

Financial Structure and Performance of the Turkish Textile Companies

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ABSTRACT

Financial structure decisions determine not only the rate of return which shareholders would receive, but the ability of a corporation to be survived in the presence of recession. In other words, the impact of financial structure of a corporation on its financial performance is undeniable. Currently, Turkish textile and apparel industry is recognized as not only an economic development factor, but also a global leading manufacturer and exporter. The main aim of this study is to investigate the financial structure and performance of a sample of textile companies in Turkey by evaluating their financial structure and determining the factors affecting their financial performance. This study is mainly focused on the textile, clothing and fashion industry because this industry plays a major role in the Turkish economy. Therefore, a sample of 16 companies from 1999 to 2012 is gathered from Thomson Reuters DataStream. Then, a panel data study is designed to investigated the factors affecting financial structure and performance of these firm according to the literature. The findings of this study reveal that return on assets (ROA) of the companies in the sample are affected by the changes in the company size and taxation benefits or tax shield provided by depreciation. Both company size and taxation benefits represented a negative relationship toward ROA.

Keywords: Financial structure, return on assets, panel data analysis, textile companies, Turkey.

ÖZ

Mali yapı ile ilgili kararlar, hissedarların alacağı getiri oranını belirlemekle kalmaz ayrıca ekonomik durgunluk döneminde şirketin hayatta kalma becerisini de belirler. Diğer bir deyişle, kurumsal bir şirketin mali yapısının, o şirketin performansına etkisi inkar edilemez. Şu anda, Türk tekstil ve giyim endüstrileri sadece ekonomik gelişmenin faktörlerinden biri değil; aynı zamanda küresel ortamda üretici ve ihracatçı olarak liderlik etmektedir. Bu çalışmanın temel amacı, Türkiye’de ki bazı tekstil firmalarının mali yapılarını ve performanslarını etkileyen faktörleri bulmak için bu şirketlerin mali yapılarını ve performanslarını incelemektir. Bu çalışmada, Türkiye ekonomisinde ki önemli rolleri nedeniyle özellikle tekstil, giyim ve moda endüstrilerine yoğunlaşmıştır. Bu sebeple, 1999-2012 yılları arasında faaliyet gösteren 16 şirket ile ilgili veriler Thomson Reuter’in Data Stream programıyla toplanmıştır. Daha sonra, şirketlerin mali yapısını ve performansını etkileyen faktörleri incelemek için literatüre de bağlı kalınarak panel veri serisi kullanılmıştır. Bu çalışmada elde edilen bulgular, örneklem seçiminde ki şirketlerin aktif karlılığının; şirket büyüklüğü, vergi muafiyetleri veya amortisman ile sağlanmış vergi yükümlülükleri tarafından etkilendiğini ortaya çıkarmıştır. Hem şirket büyüklüğü hem de vergi muafiyetleri, aktif karlılığını negatif olarak etkilemiştir.

Anahtar Kelimeler: Mali yapı, aktif karlılığı, panel veri analizi, tekstil şirketleri, Türkiye.

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Chapter 1

INTRODUCTION

1.1 Introduction

Evaluation of the capital structure of a company is known as daily concern for the managers of any corporations, investors and financial analysts. Capital structure decisions determine not only the rate of return which shareholders would receive, but the ability of a corporation to be survived in the presence of recessions. In other words, the impact of capital structure of a corporation on its growth and survival is undeniable.

Financial decision-making in corporations is a complicated process which is tied to the financial performance of a corporate. Moreover, capital is the heart of any firm and capital structure highly affects the competitiveness of firms. Existing theories are able to explain only certain features of complexity and heterogeneity of financing choices (Margaritis and Psillaki, 2010). During recent decades, corporate financing has evolved greatly due to the introduction of modern financial theories and the globalization of financial markets.

Global markets have been experiencing financial crises during last decade which has caused firms to be under pressure both domestically and internationally. In addition, banks and financial institutions has decreased their level of credit supplying which has resulted in an highly risky environment for firms to fund their investments and as

a result their cost of capital has raised. Hence, the subject of capital structure has gained lots of attention among researchers to investigate the link between capital structure and firm performance. The relationship between financial structure and financial performance of a firm has been argued by many researchers based on the important study of Modigliani and Miller (1958). In their study, they proposed the debt irrelevance. Since then, many scholars have tried to estimate clearly the relationship between capital structure and firm performance based on different theoretical perceptions. Therefore, the subject of finding the link between financial structure and financial performance of a firm has been a topic of long debate globally.

After the introduction of the Modigliani and Miller (M&M) theory, other theories have emerged in this field such as the static trade-off theory and the pecking order theory. Kraus and Litzenberger (1973) published a study which introduced the static trade-off theory. They suggested that there is a trade-off between the benefits and costs of debt financing and equity financing and firms should consider market distortions and imperfections such as taxation, agency costs and bankruptcy costs in the process of determining an “optimal” capital structure.

On the other hand, in 1984, pecking order theory (Myers and Majluf, 1984) was suggested that firms behave in accordance with a financing hierarchy because of the existence of information asymmetry. In other words, the essence of this theory is that firms prefer firstly internal sources of funding rather than external ones. Therefore, profitable firms are less likely to use debt financing compared to others. Similarly, Karadeniz et. al (2009) state that the bottom line of the pecking order theory suggests that firms prefer equity rather than debt.

Last but not the least, the agency cost theory (Jensen and Meckling,1976) suggests that as there is a conflict between the interest of firm's managers and shareholders (agency problem), decisions about the capital structure are dependent on these agency-principal conflicts.

In this respect, a financial manager should always be ready to make decisions to determine the capital structure of a firm, even on a daily basis. In addition, determining the optimal capital structure is another complexity which financial managers face in their job. The role of capital structure is so important because it not only affects the profit maximization of shareholders, but it also helps the firm to survive from various economic conditions and business cycles.

To summarize, capital structure would be one of the main determinants of a firm's growth which consequently plays a crucial role in its financial performance.

1.2 Turkish Textile, Clothing and Fashion Industry

Located in a strategic position, Turkey has benefited from being as a bridge between Europe, Asia and the Middle East. This has also been a significant advantage for the Turkish economic development. One of the main Turkish industrial sectors is undoubtedly the textile and apparel industry. Currently, Turkish textile and apparel industry is recognized as not only an economic development factor, but also a global leading manufacturer and exporter (<http://www.textileworldasia.com>, 2014).

The first establishments of this industry dates back to the Ottoman's Empire period when the Turkish textile industry has started to be developed (ITKIB , 2011). From that period, this industry has been growing continuously and in 2012, the value of exports by Turkish textile sector was reported more than US\$7.7 billion. Moreover,

there are about 7500 exporters which are operating in this sector in Turkey. Economically speaking, this industry provides nearly 25 percent of total Turkey's export revenues and 11 percent of the national gross income of Turkey (<http://www.textileworldasia.com>, 2014). All mentioned emphasizes the importance of the textile and clothing industry in Turkey and the role of active firms in this sector. Therefore, an investigation of these firms' financial structure and financial performance would provide insightful information for Turkish policy makers.

1.3 Aim of the Study

Financial managers face various complexities and difficulties in the real world in the process of determining the optimal capital structure. If they choose an inappropriate mixture of debt and equity to finance their firm, not only the financial performance of the firm would be affected severely, but also its future would be jeopardized. To grow and survive in the competitive markets, a firm definitely needs resources, but these resources are limited. Hence, the main aim of this study is to investigate the financial structure and performance of a sample of the textile companies in Turkey by evaluating their financial structure and determining the factors affecting their financial performance.

This study is mainly focused on the textile, clothing and fashion industry because this industry plays a major role in the Turkish economy. According to the Turkish ministry of Economy report (2014), textile and clothing sector constructs about 7 percent of the GDP in Turkey. In addition, foreign trade of Turkey is greatly affected by this industry by a share of 18.3% of exports in 2013. Moreover, employments in this sectors account for more than 900,000 employees. All mentioned reflect the

importance of financial performance in this industry and represent our aim to select and study this sector.

Both policy makers and managers in this sector could benefit from the results of this research since they face situations in which they have to optimize the capital structure of the firms to improve financial performance.

1.4 Objectives of the Study

As mentioned above, the aim of this study is the investigation of financial structure among textile companies and the evaluation of factors affecting financial performance in this industry. To achieve this goal, the following objectives are made:

- Analyzing the financial structure of a selected sample of textile companies in Turkey;
- Analyzing the capital structure of those companies;
- Evaluating the impacts of financial structure on their performance;
- Recommending some policy implications to enhance the performance of those companies and the Turkish textile industry.

1.5 Proposed Methodology

In order to study the financial structure and performance of Turkish textile and apparel firms, a sample of active firms in this industry is chosen. This sample includes 16 companies from 1999 to 2012 and the data is gathered from Thomson Reuters' software DataStream. Then, a panel data study is designed to investigate the factors affecting financial structure and performance of these firms according to the literature. According to the literature, there are different proxies for testing the impact of capital structure on financial performance. In this respect, return on equity

(ROE) and return on assets (ROA) are chosen as the proxies representing the financial performance of the firm.

1.6 Thesis Structure

The first chapter of this study starts with an introduction of the subject of our study. Then, this chapter continues by representing the aim of the study and objectives of the study. Chapter one ends with an overview of the structure of the study. Afterwards, chapter two discusses the theories of capital structure and financial performance of corporations. Chapter three reviews the literature and previous studies in this field of study. Chapter four introduces the data and research methodology employed in this study and the model of study is proposed which is based on the previous similar studies in the literature. Chapter five depicts the empirical findings of the study and their interpretations. Finally, in chapter six, conclusions are summarized and some policy implications are suggested for managers and policy makers in Turkish textile industry.

Chapter 2

THEORIES OF CAPITAL STRUCTURE AND CORPORATE PERFORMANCE

2.1 Introduction

Financially speaking, the way a firm provides funding for its operation is called capital structure, whether by employing debt or equity. Various theories have been developed in the literature of financial management. Modigliani and Miller theory, M&M theory, (1958) proposes the irrelevancy of value of a firm and its capital structure. However, it should be notified that M&M theory assumes that not only transactions are costless, but also there is not any information asymmetry in the markets. In other words, their assumptions lead to a perfectly competitive and efficient market which is not only unaffected by the impacts of taxation, inflation, transaction costs and bankruptcy costs, but also is characterized by equal access to information (Hatfield et. al, 1994).

This study by Modigliani and Miller (1985) has been followed by lots of studies and theoretical research to find out how optimal capital structure could be determined.

Therefore, in the following sections, the theories of capital structure are discussed briefly and the impact of capital structure on the financial performance of firms evaluated.

2.2 Modigliani and Miller Theory

The issue of capital structure was firstly discussed by Miller and Modigliani (1958), namely known as M&M theory. They state that value of the firm is irrelevant to its

capital structure. Moreover, they suggest that if markets perform competitively, the financial performance of firms are not affected by their capital structure decisions that is translated into a non-significant relationship between the capital structure and financial performance.

Their assumptions were criticized and it led to their second proposition, known as MM2, which addressed the tax benefits as a factor affecting decisions of capital structure. In this respect, tax deductibility of interest payments were considered as a tax benefit. A firm could lower tax payments by benefiting from a tax shield provided by interest tax deductibility. Hence, more debt financing enables firms to increase their value while taking advantage of tax shield. M&M also mention that firms can increase their value by employing more debt because interest payments are tax deductible (Modigliani and Miller, 1963).

Broadly speaking, markets are not perfectly competitive and there are lots of inefficiencies including taxes, asymmetry of information, brokerage costs and etc. So, by taking into account these inefficiencies, the bulk of M&M theorem would be questioned. However, it should be noted here that even though there are many criticisms about M&M theorem, this theory provides some insights which have been the basis on which other theories are grounded.

2.3 Trade-off Theory

Kraus and Litzenberger (1973) suggest that a firm is in a trade-off between the benefits and costs of debt and equity financing options. In addition, the firm would be better off by an optimized capital structure considering market inefficiencies. Therefore, in this trade-off framework, the advantage of taking more debt financing

highlights its importance since more debt is associated with more tax shield. However, it is worth noting that there is a limit for debt level where any incremental percentage of debt would result in an increasing marginal cost. To sum up, the trade-off theory suggests that when the benefits from debt financing tax shield offset its costs, an optimal proportion of debt and equity is caught. Debt financing costs vary from financial distress costs to bankruptcy costs.

Following the trade-off theory, some researchers (Baxter, 1967; Altman 2002) conclude that announcing equity financing could be inferred as deviating from the optimal capital structure which could be translated into bad signals from a firm. Myers (1984) states that if a firm considers trade-off theory, a target leverage ratio would be set to be achieved. In addition, firm's managers are not eager to issue new equity while it might be perceived by the market as an undervaluation. Consequently, equity issue has to be an overvalued or fairly-priced situation from the investors and market analysts' point of view. Van der Sar et al. (2011) suggest that debt financing improves how a firm performs by reducing agency problems. However, more debt is associated with higher obligations for debt repayments.

Furthermore, it can be inferred from the trade-off theory that corporations with higher levels of profits are more willing to employ higher leverage ratios to exploit the tax deductibility of interest. These corporations have higher retained earnings, hence there is a lower probability of facing financial distress. As a result, one can conclude that the trade-off theory proposes a direct relationship between the debt level and the financial performance of a firm (Myers, 1984; Myers and Mjaluf, 1984; Karadeniz et al., 2009).

In the literature, one can find various empirical studies on trade-off theory. In 1990, Capon et al. (1990) did a review of 320 different studies of financial performance and they found that the leverage ratio of a firm is positively associated with its financial performance.

Another study by Roden and Lewellen (1995) was focused on how the capital structure of a firm would affect its financial performance. Their sample was consisted of 48 US firms. Their empirical findings showed that the debt financing decisions of a firm have a significant impact on its performance due to the taxation issues, that is consistent with the trade-off theory.

Similarly, Dessi and Robertson' study (2003) investigates the possible relationship between leverage and performance of a firm. Their results show that the lower the growth of a firm is, the more dependent it is on debt financing. They state that these firms rely more on leverage to finance their investments in order to increase their growth opportunities which consequently improve their financial performance.

2.4 Pecking Order Theory

The foundation of pecking order theory originates from the existence of information asymmetry and transaction costs in the inefficient or real-world markets. Myers and Majluf (1984) state that firms' decisions about the capital structure are highly dependent on their hierarchy for information asymmetries and transaction costs. Therefore, when firms plan to decide on their capital structure, they are likely faced with two different costs: information asymmetry and transactions cost. Therefore, external financing sources would cost more for firms rather than internal sources.

Consequently, firms potentially follow a hierarchy to minimize the cost effects of these inefficiencies.

In the framework of pecking order theory, a firm looking for financing its investments firstly starts with internal sources. Secondly, when all internal sources are used up, it tends to provide debt financing. And, lastly, equity financing would be the last choice because it is associated with high information asymmetries and transaction costs. Hence, profitable firms with high cash flows are more willing to employ less levels of debt in comparison with lower-profit firms. To sum up, as Muritala (2012) suggests, debt is preferred over equity.

All mentioned above helps to propose that capital structure should be negatively related to the firm's performance. There are various empirical studies which have investigated this relationship.

Shyam-Sunder and Myers's study (1999) investigates whether pecking order theory exists or not in a sample of firms selected from New York Stock Exchange. Their results show that the capital structure is negatively associated with the financial performance of a firm which is consistent with the pecking order theory. However, the results of a study by Frank and Goyal (2003) are not in favor of pecking order theory. Their investigation shows that issued equity is more correlated to financial performance. Similarly, Fama and French (2005) mention that although pecking order theory suggests that equity financing is the last option for financing investments, there are many firms that employ equity financing regularly as the first option.

2.5 The Agency Theory

As there are different stakeholders varying from management, shareholders, government and etc. in a corporation, conflicts of interests is potentially available in corporations which leads to agency problem and agency costs. Jensen (1986) represents an example of agency problem by indicating the free cash flow case. He mentions that when free cash flows are accessible for managers, they would exploit these free cash flows in favor of individual interests rather than shareholders' interests. Therefore, firms have to discipline this potential behavior of their managers by acquiring more debt since debt obligations can absorb free cash flows.

If debt financing proportion increases in the combination of capital structure, firms can expect less agency conflict by their managers. So, even though internal funds may be available, in the presence of possibility of agency costs, firms may prefer to increase leverage in order to increase managers' commitment and minimize individual exploitation (Lewis and Sappington, 1995).

Chapter 3

LITERATURE REVIEW

3.1 Introduction

As mentioned earlier, the way a firm provides funding for its operation is called capital structure, whether by employing debt or equity. The previous chapter of study introduced main theories of capital structure which have been developed in the field of financial management. In this chapter, a review of literature which is related to the topic of study is conducted.

3.2 Capital Structure and Firm Performance

According to the framework of corporate governance, three main parties could be distinguished in a firm, namely shareholders (owners), managers (agents) and debt-holders. However, there might be some cases where shareholders are also managers or managers hold some shares which results in a reduction of agency conflict.

As mentioned before, agency theory (Jensen and Meckling, 1976) is a handful instrument for firms' shareholders to control managers' behaviors. So, as managers are disciplined by debt constraints, they are more inclined to perform parallel to the interests of shareholders and they might consequently do their best to improve the performance of the firm (Myers, 2001).

In addition, corporations which are potentially exposed to moral hazard problems would be willing to acquire higher levels of debt since higher leverage ratios might

constraint the managers to perform efficiently in order to maximize the shareholder's value and satisfy the shareholders' interests (Jensen, 1986). On the other hand, when there is not sever monitoring on the firms, managers would tend to decrease leverage ratio in order to mitigate the bankruptcy risks. So, there is an ambiguous relationship between the leverage ratio of a firm and its financial performance.

In a study conducted by Bajaj et. al (1998), the relationship between capital structure and performance of a firm is investigated according to the ownership structure of the firm. They propose a model in which problems resulting from moral hazard and adverse selection are included and it is hypothesized that monitoring mechanism and ownership structure affect the capital structure decisions and financial performance of the firm. They realized that ownership structure and monitoring mechanisms affect capital structure and performance of the firm significantly.

Another study by Driffield et. al (2005) investigates whether capital structure and firm performance are affected by each other or not by using three-stage least squares method. Their empirical findings show that as ownership structure becomes more concentrated, the firm tends to acquire higher levels of leverage.

In a similar study by Berger and di Patti (2006), the simultaneity between firm performance and capital structure is studied. In their study, they notify that when managers try to increase their own utilities and satisfy personal interests, the cost is borne by equity holders and this process leads to agency costs imposed on the interests of shareholders. Looking from this point of view, since agency costs are affected by capital structure, the performance of a firm is associated with its capital structure decisions.

According to the theories of capital structure, although debt financing provides a tax shelter which helps firms to improve their value, bankruptcy and financial distress costs are inevitable characteristics of debt financing. Kung and Wen (2007) investigate the relationship between return on equity (ROE) and debt ratio for Taiwanese firms. In other words, the return on equity firstly goes up as a firm levers more but it reaches to a maximum point and then starts to decrease in correspondence with higher leverage ratios. Similarly, Zeitun and Tian (2007) conducted a study on the Jordanian firms and realized that there is a negative relationship between capital structure and firm performance. In their study, they employed return on assets (ROA) and Tobin's Q as measurements of firm performance.

Another study by Salteh et al (2009) states that there is a positive relationship between the level of debt in a firm and its financial performance. They have conducted their analysis based on three different performance measurements, namely return on equity or ROE, return on assets or ROA and Tobin's Q. Results of their study show that ROE and Tobin's Q suggest that debt ratio is positively associated with the performance while ROA shows a reverse relationship.

Onaolapo (2010) investigates the relationship between the leverage ratio of a firm and its performance and he reveals that return on equity and return on assets respond negatively to leverage ratio changes. It is also worth noting here that Fama and French (2002) and Karadeniz (2009) also set the same link between debt financing and financial performance.

Similarly, Muritala (2012) tests how leverage could affect the performance of firms with a sample of ten Nigerian firms in a five-year period. The outcomes of the study suggest a negative relationship between the performance and leverage ratio. Moreover, Soumadi and Hayajneh (2012) document that the relationship between leverage and performance is the same for a sample of 76 firms operating in Amman.

3.3 Empirical Studies on the Determinants of Capital Structure and Financial Performance

In the beginning of this section, it is worth noting that according to the theories of capital structure, there is an optimal capital structure for each firm. In other words, this theoretical optimal capital structure occurs when the ratio between debt and equity is optimized, *ceteris paribus*, in a way which leads to the maximization of financial performance which results in the maximization of shareholders' wealth (Firer et al., 2004). Therefore, the literature of capital structure is concentrated on the theories of capital structure to determine the optimal capital structure.

There are several empirical studies focused on the factors affecting the financial structure and performance of firms. One of the early studies in this field by Schwartz and Aronson (1967) proposes that there are differences between the capital structures of the firms in different industries. In addition, they mention that the capital structure of a specific industry changes over time. It could be said that they suggest that capital structure of firms are dynamically evolving to a level which optimizes the financial performance and maximizes shareholders' wealth. And, firms either estimate their optimal capital structure or, more commonly, follow the same structure of their main competitors in the market.

In this respect, many studies have investigated the factors affecting the capital structure decisions. Franck et al. (2002) have investigated the impact of different law environments on the capital structure of firms. They mention that the determinants of capital structure are able to be compared between North America and European firms.

An investigation of the capital structure determinants in Pakistani firms (Shah et al. (2004) shows that there is a significant relationship between the tangibility of assets and the leverage ratio which is consistent with earlier studies (Titman and Wessels, 1988; Rajan and Zingales, 1995).

Another study by Bauer (2004) is focused on the Czech firms to investigate the determinants of financial structure. Some determinants are analyzed to test whether there is any statistically significant relationship or not, namely firm size, tangibility of assets, growth opportunities, profitability, risk, tax and operating sector. Results show that profitability and size affect the leverage ratio positively where volatility does not show any significant relationship.

Lima (2009) shows that the capital structure of pharmaceutical firms in Bangladesh is affected by the size, value of assets and bankruptcy costs. Another important finding is that as he mentions there is a positive and significant association between the size of the firm and its access to the market funds, therefore, larger firms acquire higher levels of debt with less probability of default.

3.4 Empirical Studies on the Determinants of Capital Structure and Financial Performance in the Textile Industry

Most of the literature on the capital structure of textile industry is focused on the Pakistani textile industry. Memon et al. (2012) investigate the impact of capital structure on financial performance of textile firms in Pakistan. Their sample is consisted from 141 firms over a period of time starting from 2004 to 2009. ROA is defined as a proxy to evaluate the performance of the firm. In addition, the determinants of capital structure are identified as firm size, tangibility of assets, leverage ratio, tax, growth opportunities of the firm and risk. The outcomes of the study show that all determinants are significantly affecting the capital structure and financial performance of the firms in the textile industry in Pakistan.

Khan et al. (2013) study empirically investigates the impact of the capital structure of Pakistani textile firms on their financial performance for a sample of 69 listed firms for the period of 2003-2009. In this respect, they evaluate the responsiveness of stock returns to the changes in the capital structure by defining stock returns as dependent variable and leverage ratio, ROE, earnings per share and time interest earned ratio as independent variables. Based on an OLS analysis, they propose that the changes in the financial structure have significant impacts on the financial performance and stock returns of firms operating in textile industry in Pakistan.

Chapter 4

DATA AND RESEARCH METHODOLOGY

In this section of study, the data used to analyze the subject of the study is introduced. Afterwards, the model of the study is proposed based on the relevant literature. Finally, the research methodology which is employed to evaluate the validity of the proposed model is introduced and discussed briefly.

4.1 Data

In order to study the financial structure and performance of Turkish textile and apparel firms, a sample of active firms in this industry is chosen. This sample includes 16 companies from 1999 to 2012 and the data is gathered from Thomson Reuters' software DataStream. These companies are chosen based on their sector classification. A summary of the companies' profiles are shown in the Table 1. It should be notified here that this study employs a panel data approach since this method not only enhances the number of observations for the analysis, but it also provides a framework to mitigate the multicollinearity problem to an extent.

Table 1: List of Companies in the Sample

Company Name	Company Headquarter	Sub-industry	Trading Quote : Exchange
Akin Tekstil AS	Istanbul	Textile & Textile Prods Mfg.	ATEKS: Borsa Istanbul
Gimsan Gediz Iplik ve Mensucat Sanayii AS	Istanbul	Textile & Textile Prods Mfg.	GEDIZ: Borsa Istanbul
Birlik Mensucat AS	Kayseri	Textile & Textile Prods Mfg.	BRMEN: Borsa Istanbul
Bisas Tekstil Sanayi ve Ticaret AS	Istanbul	Textile & Textile Prods Mfg.	BISAS: Borsa Istanbul
Arsan Tekstil Ticaret ve Sanayi AS	Kahramanmaras	Textile & Textile Prods Mfg.	ARSAN: Borsa Istanbul
Vakko Tekstil ve Hazir Giyim Sanayi Isletmeleri AS	Istanbul	Apparel, Footwear, Acc. Design.	VAKKO: Borsa Istanbul
Boyner Perakende Ve Tekstil Yatirimlari AS	Istanbul	Textile & Textile Prods Mfg.	BOYP: Borsa Istanbul
Bossa Ticaret Ve Sanayi Isletmeleri Tas	Adana	Apparel, Footwear, Acc. Design.	BOSSA: Borsa Istanbul
Edip Gayrimenkul Yatirim Sanayi ve Ticaret AS	Istanbul	Textile & Textile Prods Mfg.	EDIP: Borsa Istanbul
Esem Spor Giyim Sanayi ve Ticaret AS	Istanbul	Apparel, Footwear, Acc. Design.	ESEMS: Borsa Istanbul
Ihlas Madencilik AS (Okan Tekstil Sanayi ve Ticaret AS)	Istanbul	Textile & Textile Prods Mfg.	IHMAD: Borsa Istanbul
Luks Kadife Ticaret Sanayii	Kayseri	Textile & Textile Prods Mfg.	LUKSK: Borsa Istanbul
Sanko Pazarlama Ithalat Ihracat AS	Istanbul	Textile & Textile Prods Mfg.	SANKO: Borsa Istanbul
Soktas Tekstil Sanayi ve Ticaret AS	Istanbul	Textile & Textile Prods Mfg.	SKTAS: Borsa Istanbul
Sonmez Pamuklu Sanayii AS	Bursa	Textile & Textile Prods Mfg.	SNPAM: Borsa Istanbul
Yunsa Yunlu Sanayi VE Ticare	Istanbul	Textile & Textile Prods Mfg.	YUNSA: Borsa Istanbul

Source: Borsa Istanbul (<http://borsaistanbul.com/en/data>), Bloomberg Businessweek (<http://investing.businessweek.com/research/stocks/>)

4.2 Proposed Mathematical Model of the Study

The first step in the process of statistical analysis is to define the variables which are going to be tested in the model based on the literature and previous empirical studies. Technically speaking, we have to distinguish the dependent variable and the independent variables which will be regressed on it. This study aims to test the determinants of profitability, so the dependent variable is profitability. In addition, in the previous chapter, a review of the literature identified the determinants of profitability as: company size, company growth opportunities, leverage, taxation benefits and tangibility of assets (Goddard et al. , 2005; Nunes et al., 2009) which this could be shown as a functional equation as below:

$$\text{Performance} = f(\text{company size, company growth opportunities, leverage, tangibility of assets, taxation benefits})$$

In order to construct the model of the study, firstly one needs to define the dependent variable and independent variable/s. In this respect, the initial step of statistical analysis is defining the variables of study according to the previous studies and the relevant literature.

4.3 Variables

The main aim of this study is to investigate the factors affecting the financial performance of the Turkish textile companies.

Rajan and Zingales (1995) propose that the measurement proxy is critically depended on the objective of the study. However, they suggest that one of the best proxies for

evaluating financial structure is the ratio of debt to equity capital since it can capture the effect of past decisions on the firm's capital structure.

Performance of a firm could be evaluated by various proxies. According to Lin et al. (2005) return on assets or ROA is an appropriate proxy to measure the profitability of a firm. ROA shows how efficiently the firm's assets are used to generate income, so it could be measured as the ratio of earnings before interest and tax (EBIT) to total assets.

Return on equity or ROE is another proxy to investigate the financial performance of a firm. ROE represents how much the company has been successful to generate profits by investing the shareholders' money. Respectively, in this study, ROA and ROE are chosen as proxies to measure the financial performance of the firms in the sample.

In the relevant literature, firm size is suggested to be a key determinant of the firm performance (Winter, 1994; Gschwandtner, 2005). Accordingly, firm size is chosen as an independent variable to analyze its impact on the performance of the firms in the sample of the study. The proxy for firm size measurement is defined as the natural logarithm of sales revenues.

Another determinant of financial performance which is commonly mentioned in the literature is tangibility of assets. Bigger et al. (2007) suggest that firms with higher proportions of tangible assets have higher capacities of debt financing rather than equity financing. Moreover, the structure of assets in a firm is believed to affect its

leverage ratio significantly (Frank and Goyal , 2007). Therefore, tangibility of assets is the second independent variable.

Growth opportunities could affect the performance of a firm either positively or negatively. It could cause motivation among agents leading to higher productivity and better performance. On the other hand, different interpretations of growth could result in a diminishing inspiration which could be accompanied by a weak performance (Delmar et al. , 2003; Wiklund et al. 2003). Therefore, growth opportunities impacts have to be analyzed as another important variable affecting the performance of a firm. In this respect, growth opportunity is defined as the change in total assets compared to the previous year.

Theories of capital structure discuss how leverage affects the financial performance of a firm. Hence, leverage is of great importance in the framework of firm performance analysis. As being mentioned by the pecking order theory, the first source of financing in any firm is internal financing since external financing is associated with financial distress and bankruptcy costs (Myers and Majluf, 1984). In addition, many studies in the literature refer to the role of leverage in a firm performance. For instance, Campello (2006) argues that leverage ratio could affect the performance either positively or negatively. All mentioned emphasizes the importance of leverage ratio as a determining factor of performance. So, leverage is another proposed variable to be analyzed which is measured by the ratio of total debt over total assets.

Taxation benefits could also affect the performance of a firm via providing a tax shield to improve the profitability of a firm. As Biger et al. (2007) suggest, tax

benefits provided by depreciation allowances and tax credits is significantly affecting the performance of a firm and its financial structure. So, tax benefit is another independent variable which is measured by the ratio of depreciation over total assets.

In the following table (Table 2), both dependent and independent variables are defined and their measurements are shown.

Table 2: Definition of Variables and Their Measurements

Variable	Proxy
Return on Assets (ROA)	$ROA = \frac{\text{Net Income}}{\text{Total Assets}}$
Return on Equity (ROE)	$ROE = \frac{\text{Net Income}}{\text{Total Equity}}$
Firm Size	Natural Logarithm of Sales
Tangibility of Assets	$\frac{\text{Fixed Assets}}{\text{Total Assets}}$
Growth Opportunities of Firm	$\frac{\text{Total Assets}_t - \text{Total Assets}_{t-1}}{\text{Total Assets}_{t-1}}$
Leverage Ratio	$\frac{\text{Total Debt}}{\text{Total Assets}}$
Tax Benefit	$\frac{\text{Depreciation}}{\text{Total Assets}}$

4.4 Panel Data Analysis

In the framework of econometrics, data analysis could be conducted by various approaches, namely time-series analysis, cross-section analysis and panel data

analysis. The first one represents a series of observations of the same unit over a period of time. The second one, cross-section analysis, analyze the data over a section of time taking into consideration different units. The third approach is panel data which is a mixture of time-series analysis and cross-section analysis. In other words, panel data approach surveys the similar cross-section over a period of time resulting in an analysis which is consisted of both space and time dimensions.

While a panel model is being analyzed, fixed-effects and random-effects techniques are the most common techniques for the analysis. The main difference between these two techniques lies in the role of dummy variables. Taking into account dummies as a part of the intercept, the estimation is called a fixed-effect, while a random-effect estimation considers dummies as error terms.

4.4.1 Proposed Model of Study

Previously, the variables of study were identified and the panel data analysis was introduced. In this section, proxy variables are being plugged into a function to analyze the potential relationships among them. In this respect, dependent and independent variables are represented in a functional form as below:

$$Perfromance = f(Firm Size, Tangibility , Growth , Leverage Ratio, Tax Benefits)$$

In other words, the firm performance is a function of firm size, growth opportunities, leverage ratio and tax benefits.

Afterwards, we need to bring this function into equation form in order to be analyzed for regression analysis. As mentioned before, performance of a firm could be measured in different ways. In this study, we have proposed ROA and ROE as the

performance measures for the firms in the sample. So, the equation form of the function could be represented as below:

$$\text{ROE}_{i,t} = \beta_0 + \beta_1 \cdot \text{Size}_{i,t} + \beta_2 \cdot \text{Growth}_{i,t} + \beta_3 \cdot \text{Leverage}_{i,t} + \beta_4 \cdot \text{Tax Benefits}_{i,t} \\ + \beta_5 \cdot \text{Tangibility}_{i,t} + e_{i,t}$$

$$\text{ROA}_{i,t} = \beta_0 + \beta_1 \cdot \text{Size}_{i,t} + \beta_2 \cdot \text{Growth}_{i,t} + \beta_3 \cdot \text{Leverage}_{i,t} + \beta_4 \cdot \text{Tax Benefits}_{i,t} \\ + \beta_5 \cdot \text{Tangibility}_{i,t} + e_{i,t}$$

Where, *i* represents each of the companies in the sample; *t* stands for the period of time; $\text{ROE}_{i,t}$ is the return on equity of firm *i* in the time period of *t*; $\text{ROA}_{i,t}$ is similarly the return on assets of firm *I* in the time period of *t*; $\text{Size}_{i,t}$ represents the size; $\text{Growth}_{i,t}$ is the growth opportunities; $\text{Leverage}_{i,t}$ is the leverage ratio; $\text{Tax Benefits}_{i,t}$ is the tax benefits; $\text{Tangibility}_{i,t}$ is the tangibility ratio and $e_{i,t}$ is the term representing the error of analysis and it is assumed to have a normal distribution

4.4.2 Panel Unit Root Tests

Before conducting the regression analysis, unit root tests must be done to make sure that the variables of the study are in the same order of integration. Otherwise, the regression would be spurious (Gujarati, 2003). A variable is stationary if its mean and variance do not change systematically over time. Unit root tests are being used to determine whether a variable is stationary or non-stationary.

Levin and Lin (1993) have proposed that panel unit root tests improves the ability of the test compared to time series unit root tests. Their method is based on the same approach to the time series ADF unit root tests and the null hypothesis is that a unit

root exists. Technically, ADF tests are done for every individual in the panel and then the pooling of the t-tests provides a framework to evaluate the null hypothesis.

There are various panel unit root tests among which some are more common such as Fisher test (1932), Levin and Lin or LLC (1993), Im-Pesaran-Shin or IPS (1997) and Maddala-Wu or MW (1999).

Chapter 5

EMPIRICAL RESULTS

5.1 Introduction

This section of study represents the empirical findings derived from the analysis of data sample. In this respect, the variables in the proposed model of study are analyzed by various statistical tests and the relationships between dependent variable and independent variables are revealed by conducting correlation and multiple regression analysis. Later, the outcomes of these analyses are discussed according to the research objectives and their consistency with previous studies in the literature is investigated. So, this section starts with a descriptive statistics of study sample. Then, it continues with a correlation analysis to have a general view of degree and direction of potential relationships among variables. Afterwards, unit root tests are conducted to check whether the variables are in the same order of integration. Lastly, regression analysis is conducted to evaluate how the independent variables are associated with the dependent variable statistically.

5.2 Descriptive Statistics

As shown in the Table 3, the average value of return on assets (ROA) has been 0.0086 or 0.86 percent with a standard deviation of 29.52 percent over the period of 1999 to 2012 for the textile companies in the sample. It could be inferred according to the high

Table 3: Descriptive Statistics

	ROA	ROE	SIZE	TANGIBILITY	TAX BENEFIT	GROWTH	LEVERAGE
Mean	0.008603	0.168632	10.89438	0.513667	0.055408	0.186062	0.261662
Median	0.002087	0.016072	11.33643	0.552164	0.046093	0.049440	0.257555
Maximum	1.495617	35.31429	13.45332	0.962586	0.288267	11.91457	1.144275
Minimum	-2.207236	-13.66802	5.135798	0.058658	0.000697	-1.000000	0.000000
Std. Dev.	0.295257	3.091633	1.583191	0.207617	0.043008	0.992610	0.213045
Observations	167	167	167	167	167	167	167

Note: ROA represents Return on Assets; ROE represents Return on Equity; SIZE represents the company size; TANGIBILITY represents the tangibility of assets; TAX BENEFIT represents the taxation benefits; GROWTH represents the growth opportunities of the company; LEVERAGE represents the leverage ratio of the company.

standard deviation value that this industry has been experiencing a volatile stream of ROA. Similarly, ROE is being represented by an average of 16.86 percent and a standard deviation of 3.09 or more than 300 percent over the period of study. These high standard deviation values of returns on assets and equity depict the volatility of ROE and ROA values over the period of study for this sample of sixteen Turkish textile companies.

Tangibility of assets has had an average of 51.36 percent which could imply that on average more than half of the assets of these companies has been tangible assets over the period of 1999 to 2012. It could be inferred from the standard deviation of 20.76 percent (lower than mean value) that tangibility of assets has not shown a high frequency of changes during the period of study. Another variable depicted in the Table 3 is taxation benefits. According to descriptive statistics, the average ratio of depreciation over total assets for Turkish textile companies has been 5.54 percent with a standard deviation of 4.3 percent. Growth opportunities have also revealed an average of 18.60 percent with a very high standard deviation of close to 100 percent.

It could be inferred that growth opportunities for Turkish textile companies during this period have been distinctly varying. The last column of the Table 3 reports the leverage ratio statistics. It is shown that the leverage ratio has been on average 26.16 percent with a 21.30 percent. It is worth noting that there is a minimum value of 0 percent for leverage ratio revealing a situation of zero debt financing.

5.3 Correlation Analysis

In the previous section, a summary of descriptive statistics was represented and discussed according to the frequencies of variables. Hence, by having an overall understanding of the data structure, one could conduct correlation analysis to investigate the degree and direction of association among variables of study. Accordingly, correlation analysis results are depicted in the following table (Table 4).

According to the correlation analysis, the highest degree of correlation (absolute value) exists between tangibility of assets and company size in this sample (-0.4817), while the lowest degree of correlation exists between ROE and growth opportunity with a value very close to zero (-0.0087).

The negative correlation of GROWTH with ROA and ROE could be interpreted by the fact that increased company growth can mean diminished profitability, given that increased company growth can mean a breakdown in informal relations among workers, greater company scale requiring greater formality in working relations, and firms may not be ready to face up to this need. Nevertheless, it could be concluded that company growth can contribute to increased employee motivation, which in turn can contribute to improved performance and consequently profitability. Also, the effect of growth on company performance will be dependent above all on the ability

of owners to motivate or control employee behavior, so that possible organizational changes as a consequence of company growth do not mean diminished performance (Greiner,1972). In addition, according to Delmar & Wiklund (2003), company growth can mean increased or decreased profitability. On the one hand, increased growth can mean increased motivation in all the agents belonging to the company's organizational structure, as a consequence of the high expectations of future economic gains, and these greater expectations may contribute to increased company profitability. On the other hand, company growth can create negative expectations in employees, particularly concerning the possibility of company capital being opened up more to external owners, contributing to diminished employee productivity and consequently to diminished company profitability.

Table 4: Correlation Analysis

	ROA	ROE	SIZE	TANGIBILITY	TAX BENEFIT	GROWTH	LEVERAGE
ROA	1						
ROE	0.3267	1					
SIZE	-0.1368	-0.0551	1				
TANGIBILITY	-0.0096	-0.0213	-0.4817	1			
TAX BENEFIT	-0.2933	-0.1079	-0.2347	0.2095	1		
GROWTH	-0.0420	-0.0087	-0.0660	-0.0491	0.1178	1	
LEVERAGE	-0.1561	0.0311	-0.0166	-0.0128	-0.0596	-0.0179	1

5.4 Panel Unit Root Tests

Before conducting a regression analysis, one should check the order of integration among variables otherwise the regression results might turn to be spurious. Therefore, panel unit root tests are appropriate instruments for researchers to investigate whether the variables are stationary or non-stationary (Gujarati, 2003). If the variables are all in the same order of integration, one could validate the outcomes of regression. If not, VAR models should be used to correct for non-stationary status of variables.

As mentioned in the previous chapter, following the Levin and Lin, (1993) approach, other panel unit roots test have also been introduced in the literature. To name the more common ones, Fisher , Im-Pesaran-Shin or IPS and Maddala-Wu or MW. For the purpose of this study, LLC , IPS and M-W panel unit root tests are conducted and the results are shown in the Table 5.

5.4.1 Levin-Lin-Chu Test

Individual unit root tests have limited power. The power of a test is the probability of rejecting the null when it is false and the null hypothesis is unit root. It follows that we find too many unit roots. Levin-Lin-Chu Test (LLC) suggest the following hypotheses

H0: each time series contains a unit root.

H1: each time series is stationary.

5.4.2 Im, Pesaran and Shin Test

The Im-Pesaran-Shin (IPS) test is not as restrictive as the Levin-Lin-Chu test, since it allows for heterogeneous coefficients. The null hypothesis is that all individuals follow a unit root process:

$$H_0: \rho_i = 0 \forall i$$

The alternative hypothesis allows some (but not all) of the individuals to have unit roots:

$$H_1: \left\{ \begin{array}{l} \rho_i < 0 \text{ for } i = 1, 2, \dots, N \\ \rho_i = 0 \text{ for } i = N_1 + 1, \dots, N \end{array} \right\}$$

It should be notified here that, in the framework of panel unit root tests, the null hypothesis is that each series has a unit root and the alternative hypothesis is that each series does not have unit root. So, if the null hypothesis is being rejected, it could be concluded that series does not have a unit root and so it is integrated of degree zero. In other words, the series is $I(0)$ in terms of order of integration. For instance, in the following table (Table 5), the results report the rejection of the null hypothesis of ROA having a unit root. Therefore, it could be inferred that ROA is a stationary variable at its level form. Similarly, other variables are also being reported to be $I(0)$ or stationary at level form. Econometrically, these variables could be regressed on each other and the regression results would not be spurious.

Table 5: Panel Unit Root Tests

Variables	Levels			ADF Fisher Chi-Square	PP Fisher Chi-Square
	LLC	IPS			
ROA					
τ_T	-1.45**	-0.49	41.32	80.26*	
τ_μ	-4.77*	-2.61*	57.91*	66.73*	
τ	-7.96*	-	92.60*	103.07*	
ROE					
τ_T	-2.99*	-0.50	41.58	68.00 *	
τ_μ	-5.44*	-2.83*	60.34*	83.21*	
τ	-9.09*	-	102.74*	115.20*	
SIZE					
τ_T	-7.24*	-0.91	51.23*	75.71*	
τ_μ	-5.53*	-1.63**	52.58*	84.67*	
τ	-1.60	-	26.97	32.01	
TANGIBILITY					
τ_T	-2.95*	0.07	29.52	45.55**	
τ_μ	-2.05**	0.18	25.26	25.70	
τ	2.91	-	10.95	10.23	
TAX BENEFIT					
τ_T	-4.12*	-0.21	39.13	54.76*	
τ_μ	-3.23*	0.02	31.03	33.63	
τ	-4.85*	-	70.44*	111.23*	
GROWTH					
τ_T	-1.93**	0.14	31.52	64.88*	
τ_μ	-2.52*	-1.17	41.36	76.88*	
τ	-5.99*	-	79.37*	108.54*	
LEVERAGE					
τ_T	-4.48*	0.04	32.60	28.81	
τ_μ	-3.91*	-1.11	40.77	34.75	
τ	-2.34*	-	50.63**	60.37*	

Note: τ_T represents the most general model with a drift and trend; τ_μ is the model with a drift and without trend; τ is the most restricted model without a drift and trend.

*, **, *** denotes the rejection of null hypothesis in 1%, 5% and 10%, respectively.

5.5 Regression Analysis

The proposed models of study are analyzed by conducting regression analysis in E-Views 7. The relationship between the independent variables and ROA is analyzed in the proposed model of study.

$$\text{ROA}_{i,t} = \beta_0 + \beta_1 \cdot \text{Size}_{i,t} + \beta_2 \cdot \text{Growth}_{i,t} + \beta_3 \cdot \text{Leverage}_{i,t} + \beta_4 \cdot \text{Tax Benefits}_{i,t} \\ + \beta_5 \cdot \text{Tangibility}_{i,t} + e_{i,t}$$

According to Serrasqueiro and Nunes (2008), panel data regressions could be estimated by employing various panel models. The most commonly models are pooled OLS regression, panel model of random effects model and panel model of fixed effects. The main implication of these models is their ability to observe the individual effects of companies on the estimated parameters which might not be observed by pooled OLS model.

To find out which model describes the sample of study more appropriately, Hausman test is conducted to see whether random effect model is more appropriate or fixed effect model.

In order to check whether panel model of random effects is appropriate or panel model of fixed effects, Hausman test is conducted. The outcome of Hausman test suggests that the rejection of null hypothesis is not possible. Therefore, it can be inferred from this result that panel model of random effects is the appropriate compared to the fixed effects model.

Therefore, according to the random effects model, the coefficients of LEVERAGE (β_1) and TAX BENEFIT (β_4) are the only variables which are statistically significant

according to the regression results. In addition, R-squared value suggests that 12.31 percent of changes in ROA could be explained by the explanatory variables.

Table 6: Regression Results

Independent Variables	Dependent Variable : ROA		
	OLS	Fixed Effects	Random Effects
C	0.768034* (0.2132)	0.303074 (0.3219)	0.617654** (0.2649)
SIZE	-0.047201* (0.0155)	-0.002667 (0.0273)	-0.032124 (0.0209)
TANGIBILITY	-0.088509 (0.1181)	-0.147538 (0.1335)	-0.114340 (0.1229)
TAX_BENEFIT	-2.387614* (0.5158)	-1.948196* (0.5698)	-1.953799* (0.5266)
LEVERAGE	-0.252664 (0.0999)	-0.320672** (0.1328)	-0.327690* (0.1176)
GROWTH	-0.007158 (0.0216)	0.011946 (0.0183)	0.007488 (0.0181)
Observations	167	167	167
R ²	0.1667	0.4932	0.1231
F-statistics	6.4434*	7.1069*	4.5205*
DW	1.5294	2.4856	2.1755
Hausman (χ^2)			7.10

Note: *, **, *** represent that the result is statistically significant at 1%, 5% and 10%, respectively. Numbers in parentheses represent standard errors.

According to the trade-off theory, there is an inverse relationship between profitability of companies and their debt level. As Fama and French (2005) propose, low profitability may increase the risk of bankruptcy; so, companies tend to adjust their leverage ratio to lower levels. Besides, it is believed that profitable firms should be leveraged more to increase their tax shields. In contrast, according to pecking order theory, more profitable firms prefer to use more internal funds than external

funds. As Titman and Wessels (1988) mention, highly profitable firms are more willing to employ less levels of debt financing.

The other statistically significant coefficient is taxation benefit coefficient which reveals an inverse relationship. Moreover, capital structure decisions also affect the profitability and financial performance of a firm significantly. Based on the studies of theories of capital structure (Modigliani and Miller, 1958; Myers, 1984; Miller, 1988), taxation benefits encourage capital structure decision makers to acquire more levels of debt. As mentioned before, higher levels of debt is associated with lower levels of profitability. Hence, our finding is consistent with the previous studies in the literature.

In the OLS regression results, SIZE and TAX BENEFITS are the coefficients which are statistically significant. Taxation benefit behavior in this model could be interpreted same as in the model of random effects. Company size coefficient could be interpreted according to Jensen (1986) where he mentions larger firms are more potential to have high levels of profits. However, larger firms tend to discipline their managers to increase the debt financing to reduce the agent-principle conflicts. In addition, as Frank and Goyal (2009) argue, firms with higher potential profits are more willing to increase their debt. And, Mjos (2007) states that size of a firm is associated with its leverage ratio. In our regression results, company size is negatively related to its ROA. Therefore, this relationship could be interpreted as: more profits are followed by higher leverage ratio leading to a reduction in net income which could be translated into lower ROA.

Chapter 6

CONCLUSION

6.1 Conclusion

The main aim of this study was to investigate the financial structure and performance of selected textile companies in Turkey by evaluating their financial structure and determining the factors affecting their financial performance. This study was mainly focused on the textile, clothing and fashion industry because this industry plays a major role in the Turkish economy. In this respect, required data was gathered from DataStream software for Turkish textile companies listed in the Istanbul Exchange Market from 1999 to 2012. Then, data was plugged into a panel data regression analysis and it appeared that return on assets (ROA) of these companies are affected by the changes in the company size and taxation benefits or tax shield provided by depreciation. Both company size and taxation benefits represented a negative relationship toward ROA.

As company size is negatively related to its ROA this relationship could be interpreted as more profits are followed by higher leverage ratio leading to a reduction in net income which leads to a lower ROA. This finding is consistent with Jensen (1986), Mjos (2007) and Frank and Goyal (2009). Additionally, based on the studies of theories of capital structure (Modigliani and Miller, 1958; Myers, 1984; Millers, 1988), taxation benefits encourage capital structure decision makers to acquire more levels of debt. As mentioned before, higher levels of debt is associated

with lower levels of profitability. Hence, our finding is consistent with the previous studies in the literature.

Finally, the findings of this study could enable the managers and policy makers in the textile industry to allocate their capital structure more efficiently to enhance the financial performance and profitability.

6.2 Recommendations and Policy Implications

The outcomes of this study could provide some insightful recommendation for the managers and policy makers in the textile industry of Turkey.

Firstly, it could be notified that the managers should carefully allocated their financings between debt and equity. Although debt financing has some advantages, it is associated with some negative signals such as lower ROA and lower net income. Therefore, while the managers are constructing the company's capital structure, they have to consider these issues.

Secondly, one would recommend to the textile companies to employ internal funds resulting from higher sales rather than external funds or debt financing. In this case, the net income would be increased leading to a higher ROA and could be inferred as a good signal to the market.

6.3 Limitations of Study and Suggestions for Further Research

The availability of data is often a big limitation issue which researchers would face in any research field. This study also suffers from a limited period of data availability. Data covering a longer period provide more observations leading to a more comprehensive study.

Moreover, there is not many studies in the relevant literature on this topic, specially the capital structure in the textile industry, hence, the framework of study has been constructed according to the studies of similar industries.

As this study was not able to cover all aspects of financial performance in the textile industry, there are some potential topics to be investigated as further research. For instance, this study was concentrated on the Turkish textile industry, while it could be extended to an investigation of international textile companies. This would enable the policy makers in the textile industry to think more broadly. Another potential topic for further research would be analyzing the macroeconomic impacts of the Turkish textile industry on the Turkey's economy since the textile industry in Turkey is one of the leading sectors. Finally, the identification of other determinants of profitability and capital structure in the textile industry could be a potential further research.

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