences in labor productivity between foreign and domestic companies in India. They find foreign ownership to be a statistically significant determinant of firm productivity alongside the level of capital intensity, the skill of the labor force, capacity utilization and operational scale. When foreign firms are further investigated, no statistically significant difference is observed between minority and majority levels of foreign ownership in terms of productivity. They further analyze the spillover effect of the foreign corporations and the results reveal that the productivity of domestic firms are positively affected by foreign presence again with no statistically significant difference between the minority and majority levels of foreign ownership (Blomström and Sjöholm, 1999, pp.5-9).

Kim and Lyn examine the firms operating in the US to gauge whether there are any differences in the performance of foreign and domestic companies. They provide empirical evidence that domestic firms are more profitable in terms of return on equity after taxes, indicating that foreigners invest in the US to take advantage of the technological and economic prospects. Foreign multinationals are also found to be less efficient in terms of asset management which can be shown by their lower turnover ratios than their domestic counterparts. When the performance of the foreign firms are evaluated on the basis of the country of origin, Western European firms are measured to be the most profitable and efficient (Kim and Lyn, 1990, pp.44-49).

Djankov and Hoekman assert that technology transfer will result in an increase in productivity and use total factor productivity as an approximation for technology

transfer. As a result of their study, they find FDI to have a significant and positive impact on the transfer of technology. Firms which are acquired by foreigners are found to have the highest level of growth in total factor productivity, while those without foreign partnerships are proven to exhibit the lowest growth rate in this measure (Djankov and Hoekman, 1999, pp.16-17).

SECTION 6

6. FDI TRENDS IN THE WORLD AND TURKEY

6.1. Recent FDI Trends in the World and Turkey

Because of the key role that FDI plays as a channel for capital flows in the international arena, countries have been adopting policies to create an FDI enabling environment and attract more investment flows. Policymakers change legislation and regulations, reduce corporate income taxes, provide incentives to prospective investors and establish investment promotion agencies to create a favorable climate for investment and thus benefit from the advantages that will accrue to the economies by these inflows.

UNCTAD developed an index to measure the degree to which the economy of a given host country is transnationalized by combining data relating to both FDI figures and indicators of international production. This transnationality index is calculated as the average of four ratios which can be defined as;

- FDI inflows as a percentage of gross fixed capital formation for the past three years,
- FDI inward stocks as a percentage of GDP of the current year,
- Value added of foreign affiliates as a percentage of GDP of the current year,
- Employment of foreign affiliates as a percentage of total employment of the current year.

This index measures the impact of FDI on an economy and the extent to which the host countries benefit from these foreign inflows. As the figures in Table 6.1

indicate, the highest group average is that of the developed countries. It should be noted that Turkey ranks well below the average index value of the developing nations.

Table 6.1
Transnationality Index for Host Economies, 2005

Developed Countries		Developing Countries		Transition Countries	
Belgium	65.9	Hong Kong, China	103.7	TFY Rep. of Macedonia	38.6
Luxembourg	64.8	Singapore	65.2	Bosnia and Herzegovina	29.2
Estonia	49.5	Trinidad and Tobago	48.6	Croatia	26.9
Bulgaria	39.6	Chile	32.5	Ukraine	22.3
Slovakia	37.1	Jamaica	31.5	Moldova, Republic of	17.8
Hungary	33.5	Honduras	29.0	Serbia and Montenegro	16.4
Czech Republic	33.0	Panama	27.7	Russian Federation	11.8
Netherlands	31.9	South Africa	24.9	Albania	10.0
Ireland	29.7	Thailand	22.4	Belarus	3.3
New Zealand	28.5	Bahamas	20.8		
Sweden	28.1	Costa Rica	20.5		
Denmark	26.8	Colombia	20.2		
Norway	23.9	Malaysia	19.2		
Romania	22.8	Ecuador	18.6		
United Kingdom	21.9	United Arab Emirates	17.6		
Latvia	21.4	Argentina	17.5		
Poland	21.0	Guatemala	17.2		
Lithuania	20.6	Egypt	16.3		
France	19.5	Dominican Republic	15.6		
Switzerland	18.4	Venezuela, Bolivarian Rep. Of	15.0		
Portugal	17.5	Mexico	15.0		
Finland	17.2	Peru	14.2		
Israel	16.8	Turkey	13.7		
Austria	16.2	Brazil	13.5		
Spain	16.2	China	12.0		
Australia	16.0	Indonesia	8.8		
Canada	15.5	Philippines	7.9		
Slovenia	13.6	Taiwan Province of China	7.8		
Germany	10.4	Barbados	6.3		
Greece	9.6	Saudi Arabia	6.0		
Italy	9.2	Korea, Republic of	4.5		
United States	6.4	India	4.1		
Japan	1.1				
Group average	24.4	Group average	21.8	Group average	19.6

Source: UNCTAD, World Investment Report, 2008, p.12.

Table 6.3 shows that global FDI inflows reached \$1.83 trillion in 2007 surpassing the previous record level of \$1.40 trillion in 2000. The inflows of FDI into the developed, developing and transition economies have risen for each of the last five years with the greatest increases occurring to the transition economies.

Further, Table 6.3 shows that the inflows to developed countries is 68% of the total world inflows in 2007 or 1.25 trillion. Developing economies make up 27% of the remaining 32% and Turkey constitutes 4.4% of the developing economies' total. After recovering from the financial crises in 2001, Turkey has had a continuous increase in the amount of inflows between 2002 and 2007 in nominal terms. However, when the table is further evaluated in proportional terms together with Figure 6.1 below, it can be seen that there is a slight decline in Turkey's share of inflows in the developing economies and the world in 2007. Even though the global FDI inflows rose by 30% in 2007 and the shares of the developed and transition economies in these flows also increased, Turkey was not successful in attracting more of these recently generated flows. Therefore, it can be stated that the amount of foreign direct investment inflows were inadequate considering the favorable condition of the Turkish economy during the 2002-2004 period.

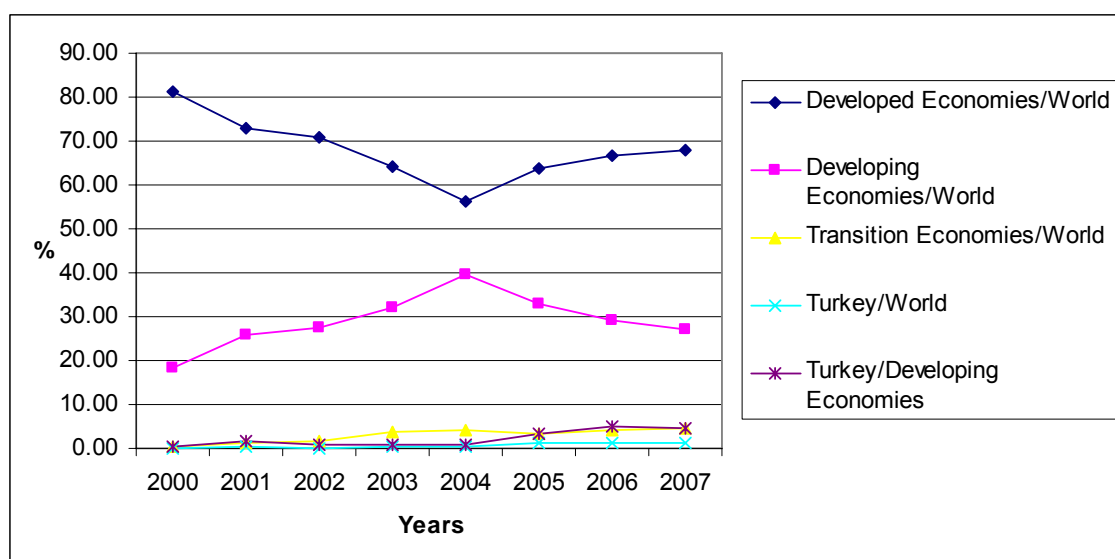


Figure 6.1: Proportion of FDI Inflows between 2000-2007 (%)
Source: UNCTAD, World Investment Report, 2008, p.12.

A closer look at the sectoral distribution of the inward and outward FDI flows reveals that investments into Turkey are predominantly in the services sector while those from Turkey are in the manufacturing sector as shown in Table 6.2. Thus, if the amount of spending on fixed capital investments in the manufacturing sector is increased in Turkey, the economy can attain sustainable development (Istanbul Chamber of Industry, The Turkish Economy in 2008, p. 34).

Table 6.2
Sectoral Distribution of Inward and Outward FDI Flows for Turkey

Panel A: Distribution of Sector of Direct Investment in Turkey by Persons Domiciled Abroad (percent)						
	2002	2003	2004	2005	2006	2007
Agriculture	0.00	0.00	0.00	0.00	0.00	0.00
Mining and Quarrying	0.00	0.02	0.06	0.00	0.01	0.02
Manufacturing	0.18	0.60	0.17	0.09	0.11	0.22
Water, Gas and Electricity Resources	0.11	0.12	0.05	0.00	0.01	0.03
Services	0.71	0.26	0.72	0.90	0.88	0.73
Panel B: Distribution of Sector of Direct Foreign Investment Abroad by Persons Domiciled in Turkey (p						
Agriculture	0.00	0.00	0.00	0.00	0.00	0.00
Mining and Quarrying	0.00	0.00	0.00	0.00	0.00	0.00
Manufacturing	0.30	0.69	0.61	0.90	0.77	0.25
Water, Gas and Electricity Resources	0.00	0.01	0.01	0.00	0.00	0.00
Services	0.70	0.29	0.38	0.10	0.23	0.75

Source: Developed from Turkish Economy Report 2008, pp. 35-36.

Table 6.3
Inflows of FDI

Inward FDI Flows by Host Region and Economy, 1990-2007 (Millions of US \$)									
	1990-1999 (average)	2000	2001	2002	2003	2004	2005	2006	2007
World	402,048	1,398,183	824,445	625,168	561,056	717,695	958,697	1,411,018	1,833,324
Developed Economies	279,483	1,134,572	600,273	442,884	361,056	403,687	611,283	940,861	1,247,635
Developing Economies	118,169	256,616	214,409	171,010	180,109	283,641	316,444	412,990	499,747
Transition Economies	4,395	6,995	9,762	11,274	19,892	30,367	30,971	57,167	85,942
Turkey	772	982	3,352	1,133	1,751	2,785	10,031	19,989	22,029
Comparative Inward FDI Flows, 1990-2007 (%)									
	1990-1999 (average)	2000	2001	2002	2003	2004	2005	2006	2007
Developed Economies/World	69.52	81.15	72.81	70.84	64.35	56.25	63.76	66.68	68.05
Developing Economies/World	29.39	18.35	26.01	27.35	32.10	39.52	33.01	29.27	27.26
Transition Economies/World	1.09	0.50	1.18	1.80	3.55	4.23	3.23	4.05	4.69
Turkey/World	0.19	0.07	0.41	0.18	0.31	0.39	1.05	1.42	1.20
Turkey/Developing Economies	0.65	0.38	1.56	0.66	0.97	0.98	3.17	4.84	4.41

Source: Developed from UNCTAD, World Investment Report, 2008.

Table 6.4
Outflows of FDI

Outward FDI Flows by Host Region and Economy, 1990-2007 (Millions of US \$)									
	1990-1999 (average)	2000	2001	2002	2003	2004	2005	2006	2007
World	418,624	1,231,639	751,297	537,424	562,760	920,151	880,808	1,323,150	1,996,514
Developed economies	372,717	1,093,665	665,694	483,157	507,040	786,004	748,885	1,087,186	1,692,141
Developing economies	44,742	134,784	82,869	49,640	45,039	120,008	117,579	212,258	253,145
Transition economies	1,165	3,191	2,734	4,627	10,681	14,138	14,345	23,706	51,227
Turkey	163	870	497	175	499	780	1,064	924	2,106
Comparative Outward FDI Flows, 1990-2007 (%)									
	1990-1999 (average)	2000	2001	2002	2003	2004	2005	2006	2007
Developed economies/World	89.03	88.80	88.61	89.90	90.10	85.42	85.02	82.17	84.75
Developing economies/World	10.69	10.94	11.03	9.24	8.00	13.04	13.35	16.04	12.68
Transition economies/World	0.28	0.26	0.36	0.86	1.90	1.54	1.63	1.79	2.57
Turkey/World	0.04	0.07	0.07	0.03	0.09	0.08	0.12	0.07	0.11
Turkey/Developing economies	0.36	0.65	0.60	0.35	1.11	0.65	0.90	0.44	0.83

Source: Developed from UNCTAD, World Investment Report, 2008.

When Tables 6.3 and 6.4 are analyzed simultaneously, it can be seen that the outflows of FDI from the developed economies are \$445 billion more than the inflows into these countries in 2007, and the outflows have a higher growth rate than the inflows. The \$1.69 trillion of outflows from the developed nations makes them the major source of foreign investments as can also be seen by their 85% share in total world outflows. The developing nations receive more than they invest abroad and make up 13% of total world outflows. The international expansion of the transnational corporations in Asia is the major reason for the increased significance of the developing countries in world outflows. We also have to note the rise in Turkey's share of the outflows from the developing nations and the world in 2007 together with the decline in its share of the inflows into the developing nations and the world. However, both the outflows from and the inflows into Turkey are increasing in nominal terms. The outflows from the transition economies are also showing a rising trend since 2004 in terms of their share of global outflows.

One thing that has to be taken into consideration while interpreting these tables is the fact that the flows are denominated in US dollars. Therefore, the values and growth levels in 2007 may be inflated as a result of the depreciation of the dollar against the major currencies. The growth rates would be different if the flows were calculated in terms of the currencies of the respective countries rather than only the US dollar. One can get a clearer picture of the trends after comparing the FDI flows into the host economies both in terms dollar and local currency. As can be seen from Table 6.5, the greatest difference between growth rates can be observed in the Euro zone due to the depreciation of the dollar against the Euro.

Table 6.5
Growth rates of FDI flows denominated in US dollars and in local currencies,
2006-2007 (percent)

Host economy	Growth rate of FDI flows denominated in dollars		Growth rate of FDI flows denominated in local currencies	
	2006	2007	2006	2007
World	47.2	29.9	45.5	23.1
Developed economies	53.9	32.6	52.3	24.7
Europe	18.6	41.6	17.3	30.6
EU	12.8	43.0	11.5	31.6
Other developed Europe	421.5	19.9	430.1	14.4
North America	127.3	14.0	124.3	12.1
Developing economies	30.5	21.0	28.9	17.0
Africa	55.3	15.8	53.4	14.1
North Africa	89.2	-3.2	85.9	-5.7
Other Africa	31.2	35.3	30.4	34.4
Latin America	21.6	36.0	18.5	30.6
South America	-3.0	66.9	-7.8	54.9
Central America	1.8	26.6	0.0	27.2
Asia	29.9	17.0	28.9	13.1
West Asia	50.1	11.7	53.4	8.6
South, East and South-East Asia	24.8	18.6	22.6	14.5
East Asia	13.5	18.8	11.8	16.2
South Asia	112.4	18.8	117.5	11.1
South-East Asia	31.6	18.1	25.3	11.8
Transition economies	84.6	50.3	78.9	42.2

Source: UNCTAD, World Investment Report, 2008

When the flows are further segmented by country, it is observed that the top three sources of FDI flows are also the top three recipients, namely, the United States, the United Kingdom and France. Table 6.6 lists the top 20 countries based on nominal terms and reveals that almost all of the countries are either a developed or developing economy. The Russian Federation is the only one that belongs to the group of transition economies. We can see from this table that Turkey ranks as the 23rd and the 50th in terms of inflows and outflows, respectively. However, the picture is totally different when the countries are evaluated according to the performance indices that are

developed by UNCTAD to gauge the relative amount of FDI that countries attract or invest abroad.

Table 6.6
Top 20 countries based on the amount of inflows and outflows of FDI without regard to the size of their economies (millions of US dollars)

Inflows of FDI			Outflows of FDI		
Rank	Economy	Amount	Rank	Economy	Amount
1	United States	232,839	1	United States	313,787
2	United Kingdom	223,966	2	United Kingdom	265,791
3	France	157,970	3	France	224,650
4	Canada	108,655	4	Germany	167,431
5	Netherlands	99,438	5	Spain	119,605
6	China	83,521	6	Italy	90,781
7	Hong Kong, China	59,899	7	Japan	73,549
8	Spain	53,385	8	Canada	53,818
9	Russian Federation	52,475	9	Hong Kong, China	53,187
10	Germany	50,925	10	Luxembourg	51,649
11	Belgium	40,628	11	Switzerland	50,968
12	Switzerland	40,391	12	Belgium	49,667
13	Italy	40,199	13	Russian Federation	45,652
14	Brazil	34,585	14	Sweden	37,707
15	Austria	30,675	15	Austria	31,437
16	Ireland	30,591	16	Netherlands	31,162
17	Mexico	24,686	17	Australia	24,209
18	Saudi Arabia	24,318	18	British Virgin Island	22,591
19	Singapore	24,137	19	China	22,469
20	India	22,950	20	Ireland	20,774
23	Turkey	22,029	50	Turkey	2,106

Source: UNCTAD, World Investment Report, 2008.

The Inward FDI Performance index computed by UNCTAD is a useful tool to evaluate the amount of FDI countries receive and is adjusted for the size of each country's economy. It is determined by dividing the share of a country in world FDI inflows by its share in global GDP. Thus, it provides a better understanding of the relative performance of countries based on factors like the state of the business environment and technological progress. The Outward FDI Performance Index is also calculated in the same manner by dividing the share of a country in the world outward FDI flows by its share in the global GDP. Analyzing the countries based on these

indices reveals that the countries that rank highest are typically the relatively small ones.

Another indicator developed by UNCTAD is the Inward FDI Potential Index, which measures the degree to which investors believe a country to be a proper place for investment.

Table 6.7
Top 20 Country Ranking and Turkey based on Inward Performance Index*

Economy	Inward FDI Performance Index			Inward FDI Potential Index			Outward FDI Performance Index		
	2005	2006	2007	2005	2006	2007**	2005	2006	2007
Hong Kong, China	3	2	1	11	10	-	3	2	3
Bulgaria	7	3	2	60	59	-	73	63	57
Iceland	12	4	3	10	12	-	1	1	2
Malta	9	5	4	53	55	-	18	120	114
Bahamas	8	8	5	38	50	-	-	-	-
Jordan	13	7	6	64	65	-	55	81	82
Singapore	4	6	7	2	2	-	12	8	10
Estonia	6	9	8	35	34	-	22	17	15
Georgia	16	15	9	94	102	-	124	125	120
Lebanon	10	13	10	76	82	-	51	56	61
Guyana	33	20	11	104	109	-	109	106	-
Bahrain	21	12	12	29	30	-	9	11	9
Belgium	11	10	13	17	15	-	7	7	6
Gambia	14	11	14	113	115	-	-	-	-
Panama	26	16	15	63	67	-	4	5	5
Mongolia	17	19	16	75	71	-	-	-	-
Tajikistan	32	18	17	97	93	-	-	-	-
Cyprus	23	24	18	45	47	-	15	19	21
Moldova, Republic of	34	27	19	83	79	-	91	99	88
Egypt	67	31	20	82	83	-	80	80	76
Turkey	107	86	84	69	72	-	70	72	77

Source: UNCTAD, World Investment Report, 2008

* The countries are listed based on their 2007 rankings. Rankings are based on indices derived using three-year moving averages of data on FDI flows and GDP for the three years immediately preceding the year in question including that year.

** Inward FDI Potential Index could not be developed by UNCTAD due to data limitations

Table 6.7 shows that Turkey is an under-performer relative to its economic indicators and the size of its population. Even though Turkey is attractive to foreign investors in terms of labor costs, skills and supplies, there are several issues that must be addressed to improve the competitive position of Turkey as a place for investment. The problems that have to be dealt are the lack of political stability and the lack of adequate communications infrastructure, transportation and energy distribution. Efficient investment promotion activities should also be carried out to communicate the strengths and opportunities in Turkey to the sources of capital. Also, several measures need to be taken to reduce the costly bureaucratic barriers and corruption. Furthermore, the

protection of intellectual property rights should be improved to protect investors and create a more favorable investment climate.

6.2. The Impact of the 2008 Financial Crisis on FDI Flows

One of the most obvious reasons for the recent upward trend in FDI flows was the high corporate profits and the sustained growth achieved in different parts of the world. When companies were faced with competitive pressures, they engaged in cross-border merger and acquisition (M&A) activity with the abundance of funds they had amassed as a result of their strong financial performance. The easy financing conditions also provided a favorable environment for these international transactions.

The economic downturn occurred as a result of the global financial crisis that originated from the US sub-prime mortgage market towards the end of 2007; however, it did not have a negative impact on M&A activities that year. Nevertheless, the volume and number of deals in the M&A market contracted drastically in 2008 due to the resulting global liquidity crisis and the credit crunch. The number of the deals in 2005, 2006, 2007 was 32,568, 36,598 and 42,437, respectively. Figure 6.2 shows that a total of 28,871 deals were negotiated until September 2008 with a volume of \$2.5 trillion. Thus, the poor investment climate due to the global financial crises resulted in a 44% decline in the volume of overall M&A activity. The downtrend is expected to go on in 2009 as well.

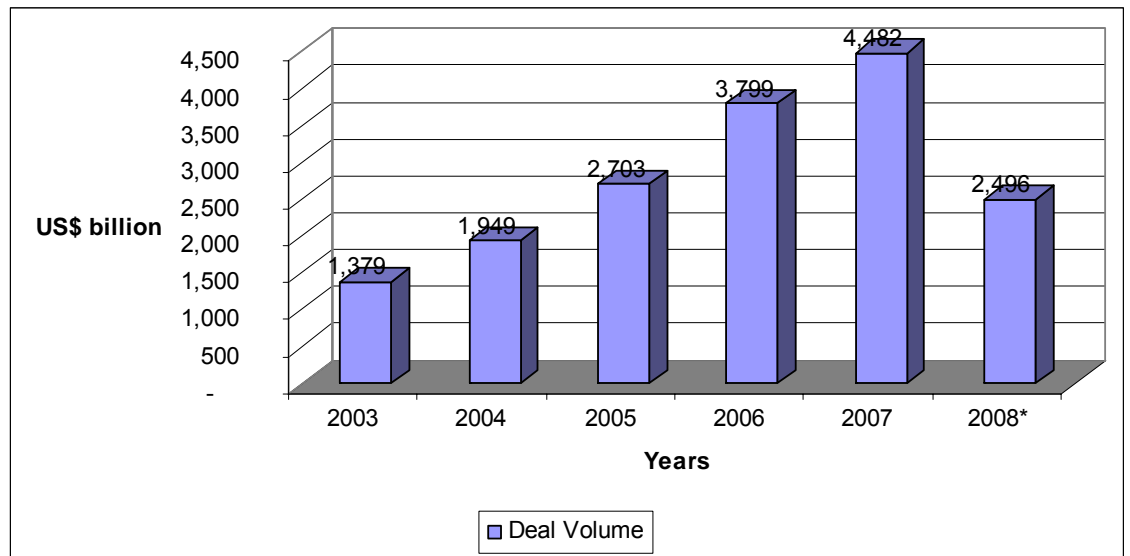


Figure 6.2: Global M&A Volume*

Source: Deloitte, Annual Turkish M&A Review 2008

*The data is available as of September 2008

Even though the origin of the financial crisis is the United States, all of the players in the international arena are affected by this phenomenon. The deterioration of the industrialized economies will have a large negative impact on the development of the emerging countries as the developed ones will be more likely to invest in their home markets and postpone going abroad. The major reasons for this trend are the reduced profits of the corporations and the lack of confidence in the business world. According to UNCTAD Investment Brief, overall world FDI flows are expected to decline by more than 20% to \$1.45 trillion due to the increased risks and associated credit crunch in 2008 with the greatest impact being on the inflows to the developed nations (UNCTAD Investment Brief, 2009). The figures seem better for the FDI flows to the developing and transition economies with an estimated 4% growth rate in 2008, which is much lower than 2007. However, as these nations were mostly affected by the financial crisis in the last quarter of the year, 2009 is expected to be weaker than 2008.

As FDI usually takes the form of M&A activity at the firm level, we look at the Turkish M&A market in 2008 to get a better understanding of the condition of foreign flows.

Table 6.8
2008 Turkish Market Snapshot

Deal Number	172
Deal Volume*	US \$18.4 bn; (38% of total volume)
Privatizations	US \$7 bn
Foreign Investors*	75% of deal value
Financial Investors*	35% of deal value
Average Deal Size	US \$105 mn
Largest Deal Value	US \$3.1 bn (Migros)

Source: Deloitte, Annual Turkish M&A Review 2008

*These figures include estimates for deals with undisclosed figures

Clearly the situation in the international markets impacts the M&A deals in Turkey as well. However, other than the economic slowdown in the global markets, the Turkish economy was also constrained by the uncertainty caused by the presidential and general elections. These two political events cast further doubt on the Turkish market despite the favorable conditions that were achieved in the post 2001 period. As Table 6.8 above reveals, the volume of the deals in 2008 totals of \$18.4 bn, which is 60% below that of the previous year. Due to the deepening of the global crisis and the recession faced by the developed economies, it will be more and more difficult for Turkey to attract foreign investors. Thus, it can be stated that the prospects for 2009 are not very favorable. The perceptions of investors on the riskiness on Turkey as an investment destination are likely to deteriorate if policymakers come up with ‘quick-fix’ solutions rather than those that focus on the long-term.

Table 6.9 below reveals the components of FDI Inflows based on the data released by T.C. Prime Ministry Undersecretariat of Treasury. The overall decline of 19.6% is noteworthy. Furthermore, the inflows of International Direct Investment Capital have decreased by 22.7%. If worse is expected to happen in 2009, Turkish policymakers have a lot to do to improve the investment climate and thus prevent

divestments by foreign investors and also receive a larger share of the inflows to the developing nations.

Table 6.9
Components of International Direct Investment Inflow, (2007- 2008)

	2007	2008	% Change
International Direct Investment Total (Net)	22,046	17,718	-19.6
International Direct Investment Capital	19,120	14,781	-22.7
Equity Investment (Net)	18,393	14,407	-21.7
<i>Inflows</i>	<i>19,136</i>	<i>14,442</i>	<i>-24.5</i>
<i>Outflows</i>	<i>-743</i>	<i>-35</i>	<i>-95.3</i>
Intra Company Loans*	727	374	-48.6
Real Estate (Net)	2,926	2,937	0.4

Source: Republic of Turkey Prime Ministry Undersecretariat of Treasury

*Loans which companies with foreign capital take from foreign partners
Provisional Data

SECTION 7

7. EMPIRICAL RESEARCH

7.1. Data and Sample Selection

The data used in this study is obtained from the publicly available database of the Istanbul Stock Exchange (ISE). This database contains a vast amount of information concerning the ISE 30, ISE 50 and ISE 100 indices. The annual reports that display the shareholding structures, the financial statements, the footnotes to these statements and any other data relating to the dividend policies and exporting and importing behavior of the companies are collected from the database on a yearly firm basis for each firm. Furthermore, in order to conduct the analysis on the largest data set available, the personnel of the ISE are contacted to collect any data missing from the website. The data set consists of the non-financial companies listed on the ISE covering the 3 year time period from 2005-2007. Some companies are omitted due to a lack of data. Previous years are not included in this study to prevent any distortion that may result from the application of Inflation Accounting Practices in Turkey. Thus, a balanced panel data set of 205 companies is employed, resulting in a final sample of 615 firm-year observations.

7.2. The Variables

In this subsection, a detailed explanation of the variables used is provided. The list of the variables and how they are measured is given in Table 7.1 below, followed by detailed explanations as to why they are included in the analysis.

Table 7.1
Variable Names and Definitions

The dependent variables	
EBITTA	The ratio of earnings before interest and tax to total assets
ROA	The ratio of net income to total assets
ROS	The ratio of net income to net sales
ROE	The ratio of net income to total equity
The explanatory variables	
FDIPERCENT	The percentage of shares that are owned by foreigners
MIN	A dummy variable equal to unity if foreigners own 50 percent or less of the shares of the company (but more than 10 percent), and otherwise equal to zero
MAJ	A dummy variable equal to unity if foreigners own more than 50 percent of the shares of the company, and otherwise equal to zero
MIN2005	A dummy variable equal to unity if the foreigners own 50 percent or less of the shares of the company (but more than 10 percent) in year 2005, and otherwise equal to zero
MIN2006	A dummy variable equal to unity if the foreigners own 50 percent or less of the shares of the company (but more than 10 percent) in year 2006, and otherwise equal to zero
MIN2007	A dummy variable equal to unity if the foreigners own 50 percent or less of the shares of the company (but more than 10 percent) in year 2007, and otherwise equal to zero
MAJ2005	A dummy variable equal to unity if the foreigners own more than 50 percent of the shares of the company in year 2005, and otherwise equal to zero
MAJ2006	A dummy variable equal to unity if the foreigners own more than 50 percent of the shares of the company in year 2006, and otherwise equal to zero
MAJ2007	A dummy variable equal to unity if the foreigners own more than 50 percent of the shares of the company in year 2007, and otherwise equal to zero
DOM2005	A dummy variable equal to unity if the firm is fully domestically owned or the share of foreign ownership is less than 10 percent in the year 2005
DOM2006	A dummy variable equal to unity if the firm is fully domestically owned or the share of foreign ownership is less than 10 percent in the year 2006
The control variables	
SIZE	The log of net assets
AGE	The number of years since the establishment of the firm to the observation date
DEBT	The ratio of long and short term debt to total assets
CLTA	The ratio of current liabilities to total assets
IMPCOGS	The ratio of imports to cost of goods sold
EXPNETSALES	The ratio of exports to net sales
DIVPAYOUT	The dividend payout ratio obtained from the ISE
CAPINTENSITY	The ratio of net fixed assets to total assets
INVTURNOVER	The ratio of cost of goods sold to average inventory
CURRENTRA	The ratio of current assets to current liabilities
NETSALESTA	The ratio of net sales to total assets

7.2.1. Dependent Variables

Four different accounting based measures are used as dependent variables in this study to evaluate the level of corporate financial performance. The reason why accounting based measures are employed in this analysis relates to their superiority to certain other performance measures, which are based on the stock market. As noted by Prowse, stock market returns are affected by the differences between the interests of managers and shareholders (Prowse, 1992, p. 1137). Furthermore, Demsetz and Villalonga also note the fact that accounting profit rates are not distorted by the investors' psychology and do not fail to provide insight into the future to a certain extent by including estimations that are made on issues like goodwill and depreciation (Demsetz and Villalonga, 2001, p. 213). Boardman and Vining cite that empirical research find accounting based measures to be highly correlated with economic rates of return (Boardman and Vining, 1989, p.11).

One of the measures used to proxy financial performance is the ratio of earnings before interest and tax to the total assets of the company (EBITTA). This ratio determines the capability of a firm to generate profits from its assets before the deduction of interest and taxes. Therefore, this variable measures the operating profitability and acts as an indicator of the efficiency of the company in its operations without the influence of the financing decisions of the managers.

The ratio of net income to total assets (ROA) is used as another indicator of financial performance. This ratio measures investment productivity and has been widely used in literature in studying the link between ownership and performance. Some of the studies that have employed this ratio are the works of Gedajlovic, Yoshikawa and Hashimoto (2001), Douma, George and Kabir (2006), Thomsen and Pedersen (2000), Hu and Izumida (2008), Chhibber and Majumdar (1999).

Another ratio that has been used in previous empirical work is the net profit margin on sales (ROS) which is computed by the ratio of net income to the net sales of the company. The analysis of the descriptive statistics reveals that Turkey displays above average levels of this ratio during the years that are analyzed. This fact indicates

that the companies are faced with an imperfect competitive environment and that further inquiry into the relationship between this ratio and foreign ownership can provide meaningful results. Chhibber and Majumdar (1999), Majumdar (1997), and Boardman and Vining (1989) have employed this ratio in their works as a dependent variable.

The variable that is employed to indicate the efficiency of a company in generating profits from the stockholders' investment is the ratio of net income to the total equity of the firm (ROE). However, it should be noted that this ratio can fluctuate among the years due to the dividend policies' of the companies. Kim and Lyn (1990) and Boardman and Vining (1989) used this measure in their analyses.

7.2.2. Explanatory Variables

This study aims to investigate the influence of foreign ownership on firm financial performance. Thus, several explanatory variables are used in three different types of models that are run to conduct a detailed analysis.

In the first model, the percentage of shares that are owned by the foreigners, which is denoted by FDIPERCENT, is employed to understand whether foreign-owned firms perform better than the domestic ones. It should be noted that, firms with less than 10 percent foreign ownership are considered to be domestic firms in line with the Turkish Laws and Regulations.

In the second model, two dummy variables, which are named as MIN and MAJ, are included depending on the assumption that different degrees of foreign ownership in a company can have divergent impacts on financial performance. In this model, domestic ownership is regarded as the benchmark of the analysis. The dummy variable MIN takes the value 1 if foreigners own 50 percent or less of the shares of the company (but more than 10 percent). The second dummy variable MAJ takes the value 1 if foreigners own more than 50 percent of the shares of the company. Thus, the impact of different levels of foreign ownership can be disentangled with the inclusion of these categories.

Because the time interval of this study covers three years, eight different dummy variables are created to further analyze the yearly influence of different levels of foreign ownership on firm financial performance. The dummy variable named MIN2005 takes the value 1 if the foreign ownership is equal to or less than 50 percent but more than 10 percent in 2005. Likewise, the dummy variable denoted by MAJ2005 takes the value 1 if the foreign ownership is more than 50 percent in 2005. The dummy variable labeled as DOM2005 takes the value 1 if the firm is fully domestically owned or the share of foreign ownership is less than 10 percent in 2005. In the same manner, the other dummy variables employed in this model can be named as MIN2006, MAJ2006, DOM2006, MIN2007 and MAJ2007. In this model, domestic ownership in 2007 is regarded as the benchmark of the analysis.

7.2.3. Control Variables

After having examined previous empirical work, several firm and industry related variables are included in this study to eliminate the likely impact of other factors on corporate financial performance and to accurately demonstrate whether there are any significant differences in the financial performance of the firms due to foreign ownership. Thus, in this part of the empirical analysis, the control variables employed in the analysis are thoroughly discussed.

First, the impact of firm specific characteristics has to be controlled for. Large firms present several advantages over smaller firms because of the broad set of capabilities they possess, the economies of scale and scope they achieve, and the efficient manner in which they conduct their activities (Majumdar, 1997, p.233). On the other hand, small firms have the potential to be more flexible and perform better as they are not structured to have many hierarchical levels and are less exposed to the phenomenon of loss of control (Williamson, 1967, pp. 134-135). Thus, different sizes of companies can be considered to be one of the reasons for performance differences. Further, an approximation for the firms' market power and degree of concentration in the specific industries they operate in cannot be measured due to the issue of data availability. Therefore, the use of SIZE as a control variable can also be an approximation for the firms' market power and competitive position. Most studies in

literature have found a positive and significant relationship between firm size and performance. They can be listed as the works of Chhibber and Majumdar (1999), Majumdar and Chhibber (1999), Majumdar and Datta (2008), Gedajlovic, Yoshikawa and Hashimoto (2001), Globerman, Ries and Vertinsky (1994), Barbosa and Louri (2005), and Douma, George and Kabir (2006). In this study, log of net assets is used as an approximation for firm size.

The age of the firm (AGE) can have a significant impact on its performance and is calculated in this study as the number of years since establishment of the firm to the observation date. Older firms can demonstrate superior performance as a result of experience. On the other hand, there is a probability that firms can become more bureaucratic as they get older and lose the flexibility to adapt to changes in the environment. Thus, they may not make the necessary moves to deal with competition in a timely manner. Another issue that has to be taken into consideration is the impact of age on firm profitability. New subsidiaries of the MNCs need to invest more and this can affect their profitability and tax figures. Furthermore, these companies can engage in strategies to increase their presence in the market and sacrifice short-term profits for long-term profits (Munday et. al., 2003). Previous empirical work conducted by Douma, George and Kabir (2006), Majumdar and Chhibber (1997), Chhibber and Majumdar (1999) determine a significant and negative relationship between firm age and performance. However, a significant and positive impact of age on performance is observed in the work of Majumdar and Datta (2008).

The level of debt (DEBT) is used as a control variable in order to approximate the financial risk of the company and gauge the impact of the financial policy of the firm on performance. It also indicates the bargaining power and dependency of the firm on the capital markets (Barbosa and Louri, 2005, p.79). Leverage impacts firm profitability due to the differences in interest obligations that arise when the terms of borrowing are negotiated (Demsetz and Villalonga, 2001, p.221). Furthermore, monitoring by governmental and private creditors is increased as the amount of debt that is undertaken by the firm is increased (Chhibber and Majumdar, 1999, p.223). Previous works by Chhibber and Majumdar (1999), Majumdar and Datta (2008),

Barbosa and Louri (2005), Perini, Rossi and Rovetta (2008), Kapopoulos and Lazaretou (2007) signal a significant and negative relationship between the level of debt and firm performance. In this analysis, it is measured by the ratio of long and short term debt to total assets.

The ratio of current liabilities to total assets is also used as a control variable (CLTA) to provide further insight into the influence of debt on the firm performance. Therefore, a detailed analysis can be conducted by focusing on the duration of the firms' obligations.

The ratio of imports to cost of goods sold (IMPCOGS) is used in the analysis to capture some part of the competitive strengths of the companies. As noted by Chhibber and Majumdar (1999), the impact of the imports of raw materials and supplies on firm performance cannot be anticipated. When firms engage in imports, higher quality goods with the potential of generating higher profits can be produced and customers can be charged more for these distinctive products (Chhibber and Majumdar, 1999, p.219). However, imports can also have a negative effect on firm profitability because of the changes in exchange rates. Majumdar (1997) finds a negative and significant relationship between the ratio of imports to total operating expenses and the return on sales. They justify this phenomenon by the rent-seeking activity of the firms in India.

Another control variable that is introduced to gauge the competitive condition of the firms is the ratio of exports to net sales (EXPNETSALES). Firms that export more of their products tend to be more progressive and risk-oriented in order to become successful players in the international arena. Thus, they can achieve superior performance (Chhibber and Majumdar, 1999, p.219). However, changes in exchange rates can also have a negative impact on the performance of firms that engage in exports just as in the case for imports. Majumdar (1997) and Chhibber and Majumdar (1999) signal to a positive and significant impact of exports on firm profitability.

In order to control for the future growth prospects of the companies, dividend payout ratio (DIVPAYOUT), obtained from the ISE, is used as a control variable. A

high ratio of dividend distribution by a company can be an indicator of a profit seeking tendency (Thomsen and Pedersen, 2000, p. 698). In this study, dividend yield figures are taken from the database of the ISE to proxy for the differences in performance that arise from the dividend policies of the companies.

The capital intensity (CAPINTENSITY) of a firm can be regarded as an industry-related control variable and is considered to measure the differences in the input structures of firms. Firms engage in these expenditures to enhance the efficiency of their operations. The ratio of net fixed assets to total assets is used as a proxy to capture the intensity of capital. Chhibber and Majumdar (1999) indicate a significant and negative relationship between capital intensity and the performance of the firm. This ratio is also an indicator of the solvency of firms (Hu and Izumida, 2008, p.344).

The inventory turnover ratio (INVTURNOVER), which is calculated as the ratio of cost of goods sold to average inventory in this study, can control for the differences among industries based on the fact that certain industries require larger stockholdings. Furthermore, this ratio can help measure performance at the firm level as it acts as an indicator of the company's efficiency in the management of its assets and plays an important role in performance improvement. Keeping inventory idle places a burden on the organization in that higher interest costs are incurred and the need for working capital is increased (Majumdar and Chhibber, 1999). Thus, the poor management of inventories distorts firm performance.

The short-term liquidity of a company can also be an indicator of performance. The ability of the firm to meet short term cash requirements can prevent it from getting into financial difficulty. However, due to the fact that lower rates of return are generated on the current assets, too much liquidity can be a sign of poor management of company assets. The variable CURRENTRA, calculated as the ratio of current assets to current liabilities, is introduced to draw an inference about the impact of short-term asset management on performance.

The variable NETSALESTA is included as another control variable and measures the competency of the company in the successful management of its assets.

This variable is calculated as the ratio of net sales to total assets of the firm. Barbosa and Louri (2005) conduct analysis on two samples of firms from Portugal and Greece and conclude on a significant and positive relationship between this ratio and firm profitability.

The following two tables show the descriptive statistics with the companies categorized in terms of their ownership structures on a yearly basis. In Table 7.2, the results of the descriptive analysis including the standard deviation, mean, minimum and maximum for the minority foreign-owned, majority foreign-owned and domestic firms in the years 2005, 2006 and 2007 are provided for the explanatory variable FDIPERCENT and the four dependent variables. The percentage of foreign ownership is rather stable not showing a major change during the observation period. This finding provides some evidence for the fact that ownership structures do not adjust quickly to changes in financial performance. However, this issue of causality will be addressed in the following parts of the analysis. The means of the financial performance measures show that minority foreign-owned companies perform better than the others in terms of ROA and EBITTA in all of the years. When the performance measure employed is ROS, majority foreign-owned companies are found to be the best performers in the years 2005 and 2006. However, minority foreign-owned companies perform better than majority foreign-owned and domestic firms with a mean of 0.0826 in 2007. Minority foreign-owned firms are again more profitable than others in the years 2006 and 2007 when ROE is used as the performance measure. But, majority foreign-owned firms perform better than them with a mean of 0.0792 in 2005. Thus, the descriptive statistics reveal that domestic firms are the worst performers in terms of the means of all four ratios included, namely ROA, ROS, ROE and EBITTA. However, more reliable findings will be obtained in the section displaying the results of the panel data analysis.

Table 7.2
Descriptive statistics of the explanatory variable FDIPERCENT and four dependent variables by type of ownership

CATEGORIES	FDIPERCENT	ROA	ROS	ROE	EBITTA
STD. DEV. 2005 DOM.	0.0000	0.1006	0.4718	1.3902	0.0851
MIN. 2005 DOM.	0.0000	-0.6007	-4.8467	-16.5564	-0.2665
MAX. 2005 DOM.	0.0000	0.3111	0.5460	3.7383	0.2701
MEAN 2005 DOM.	0.0000	0.0088	-0.0430	-0.0643	0.0243
STD. DEV. 2005 MIN.	0.1102	0.1167	0.2043	0.3704	0.0938
MIN. 2005 MIN.	0.1307	-0.3425	-0.7371	-1.5514	-0.0904
MAX. 2005 MIN.	0.4673	0.2716	0.4844	0.3404	0.2958
MEAN 2005 MIN.	0.3079	0.0682	0.0506	0.0540	0.0966
STD. DEV. 2005 MAJ.	0.1426	0.0885	0.0979	0.1402	0.1113
MIN. 2005 MAJ.	0.5313	-0.0932	-0.1040	-0.1869	-0.0529
MAX. 2005 MAJ.	0.9867	0.2581	0.2750	0.3317	0.3610
MEAN 2005 MAJ.	0.8050	0.0560	0.0621	0.0792	0.0732
STD. DEV. 2006 DOM.	0.0000	0.1653	0.9898	1.1542	0.1125
MIN. 2006 DOM.	0.0000	-0.9918	-8.0357	-11.3340	-0.4148
MAX. 2006 DOM.	0.0000	0.3647	0.7908	4.4561	0.5498
MEAN 2006 DOM.	0.0000	-0.0015	-0.1487	-0.0498	0.0455
STD. DEV. 2006 MIN.	0.1096	0.1089	0.1293	0.2493	0.0956
MIN. 2006 MIN.	0.1307	-0.1933	-0.2192	-0.7064	-0.0920
MAX. 2006 MIN.	0.4673	0.3040	0.4336	0.4890	0.2991
MEAN 2006 MIN.	0.3065	0.0790	0.0679	0.1237	0.1120
STD. DEV. 2006 MAJ.	0.1475	0.1444	0.1841	0.5872	0.0948
MIN. 2006 MAJ.	0.5313	-0.2422	-0.3025	-2.2447	-0.1437
MAX. 2006 MAJ.	0.9867	0.4694	0.6205	0.6092	0.2378
MEAN 2006 MAJ.	0.7858	0.0754	0.0873	0.0262	0.0820
STD. DEV. 2007 DOM.	0.0000	0.1258	1.1847	0.2786	0.1270
MIN. 2007 DOM.	0.0000	-0.3934	-13.7555	-0.9760	-0.3934
MAX. 2007 DOM.	0.0000	0.7703	2.7285	1.5695	0.7703
MEAN 2007 DOM.	0.0000	0.0395	-0.0351	0.0650	0.0381
STD. DEV. 2007 MIN.	0.0977	0.0709	0.0743	0.3221	0.0887
MIN. 2007 MIN.	0.1307	-0.0605	-0.0513	-1.1250	-0.0842
MAX. 2007 MIN.	0.4673	0.2241	0.2690	0.5424	0.2831
MEAN 2007 MIN.	0.3296	0.1035	0.0826	0.1009	0.1101
STD. DEV. 2007 MAJ.	0.1566	0.1955	0.2192	0.6309	0.2398
MIN. 2007 MAJ.	0.5100	-0.8372	-0.8865	-2.9121	-0.6929
MAX. 2007 MAJ.	0.9915	0.1785	0.2462	0.2510	0.8465
MEAN 2007 MAJ.	0.7617	-0.0086	-0.0031	-0.0820	0.0671

The results of the descriptive analysis relating to the standard deviation, mean, minimum and maximum for the minority foreign-owned, majority foreign-owned and domestic firms in the years 2005, 2006 and 2007 are provided for the control variables in Table 7.3. In this table, assets and net sales figures are provided in monetary terms to compare the sizes of different categories of companies. Minority foreign-owned firms are found to be the largest ones based on assets and net sales in monetary terms. They are also found to be the best managers of assets as can be concluded from the largest NETSALESTA figures for the three years analyzed. Furthermore, these firms also display the highest dividend payout ratios, only with the exception of 2007. Table 7.3 also shows that domestic firms are more capital intensive than the others and have the largest debt ratios during the observation period. These firms are also found to exhibit the highest current ratio figures. One other important thing to notice is that these firms have the lowest ratio of imports to cost of goods sold. The firms that display the highest exports to net sales ratio in all three years are the majority foreign owned ones, which are also found to be the oldest firms in average. Detailed analysis will also be provided for these variables in the section relating to the panel data analysis.

Table 7.3
Descriptive statistics of the control variables by type of ownership

CATEGORIES	ASSETS	NETSALES	AGE	DEBT	CLTA	IMPCOGS	EXPNETSALES	DIVPAYOUT	CAPINTENSITY	INVTURNOVER	CURRENTRA	NETSALESTA
STD. DEV. 2005 DOM.	1,176,919,089	1,703,418,813	13	0.3926	0.2369	0.2738	0.2828	2.3551	0.2079	1.0488	3.4234	0.8498
MIN. 2005 DOM.	3,509,868,7278	194,866.0000	2	0.0146	0.0102	0.0000	0.0000	0.0000	0.0132	0.0052	0.1692	0.0122
MAX. 2005 DOM.	7,211,384,713	14,844,804,000	72	3.7908	1.4651	1.8794	1.7235	14.2356	0.9644	11.9403	26.3974	8.4165
MEAN 2005 DOM.	506,561,365	545,916,312	32	0.4928	0.3146	0.2478	0.2271	1.2273	0.5330	0.3745	2.6097	0.9744
STD. DEV. 2005 MIN.	1,489,276,617	1,732,322,518	12	0.2564	0.1707	0.2008	0.1824	2.8847	0.1811	0.1873	1.4297	1.0235
MIN. 2005 MIN.	38,976,650	33,924,739	7	0.1375	0.0631	0.0000	0.0000	0.0000	0.0478	0.0033	0.9781	0.4647
MAX. 2005 MIN.	6,832,157,000	6,059,155,275	51	1.1989	0.7280	0.5620	0.5782	10.5678	0.7832	0.6921	5.9651	5.1776
MEAN 2005 MIN.	786,098,710	1,034,517,267	30	0.4176	0.2790	0.2554	0.1707	2.4057	0.4900	0.1867	2.3846	1.3828
STD. DEV. 2005 MAJ.	300,711,315	360,395,739	19	0.1934	0.2115	0.2197	0.2212	1.5492	0.2112	0.1833	1.3790	0.4312
MIN. 2005 MAJ.	28,610,529	19,263,699	13	0.1738	0.0532	0.0000	0.0000	0.0000	0.1484	0.0158	0.6342	0.3579
MAX. 2005 MAJ.	1,047,012,631	1,443,858,698	94	0.8873	0.7908	0.6530	0.7991	6.3521	0.8690	0.8130	5.4314	2.0003
MEAN 2005 MAJ.	306,792,812	316,612,518	37	0.4713	0.3563	0.2519	0.2309	0.8460	0.4541	0.2025	2.0450	1.0431
STD. DEV. 2006 DOM.	1,377,354,775	1,906,014,690	13	0.4400	0.2666	0.2532	0.2477	2.1590	0.2097	9.0526	4.2107	0.9373
MIN. 2006 DOM.	3,092,323	116.627	3	0.0191	0.0143	0.0000	0.0000	0.0000	0.0250	0.0413	0.1099	0.0079
MAX. 2006 DOM.	8,688,113,113	20,103,086,000	73	3.7908	1.7970	1.0087	1.0000	9.0098	0.9837	52.2966	47.9622	10.0042
MEAN 2006 DOM.	572,318,709	607,779,229	33	0.5256	0.3452	0.2381	0.2213	1.0588	0.5104	8.1980	2.4572	1.0403
STD. DEV. 2006 MIN.	2,069,317,426	3,169,488,646	14	0.2686	0.1686	0.2097	0.2025	3.5153	0.1567	7.0367	1.3089	0.8906
MIN. 2006 MIN.	43,422,949	45,906,958	8	0.1467	0.0977	0.0000	0.0000	0.0000	0.0876	1.1139	0.7810	0.5559
MAX. 2006 MIN.	8,432,206,000	13,699,843,201	65	1.2965	0.7031	0.6042	0.6167	13.2750	0.7730	28.7304	5.5972	4.7043
MEAN 2006 MIN.	1,147,014,678	1,719,367,950	33	0.4572	0.3037	0.2726	0.1647	3.1531	0.4558	9.7795	2.2648	1.4686
STD. DEV. 2006 MAJ.	319,731,967	399,373,241	19	0.2172	0.2163	0.2161	0.2500	3.1158	0.2200	6.2490	1.4848	0.4417
MIN. 2006 MAJ.	24,427,493	19,562,200	14	0.1305	0.0674	0.0000	0.0000	0.0000	0.0354	1.3774	0.3660	0.3431
MAX. 2006 MAJ.	1,132,575,000	1,723,530,222	95	0.8921	0.8738	0.6664	0.8183	13.3160	0.8680	30.4148	6.1856	1.9098
MEAN 2006 MAJ.	324,378,460	347,443,924	38	0.4817	0.4016	0.2794	0.2704	1.5279	0.4018	7.9456	1.9897	1.0872
STD. DEV. 2007 DOM.	1,551,783,668	2,131,435,409	13	0.4199	0.3093	0.2512	0.2406	4.4195	0.2102	7.2406	2.5869	0.9277
MIN. 2007 DOM.	2,877,495	38,048	4	0.0403	0.0307	0.0000	0.0000	0.0000	0.0444	0.2681	0.1002	0.0132
MAX. 2007 DOM.	9,629,246,150	22,520,083,000	74	3.4655	2.2774	0.9840	1.0000	41.2853	0.9833	39.9251	16.6211	9.5941
MEAN 2007 DOM.	620,216,147	663,623,226	33	0.5151	0.3567	0.2191	0.2065	1.7459	0.5139	7.2819	2.3894	1.0091
STD. DEV. 2007 MIN.	2,403,366,574	3,472,222,698	15	0.2472	0.1803	0.2097	0.2068	4.3325	0.1880	7.1267	1.1444	0.9021
MIN. 2007 MIN.	41,189,772	52,061,180	9	0.1572	0.1014	0.0000	0.0000	0.0000	0.0905	1.3704	0.5866	0.5904
MAX. 2007 MIN.	9,770,052,000	13,414,365,662	66	1.1408	0.7196	0.5931	0.6196	14.6548	0.8089	26.8901	4.8314	4.6797
MEAN 2007 MIN.	1,424,207,299	2,124,842,955	34	0.4497	0.3187	0.2758	0.1762	3.9374	0.4516	9.8331	2.1088	1.5385
STD. DEV. 2007 MAJ.	386,372,285	413,665,294	18	0.1965	0.2120	0.2128	0.2231	18.6002	0.2118	2.8227	1.3087	0.4669
MIN. 2007 MAJ.	13,799,127	13,031,370	15	0.1255	0.0717	0.0000	0.0000	0.0000	0.0306	1.2445	0.1944	0.3718
MAX. 2007 MAJ.	1,320,117,218	1,776,803,766	96	0.8089	0.8372	0.5811	0.6877	89.9274	0.8680	11.8820	6.0812	2.2934
MEAN 2007 MAJ.	368,561,020	387,056,523	39	0.5139	0.4515	0.2478	0.2448	5.2356	0.4118	6.1617	1.7219	1.0977

**Table 7.4
Correlation Matrix**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
(1) EBITTA	1.0000															
(2) ROA	0.7214	1.0000														
(3) ROS	0.1124	0.2116	1.0000													
(4) ROE	0.0197	0.0482	0.0066	1.0000												
(5) SIZE	0.3167	0.3314	0.1428	0.0461	1.0000											
(6) AGE	0.0979	0.1204	0.0325	0.0312	0.2985	1.0000										
(7) DEBT	-0.2439	-0.4464	-0.0686	0.0183	-0.0458	-0.0313	1.0000									
(8) CLTA	-0.2461	-0.3653	-0.0576	0.0799	-0.0887	-0.0263	0.8202	1.0000								
(9) IMPCOGS	0.0516	0.0844	0.0183	-0.0052	0.1753	0.0921	-0.0488	0.0454	1.0000							
(10) EXPNETSALES	-0.0757	-0.0671	0.0019	-0.0142	-0.0142	0.1346	0.0714	0.0819	0.2293	1.0000						
(11) DIVPAYOUT	0.2214	0.2154	0.0466	0.0093	0.1694	0.0882	-0.1531	-0.1244	0.0372	0.0103	1.0000					
(12) CAPINTENSITY	-0.1252	-0.1058	-0.0242	-0.0259	0.0592	0.0296	-0.1212	-0.3608	-0.3076	-0.1482	-0.0905	1.0000				
(13) INVTURNOVER	0.0208	-0.0088	0.0010	-0.0020	-0.0404	-0.0692	0.0113	-0.0372	-0.0557	-0.0500	-0.0186	0.0989	1.0000			
(14) CURRENTRA	0.0687	0.1363	0.1031	-0.0037	-0.1363	-0.0854	-0.3150	-0.3410	0.0141	-0.1052	0.0490	-0.0100	-0.0244	1.0000		
(15) NETSALESTA	0.1396	0.0848	0.0152	-0.0015	0.1056	-0.1075	0.1143	0.2661	0.2261	-0.0165	0.0127	-0.4113	-0.0503	-0.1020	1.0000	
(16) FDIPERCENT	0.0989	0.0407	0.0086	0.1177	0.1135	0.1458	-0.0119	0.0938	0.0616	0.0201	0.0810	-0.1349	-0.0261	-0.0662	0.0596	1.0000

Multicollinearity is defined as the high but not perfect correlation between two or more of the independent variables (Wooldridge, 2002, p.95). The correlation matrix shows the correlation between the variables DEBT and CLTA is 0.8202. This can be regarded as a high degree of correlation. However, the results of the analysis reveal that both variables are significant for all of the models. Therefore, the analysis is not disturbed by the problem of multicollinearity.

7.3. The Methodology

The use of panel data in this study enables an analysis to be conducted of many firms overtime by combining time-series and cross-sectional information. When the relationship between performance and foreign ownership is analyzed in a cross-sectional regression, the heterogeneity that is unobserved can drive biased estimates due to the correlation between the variables and the error term. Panel data analysis is applied in this study following the works of Himmelberg *et al.* (1999) and Wintoki *et al.* (2008)

As previously mentioned in the subsection referring to the explanatory variables, three models are estimated for each of the four dependent variables making up a total of 12 models to gauge the influence of foreign ownership on firm financial performance. In these models, only the explanatory variables employed are different; meaning that the same set of control variables are used for each model. The first type of models investigates the impact of foreign ownership denoted by the percentage of shares held by foreigners on the four different financial performance measures. The second type of models takes a more detailed perspective and differentiates between minority and majority levels of foreign ownership. Thus, the analysis is conducted to examine whether companies that display foreign ownership within certain ranges outperform the domestic ones. In the last type of models, eight dummy variables are generated to see the yearly influence of minority and majority foreign ownership on financial performance and explore whether they display superior performance compared to domestic firms. The estimation of these separate models is important because each one of them provides insight into the relationship between different measures of financial performance and foreign ownership from different perspectives. In order to

have a better understanding of the models applied and the variables employed in these models, a table is provided below.

Table 7.5
The Applied Models of the Analysis

Model No.	Dependent Variable Employed	Explanatory Variable Employed	Control Variables Employed
1	EBITTA	FDIPERCENT	11 control variables*
2	EBITTA	MIN, MAJ	
3	EBITTA	MIN2005, MAJ2005, DOM2005 MIN2006, MAJ2006, DOM2006 MIN2007, MAJ2007	
4	ROA	FDIPERCENT	
5	ROA	MIN, MAJ	
6	ROA	MIN2005, MAJ2005, DOM2005 MIN2006, MAJ2006, DOM2006 MIN2007, MAJ2007	
7	ROS	FDIPERCENT	
8	ROS	MIN, MAJ	
9	ROS	MIN2005, MAJ2005, DOM2005 MIN2006, MAJ2006, DOM2006 MIN2007, MAJ2007	
10	ROE	FDIPERCENT	
11	ROE	MIN, MAJ	
12	ROE	MIN2005, MAJ2005, DOM2005 MIN2006, MAJ2006, DOM2006 MIN2007, MAJ2007	

* The control variables employed are the same for all of the models and they can be listed as SIZE, AGE, DEBT, CLTA, IMPCOGS, EXPNETSALES, DIVPAYOUT, CAPINTENSITY, INVTURNOVER, CURRENTRA, and NETSALESTA. They are not displayed on the table for each model to save space.

For each of the models, certain tests are conducted to test for heteroskedasticity and autocorrelation. Therefore, correctly estimated models are obtained and tested when error terms are heteroscedastic. In other words, the Modified Wald Test is conducted to test for heteroskedasticity and we get robust error terms. That is the primary reason why the GLS estimation procedure is used to estimate the equations (Wooldridge, 2003, p.264). Moreover, in order to test for serial correlation (autocorrelation), the Wooldridge Test for Autocorrelation is applied to all of the models. Only the models 7, 8, and 9, which employ ROS as the dependent variable, are found not to suffer from serial correlation, meaning that their error terms are not correlated over time.

(Wooldridge, 2003, p.334). All of these results are obtained by using STATA (Data Analysis and Statistical Software).

Standard linear model assumes,

$$y = X\beta + \varepsilon$$

with independently and identically distributed error terms like,

$$\varepsilon \sim N(0, \sigma^2 I_n).$$

By means of this basic model we can have OLS estimators and their standard errors like,

$$b_{OLS} = (X'X)^{-1} X'y \quad \text{and}$$

$$V_{b_{OLS}} = \sigma^2 (X'X)^{-1}.$$

However these are unbiased in the case that ε is iid. Otherwise, we should employ a variant of the OLS model to obtain more efficient estimators (unbiased standard errors) by means of (GLS) Generalized Least Squares technique.

If $\varepsilon \sim N(0, \Sigma)$ is present, meaning that error term may have heteroscedasticity and autocorrelation, we can use GLS. Here, Σ refers to the error-covariance matrix that is symmetric and positive-definite. Different diagonal entries in Σ correspond to non-constant error variances while nonzero off-diagonal entries correspond to correlated errors. In such case, the log-likelihood for the model is,

$\ln L(\beta) = -\frac{n}{2} \ln(2\pi) - \frac{1}{2} \ln(\det \Sigma) - \frac{1}{2} (y - X\beta)' \Sigma^{-1} (y - X\beta)$ which is maximized by GLS estimator of β .

Doing this, we obtain $b_{GLS} = (X' \Sigma^{-1} X)^{-1} X' \Sigma^{-1} y$ and $V_{b_{GLS}} = (X' \Sigma^{-1} X)^{-1}$ that are efficient and consistent (Fox, 2002).

7.4. The Issue of Causality

The studies that investigate the impact of ownership structure on performance are confronted with the problem of a potential reverse relationship. This implies that the financial performance of a company can affect the ownership structure. The first study that analyzed this reverse relationship was that of Demsetz, who considered the ownership structure to be endogenously determined. He argues ‘no single ownership structure is suitable for all situations if the value of the firm’s assets is to be maximized’ (Demsetz, 1983, p.386). The issue of treating the ownership structure as an endogenous variable is further stressed in the work of Demsetz and Villalonga (2001).

Many previous studies in literature have focused on the issue of ownership and performance but yet failed to consider the problem of endogeneity. However, the fact that the decision of foreigners to invest in a company can be affected by the profitability of the company in question has to be taken into consideration in the specification of the models. There is a probability that the explanatory variable referring to foreign ownership in the model can be determined simultaneously with the performance measure, which is originally the dependent variable. Thus, an appropriate analysis has to be conducted to deal with this causality problem.

It has to be stated that the ownership structure of the companies that are the focus of this study are rather stable over the time period analyzed. However, following the work of Thomsen and Pedersen (2000), further tests are conducted between each of the four variables that measure financial performance and the percentages of foreign ownership. In order to determine whether changes in performance affect the percentage of shares that are held by foreigners, a test is conducted to explore if the changes in the performance measure, which is the dependent variable in the original model, is a significant determinant of the foreign ownership in 2007. Thus, the equation for this test can be written as;

$$FDI_{2007} = \text{constant} + \beta \cdot (\text{change in performance measure btw 2005-2007})$$

This equation is applied for each measure of financial performance named as EBITTA, ROA, ROS and ROE and no significant relationship is observed between the

changes in performance and the ownership structure. Thus, it can be stated that there is no problem in defining the structure of ownership as an exogenous variable in the model of this study. Alternatively, vector autoregression model (VAR) can be used in this kind of analysis but due to the short time interval (3 years) it can not be applied to this case.

7.5. Empirical Results

In this subsection, the relationship between firm financial performance and foreign ownership is analyzed depending on the results obtained from GLS corrected for heteroskedasticity and serial correlation. The tables that display the outcomes of the analyses are provided together with their interpretations.

Table 7.6 shows the results of the analysis that employ the first model. As the table represents, the control variables used in this study have certain significant impacts on firm financial performance and thus need to be discussed. The results show that the operating profitability of the firm is positively and significantly affected by firm size ($z = 25.03$, $p < 0.01$), which is consistent with previous empirical work. This means that larger firms perform better than smaller ones as a result of their competitive power and operational efficiency. The control variable AGE also has a significant and positive influence on operating profitability ($z = 3.64$, $p < 0.01$). This finding is also consistent with the expectation that more experienced firms exhibit superior performance. It has to be noticed that firm size positively affects the dependent variable EBITTA more than firm age which can be understood by the larger coefficient of the former.

The variables DEBT and CLTA have negative and significant effects on firm financial performance ($z = -3.04$, $p < 0.01$; $z = -13.56$, $p < 0.01$ respectively). These findings are likely caused by the fact that the increase in the amount of debt raises the costs associated with its fulfillment resulting in a decline in the profitability of the firm.

The coefficients of the variables IMPCOGS and EXPNETSALES are negative and significant ($z = -5.23$, $p < 0.01$; $z = -10.41$, $p < 0.01$ respectively). The overvaluation of the Turkish Lira during the years 2005, 2006 and 2007 can provide an explanation for this phenomenon. The major reason why the firms engaged in imports during this

period was the fact that imports of the inputs for production were relatively cheaper than the inputs that can be purchased in the domestic market due to exchange rates. Because the major motivation for imports was to provide inputs at a relatively lower price, production of higher quality products that generate higher profits was not guaranteed. Thus, the sign of the coefficient of IMPCOGS is found to be negative. Furthermore, in order to export their products, the firms engaged in fierce price competition resulting in low margins that disturbed profits. As a result, it can be stated that the overvaluation of the Turkish Lira also provides an explanation for the significant and negative coefficient of the control variable EXPNETSALES.

Another finding displayed in Table 7.6 is the positive and significant impact of the variable DIVPAYOUT on the dependent variable EBITTA ($z = 5.46$, $p < 0.01$). When firms distribute some of their earnings in the form of dividends, investors' expectation that firms will be profitable in the future is increased.

The capital intensity ratio of the firm, which provides some insight about industry-specific characteristics, has a negative and significant coefficient meaning that capital intensive firms that have more of their assets in the form of fixed assets perform worse than the others ($z = -21.08$, $p < 0.01$). This can be attributed to the high costs of capital in Turkey which prevent firms from improving their profitability.

The effect of the inventory turnover ratio of a company on its profitability is positive and significant but rather very small as can be understood from the coefficient of the variable ($z = 4.07$, $p < 0.01$). This means that keeping too much inventory distorts firm financial performance.

The current ratio, which is labeled CURENTRA, does not explain the variations in operating profitability which is illustrated by the insignificance of its coefficient.

The positive and significant coefficient of the control variable NETSALESTA indicates that the higher the efficiency of the firms in managing their assets, the better they perform ($z = 14.20$, $p < 0.01$). This result implies that as firms take advantage of their assets, their profitability increases.

Interpretation of the data reveals that EBITTA is not statistically dependent on FDIPERCENT after controlling for the firm and industry specific characteristics. However, it is reasonable to consider that different levels of foreign ownership can have divergent impacts on financial performance and thus can distort the results, creating a spurious insignificant relationship between the performance measure and the explanatory variable FDIPERCENT. Therefore, the second model is developed to clearly analyze the impact of different levels of foreign ownership on firm financial performance.

Table 7.6
The Results of the Panel Data Analysis Running the 1st Model

Dependent Variable : EBITTA			
Variables	Coefficient estimates	Standart errors	z-statistics
SIZE	0.0196	0.0007	25.03***
AGE	0.0003	0.0000	3.64***
DEBT	-0.0207	0.0068	-3.04***
CLTA	-0.1193	0.0088	-13.56***
IMPCOGS	-0.0201	0.0038	-5.23***
EXPNETSALES	-0.0492	0.0047	-10.41***
DIVPAYOUT	0.0017	0.0003	5.46***
CAPINTENSITY	-0.1178	0.0055	-21.08***
INVTURNOVER	0.0000	0.0000	4.07***
CURRENTRA	0.0000	0.0000	0.18
NETSALESTA	0.0195	0.0013	14.20***
FDIPERCENT	0.0055	0.0045	1.23
constant	-0.2379	0.0145	-16.31***
Number of observations	611		
Number of groups	204		
Wald chi2(12)	2455.19		
Prob > chi2	0.0000		
Log likelihood	1272.552		
legend	* $p < 0.10$;	** $p < 0.05$;	*** $p < 0.01$

Table 7.7 shows that the signs and the levels of significances of the control variables' coefficients in the second model are the same as those of the first one displaying no major difference in their magnitudes. Therefore, the explanations provided for the first model also hold true for the second one. The important issue to

notice here is related to the significances of the coefficients of the variables MIN and MAJ. The coefficient of MIN is positive and significant meaning that firms that have no more than 50% foreign ownership perform better than the domestic ones, which are represented by the constant term ($z = 3.92$, $p < 0.01$). However, the coefficient of the variable MAJ, which represents firms with more than 50% foreign ownership, is statistically insignificant. Thus, it can be concluded that when the dominant factor in the ownership structure of the firm is the domestic investor, additional investments by the foreigners do not have a positive and significant impact on operating profitability. This finding explains why the explanatory variable FDIPERCENT is found to be insignificant in the first model.

Table 7.7
The Results of the Panel Data Analysis Running the 2nd Model

Dependent Variable : EBITTA			
Variables	Coefficient estimates	Standart errors	z-statistics
SIZE	0.0207	0.0007	27.32***
AGE	0.0002	0.0000	2.68***
DEBT	-0.0244	0.0077	-3.16***
CLTA	-0.1065	0.0097	-10.97***
IMPCOGS	-0.0220	0.0038	-5.67***
EXPNETSALES	-0.0437	0.0047	-9.29***
DIVPAYOUT	0.0017	0.0003	5.55***
CAPINTENSITY	-0.1160	0.0059	-19.49***
INVTURNOVER	0.0000	0.0000	3.96***
CURRENTRA	0.0000	0.0001	0.48
NETSALESTA	0.0181	0.0015	11.47***
MIN	0.0172	0.0043	3.92***
MAJ	0.0030	0.0044	0.69
constant	-0.2593	0.0144	-17.93***
Number of observations	611		
Number of groups	204		
Wald chi2(13)	2484.31		
Prob > chi2	0.0000		
Log likelihood	1273.53		
legend	* $p < 0.10$; ** $p < 0.05$; *** $p < 0.01$;		

In the third model for the dependent variable EBITTA, eight dummy variables are generated to determine if there are any yearly differences among the financial performances of minority foreign-owned, majority foreign-owned and domestic firms. In this model, the constant term represents the financial performance of the domestic firms in the year 2007 and acts as the benchmark of the model. The interpretation of the results on Table 7.8 reveals that minority foreign-owned companies perform better than the domestic ones in all of the three years with the best performance occurring in the year 2006.

Table 7.8
The Results of the Panel Data Analysis Running the 3rd Model

Dependent Variable : EBITTA			
Variables	Coefficient estimates	Standart errors	z-statistics
SIZE	0.0215	0.0006	30.88***
AGE	0.0004	0.0000	4.15***
DEBT	-0.0564	0.0100	-5.61***
CLTA	-0.0744	0.0125	-5.95***
IMPCOGS	-0.0297	0.0052	-5.65***
EXPNETSALES	-0.0405	0.0057	-7.06***
DIVPAYOUT	0.0016	0.0003	5.32***
CAPINTENSITY	-0.1174	0.0050	-23.50***
INVTURNOVER	0.0000	0.0000	2.54**
CURRENTRA	0.0002	0.0002	1.31
NETSALESTA	0.0182	0.0017	10.41***
MIN2005	0.0140	0.0044	3.13***
MIN2006	0.0199	0.0045	4.37***
MIN2007	0.0184	0.0053	3.48***
MAJ2005	0.0053	0.0074	0.72
MAJ2006	0.0052	0.0077	0.68
MAJ2007	-0.0019	0.0091	-0.22
DOM2005	-0.0114	0.0012	-9.29***
DOM2006	0.0117	0.0010	11.01***
constant	-0.2745	0.0138	-19.78***
Number of observations	611		
Number of groups	204		
Wald chi2(19)	3585.61		
Prob > chi2	0.0000		
Log likelihood	1229.431		
<i>legend</i>	* $p < 0.10$; ** $p < 0.05$; *** $p < 0.01$;		

The yearly coefficients of the majority foreign ownership structure are again insignificant providing further proof for the ineffectiveness of majority foreign ownership on the performance measure EBITTA. When this model is analyzed in terms of the control variables, it is seen that the signs and the levels of significances of the coefficients of the control variables are the same with the previous model with a reduction only in the significance of the coefficient of the variable INVTURNOVER ($z = 2.54, p < 0.05$).

Table 7.9 displays the results of the fourth model which employs ROA as the dependent variable. As the results of the analysis indicate, the only insignificant control variables are INVTURNOVER and CURRENTRA. The signs of the coefficients of the remaining control variables and the levels of their significances are the same with those of the first model. Therefore, the explanations regarding the impact of the control variables on firm financial performance provided for the first model are also appropriate for the fourth one. However, it has to be noted that the signs of the coefficients stay constant but their magnitudes are a little higher than those in the first model. Furthermore, the explanatory variable FDIPERCENT deserves some interpretation as it has a negative and significant coefficient ($z = -1.87, p < 0.10$). This finding indicates that as the percentage of foreign ownership increases, the performance of the firms in terms of ROA deteriorates. Thus, it can be stated that the investment productivity is negatively affected by the increase in the percentage of shares held by the foreigners. Better understanding of the effect of foreign ownership on financial performance can be obtained with a more detailed analysis employing MIN and MAJ as the explanatory variables.

Table 7.9
The Results of the Panel Data Analysis Running the 4th Model

Dependent Variable : ROA			
Variables	Coefficient estimates	Standart errors	z-statistics
SIZE	0.0220	0.0011	19.23***
AGE	0.0003	0.0001	2.81***
DEBT	-0.1095	0.0112	-9.74***
CLTA	-0.0746	0.0147	-5.04***
IMPCOGS	-0.0145	0.0058	-2.47**
EXPNETSALES	-0.0257	0.0064	-3.98***
DIVPAYOUT	0.0037	0.0004	7.59***
CAPINTENSITY	-0.1128	0.0093	-12.09***
INVTURNOVER	0.0000	0.0000	0.07
CURRENTRA	-0.0003	0.0007	-0.46
NETSALESTA	0.0109	0.0022	4.95***
FDIPERCENT	-0.0087	0.0046	-1.87*
constant	-0.2715	0.0204	-13.29***
Number of observations	612		
Number of groups	205		
Wald chi2(12)	1217.85		
Prob > chi2	0.0000		
Log likelihood	906.2679		
<i>legend</i>	* $p < 0.10$; ** $p < 0.05$; *** $p < 0.01$;		

The fifth model is run to see whether the dependent variable ROA is affected by the minority and majority shares of foreign ownership. In this model, the constant term acts as the benchmark of the analysis and displays the impact of domestic ownership on financial performance. Evaluation of the results on Table 7.10 reveals that minority foreign ownership improves performance in terms of ROA ($z = 4.77$, $p < 0.01$). However, the significant and negative coefficient of MAJ indicates that when the dominant shareholders are foreigners, firms display worse performance than the domestic ones and minority foreign-owned ones in terms of investment productivity ($z = -1.97$, $p < 0.05$). Because the signs and the levels of the significances of all of the control variables are the same with those of the first model, no further explanations regarding these variables are provided.

Table 7.10
The Results of the Panel Data Analysis Running the 5th Model

Dependent Variable : ROA			
Variables	Coefficient estimates	Standart errors	z-statistics
SIZE	0.0229	0.0009	23.18***
AGE	0.0002	0.0001	2.65***
DEBT	-0.1095	0.0109	-10.03***
CLTA	-0.0640	0.0143	-4.45***
IMPCOGS	-0.0169	0.0055	-3.03***
EXPNETSALES	-0.0228	0.0063	-3.58***
DIVPAYOUT	0.0034	0.0004	7.36***
CAPINTENSITY	-0.1124	0.0090	-12.45***
INVTURNOVER	0.0000	0.0000	0.04
CURRENTRA	-0.0003	0.0007	-0.49
NETSALESTA	0.0082	0.0022	3.72***
MIN	0.0190	0.0039	4.77***
MAJ	-0.0080	0.0040	-1.97**
constant	-0.2899	0.0177	-16.29***
Number of observations	612		
Number of groups	205		
Wald chi2(13)	1678.81		
Prob > chi2	0.0000		
Log likelihood	904.146		
<i>legend</i>	* $p < 0.10$; ** $p < 0.05$; *** $p < 0.01$;		

The yearly impact of minority and majority foreign ownership on firm performance in terms of ROA is analyzed in the sixth model. The constant term in this model represents the impact of domestic ownership on firm financial performance in the year 2007. The results on Table 7.11 show that 2007 is the only significant year to evaluate the foreign owners' effect on performance. This finding reveals that pooling the data in terms of minority and majority ownership, as in the fifth model, improves the explanatory power of the analysis. When the data is segregated in terms of years, as in the sixth model, the explanatory power decreases. The result shows that minority foreign-owned companies perform better than majority foreign-owned and domestic ones in 2007 ($z = 1.81$, $p < 0.10$). Furthermore, the significant and negative coefficient of the explanatory variable MAJ2007 shows that majority foreign ownership distorts

investment productivity ($z = -7.80$, $p < 0.01$) and domestic firms are found to demonstrate better performance than these companies.

Table 7.11
The Results of the Panel Data Analysis Running the 6th Model

Dependent Variable : ROA			
Variables	Coefficient estimates	Standart errors	z-statistics
SIZE	0.0227	0.0011	20.53***
AGE	0.0003	0.0001	3.58***
DEBT	-0.1140	0.0134	-8.50***
CLTA	-0.0579	0.0162	-3.56***
IMPCOGS	-0.0190	0.0058	-3.25***
EXPNETSALES	-0.0219	0.0078	-2.78***
DIVPAYOUT	0.0033	0.0004	8.05***
CAPINTENSITY	-0.1109	0.0095	-11.58***
INVTURNOVER	0.0000	0.0000	0.14
CURRENTRA	-0.0005	0.0007	-0.78
NETSALESTA	0.0088	0.0022	3.89***
MIN2005	0.0028	0.0075	0.37
MIN2006	0.0049	0.0074	0.66
MIN2007	0.0137	0.0076	1.81*
MAJ2005	-0.0024	0.0126	-0.19
MAJ2006	0.0071	0.0127	0.56
MAJ2007	-0.0503	0.0064	-7.80***
DOM2005	-0.0137	0.0036	-3.72***
DOM2006	-0.0176	0.0036	-4.80***
constant	-0.2793	0.0203	-13.73***
Number of observations	612		
Number of groups	205		
Wald chi2(19)	1581.85		
Prob > chi2	0.0000		
Log likelihood	894.6246		
<i>legend</i>	* $p < 0.10$;	** $p < 0.05$;	*** $p < 0.01$;

Models seven, eight and nine analyze the influence of foreign ownership on firm financial performance by the ROS ratio. This dependent variable measures the profit margin of the firm providing insight into its competitive power. Before the analysis, the descriptive statistics are analyzed. They show that the mean ROS ratio of minority foreign-owned companies is above the average, signaling their high profit margins. Depending on the descriptive statistics, the market can be regarded to be imperfectly competitive for them because they can charge higher prices for their products. However, the mean of the domestic firms' ROS ratio is lower. It indicates that they have to offer lower prices for their products to be able to compete with the foreign firms in the market. Therefore, ROS is employed as a dependent variable to explain the competitive power of the firm. But, the results of the econometric analysis produce contradictory results with our anticipations. This contradiction can be seen in the following three tables. Table 7.12 shows that as foreign ownership increases, the profit margin reduces. As Table 7.13 indicates, this negative impact comes from minority foreign ownership while majority foreign ownership has no impact on financial performance. In other words, further analysis' results suggest that minority foreign ownership displays worse performance than domestic ownership while additional increase in the shares of the foreign owners has no impact on firm financial performance shown by the insignificant coefficient of the variable MAJ. Additionally, results of yearly analysis on Table 7.14 -conducted for the years 2005, 2006, 2007 - also supports this finding as the coefficients are negative and significant for MIN while those for MAJ are insignificant.

Table 7.12
The Results of the Panel Data Analysis Running the 7th Model

Dependent Variable : ROS			
Variables	Coefficients	Standart errors	z-statistics
SIZE	0.0963	0.0054	17.74***
AGE	-0.0000	0.0003	-0.13
DEBT	-0.1508	0.0292	-5.16***
CLTA	0.1027	0.0378	2.71***
IMPCOGS	-0.0942	0.0201	-4.69***
EXPNETSALES	0.0453	0.0188	2.40**
DIVPAYOUT	0.0038	0.0012	3.01***
CAPINTENSITY	-0.1152	0.0295	-3.90***
INVTURNOVER	0.0000	0.0000	0.04
CURRENTRA	0.0284	0.0036	7.88***
NETSALESTA	-0.0025	0.0056	-0.45
FDIPERCENT	-0.0317	0.0120	-2.64***
constant	-1.7622	0.1016	-17.34***
Number of observations	612		
Number of groups	205		
Wald chi2(12)	581.59		
Prob > chi2	0.0000		
Log likelihood	284.2387		
<i>legend</i>	* $p < 0.10$;	** $p < 0.05$;	*** $p < 0.01$;

Table 7.13
The Results of the Panel Data Analysis Running the 8th Model

Dependent Variable : ROS			
Variables	Coefficients	Standart errors	z-statistics
SIZE	0.0944	0.0055	16.95***
AGE	0.0000	0.0003	-0.22
DEBT	-0.1530	0.0286	-5.34***
CLTA	0.1136	0.0358	3.17***
IMPCOGS	-0.0826	0.0211	-3.90***
EXPNETSALES	0.0367	0.0201	1.83*
DIVPAYOUT	0.0037	0.0012	3.01***
CAPINTENSITY	-0.1035	0.0298	-3.47***
INVTURNOVER	0.0000	0.0000	0.04
CURRENTRA	0.0304	0.0037	8.20***
NETSALESTA	-0.0030	0.0061	-0.50
MIN	-0.0307	0.0130	-2.35**
MAJ	-0.0002	0.0133	-0.02
constant	-1.7342	0.1028	-16.87***
Number of observations	612		
Number of groups	205		
Wald chi2(13)	591.46		
Prob > chi2	0.0000		
Log likelihood	282.5382		
<i>legend</i>	* $p < 0.10$;	** $p < 0.05$;	*** $p < 0.01$;

Table 7.14
The Results of the Panel Data Analysis Running the 9th Model

Dependent Variable : ROS			
Variables	Coefficients	Standart errors	z-statistics
SIZE	0.0779	0.0076	10.17***
AGE	0.0002	0.0005	0.49
DEBT	-0.0883	0.0407	-2.17**
CLTA	0.0376	0.0587	0.64
IMPCOGS	-0.0563	0.0342	-1.65
EXPNETSALES	-0.0192	0.0309	-0.62
DIVPAYOUT	0.0036	0.0016	2.20**
CAPINTENSITY	-0.1011	0.0444	-2.28**
INVTURNOVER	0.0000	0.0000	0.57
CURRENTRA	0.0315	0.0047	6.63***
NETSALESTA	-0.0046	0.0099	-0.47
MIN2005	-0.0467	0.0249	-1.87*
MIN2006	-0.0664	0.0252	-2.63***
MIN2007	-0.0655	0.0255	-2.57***
MAJ2005	0.0021	0.0265	0.08
MAJ2006	0.0081	0.0263	0.31
MAJ2007	-0.0393	0.0263	-1.50
DOM2005	-0.0365	0.0211	-1.73*
DOM2006	-0.0818	0.0210	-3.89***
constant	-1.4051	0.1444	-9.73***
Number of observations	612		
Number of groups	205		
Wald chi2(19)	372.51		
Prob > chi2	0.0000		
Log likelihood	179.5389		
<i>legend</i>	* $p < 0.10$; ** $p < 0.05$; *** $p < 0.01$;		

ROE is the last measure of performance used in this study and employed as a dependent variable of the models ten, eleven and twelve. As the estimates of the tenth model on Table 7.15 indicate, the explanatory variable FDIPERCENT is one of the positive predictors of firm financial performance ($z = 5.04$, $p < 0.01$). It can be seen from the results of the analysis that the control variables named as SIZE, CLTA, CAPINTENSITY, INVTURNOVER, CURRENTTA relate positively and significantly

to the performance of the firm measured by ROE. On the other hand, the coefficients of the control variables namely DEBT, IMPCOGS, EXPNETSALES, DIVPAYOUT and NETSALESTA are negative and significant.

Table 7.15
The Results of the Panel Data Analysis Running the 10th Model

Dependent Variable : ROE			
Variables	Coefficient estimates	Standart errors	z-statistics
SIZE	0.1374	0.0163	8.40***
AGE	-0.0005	0.0013	-0.42
DEBT	-1.2037	0.1361	-8.84***
CLTA	2.5239	0.2545	9.92***
IMPCOGS	-0.2903	0.0597	-4.86***
EXPNETSALES	-0.0830	0.0455	-1.83*
DIVPAYOUT	-0.0087	0.0042	-2.05**
CAPINTENSITY	0.3918	0.1199	3.27***
INVTURNOVER	0.0000	0.0000	4.39***
CURRENTRA	0.0205	0.0049	4.18***
NETSALESTA	-0.1518	0.0240	-6.30***
FDIPERCENT	1.1230	0.2229	5.04***
constant	-2.8586	0.3308	-8.64***
Number of observations	609		
Number of groups	204		
Wald chi2(12)	407.14		
Prob > chi2	0.0000		
Log likelihood	-151.976		
<i>legend</i>	* $p < 0.10$;	** $p < 0.05$;	*** $p < 0.01$;

When the analysis is conducted to see the impact of different ranges of foreign ownership on firm financial performance, it is found that minority foreign ownership relates positively and significantly to profitability of the shareholders' investment ($z = 2.16, p < 0.05$) while majority foreign ownership is found to display no influence on this measure, as shown in table 7.16.

Table 7.16
The Results of the Panel Data Analysis Running the 11th Model

Dependent Variable : ROE			
Variables	Coefficient estimates	Standart errors	z-statistics
SIZE	0.0973	0.0135	7.19***
AGE	0.0008	0.0011	0.80
DEBT	-0.7317	0.1401	-5.22***
CLTA	1.5899	0.2630	6.04***
IMPCOGS	-0.1363	0.0567	-2.40**
EXPNETSALES	-0.1214	0.0388	-3.13***
DIVPAYOUT	0.0009	0.0038	0.25
CAPINTENSITY	0.0898	0.1053	0.85
INVTURNOVER	0.0000	0.0000	2.57**
CURRENTRA	0.0132	0.0043	3.01***
NETSALESTA	-0.0948	0.0259	-3.65***
MIN	0.0708	0.0328	2.16**
MAJ	0.4345	0.3367	1.29
constant	-1.9312	0.2600	-7.43***
Number of observations	609		
Number of groups	204		
Wald chi2(13)	290.42		
Prob > chi2	0.0000		
Log likelihood	-60.48291		
<i>legend</i>	* $p < 0.10$;	** $p < 0.05$;	*** $p < 0.01$;

However, when the data is split to generate yearly dummy variables as on Table 7.17, it is observed that the coefficients of the variables MIN2005, MIN2006 and MIN2007 turn out to be insignificant. This is contrary to the findings of the previous model that shows a positive and significant relationship between ROE and the control variable MIN. This can be due to reduction in the explanatory power of the variables when the number of the observations in each explanatory variable is reduced. It should be noted that the dividend distribution policies of the companies can change from year to year. This affects the amount of equity in the firm, further distorting the results on a yearly basis.

Table 7.17
The Results of the Panel Data Analysis Running the 12th Model

Dependent Variable : ROE			
Variables	Coefficient estimates	Standart errors	z-statistics
SIZE	0.0047	0.0048	0.99
AGE	0.0044	0.0008	5.01***
DEBT	-0.2007	0.1021	-1.97**
CLTA	0.0271	0.1583	1.71*
IMPCOGS	-0.0205	0.0429	-0.48
EXPNETSALES	-0.1389	0.0373	-3.72***
DIVPAYOUT	0.0037	0.0030	1.26
CAPINTENSITY	-0.2758	0.0817	-3.73***
INVTURNOVER	0.0000	0.0000	2.78***
CURRENTRA	0.0009	0.0048	0.19
NETSALESTA	0.0267	0.0185	1.44
MIN2005	-0.0205	0.0360	-0.57
MIN2006	-0.0292	0.0383	-0.76
MIN2007	-0.0207	0.0607	-0.34
MAJ2005	0.0173	0.1759	0.10
MAJ2006	0.0422	0.3473	0.12
MAJ2007	-0.1878	0.0972	-1.93*
DOM2005	-0.0156	0.0189	-0.83
DOM2006	-0.0123	0.0146	-0.84
constant	(dropped)		
Number of observations	609		
Number of groups	204		
Wald chi2(19)	1.85E+08		
Prob > chi2	0.0000		
Log likelihood	-41.01355		
<i>legend</i>	* $p < 0.10$; ** $p < 0.05$; *** $p < 0.01$;		

SECTION 8

8. CONCLUSION

There has long been a debate about the impact of FDI on the economies of recipient countries. One way to examine this phenomenon is to analyze financial performance of the companies with respect to their ownership structures and evaluate the relationship between foreign ownership and firm financial performance.

This thesis runs four different sets of models, each employing a different dependent variable, to capture whether the existence of shares held by foreigners affects financial performance of the firms. This detailed analysis is unique in that it covers a period of three years and is conducted on a total of 205 listed companies in an emerging market. This analysis also employs a large set of control variables and different explanatory variables in each model to determine if there are differences between the performance of domestic and foreign companies and if different ranges of foreign ownership impact firm performance. Furthermore, the fact that the issue of causality is also taken into account adds to the uniqueness of the study.

In the first set of models, EBITTA is used as the dependent variable to measure the operating profitability of the firms. The results of the first model indicate that there is no significant relationship between EBITTA and the explanatory variable FDIPERCENT. However, further analysis proves this insignificant relationship to be spurious due to the divergent impacts of different levels of foreign ownership on financial performance. In the second model, minority foreign-owned companies are found to be more profitable than domestic ones. The insignificant coefficient of the explanatory variable MAJ shows that when domestic investors form the majority of the ownership structure, additional investments by the foreigners do not add to the operating profitability of the firm. The yearly analysis in the third model also affirms these findings. These results show that ownership of the shares of a company by foreigners is crucial in terms of improving performance due to the knowhow, skills and

technologies introduced to the firm in the host country, but the results also show that this effect erodes beyond a certain level of ownership. It can be asserted that this effect is due to the fact that there are certain unique ways of conducting business in Turkey that continue to make domestic relationships valuable, and allow for domestic ownership to play a significant role.

ROA is employed as the dependent variable of the second set of models. It is found that an increase in foreign ownership deteriorates the investment productivity of the firms. However, the fifth model shows that this negative impact arises because of the significant and negative impact of majority foreign ownership on firm financial performance with MIN performing better than both domestic firms, as indicated by the constant term, and MAJ. In this model, majority foreign owned companies are found to be the worst performers. The yearly analysis indicates that 2007 is the only significant year with the results the same as those of the previous model.

The third set of models uses ROS as the dependent variable to investigate if any difference exists among the firms due to the influence of foreign ownership on performance. The usage of this dependent variable is important in that it captures the competitive power of the firms in terms of their profit margins. The results indicate that the increase in the shares of foreign owners reduces the profit margin of the firms. As further analysis shows, this impact occurs as a result of minority foreign ownership since the coefficient of the variable MIN is significant and negative and that of the variable MAJ is insignificant. As the constant term in this model represents the domestic firms, it is concluded that domestic firms are the best in terms of this performance measure. This finding provides further evidence for the importance of local relationships in the way firms conduct business.

The results of the analysis that use ROE as the dependent variable show that the explanatory variable FDIPERCENT is a positive predictor of financial performance with the coefficient of the variable MIN being positive and significant and that of MAJ being insignificant. However, due to the reduction in the explanatory power of the variables with the inclusion of yearly dummies, the 12th model does not generate consistent results with those of the previous model.

The overall results of this thesis indicate that foreign ownership improves firm financial performance in Turkey up to a certain level, beyond which additional ownership by the foreigners does not add to firm profitability. Local bonds and relationships among domestic companies, their owners, and their managers provide some advantages to domestically-owned firms that cannot be attained by majority foreign-owned companies. Thus, I view the effect of FDI on Turkish Companies as positive, so long as foreign companies invest in minority stakes in domestic firms.

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