The Impact of Capital Structure on Telecom Companies Value Europe vs United States of America

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ABSTRACT

Optimal financing structure of companies is the subject of numerous modern studies which analyze the extent in which capital structure may affect the company's value. The classical theory of Modigliani and Miller, that there is no optimal financing structure, represents the basis of the modern finance that have led to a thorough research regarding capital structure theories.These theories have analyzed the impact of capital strucutre on company value and how to maximize value. The aim of this study is to analyse on the impact of capital structure upon firm value and to explain the influence of the main determinants of capital structure comparing results for the telecom industry across US and Europe. I have chosen this subject due to the importance that it has been given, being often adressed in the financial literature. In the past 60 years, significant progress has been made on the ability of the main theories to explain decisions regarding the financing structure and to provide empirical support for the application of these models in the business environment. Multiple studies have analyzed financial decisions made by the listed companies both in emerging countries and developed economies.Secondly, I have chosen the telecommunications sector due to intense development in this field and growth opportunities generated by the evolution of wireless technologies which allow expanding customer base due to the possibility of providing service in areas which seemed inaccessible in the past. I decided to study effects of the capital structure firm value of companies in the US and Europe, to capture zone particularities and the relation with the market value of companies.

INTRODUCTION

The scope of this paper is to identify the determinants of capital structure and the impact on firm value in the telecommunications sector, making a comparative analysis between the US and Europe based companies. In this regard, I have used a linear regression model, aimed to analyze the links and relationships using data for a single financial year. In analyzing these particular ongoing relationships over an extended period of time(four years) I used fixed effects models to capture specific company effects and to include time dependent effects.

In order to identify the main determinants of the capital structure and their impact on the firm value I used a total sample of 121 publicly listed active companies in the telecom industry, collecting financial info across a period of 4 years (2011-2014).

In order to research the effects described above, the paper consists of four parts. In the first part I conducted a brief description of the telecom industry, I described the modern theories regarding capital structure and made a review of the main empirical studies, outlining the relations arising from the link between financing structure and value of the company. In the second part, the methodology applied is detailed regarding data collection, presentation of the

main indicators and of the econometric models. In the third part, there can be found information regarding data processing , descriptive analysis of the indicators used and the results of the empirical studies, making a comparison between the two areas. The last part of the paper is a summary of the conducted study and contains the conclusions and further recommendations.

Short description of the telecom industry

Globally, the telecom industry includes communications services and also equipments and products necessary for this type of service. Communications equipment market, including routers, telephones, network cards and other devices of this type were based on the valuation of the price paid by the final consumer, except for network equipment, where production cost is used. Companies in the telecom market today are divided into two types. Large companies such as AT & T and Verizon that are required to provide certain services market and smaller companies that can only provide network services. For example, AT&T is presented in 22 US states, offering local telephone service. If this type of companies were not forced by law to serve a specific area, then they could invest in the necessary infrastructure and underinvest in telecom services for areas for which they do not consider profitable this action. Legal regulations do not require a wireless service provider to serve an area in which land communication is provided by a local company. On this consideration, major telecommunications companies have a dual purpose. On one hand they have the obligation to serve specific customers without pressure from its peers and also act in an areas with a wider base of customers, with significant pressure from direct competitors.

Capital structure theories

Classical theory

Capital structure represents one of the main factors that can influence value and profitability of a firm. The importance of the theory of capital structure and its impact on the company's performance was first emphasized by Modigliani and Miller (1958)[1] which suggested that decisions on a company's financing structure have no influence on its value in the absence of taxes, information asymmetry, bankruptcy costs and transactional costs in an efficient market. The influence of capital structure on the cost of capital is the second issue addressed by them, describing the cost of capital as an increasing linear function dependent on the ratio between debt and equity. They were the first that founded the modern finance through the capital irrelevance theory in 1958.

Trade-off theory

Following the assumptions made by Modigliani and Miller in 1963, there were numerous studies on the subject of *static trade-off theory.* It is focused mainly on the analysis of both the costs and the benefits associated with indebtedness, arguing that there exists a optimal capital structure that will maximize company value. The optimum level is reached when the present value of the

[1] Modigliani, F. şi Miller, M. (1958), The cost of capital, corporate finance and the theory of investment , American Economic Review, Vol. 48, pp. 261-97.

benefits will outweigh the costs associated with an increase in indebtedness. The benefits are represented by tax gains due to the deductibility of the interest, being offset by bankruptcy costs when a company relies excessively on debt. Another factor discussed in this theory is the agency costs.

Agency theory

Agency theory was first addressed in corporate finance Jensen and Meckling by Meckling[2]. This implies that the interests of shareholders and managers are not aligned and financial decisions are not always taken in the best interest of shareholders. Company managers, considered agents will act in their own interest and will seek to obtain high wages, job security, and in some cases direct absorption of cash-flows or assets. They will prefer investments that will adapt assets and operations performed based on their knowledge and management skills and will increase bargaining power in the relation with the investors. To discourage such actions, shareholders can resort to the control and monitoring mechanisms, either by establishing a board made up of independent directors or by the threat of loss of autonomy the managers have enjoyed under normal conditions.

Signaling theory

The problem of information asymmetry between managers and investors led to the signaling theory of Ross[3]. The concept is based on the idea that top management has internal company information and wants to send a signal to external investors causing a rise in price. For transmission of such information, a manager may decide to use the company's financial policy.Thus, they could decide to increase leverage, which is a confirmation of the prospect of future positive cash-flows. Ross believes that this signal will be reliable as an overestimated company or a company with a precarious financial situation cannot bear the burden of debt, being finally faced with an increased risk of bankruptcy. The loan will act as a guarantee given by the company management on the future development and will suggest that the company is undervalued.

Pecking order theory

The pecking order theory was first introduced by Myers[4] in 1984, stating that a company will follow a hierarchical order of financing if it will prefer internal financing to external debt and ultimately capital increase, in the case where companies need additional capital. This theory was seen as an alternative to trade-off theory, stating that an enterprise has a hierarchy of funding decisions. Pecking order theory argues that a company will resort at first to own funds to avoid

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[2] Jensen, M.C. şi Meckling, W.H. (1976), Theory of the firm: managerial behavior, agency costsand ownership structure , Journal of Financial Economics, Vol. 3, pp. 305-60.
[3] Ross A. Stephen (1977). The determination of financial structure: the incentive – signaling approach . The Bell Journal of Economics,8(1).
[4] Myers, S. C. (1984). The capital structure puzzle. The journal of finance, 39(3), 574-592.

sending negative signals to the market, and after this measure is worn will increse debt ratio and only as a last resort will it issue equity . Under this scheme, firms will not aim to achieve optimal capital structure, but rather will use a distinct principle, resorting to external financing when there are possibilities of increasing debt ratio .

Market timing theory

The market timing theory is associated with the practice of the companies to issue shares at a high price when they perceive that they might be overvalued and redeem them at a low price when they are undervalued. This continuous flow of share price will affect the company's capital structure. Market timing theory can be approached in two ways according to Iqbal et al[5]. In the first version, where it is assumed that the trader is rational to avoid information asymmetry , the company will issue shares directly to potential investors after the release of positive information related, in this way reducing the informational gap between managers and shareholders. Thus, through transparency of information between the two classes an increasing share price will be secured

EMPIRICAL REVIEW

Kingsman and Newman[6] started the study of the relationship between capital structure and corporate value due to increased debt level in the corporate environment over a period of time, analyzing the effects of financial leverage and the existence of an optimum capital structure.

Cheng and Tzeng[7]start from the trade-off theory and believe that there is an optimal capital structure in which the marginal benefits outweigh the marginal costs related to loans.

Shah and Khan[8]analyzed using panel data the determinants of capital structure of listed companies in Pakistan between 1994 and 2002. They identified a negative relationship between leverage and performance of the company, the authors suggesting that there is the possibility of bias in the model due to the fact that a large part of Pakistan companies are owned by families, their usual practice being to declare a high level of expenses in order to avoid paying taxes.

Zeitun şi Tian[9] tested the relation between capital structure and performance of the company taking data from companies in Jordan, obtaining a negative between the two. They use accounting measures to quantify the two variables and also market values. In analyzing company performance, they use Tobin's Q indicator to quantify the market value and ROA for the accounting measure.

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[5] Iqbal, J., Muhammad, S., Muneer, S., & Jahanzeb, A. (2012). A Critical Review of Capital Structure Theories. Information Management & Business Review, 4(11).

[6] Kinsman, M. şi Newman, J. (1999), Debt level and firm performance: an empirical evaluation . 28th Annual Meeting of the Western Decision Science Institute, 1999, Puerto Vallarta, Mexico.

[7] Cheng, M. C., & 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.

[8] Shah, A. and Khan, S. (2007), Determinants of Capital Structure: Evidence from Pakistani Panel Data , International Review of Business Research Papers, Vol. 3 No. 4, pp. 265-282.

[9] Zeitun, R., & Tian, G. G. (2014). Capital structure and corporate performance: evidence from Jordan. Australasian Accounting Business & Finance Journal,.

Main determinants of capital structure

Company size

Company size represents a proxy variabile negatively associated with the risk of bankruptcy. Bigger companies tend to have a diversified capital structure and to avoid bankruptcy, thus size can be a relevant factor that can influence capital structure.

Profitability

Myers and Majluf (1984) have shown in their study that firms follow an pecking order and prefere internal instead of external sources when it comes to financing. Starting from this idea, we can assume the existence of a negative relationship between debt level and profitability, as a measure of company efficiency. Firms with a high rate of profitability have the capacity to create high capital flows, allowing them to internal sources for financing.

Tangibility

Empirical studies confirm the influence of tangibility upon company leverage. Based on the agency theory of Jensen and Meckling, we can say that there is a positive relationship between the level of tangible assets and leverage. One way to explain this influence would be through the conflict of interest triggered by the possibility of the management to take decisions that could generate losses to the creditors.

Growth opportunities

According to the trade-off theory, firms with high growth opportunities, but have a high rate of intangible assets, that cannot be used as guarantees for loans, will not be able to obtain external financing in opposition with firms with a high level of tangible assets and thus a negative relationship between growth opportunities and leverage is expected

Earnings volatility

Volatility can be used as a a measure of risk, being associated with the bankruptcy risk in the main studies regarding capital structure. Considering that high leverage can increase the risk of financial difficulties, a negative relationship is expected between volatility and leverage.

Non Debt Tax Shield

Due to the deductibility of the depreciation expenses, in major studies another determinant of capital structure has been highlighted through the ratio of depreciation in total assets. Modigliani and Miller have considered that the tax shields generated by interest expenses can also represent an incentive for increasing debt level and thus the company has to obtain an equilibrum between the two. A negative relationship between non debt tax shields and leverage is expected.

METHODOLOGY AND RESULTS

The descriptive statistics have the role of offering information regarding the structure and distribution of variables in the scope of comparing the values at the level of US and Europe and to emphasize the differences and similiarities of the two areas.

Linear regression models and fixed effects models were used in order to assess the relationship between capital structure and firm value.

$$Linear\ regression\ model\ Y_i = \alpha + \beta X_i + \varepsilon_i$$

$$Fixed\ effects\ model: \quad Y_{it} = \alpha_i + \beta X_{it} + \varepsilon_{it}$$

ONE YEAR MODEL

USA

$$LEV_i = \alpha + \beta_1 PROF_i + \beta_2 SIZE_i + \beta_3 GROWTHA_i + \beta_4 GROWTHS_i + \beta_5 VOL_i + \beta_6 NDTS_i + \beta_7 TANG_i + \varepsilon_i$$

$$LEV = 0{,}314 + 1{,}27 GROWTHS + 0{,}14 TANG$$

We observe a positive relationship between the leverage of US telecoms companies and variable quantifying the growth opportunities of the company. This relationship is consistent with signaling theory which states that companies with growth opportunities in the future are those that will be most indebted due to the desire of development.A possible explanation for this relationship is that growth implies additional capital requirements that can rarely be met through internal financing so that companies turn to external sources, namely financing through loans. This positive relationship is consistent with the study Hall et al.[10] and contrary to the study of Titman and Wessels[11]. There is a positive relationship between tangibility and leverage of the companies that confirm the trade-off and pecking order theories, and Rajan and Zingales'[12]study . Companies with a higher share of fixed assets in total assets will have easy access to loans as they can provide collateral, thus increasing their debt capacity.

$$TOBINSQ_i = 0{,}423 + 2{,}044 LEV_i + \varepsilon_i$$

A positive relationship between the leverage of US telecoms companies and company value estimated through Tobin's Q via indicator can be observed, in accordance with Ross' signaling theory which states that managers know best the future cash flows of the company, and send this information to the market by contracting loans, which will be a signal to investors that the company is a source of stable cash-flows showing a high degree of solvency.

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[10] Hall, G., Hutchinson, P., and Michaelas, N.(2004). Determinants of the Capital Structures of European SMEs, Journal of Business Finance & Accounting 31,711-728.

[11] Titman S. and Wessels R., (1988). The determinants of Capital Structure Choice. The Journal of Finance 43 (1),1-19.

[12] Rajan, R. G., & Zingales, L. (1995). What do we know about capital structure? Some evidence from international data. The journal of Finance, 50(5), 1421-1460.

EUROPE

$$LEV = 0.224 + 0.052GROWTHS+0.018SIZE$$

The equation above indicates a positive relationship bewteen leverage and growth opportunities in accordance with empirical studies and contrary to the trade-off theory.

A positive relation between size and leverage is identified in accordance with Barclay and Smith(1996) and Fama and French(2002).

$$TOBINS\_Q = -0.139+4.677LEV$$

Based on the result there is a positive relationship between capital structure and enterprise value. The indicator is statistically significant. Compared with the US, the capital structure of enterprises in the telecommunications sector in Europe has an impact approximately double on enterprise value (the coefficient is 4.677, compared to 2.044). This result is consistent with the signaling thatcompanies issuing debt in the market send a positive signal to investors. These companies have a good performance, they are able to sustain debt. Thus, by contracting loans, it sends a message of credibility to potential investors (Rayan,2008).[13] Leverage can create value even if the condition of agency problems. Debt financing is a mchanism of control of managers, which aims to restrict their opportunistic behaviour. According to information asymmetry theory, managers have more information comparative to external investors.

FIXED EFFECTS MODEL

USA

$$LEV= -0,310 -0,311PROF+0,165TANG$$

PROF has sign (-) which shows a negative relationship between company profitability and capital structure. Profitable enterprises do not need to use loans, as their high rates of return makes them able to use profits to finance activities and investments. Profit is the easiest and quickest way of funding for most companies. This result is in accordance with studies of Myers & Majlug (1984) and Cassar & Holmes (2003).

TANG has sign (+) highlighting a positive relationship between the rate of tangible assets and capital structure. Long-term influence of this factor increases from one year - 0.014 to 0.165-4 years. According to the agency theory, there is a positive relationship between the value of tangible assets and leverage. One explanation for this relationship would be the conflict of interest that could be triggered by the possibility of taking decisions by the management that may lead to financial losses of the creditors. To avoid this situation, financial institutions will take as collateral tangible assets, thus reducing the risks associated with borrowing[14]. Rajan and Zingales and Wald's studies confirm the existence of a positive relationship between the rate of tangible

[13] Rayan, K. (2008), Financial leverage and firm value, Gordon Institute of Business Science, University of Pretoria.

[14] Harris, M., & Raviv, A. (1991). The theory of capital structure . the Journal of Finance, 46(1), 297-355.

assets and leverage, arguing that a company with high levels of tangible assets is associated with a high rate of solvency and the possibility of contracting new loans.

$$TOBINS\_Q=0,523724 + 1,688432LEV$$

A positive relation between capital structure quantified throught leverage ratio and company value, measured by Tobin's Q indicator can be observed. This relationship is consistent with the signaling theory detailed in the first part of the study. Signaling theory assumes that managers are in the best position to know the financial situation of a company and future cash-flows to be generated by it. According to this principle, these profitable companies with stable income will send a strong signal to the market, announcing so the company's high value through external sources borrowing. The idea behind this concept is that only profitable firms with stable income which have a safety regarding future cash-flows that will allow a high level of solvency, will have the ability to get loans.

EUROPE

$$LEV = 0.173 -0.286PROF+0.023SIZE+0.555VOL$$

PROF has sign (-) which shows a negative relationship between company profitability and capital structure. Thus, according to the pecking order theory businesses tend to use internal financing first, then debt and finally to issue equity. Such highly profitable businesses, as those in Europe do not need to use loans, as their high rates of return makes them able to use profits to finance. This result is in accordance with Myers & Majlug (1984) and Cassar & Holmes, (2003) studies.

SIZE has the sign (+) highlighting a positive relationship between the company size and capital structure. Long-term influence of this factor increase from 0,018 to 0.23 for the four year model. Smaller businesses are more likely to use equity, while larger companies seek external funding. Thus, according to the trade-off theory, large firms have a greater debt capacity, because they are more diversified and have lower default risk. The more a company increases in size the more it has the ability to reduce costs associated with long-term debt. This result is consistent with study of Barclay & Smith (1996).

VOL has sign (-) which shows a negative relationship between earnings volatility and capital structure. As a company's earning volatility increases, so does the risk of default. Increasing the use of financial leverage will lead to an increase in the estimated cost of default leading to decreased market value of the company. Companies with relatively higher operational risk will be encouraged to have a lower level of debt. This relationship is in accordance with thestudy of Haris (1991) [15] claiming that for the companies that have highly variable earnings, the market will demand a higher risk premium. This leads to a higher cost of debt. Consequently, this generates a negative relationship between leverage and earnings volatility.

[15] Harris, M. & Raviv, A. (1991). The theory of capital structure. Journal of Finance, vol.46: 297-355.

$$TOBINS\_Q = -0{,}138 + 4{,}676LEV$$

Based on the results a positive relationship between capital structure and value of the company can be observed, that is also found also in the one year model. . This indicator has kept the same level of influence. The outcome is consistent with the signaling theory which states that companies issuing debt in the market send a positive signal to investors. These companies have a good performance, they are able to sustain debt. Thus, by taking loans, it sends a message of credibility to potential investors (Rayan, 2008)[16].

CONCLUSIONS AND FURTHER RECOMMENDATIONS

In the analysis of the determinants of capital structure the statistically significant variables for companies in Europe are relative increase in sales (as growth opportunities) and company size, revealing a positive relationship in both cases consistent with signaling and trade-off theories, the multiple linear regression model having a predictive power of 63%. For companies in US, we could identify tangibility and growth opportunities as determinants of capital structure, both with a positive impact,the model having a predictive power of 32%, lower than the model for Europe. Regarding the analysis of the impact of capital structure on firm value, a positive relationship is visible in both areas studied in accordance with trade-off and signaling theory, the models having a predictive power of 41% for the US, respectively 45% for companies in Europe. According to the estimated parameter, we can say that the capital structure has a greater positive impact on the value of US companies than in those in Europe. In the fixed effects model that analyzes the links between capital structure and value of companies over the years 2011-2014, we obtained as determinants with positive impact of capital structure tangibility, and profitability as having a negative impact, consistent with the theory of pecking order theory for US companies. For companies in Europe, the statistically significant variables as determinants of capital structure were profitability (negative impact), size (positive impact) and volatility (negative impact). Regarding the relationship between capital structure and firm value, for both companies from the US and Europe, we obtained a positive relationship, consistent with signaling and trade-off theories.

In the future, in order to improve the analysis I propose to increase the time period that can allow for a broader picture of the studied relationship and also to analyze the effects of the economic crisis. I propose also to increase the number of variables used in the model, including macroeconomic variables, corporate governance indicators and other variables that can impact the value of companies and capital structure and considering specific country effects.

[16] Rayan, K. (2008), Financial leverage and firm value, Gordon Institute of Business Science, University of Pretoria.

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APPENDIX

Table 4.1.1. US Descriptive Statistics

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation	Variance
TOBINSQ	35	.694	2.726	1.322	.5370	.288
LEV	35	.105	.8017	.4400	.1762	.031
PROF	35	-.388	.1179	-.011	.1135	.013
SIZE	35	.950	12.398	7.014	2.856	8.160
GROWTHA	35	-.231	2.1105	.2452	.4122	.170
GROWTHS	35	-.741	2.8585	.2445	.5956	.355
VOL	35	.0037	.11388	.0355	.0244	.001
NDTS	35	.0003	.16568	.0652	.0340	.001
TANG	35	0.000001	.87791	.4036	.2191	.048

(Source: SPSS)

Table 4.1.2 Europe Descriptive Statistics

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
TOBINS_Q	86	.2165	10.7711	1.4652	1.4648
LEV	86	.0235	.7919	.3429	.2017
PROF	86	-1.0769	4.2357	.0797	.4766
SIZE	86	1.027	11.9007	6.1767	2.7785
GROWTHA	86	-.920	38.1976	.6387	4.2271
GROWTHS	86	-1.005	8.0078	.1686	1.0183
VOL	86	.0000098453300	2.2822	.0839	.2493
NDTS	86	.0000000976	.2002	.0647	.0471
TANG	86	0.00000000348	.7812	.3162	.2193
Valid N (listwise)	86				

(Source:SPSS)

Table 4.2.4 Coefficients one year model US

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	.314	.073		4.318	.000					
	TANG	.014	.010	.219	2.320	.016	.228	.243	.219	1.000	1.000
	GROWTHS	.127	.046	.429	2.773	.009	.433	.440	.429	1.000	1.000

a. Dependent Variable: LEV

(Source:SPSS)

Table 4.2.5 US one year model summary

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.671[a]	.450	.433	.404	2.317

a. Predictors: (Constant), LEV

b. Dependent Variable: TOBINSQ

(Source:SPSS)

Table 4.2.7 US one year model coefficients

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.423	.186		2.271	.030
	LEV	2.044	.394	.671	5.193	.000

a. Dependent Variable: TOBINSQ

(Source:SPSS)

Table 4.2.8 Europe one year model summary

Model Summary[c]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.624[a]	.389	.248	.198135319877532	

2	.794[b]	.630	.621	.193153453075533	1.943

a. Predictors: (Constant), GROWTHS

b. Predictors: (Constant), GROWTHS, SIZE

c. Dependent Variable: LEV

(Source:SPSS)

Table 4.2.10 Europe one year model coefficients

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	.336	.022		15.501	.000					
	GROWTHS	.043	.021	.216	2.032	.045	.216	.216	.216	1.000	1.000
2	(Constant)	.224	.053		4.267	.000					
	GROWTHS	.052	.021	.263	2.484	.015	.216	.263	.258	.965	1.037
	SIZE	.018	.008	.245	2.321	.023	.196	.247	.241	.965	1.037

a. Dependent Variable: LEV

Table 4.2.11 Europe one year model summary

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.644[a]	.415	.408	1.127137878413145	1.930

a. Predictors: (Constant), LEV

b. Dependent Variable: TOBINS_Q

(Source:SPSS)

Table 4.2.13 Europe one year model coefficients

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.139	.241		-.577	.037
	LEV	4.677	.606	.644	7.718	.000

a. Dependent Variable: TOBINS_Q

(Source:SPSS)

Table 4.3.6 US Fixed Effects model coefficients

Estimates of Fixed Effects[a]

Parameter	Estimate	Std. Error	df	t	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Intercept	.310	.054	140	5.743	.000	.203	.416
PROF	-.311	.121	140	-2.557	.012	-.551	-.070
SIZE	.008	.005	140	1.540	.126	-.002	.019
GROWTHS	.00005	.002	140	.023	.982	-.004	.004
VOL	-.035	.079	140	-.455	.650	-.192	.120
NDTS	-.113	.453	140	-.251	.802	-1.011	.783
TANG	.165	.074	140	2.211	.029	.017	.312

a. Dependent Variable: LEV.

(Source:SPSS)

Table 4.3.13 Europe Fixed Effects model coefficients

Estimates of Fixed Effects[a]

Parameter	Estimate	Std. Error	df	t	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Intercept	.173	.058	86	2.957	.004	.056	.289
PROF	-.286	.102	86	-2.786	.007	-.491	-.082
SIZE	.023	.007	86	3.051	.003	.008	.039
GROWTHS	.040	.020	86	1.953	.054	-.0007	.082
VOL	-.555	.196	86	2.830	.006	-.165	.945
NDTS	.448	.458	86	.976	.332	-.464	1.360
TANG	-.115	.100	86	-1.147	.255	-.315	.084

(Source:SPSS)