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Firma Kaldıracı, Vekalet Maliyetleri ve Firma Performansı: Türkiye'de Hizmet Firmaları Üzerinde Ampirik Bir Araştırma

Firm Leverage, Agency Costs and Firm Performance: An Empirical Research on Service Firms in Turkey

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Öz

Agency teorisi, borçlanmanın hissedarlar-yöneticiler agency problemini azaltarak (hissedarlar-borç verenler agency problemini arttırarak) firmanın performansını artırabileceğini (azaltabileceğini) önermektedir. Bu çalışma kaldıracın yüksek ve düşük agency maliyetlerine sahip olan firmaların performansı üzerinde etkisini analiz etmiştir. En küçük kareler yönetimi (OLS) ve Borsa İstanbul'da (BİST) hizmet sektöründe hisse senetleri işlem gören 52 firmanın 2008-2017 yıllarına ait verilerini kullanarak kaldıracın firma karlılığı üzerindeki etkisi negatif, ve bu negatif etki yüksek borcun agency maliyetlerine sahip firmalar için (yüksek büyüme fırsatları ve daha az maddi duran varlıklara sahip firmalar) daha yüksek, serbest nakit akışlarının agency maliyetlerine sahip firmalar için (yüksek serbest nakit akışlarına sahip firmalar) ise daha düşük olduğu tespit edilmiştir.

Anahtar Kelimeler: Kaldıraç, Agency Maliyetleri, Firma Performansı, Hizmet Firmaları, Türkiye.

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Abstract

The agency theory suggests that loan can reduce the agency problem of shareholders-managers (enhance the agency problem of shareholders-lenders) and increase (decrease) the performance of a firm. This article analyzes the impact of firm leverage on the performance of firms with high and low agency costs. Using the ordinary least squares (OLS) method and the 2008-2017 data of 52 firms whose stock certificates are processed in the service sector in Istanbul Stock Exchange; it was determined that leverage had a negative impact on firm profitability and that impact was higher for firms with higher agency costs (firms with higher growth opportunities and fewer tangible assets) and lower for firms with agency costs of free cash flows (firms with higher free cash flows).

Keywords: Leverage, Agency Costs, Firm Performance, Service Firms, Turkey.

1. Introduction

In the agency theory, leverage can decrease the agency costs of equity and increase the agency costs of debt. Agency costs of equity arise when the interests of the shareholders differ from the interests of managers (Jensen and Meckling, 1976). Jensen (1986) argues that managers with high free cash flow can waste the excess cash or invest it in low-return projects. In this context, excessive free cash flow could result in low performance. One way to reduce the agency problem is to use debt. Debt financing mitigates the agency costs of free cash flow by reducing the excess cash flow under the control of managers (Jensen, 1986: 324). Debt payments force managers to behave efficiently and in a manner consistent with the interests of shareholders. Higher debt service requirements play an important role in reducing the excess cash flow (Ehrhardt and Brigham, 2011: 616). According to these arguments, Leverage contributes to higher performance by mitigating the agency costs of free cash flow.

Although leverage moderates the agency costs derived from the conflicts of interest between shareholders and managers, it increases the agency costs of debt (Jensen, 1986: 324). These agency costs derive from the conflicts of interest between shareholders and debtholders. These costs make it more expensive for firms with risky debt to obtain additional funds for investment opportunities. Such firms would be reluctant to invest because the investment benefits will accrue to debtholders rather than shareholders (Opler, Pinkowitz, Stulz and Williamson, 1999: 11). These firms pass up profitable investment opportunities which could make a positive contribution to the firm performance (Myers, 1977: 149). Therefore, we would expect that less debt to be associated with higher performance in the presence of agency costs of debt. Low levels of debt will solve the underinvestment problem and consequently enhance the performance. Accordingly, firms with more investments tend to issue less debt (Fama and French, 2002; Frank and Goyal, 2009). However, contradicting this view, the pecking order model of corporate leverage predicts that firms with more investment opportunities tend to have more leverage. Because of the costs arising from information asymmetry, firms finance the investment opportunities with internal funds. If internal finance is not sufficient, firms first issue safe debt, then risky debt, and finally, as a last resort, equity (Myers, 1984: 581).

Numerous studies have investigated the effect of leverage on firm performance. We contribute to the finance literature by conditioning the leverage-performance relation on agency costs. This research investigates the effect of leverage on firm performance in the presence of agency costs. Our main question is how the interaction between leverage and agency costs

affects the performance of 52 service firms listed on Istanbul Stock Exchange during the period from 2008 to 2017. We find that the negative effect of leverage on firm performance is moderated by the agency costs of free cash flow, and exacerbated by the agency costs of debt.

The remainder of this paper is organized as follows. The next section reviews the literature. Section 3 presents the data and Methodology. Section 4 discusses the empirical results. Section 5 summarizes the findings.

2. Literature Review and Hypotheses

According to the trade-off model of corporate leverage, the optimal leverage that maximizes firm performance is determined by weighing the benefits and costs of debt. The benefits of debt include the tax benefits and the reduction of agency costs of free cash flow. The costs of debt include bankruptcy costs and the agency costs of debt (Bradley, Jarrell and Kim, 1984; Fama and French, 2002; Frank and Goyal, 2009). This suggests that, in the presence of tax benefits and agency costs of free cash flow, the firm performance will be positively related to leverage. On the other hand, firm performance will decrease with leverage in the presence of bankruptcy costs and agency costs of debt.

As an alternative to the trade-off model, the pecking order model suggests that there is no well-defined optimal leverage. Firms prefer debt over equity to fund investment opportunities if the internal funds are not sufficient. This is because the asymmetric information costs make it cheaper for firms to issue debt rather than equity (Myers, 1984). In this case, leverage can have a positive effect on firm performance under conditions of higher asymmetric information costs.

According to the previous arguments, the effect of leverage on firm performance is an empirical question.

2.1. Leverage, Agency Costs of Free Cash Flow and Firm Performance

Managers with excess cash flow may choose poor investments when valuable investments are not available (Opler, Pinkowitz, Stulz and Williamson, 1999: 12). This means that managers can use the excess amounts of cash flows on negative-net present value investments. Thus, excess cash flow will affect negatively the firm performance. Several studies provide support for this view (Brush, Bromiley and Hendrickx, 2000; Dechow, Richardson, and Sloan, 2008; Hong, Shuting and Meng, 2012; Heydarı, Mırzaeıfar and Javadghayedı, 2014; Salmanzadeh, Jafari, Anjomani and Marefat, 2014; Kadioglu, Kilic, and yılmaz, 2017).

Leverage plays an important role in mitigating the manager-shareholder agency conflicts (Datta, Datta and Raman, 2005). Due to debt service requirements, debt will make managers more disciplined (Cheffou, 2011: 2). Lasfer (1995) and Cheng and Tzeng (2011) find that debts reduce the free cash flow problem. Ang, Cole and Lin (2000) suggest that additional debt and monitoring by banks reduce the equity agency costs. Harvey, Lins and

Roper (2004) have shown that debt is more beneficial for firms with severe managerial agency costs. Park and Jang (2013) find that leverage reduce the free cash flow and improve firm performance. Mostaghimi, Ramezanpour and Nozari (2014) and Kadioglu and Yilmaz (2017) pointed out a negative relation between free cash flow and leverage. Li and Cui (2003); Zhang and Li (2008) and Nazir, Saita and Nawaz (2012) showed that firms with more leverage are more efficient and have less agency costs created by free cash flow. Put together, these arguments suggest that leverage is more beneficial for firms with high agency costs of free cash flow. This reasoning results in the following hypothesis:

H1: The negative (positive) effect of leverage on firm performance is alleviated (accentuated) by the agency costs of free cash flow.

2.2. Leverage, Agency Costs of Debt and Firm Performance

According to the model of the agency costs of debt, highly levered firms are more likely to face the underinvestment problem where managers cut back valuable investments as the benefits would accrue to the debtholders rather than the shareholders (Myers, 1977). Several studies find that leverage affects negatively the investment (Aivazian and Qiu, 2005; Ahn, Denis and Denis, 2006; Odit and Chittoo, 2008; Dang, 2010; Cai and and Zhang, 2011; Haque, 2014; Sajid, Mahmood and Sabir, 2016). The underinvestment problem can result in lower performance. Morgado and Pindado (2003) showed that the relationship between firm value and investment is quadratic. This implies that Investment has an optimal level. Firms with suboptimal investments would face the underinvestment problem and consequently lower value. Farooq, Ahmed and Saleem (2014) find that the underinvestment problem has a negative effect on firm performance.

If high leverage increases the possibility that firms will pass up valuable investments, we would expect high leverage to be related with lower performance. Therefore, leverage is less beneficial in the presence of shareholder-debtholder agency problem. This leads us to the second hypothesis:

H2: The negative (positive) effect of leverage on firm performance is exacerbated (alleviated) by the agency costs of debt.

3. Data and Methodology

3.1 Data

This study used the financial data of 52 service firms listed on Istanbul Stock Exchange for the period 2008-2017. We collected the data from the website "kap.org.tr". The resulting unbalanced panel data provides 426 firm-year observations.

3.2 Variables Construction

3.2.1 Measures of Firm Performance and Leverage

We use return on assets (ROA) as a measure of the dependent variable (firm performance). ROA is the ratio of earnings before interest and taxes to total assets. Leverage (Lev) is measured as (total debt / total assets).

3.2.2 Variables Proxy for Agency Costs of Free Cash Flow and Debt

We use free cash flow to proxy for the agency costs of free cash flow. Firms with more free cash flow are more likely to face shareholders-managers agency problem (Jensen, 1986). We compute free cash flow (FCF) as [(operating cash flows – capital expenditures) / (total assets)].

To proxy for the agency costs of debt, we use investment opportunities and tangibility. Firms with more investment opportunities should be more susceptible to the underinvestment problem (Gay and Nam, 1998; Doukas and Pantzalis, 2003). Our measure of investment opportunities (INV) is the growth in assets (Fama and French, 2002), computed as [(total assets t – total assets t-1) / (total assets t)]. As an additional proxy for agency costs of debt, we use tangibility (Tang). Firms with lower proportion of tangible assets (collateralized assets) find it easier to engage in risky projects at the expense of debtholders (Doukas and Pantzalis, 2003). Tangible assets are used as collateral and mitigate the conflicts of interests between debtholders and shareholders (Titman and Wessel, 1988). Therefore, firms with more tangible assets are less susceptible to the agency costs of debt. We measure tangibility as (fixed assets / total assets).

3.2.3 Control Variables

Following previous studies (Abor, 2005; Zeitun and and Tian, 2007; Soumadi and Hayajneh, 2012; Salim and Yadav, 2012; Kebewar, 2013), we control for firm size, growth in assets (INV) and tangibility of assets (Tang) in the estimations. Firm size (Size) is measured as the natural logarithm of total assets.

3.2.4 Descriptive Statistics and Correlations

Table 1. Descriptive Statistics

	ROA	Lev	Size	INV	Tang	FCF
Mean	0.050	0.552	20.095	0.097	0.588	0.055
Median	0.045	0.591	19.889	0.108	0.658	0.045
Std. Deviation	0.110	0.260	1.899	0.256	0.272	0.202
Minimum	-0.486	0.006	14.871	-2.229	0.000	-0.808
Maximum	0.563	1.000	24.952	0.960	1.000	2.001
Observations	426	411	426	375	426	372

Table (1) presents the descriptive statistics for the variables used in this study. Leverage (Lev) has a mean (median) of 0.552 (0.591). The mean (median) values of ROA, FCF are 0.05 (0.045), 0.055 (0.045) respectively. On average, fixed assets (Tang) amount to 58.8% of the total assets. The growth in assets (INV) has a mean (median) of 0.097 (0.108).

Table (2) shows the results of the non-parametric Spearman rank correlation coefficients between the variables. We find a negative and insignificant relation between leverage and return on assets (ROA). Moreover, firm size and growth in assets are significantly and positively related to leverage and firm performance. On the other hand, tangibility is significantly and negatively correlated with leverage and performance. The table also shows that the correlation coefficients between the variables are modest, which supports the absence of multicollinearity problem.

Table 2. Spearman Rank Correlation Coefficients

	ROA	Lev	Size	INV	Tang	FCF
ROA	1					
Lev	-0.057	1				
Size	0.266**	0.428**	1			
INV	0.210**	0.146**	0.144**	1		
Tang	-0.160**	-0.110*	0.008	-0.085	1	
FCF	0.365**	0.056	0.139**	0.043	-0.062	1

* P < 0.05, ** P < 0.01.

3.3 Estimation Techniques

To examine the effect of leverage on firm performance, we estimate the following baseline regression:

$$ROA_{it} = ß_0 + ß_1 (Lev_{it}) + ß_2 (Size_{it}) + ß_3 (INV_{it}) + ß_4 (Tang_{it}) + \varepsilon_{it} \quad (1)$$

To test whether the effect of leverage on firm performance is alleviated (accentuated) by free cash flow, we add an interaction term between leverage and a free cash flow dummy (FCF_ Dum) variable, in the baseline model Eq. (1). The interaction term (Lev * FCF_ Dum) is equal to leverage multiplied by a dummy variable (FCF_ Dum) which takes a value of one when free cash flow is larger than the median value and zero otherwise. We also divide the total sample into two subsamples: firm-years with high free cash flow (FCF_ Dum =1) and firm-years with low free cash flow (FCF_ Dum =0). We estimate the baseline regression Eq. (1) separately for the two subsamples.

To test whether the effect of leverage on firm performance is exacerbated (alleviated) by the underinvestment problem, we estimate Eq. (1) with an interaction term (Lev * INV_ Dum) between leverage and an investment opportunities dummy (INV_ Dum) variable which takes a value of one

when INV is larger than the median value and zero otherwise. We also divide the total sample into two subsamples: firm-years with high investment opportunities (INV _Dum =1) and firm-years with low investment opportunities (INV_ Dum =0). We estimate the baseline regression Eq. (1) separately for the two subsamples. We also construct an interaction term (Lev * Tang_ Dum) between leverage and a tangibility dummy (Tang_ Dum) variable which takes a value of one when tangibility (Tang) is larger than the median value and zero otherwise. The baseline regression Eq. (1) is estimated with this interaction term, and also separately for two subsamples (Tang_ Dum =1 & Tang_ Dum=0).

4. Empirical Results

Table 3. Leverage, Free Cash Flow and Firm Performance

Models	Dependent variable: ROA			
	Model 1	**Model 2**	**Model 3 Firms with high (FCF)**	**Model 4 Firms with low (FCF)**
Constant	-0.061 (0.257)	-0.027 (0.588)	-0.038 (0.572)	-0.01 (0.906)
Leverage	**-0.081***** **(0.000)**	**-0.119***** **(0.000)**	**-0.042** **(0.130)**	**-0.082**** **(0.011)**
Size	0.01*** (0.000)	0.008*** (0.002)	0.011*** (0.003)	0.005 (0.264)
INV	0.008 (0.734)	0.056** (0.012)	-0.036 (0.210)	0.089*** (0.009)
Tang	-0.073*** (0.000)	-0.064*** (0.000)	-0.113*** (0.000)	-0.046** (0.044)
FCF		0.174*** (0.000)		
FCF_ Dum		-0.037 (0.116)		
(Lev * FCF_ Dum)		**0.081**** **(0.024)**		
Adjusted R^2	0.063	0.196	0.088	0.058
F	7.003*** (0.000)	13.401*** (0.000)	5.323*** (0.000)	3.679*** (0.007)
N	360	356	180	176

- This table presents the OLS estimation results for the interactive effect of leverage and free cash flow on firm performance.
- N is the number of observations.
- P values are reported in parentheses.
- **, ***, indicate significance at the 5%, 1% levels, respectively.

Table (3) presents the OLS estimation results for the interactive effect of leverage and free cash flow on firm performance. In the baseline regression (model 1), we find that leverage significantly and negatively affects firm performance (ROA). We also find that the coefficients on firm size and (tangibility) are significant and positive (negative), indicating that larger firms and firms with less tangible assets have better performance. However, the coefficient on investment opportunities is not significant. The interaction term (Lev * FCF_ Dum) is included in model 2. The coefficient on (Lev *

FCF_ Dum) is positive (0.081) and significant while the coefficient on leverage is negative (-0.119). This suggests that the negative effect of leverage on ROA is reduced by 0.081 for firms with high free cash flow. We obtain similar results when we estimate the baseline regression Eq. (1) separately for firms with high FCF and low FCF (models 3 & 4). Model 3 shows that the negative effect of leverage on firm performance (ROA) is lower and insignificant for high-FCF firms. On the other hand, model 4 indicates that the negative effect of leverage on (ROA) is higher and significant for low-FCF firms. These results support the first hypothesis, which suggests that the negative (positive) effect of leverage on firm performance is alleviated (accentuated) by the agency costs of free cash flow.

Table 4. Leverage, Agency Costs of Debt and Firm Performance

Models	Dependent variable: ROA					
	Model 1	**Model 2 Firms with high (INV)**	**Model 3 Firms with low (INV)**	**Model 4**	**Model 5 Firms with high (Tang)**	**Model 6 Firms with low (Tang)**
Constant	-0.071 (0.183)	-0.012 (0.863)	-0.093 (0.294)	-0.001 (0.981)	0.056 (0.623)	-0.07 (0.355)
Leverage	**-0.056** (0.03)**	**-0.127*** (0.000)**	**-0.059* (0.062)**	**-0.141*** (0.000)**	**-0.015 (0.619)**	**-0.146*** (0.000)**
Size	0.009*** (0.001)	0.009*** (0.008)	0.01** (0.026)	0.009*** (0.002)	0.004 (0.341)	0.013*** (0.002)
INV	-0.039 (0.159)	0.014 (0.760)	-0.064* (0.098)	0.015 (0.512)	0.03 (0.353)	0.001 (0.979)
Tang	-0.065*** (0.001)	-0.064*** (0.004)	-0.065** (0.043)	-0.088*** (0.004)	-0.112 (0.140)	-0.099*** (0.006)
INV_ Dum	0.073*** (0.005)					
(Lev * INV_ Dum)	**-0.069* (0.082)**					
Tang_ Dum				-0.051* (0.056)		
(Lev * Tang_ Dum)				**0.109*** (0.005)**		
Adjusted R^2	0.085	0.101	0.045	0.079	0.006	0.116
F	6.549*** (0.000)	6.134*** (0.000)	3.07** (0.018)	6.104*** (0.000)	1.268 (0.285)	6.856*** (0.000)
N	360	183	177	360	180	180

- This table presents the OLS estimation results for the interactive effect of leverage and agency costs of debt on firm performance.
- N is the number of observations.
- P values are reported in parentheses.
- *, **, *** indicate significance at the 10%, 5%, 1% levels, respectively.

Table (4) presents the OLS estimation results for the interactive effect of leverage and agency costs of debt on firm performance. The results of model

1 in table (4) show that leverage has negative (-0.056) and significant sign. The coefficient on the interaction term (Lev * INV_ Dum) is negative (-0.069) and significant. This suggests that the negative effect of leverage on ROA is increased by 0.069 for firms with high investment opportunities. We obtain similar results when we estimate the baseline regression Eq. (1) separately for firms with high INV and low INV (models 2 & 3). We find that the negative effect of leverage on firm performance ROA is higher for high-INV firms (-0.127) than for low-INV firms (-0.059). The absolute value of the difference between the two coefficients is (0.068). The results of model 4 show that the coefficient on the interaction term (Lev * Tang_ Dum) is positive (0.109) and significant, indicating that the negative effect of leverage (-0.141) on ROA is reduced by 0.109 for firms with more tangible assets (less agency costs of debt). Model 5 shows that the negative effect of leverage on (ROA) is lower and insignificant for high-Tang firms while model 6 indicates that the negative effect of leverage on (ROA) is higher and significant for low-Tang firms. These results are consistent with the second hypothesis, which suggests that leverage should be less beneficial for firms that are more susceptible to the underinvestment problem and agency costs of debt (firms with more investment opportunities and less tangible assets). However, the results are not consistent with the pecking order model of corporate leverage, which suggests that the asymmetric information costs are lower under debt-financing than under equity-financing. Firms with more investment opportunities are more likely to face information asymmetry problem (Fosu, Danso, Ahmad and Coffie, 2016), and therefore, the pecking order model predicts that debt financing should be performance-enhancing for firms with high investment opportunities.

5. Conclusion

The agency stories suggest that debt can enhance firm performance by mitigating the shareholders-managers agency problem. However, debt can also reduce the firm performance by exacerbating the shareholder-debtholder agency problem. In this paper, we contribute to the finance literature by examining the effect of leverage on firm performance, and investigating whether agency costs affect the relation between performance and leverage. Using a sample of 52 service firms listed on Istanbul Stock Exchange during the period from 2008 to 2017, we find that leverage has a negative and significant effect on firm performance, and that this effect is alleviated by free cash flow. The performance of high-free cash flow firms is less negatively affected by leverage compared to low-free cash flow firms. This suggests that leverage plays a beneficial role for firms with high agency costs of free cash flow. On the other hand, the results support the assumption that the negative effect of leverage is exacerbated by the agency costs of debt. We find that the negative effect of leverage on firm performance is higher for firms that are more likely to face the agency costs of debt (firms with more investment opportunities and low level of tangible assets).

References

Abor, J. (2005). The Effect of Capital Structure on Profitability: An Empirical Analysis of Listed Firms in Ghana. The Journal of Risk Finance, 6(5), 438-445.

Ang, J. S., Cole, R. A., & Lin, J. W. (2000). Agency Costs and Ownership Structure. The Journal of Finance, 55(1), 81-106.

Bradley, M., Jarrel, G. A., & Kim, E. H. (1984). On the Existence of an Optimal Capital Structure: Theory and Evidence. The Journal of Finance, 39(3), 857-878.

Brush, T. H., Bromiley, P., & Hendrickx, M. (2000). The Free Cash Flow Hypothesis for Sales Growth and Firm Performance. Strategic Management Journal, 21(4), 455-472.

Cheffou, A. I. (2011). Agency Costs of Equity and Debt, and Corporate Incentive Compensation Policy: The French Case. International Conference of the French Finance Association (AFFI).

Cheng, M.S., & Tzeng, Z. C. (2011). The Effect of Leverage on Firm Value and How the Firm Financial Quality Influence on This Effect. World Journal of Management, 3(2), 30-53.

Datta, S., Datta, M. I., & Raman, K. (2005). Managerial Stock Ownership and the Maturity Structure of Corporate Debt. The Journal of Finance, 60(5), 2333-2350.

Dechow, P., Richardson, S., & Sloan, R. (2008). The Persistence and Pricing of the Cash Component of Earnings. Journal of Accounting Research, 46(3), 537-566.

Doukas, J. A., & Pantzalis, C. (2003). Geographic Diversification and Agency Costs of Debt of Multinational Firms. Journal of Corporate Finance, 9(1), 59-92.

Ehrhardt, M.C., & Brigham, E.F. (2011). Financial Management: Theory and Practice, 13th ed, South-Western, Cengage Learning, USA.

Fama, E. F., & French, K. R. (2002). Testing Trade-Off and Pecking Order Predictions about Dividends and Debt. Review of Financial Studies, 15(1), 1-33.

Farooq, S., Ahmed, S., & Saleem, K. (2014). Impact of Overinvestment & Underinvestment on Corporate Performance: Evidence from Singapore Stock Market. Available at SSRN: https://ssrn.com/abstract=2512436.

Fosu, S., Danso, A., Ahmad, W., & Coffie, W. (2016). Information asymmetry, leverage and firm value: Do crisis and growth matter?. International Review of Financial Analysis, 46, 140–150.

Frank, M. Z., & Goyal, V. K. (2009). Capital Structure Decisions: Which Factors Are Reliably Important?. Financial Management, 38(1), 1-37.

Gay, G.D., & Nam, J. (1998). The Underinvestment Problem and Corporate Derivatives Use. Financial Management, 27(4), 53 – 69.

Harvey, C.R., Lins, K.V., & Roper, A. H. (2004). The Effect of Capital Structure when Expected Agency costs are Extreme. Journal of Financial Economics 74, 3–30.

Heydari, I., Mirzaeifar, M., & Javadghayedi, M. (2014). Investigating the Relationship between Free Cash Flows and Firm Performance: Evidence from Tehran Stock Exchange, Indian J.Sci.Res. 4 (6), 269-279.

Hong, Z., Shuting, Y., & Meng, Z. (2012). Relationship between Free Cash Flow and Financial Performance, Evidence from the Listed Real Estate Companies in China. International Conference on Innovation and Information Management, 36, 331-335.

Jensen, M. C. (1986). Agency Costs of Free Cash Flow, Corporate Finance, and Takeovers. American Economic Review, 76(2), 323-329.

Jensen, M. C. & Meckling, W. H. (1976). Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure. Journal of Financial Economics, 3(4), 305-360.

Kadioglu, E., & Yilmaz, E. A. (2017). Is the Free Cash Flow Hypothesis Valid in Turkey?. Borsa Istanbul Review 17-2, 111-116.

Kadioglu, E., Kilic, S., & Yilmaz, E. A. (2017). Testing the Relationship between Free Cash Flow and Company Performance in Borsa Istanbul. International Business Research, 10(5), 148-158.

Kebewar, M., (2013). Does debt affect profitability? An empirical study of French trade sector, https://halshs.archives-ouvertes.fr/halshs-00780310.

Lasfer, M. A. (1995). Agency Costs, Taxes and Debt: The UK Evidence. European Financial Management, 1(3), 265-285.

Lee, S., Koh, Y., & Huh, C. (2010). Financial Distress for U.S. Lodging Industry: Effects of Leverage, Capital Intensity, and Internationalization. International CHRIE Conference Refereed Track. 3. http://scholarworks.umass.edu/refereed/CHRIE_2010/Saturday/3.

Li, H., & Cui, L. (2003). Empirical Study of Capital Structure on Agency Costs in Chinese Listed Firms. Nature and Science, 1(1), 12-20.

Morgado, A., & Pindado, J. (2003). The underinvestment and overinvestment hypotheses: an analysis using panel data. European Financial Management 9 (2), 163-177.

Mostaghimi, M., Ramezanpour, E., & Nozari, A. H. (2014). Studying the Effect of Financial Leverage on Agency Cost Resulting from Free Cash Flow of Manufacturing Companies Accepted in Tehran Stock Exchange.

Singaporean Journal of Business Economics, And Management Studies, 3(3), 1-9.

Myers, S.C. (1984). The Capital Structure Puzzle. Journal of Finance, 39(3), 575-592.

Myers, S.C. (1977). Determinants of Corporate Borrowing. Journal of Financial Economics 5, 147-175.

Nazir, M.S., Saita, H. K., & Nawaz, M. M. (2012). The Role of Debt in Reducing Agency Cost: Empirical Evidence from Pakistan. Innova Ciencia, 4(5), 28-43.

Opler, T., Pinkowitz, L., Stulz, R., & Williamson, R. (1999). The determinants and implications of corporate cash holdings. Journal of Financial Economics 52, 3-46.

Prak, K., & Jang, S.S. (2013). Capital structure, free cash flow, diversification and firm performance: A holistic analysis. International Journal of Hospitality Management 33(1), 51–63.

Salim, M., & Yadav, R. (2012). Capital Structure and Firm Performance: Evidence from Malaysian Listed Companies, Procedia - Social and Behavioral Sciences 65, 156 – 166.

Salmanzadeh, H., Jafari, V., Anjomani, R., & Marefat, S. (2014). Effect of Capital Structure, Free Cash Flow and Diversification on Firm Performance. Journal of Applied Business and Finance Researches, 3(2), 33-39.

Soumadi, M. M., and Hayajneh, O. S. (2012). Capital Structure and Corporate Performance: Empirical Study on the Public Jordanian Shareholdings Firms Listed in the Amman Stock Market. European Scientific Journal, 8(22), 173-189.

Titman, S., and Wessels, R. (1988) "The Determinants of Capital Structure Choice", Journal of Finance, 43(1): 1-19.

Turbaoğlu, T.T., Erkol, A. Y., & Topaloğlu, E. E. (2017). Finansal Başarısızlık ve Sermaye Yapısı Kararları: BIST 100 Endeksindeki Firmalar Üzerine Bir Uygulama. Business and Economics Research Journal, 8(2), 247-258.

Zeitun, R., and Tian, G.G. (2007). Capital Structure and Corporate Performance: Evidence from Jordan. Australasian Accounting, Business and Finance Journal, 1(4), 40-61.

Zhang, H., & Li, S. (2008). The Impact of Capital Structure on Agency Costs: Evidence from UK Public Companies, Proceedings of the 16th Annual Conference on Pacific Basin Finance, Economics, Accounting and Management, Brisbane, Australia, 1-18.