MINISTRY OF EDUCATION AND SCIENCE OF
THE REPUBLIC OF KAZAKHSTAN

SULEYMAN DEMIREL UNIVERSITY

SDU BUSINESS SCHOOL

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«___» _____ 2018

THESIS WORK

Theme: **«Capital structure and corporate strategy: An analysis of linkage between them»**

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Kaskelen, 2018

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ABSTRACT

Capital structure decision is considered one of most debated topics in corporate finance, being several theories and empirical studies developed since the irrelevance of financing decisions in value creation of the firm with Modigliani and Miller. Notwithstanding, the puzzle of firm's financial resources is still unsolved, and there is not a single theory capable of incorporating all the determinants in this dynamic process . For this reason, the present master thesis aims to introduce a corporate strategy approach in the capital structure decision, focusing on Diversification Strategies. Using a sample of 28 Kazakhstani publicly available companies, from 2012 until 2016, static panel data model was developed for the Leverage measure – Debt/equity ratio – as dependent variables, being Product Diversification introduced as explanatory variables. The results evidence that Product Diversification is not significant in explaining Leverage ratios.

Key words: capital structure, corporate strategy, financing decisions, diversification strategy.

АБСТРАКТ

Решения о структуре капитала считаются одной из наиболее обсуждаемых тем в мире корпоративных финансов. Было создано несколько теорий и эмпирических исследований, разработанных с учетом нерелевантности предположения о независимости рыночной цены предприятия Модильяни и Миллером. Несмотря на это, на данный момент не существует точного ответа на вопрос о необходимом уровне финансовых ресурсов для компании, также как и нет ни одной теории, способной учесть все детерминанты этого динамического процесса. По этой причине данное исследование направлено на изучение влияния корпоративной стратегии, а именно стратегии диверсификации, на решения о структуре капитала. Используя выборку из 28 общедоступных компаний Казахстана, с 2012 по 2016 годы. были разработаны модели статических панельных данных для показателя Leverage – Debt to equity ratio - в качестве зависимой переменной. В качестве объясняющей переменной была выбрана диверсификационная стратегия. Согласно результатам проведенного анализа, стратегия диверсификации не имеет существенного влияние на структуру капитала.

Ключевые слова: структура капитала, корпоративная стратегия, финансовые решения, стратегия диверсификации.

АБСТРАКТ

Туралы шешім капитал құрылымында болып саналады ең көп талқыланатын тақырыптардың әлемде корпоративтік қаржы. Құрылды бірнеше теориялар мен эмпирикалық зерттеулерді ескере отырып әзірленген нерелевантности болжамдар тәуелсіздік туралы нарықтық бағасы кәсіпорынның Мөдильяни мен Кездесті. Осыған қарамастан, қазіргі уақытта емес, нақты бір мәселе қажетті деңгейде қаржы ресурстарын компаниялар, сондай-ақ жоқ бірде-бір теория, қабілетті ескерілсін барлық себепшілері бұл динамикалық процесс. Осы себеппен бұл зерттеу бағытталған әсерін зерттеу корпоративтік стратегиясын, атап айтқанда, стратегиясы әртараптандыру, шешім құрылымы туралы капитал. Пайдалана отырып, іріктеулерді 28 қолжетімді компаниялардың, 2012-2016 жылдарға арналған. әзірленген модельдің статикалық панельді деректер үшін көрсеткіш Leverage – Debt to equity ratio ретінде тәуелді айнымалы. Ретінде объясняющей айнымалы таңдалды диверсификация стратегиясы. Жүргізілген талдау нәтижелеріне сәйкес, әртараптандыру стратегиясы жоқ елеулі әсері капитал құрылымы.

Түйінді сөздер: капитал құрылымы, компания құндылығы, қаржылық шешімдер, диверсификация стратегиясы, салалық әсер

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LIST OF ABBREVIATIONS

FX rate – foreign exchange rate

EMDI – Entropy Measure of Diversification Index

MM – Modigliani Miller theory

CPI – Consumer price index

Introduction

The present study investigates the impact of the degree of Diversification Strategy on financial sources, and whether Product Diversification are significant determinants of publicly available Kazakhstani company's capital structure. Since de 50's, it has been widely discussed what are the determinants of capital structure. These decisions have raised a significant amount of theories and empirical researches in order to investigate this complex process. Modern theory began the puzzle holding the irrelevance of financing decisions in value creation of the firm with Modigliani and Miller (1958). In the following years, some assumptions of this initial perspective were removed, emerging other theories to complement the determinants of the firms' financial resources.

Research objective

The main objective of this paper is to examine the impact of corporate strategy, particularly Diversification strategy, on capital structure of Kazakhstani corporate firms using Kazakhstani modern data.

Actuality of thesis

While there have been studies on capital structure and corporate strategy, limited research has considered the unique characteristics that influence the capital structures and corporate strategies of Kazakhstan companies, as corporate sector of Kazakhstan is the main engine of Kazakhstan welfare. So it's very important to understand the linkage between corporate strategy and capital structure of Kazakhstani firms, in order to optimize performance of this firms for future progress.

Aim

The aim of the work is to discuss the implication of corporate strategy of publicly available firms of Kazakhstan on capital of these firms.

In order to reach aim of this thesis work, we should put some smaller indicators, in accordance with which we can track step-by-step success of performed work (objectives):

- To identify corporate strategy variable
- Capital structure measurement
- To analyze corporate strategy and capital structure data of Kazakhstani firms and develop panel data model
- Provide regression analysis of panel data model
- Discuss the ways in which capital structure decisions relate to the corporate strategies of Kazakhstan firms

Research question

This thesis answers the following research question:

- To what extent does corporate strategy influence the capital structure decisions of Kazakhstan corporate firms?

Methodology

My work based on analysis of secondary data. The main secondary data sources are books, articles, surveys, variety of publications. The main statistical source is KASE and S&P CapitalIQ Database.

Research scope:

- Scope country: Kazakhstan publicly available firms
- Scope period: 2012-2016

Model

The basic regression model used in this thesis work is:

$DEBEQ = B_0 + B_1 PRODDIV + e_i$

B – unknown coefficient to be estimated

e_i – random error

DEBEQ – is debt to equity ratio

PRODDIV – is the production diversification, calculated by using Entropy Measure of Diversification.

Hypothesis development

In light of Coinsurance Effect, firms with uncorrelated cash-flows from different businesses and segments will have more debt capacity [1]. Singh, et al. also found evidence of the Coinsurance Effect of diversification in the debt usage. Other studies report higher Leverage for unrelated diversification [2]. Therefore, it is expected a positive relationship between Leverage and the degree of the Product Diversification. Based on these arguments, we formulated the following hypothesis:

H_1: Leverage is positively related with Product Diversification.

H_0: Leverage is not related to the Product Diversification.

Data collection process

The sample was taken from the S&P list of Kazakhstan public companies. Five years of financial data (2012-2016) were collected from the S&P Capital IQ service and segment data from annual reports. Firms with incomplete financial data and those which changed their strategy category during the study period were eliminated from the sample.

Financial companies were excluded, since they have specific regulations applied to their capital structure as well as companies with year-end different from 31st of December, constructing a panel data with annual frequency from January until December of each year. This produced a sample of 28 firms.

1. Theoretical background

1.1 Literature review

Modigliani and Miller (1954)	The MM (1958) capital structure insignificant suggestion was set up in view of an arrangement of suspicions about capital markets, tax collection, and data asymmetry. All in all, the creators accept that the firm has an arrangement of expected money streams which is separated among obligation and value holders. Speculators make hand crafted use since it is expected that financial specialists and firms have level with access to money related markets. All things considered, the use of the firm has no effect available estimation of the firm. Therefore, in an immaculate capital market, the association's capital structure decisions don't make a difference. Be that as it may, the MM (1958) recommendation is hard to test since obligation and firm esteem are conceivably endogenous and are consequently determined by different elements, for example, benefits, development openings and insurance. Consequently, despite the fact that the hypothesis isn't practical as far as how firms back their tasks, it gives a sensible understanding of a great part of the hypothesis of corporate fund. Hence it could be contended that the MM hypothesis impacts the advancement of the pecking-arrange and the exchange off speculations.
Modigliani and Miller (1963)	Subsequent to accepting much feedback on MM1, the creators reconsidered their reasoning and thought of a moment suggestion in 1983. This recommendation unwinds the suspicion of no charges. Accepting that there are no chapter 11 or money related pain costs, the ideal capital structure ought to be 100% obligation financed [3].
Miller (1977)	The creator amended the first MM II (1963) to consider the impact of individual and corporate duties. The creator contends that, since stocks are saddled at a moderately bring down rate than securities return, financial specialists would acknowledge a lower pre-government form from stocks with respect to the pre-expense form on securities. Be that as it may, Brigham and Ehrhardt (2005) contend that, albeit individual duties decrease the cost of value, there is no certification that they totally balance the sparing from the lower cost of obligation financing.

Bradley et al. (1984)	In this investigation, the creators look at an example of 851 firms in the US from 1962 to 1981 and utilize cross-sectional, firm-particular information to test for the presence of an ideal capital structure. They contend that the nearness of huge chapter 11 and office costs, loss of non-obligation related duty shields, and untaxed value wage would bring about a positive expense preferred standpoint of obligation financing. Along these lines the ideal use is a tradeoff between the expense preferred standpoint of obligation and costs that are identified with use.
Faulkender and Petersen (2006)	The creators inspect an example of 77 659 firm year perceptions from COMPUSTAT amid the time of 1986-2000. The creators find that duty related exchange off hypothesis isn't appropriate in their example. Their outcomes on firm particular determinants of capital structure demonstrate that use is bring down for firms with substantial assessable income. The creators ascribe these outcomes to open markets neglecting to supply obligation to such firms.
Rafaela Teixeira Militão	The author examined relationship of capital structure and corporate strategy, particularly diversification strategy of listed Portuguese firms. She finds that there is no significant influence of diversification strategy to capital structure of listed Portuguese firms.
Eduardo José Menéndez Alonso	The creator broke down the potential connection between capital structure and the enhancement technique of the firm for an example of 480 Spanish assembling firms amid the period 1991-1994. The outcomes demonstrate a negative and factually huge connection between firm obligation level and the level of firm broadening.
Sankaran P. Raghunathan	The creator analyzed entropy measure of firms expansion and attempted to enhance its exactness. The idea of broadening is characterized and the measure is adjusted to mirror its measurements—the degree of expansion crosswise over sections (appropriation) and the quantity of fragments in which a firm works. The refined measure improves it conceivable to comprehend equivalences among firms with various broadening profiles.

Ozkan (2001)	The creator inspects an example of 390 UK firms from 1984-1996 and tests for firm-particular traits that impact capital structure. The creator finds that organizations with an abnormal state of non-obligation charge shields convey less obligation than different firms.
Aivazian et al. (2005)	The creators contemplate the effect of use on company's venture choices in an example 1,035 Canadian mechanical organizations amid the period 1982-1999. The creators locate that settled resources positively affect use. They find that the connection amongst's use and resource substance is 0.613.
Balakrishnan and Fox (1993)	The creators experimentally look at the connection between firms' specific resources and varieties in their levels of use. They find that the primary explanation behind the variety in firms' use is identified with firm-particular impacts. Firm-particular elusive resources (Research and development) force higher expenses in chapter 11. What's more, firms don't benchmark their use position yet take after their individual needs.
Mocnik (2001) Rajan and Zingales (1995)	The creator analyzes the connection between resource specificity and capital structure for an example of Slovene fabricating firms, utilizing an example of 136 firms from 1991 to 1996. Firms back their firm-particular resources with value because of lower exchange costs. The creator inspects the connection between resource specificity and capital structure for an example of Slovene fabricating firms, utilizing an example of 136 firms from 1991 to 1996. Firms back their firm-particular resources with value because of lower exchange costs.
Van der Wijst et al. (1993)	The creators dissect an example of 27 "shoptypes" covering a time of 24 years. The creators find that industry-particular impacts help clarify capital structure choices.
Williamson (1988)	The creator surveys the financing choice of firms and contends that organizations' financing choices rely upon the kind of benefits they have. Particular (or non-redeployable) resources are typically financed by value and non-particular (or redeployable) resources are financed with obligation.
Cassar and Holmes (2003)	The creators break down the capital structure determinants for an example of 1,555 little and medium-sized Australian firms for the period 1995-1998. They locate a negative connection amongst benefit and use.

Chang (1999)	The creator shows a model in which the ideal money related contract depends on variables, for example, taste, blessings and innovation. The creator proposes that activities that are more productive can without much of a stretch meet a financial specialist's required return, and the speculator, thus, would supply the assets that the firm needs. The conclusion drawn is that beneficial firms should convey less obligation.
Fama and French (2002)	The creators dissect the exchange off and pecking request hypothesis utilizing a cross-sectional relapse of firms from COMPUSTAT from 1965 to 1999. They locate that more beneficial firms have less obligation, which demonstrates that there is a negative connection amongst gainfulness and use.
Huang and Song (2006)	The creators break down the qualities of an example of 799 Chinese firms from 1994 to 2000. Their discoveries uncover a negative connection amongst gainfulness and use.
Kashefi-Pour et al. (2010)	The test the determinants of capital structure with regards to UK firms. By analyzing pecking request and dynamic exchange off hypotheses, they locate that size negatively affects firms' use position.
Lasfer and Levis (1998)	The creators break down the determinants of the renting choices of little and substantial firms in the UK. Utilizing an example of 3,000 UK firms from 1982 to 1996, they locate a positive connection amongst use and size of the firm.
Omet and Mashharawe (2003)	The creators break down the determinants of capital structure for an example of 51 Jordanian, 30 Kuwaiti, 28 Omani and 29 Saudi firms amid the period 1996-2001. They report a positive connection amongst size and use.
Rajan and Zinglales (1995)	The creators explore the determinants of capital structure by examining the financing choices made by open firms in the G7 nations, utilizing an example of 2,583 non-money related firms. The creators express that size is an intermediary for the converse likelihood of default. They find that there is a positive connection amongst use and the measure of the firm for the greater part of the nations, aside from Germany, where estimate negatively affects use.
Wald (1999)	The creator investigations the determinants of the capital structure of 4,404 firms from the UK, France, Germany, Japan and the US in 1991-1992. The creator finds that size is adversely identified with use. The outcomes are credited to the

	way that extensive firms have bring down exchange costs and lesser data asymmetry than little firms.
Petersen and Rajan (1994)	The creators take a gander at how the connection between a firm and its banks will influence the organizations' use, accessibility and expenses of assets. Utilizing a study directed in 1988 and 1989 for an example of 4,504 non-monetary and non-firm independent ventures, the creators find that organizations with low profit instability (less dangerous firms) will probably have high obligation proportion. Thus, there is a negative connection between the hazard and use of SME.
Julian Lowe 1994	The creators take a gander at how the connection between a firm and its leasers will influence the organizations' use, accessibility and expenses of assets. Utilizing a review directed in 1988 and 1989 for an example of 4,504 non-money related and non-firm independent companies, the creators find that organizations with low profit instability (less dangerous firms) will probably have high obligation proportion. Henceforth, there is a negative connection between the hazard and use of SME.
Sidney Barton (1988)	Creator inspected the connection between a capital structure and corporate system. Benefit, income, the rate of development and the level of profit hazard are critical extra inner impacts on capital structure.
Richard Rumelt	Author examined the relationship between a firm's diversification strategy and its economic performance. He identified 4 main strategy types of the firms.

1.2 Corporate strategy variable

Acquiring the hazard penchants and objectives of best administration of huge firms is as a matter of fact tricky. Along these lines, an intermediary measure was utilized to speak to these factors. Rumelt's [4] corporate procedure typology was the measure chose. In the first place, it is a corporate-level vital measure. Since use information are by and large not accessible or important at the specialty unit level, a firm level measure was a fundamental necessity. Second, Rumelt's measure depends on broadening. As Bettis (1983) called attention to, an association's broadening methodology reflects top administration's state of mind and approach toward hazard. This is helpful, since administration's hazard loath attributes were proposed as a key determinant of capital structure. Third, while it was anything but a 'standard' aftereffect of the Rumelt (1974) think about, use was one of the monetary qualities of the expansion bunches that were deliberately and essentially extraordinary. While Rumelt's investigation did not endeavor to control for other conceivable reasons for capital structure, his discoveries gave foundation to the advancement of speculations relating the induced objectives of particular expansion methodology classes to capital structure.

Fourth, in spite of the fact that the arrangement of firms requires judgment, contemplates by Christensen and Montgomery [5] and Bettis [6] gave broad help to the unwavering quality of the measure. Finally, the typology way to deal with the portrayal of the multidimensional technique idea is reliable with comparative system contemplates done at the specialty unit level [7]. As a matter of fact, this enhancement system measure speaks to a gestalt, multi-dimensional measure of procedure. Further, as Rumelt's underlying examination showed, determination of a broadening system is to a great extent the aftereffect of the specialized, financial, and aggressive condition of the businesses in which the firm takes an interest. Notwithstanding, Rumelt likewise contended that the outcomes bolstered the dispute that his measure at any rate somewhat caught the qualities and objectives of administration too. Further, it is suggested that the broad earlier

examinations of the idea of the Rumelt's procedure classes gives a sensible premise to evaluating the idea of these administrative qualities and objectives for use in an exploratory investigation, for example, this. In the event that outcomes demonstrate empowering, a more straightforward measure of these administrative decision develops would be justified. In any case, the constraint of such an intermediary measure in totally catching administration esteems and objectives is promptly conceded.

For the reasons for distinguishing proof of expansion of the organizations we utilized Entropy Measure of Diversification.

Entropy Measure of Diversification.

Dispersal of segments can be estimated utilizing the "entropy technique", a method for measuring the circulation of a specific movement over a few sections, be they business or nation fragments. In estimating a company's level of expansion, the strategy fundamentally mirrors the measure of entropy and henceforth "the entropy measure." Theil [9] gives a clear composition of this technique and the rationale behind the math.

A few examinations have utilized this strategy to gauge the level of expansion or to decide broadening write. The expanded utilization of this technique is additionally an impression of the disappointment with different measures [10]. All the more as of late, the entropy measure has been found to appreciate more legitimacy than a portion of alternate measures [11]. In any case, the meaning of the entropy measure of expansion and the immediate utilization of the entropy equation to the estimation of the idea should be checked on.

The entropy measure of an association's expansion is differently characterized as "a weighted normal of a company's broadening inside segments" [12], "a weighted normal of the offers of the segments[13]. The weight is thought to be the logarithm of the opposite of the extent of aggregate business in each section [13].

Entropy Measure of Diversification Index calculated as follows:

$$Total\ Diversification = \sum_{i=1}^{n} P_i ln \frac{1}{P_i}$$

Where:

P_i - is the share of the it's business segment's sales as a percent of total firm sales;

N – number of the firm's business segment.

Since the sum of the weights is not equal to one, the mathematical equation, as it stands now, actually reflects only a weighted score of the proportional shares of the segments. If the proportions are the weights, then the measure would be defined as a weighted average in consonance with the entropy definition. If the logarithms are considered to be weights, then the measure has to be described as a weighted score. The concept of entropy, however, is measured as a weighted average because the proportions, not the logarithms, are the weights as is clear from Theil [14].

The current mathematical formulation of entropy, when directly applied to measure the level of diversification, does not help capture the multidimensionality of the concept in its entirety. A measure should relate properly to the construct being studied. The entropy measure is attractive, it is argued, because it takes into account "two elements of diversification: (i) the number of segments in which a firm operates, and (ii) the relative importance of each of the segments in the total sales".

1.3 Capital structure variable

Capital structure can be a blend of a company's long term obligation, here and now obligation, basic value and favored value. An organization's extent of short-and long term obligation is considered while examining capital structure. At the point when experts allude to capital structure, they are no doubt alluding to an association's obligation to-value (D/E) proportion, which gives understanding into how risky an organization is. For the most part, an organization that is vigorously financed by obligation has a more forceful capital structure and in this manner postures more serious hazard to financial specialists. This hazard, in any case, might be the essential wellspring of the association's development [16].

Debt/equity ratio

Examiners utilize the D/E proportion to think about capital structure. It is ascertained by separating debt to equity. Clever organizations have figured out how to join both debt to equty into their corporate methodologies. On occasion, be that as it may, organizations may depend too vigorously on outer subsidizing, and obligation specifically. Speculators can screen an both than equity to back resources have a high use proportion and a forceful capital structure. An organization that pays for resources with more equity than debt has a low use proportion and a moderate capital structure. So, a high use proportion as well as a forceful capital structure can likewise prompt higher development rates, while a preservationist capital structure can prompt lower development rates. It is the objective of organization administration to locate the ideal blend of debt and equity, additionally association's capital structure by following the D/E proportion and looking at it against the organization's companions[17].

In motivations behind our exploration we investigated financial reports of the sample number of organizations and recognize the mean of debt/equity proportion.

1.4 Capital Structure and Diversification

The limitations of finance paradigm in explaining capital structure decisions at the firm level suggest that managerial choice is relevant, and the strategy decision framework is an important complement in capturing the factors that have an impact on this decision [19]. In fact this new perspective, complemented with corporate strategy, is a development from a deterministic product of external market forces as implied by the finance field, into a more functional managerial decision approach. In particular, the effect of diversification on capital structure is likely to be a product of the coinsurance effect [20]; the transaction cost [21] and the agency cost [22]. We discussed on the following paragraphs for each of these theories the impact of Diversification Strategies on Capital Structure.

Coinsurance Effect

Lewellen questioned if it was possible to produce gains to the stockholders in a merger without sufficient operating efficiencies, referring this possibility as a pure financial combination of enterprises. Following this approach, the author concludes that mergers provide more debt capacity, because the likelihood of default of the consolidated firm is smaller than the sum of firm's individual probability of failure on debt commitments. The merger partners are now accountable for all the jointed debt obligations, setting a borrower diversification context, which results in more debt capacity. Therefore, the coinsurance effect arises from the possibility of imperfect correlation of cash-flows, which reduces the operational risks, creating additional borrowing capacity. In search of coinsurance effect, Kim and McConnell also conclude that merger firms employ more debt, than the individual ones. Additionally, it was found that this increase on leverage didn't cause abnormal negative returns on bondholders, suggesting as explanation, that this growth was provided by the occurrence of higher coverage of the cash-flows [23].

Transaction Costs

In this framework, firm specific assets1 have lower reutilization in other business and structures, representing a restricted liquidation value in case of default [24] . Subsequently, debt will be preeminent in supporting non-specific assets acquisitions and, on the other hand, equity will prevail on more focused and specialized businesses [25].

Since the diversification type is dependent on the characteristics of the resources available [26], unrelated business will point to more non-specific assets, than related businesses organizations. Therefore, the nature of assets, measure of their collateral capacity, will dictate the preferred financial tool – debt or equity.

Agency costs

Jensen (1986) sets the debt as discipline mechanism of managers and controlling device of free cash-flow available for spending at the discretion of managers. The author also highlights the role of debt in motivating the organizational efficiency, since the firm will conduct more efficient procedures and activities, with the threat of fail to comply with the debt service. Nonetheless, there are some agency costs along with debt, since managers are agents acting on the behalf of equity holders and bondholders.

Therefore, the debt use disadvantages comprises the monitoring expenditures, the increase in bankruptcy costs and also the opportunity wealth loss, to the extent that it influences the investments decisions [27]. Shareholders will endorse the use of debt, constraining the opportunistic behaviours and probably destroying value of diversification strategies held by managers. Therefore, firms with more leverage will conduct lower unrelated diversification strategies. In the case of companies with foreign operations, the agency costs of debt intensify, because geographic dispersion demands more efforts in the information processing, increasing the costs of monitoring activities.

Therefore, bondholders require higher interest rate to meet with the information asymmetries and higher monitoring costs.

1.5 Leverage and Diversification

Barton and Gordon first empirical study developed over this matter was an attempt to achieve an integrated view – filling the gap of the financial literature to explain and understand the capital structure and introduce more functional inputs to the strategy ground. In the following year, Barton and Gordon continued the research, introducing the values and goals of management, based on Andrews research, which settle the dimensions of corporate strategy as an organizing framework.

Using a sample of American industrial companies still in existence in 1982, which maintain the diversification strategy between 1970-74, the study concludes that the level of debt is different among different strategies of diversification – being unrelated strategies the ones that achieve a higher volume of debt financing, contrarian to single or related diversification.

Other important finding was the link between debt and the level of profits – across all diversification strategies, profit was shown to have a significant negative relationship with debt. This result is consistent with fact that managers want to have flexibility. So, with an increase in profit, firms could be financed by internal generated funds, reducing the level of debt, as it is predicted by Pecking Order Theory [28].

Kochhar and Hitt (1998) examine the relationship between corporate strategies and financing types and sources, dividing the diversification strategies into two types –related and unrelated diversification. A company is pursuing a related diversification when acquires a company which segment is in the same industry or invests in specific assets related to the company's industry. Unrelated diversification implies acquisition of businesses in different industry groups.

Using a sample of 187 large manufacturing firms traded on the American or New York stock exchange that adopted a diversification strategy during the period of 1982-1986, the study confirmed that financial decisions are influenced by firm diversification

strategies. The results supported that related diversification implies more specific assets and businesses, since this is pointed out as more risky from the point of view of fund suppliers, which may lose their investment if the firm bankrupts. This also, linked with constraints to managerial actions faced by the debtholders, introduces higher risk into related diversification strategies. In short, it was found out that equity is preferred for related diversification and debt for unrelated diversification.

Regarding the source of financing (public or private), the results indicate that it is influenced by the form of entry in new business – acquiring an existing firm or through direct entries (internal development). In the case of internal development, since it involves more uncertainty than acquiring an existing business, because of greater information asymmetry, firms tend to rely more on private sources. On the other hand, firms using acquisitions of existing business will use more public sources. Menendez-Alonso developed an article to study the effect of diversification on capital structure in a Spanish panel data composed by 480 manufacturing firms, from 1991 until 1994. The results conclude that diversification does not have influence in the leverage ratios for Spanish data during the period in study.

Summary

Most of the studies found strong evidence regarding the impact of diversification strategies in capital structure. Those findings are in general supported by the theoretical field through the Coinsurance Effect [29].

After having discussed the theoretical background regarding Capital Structure and specifically its relationship with Diversification Strategies, in section 2, we present some of the empirical studies developed in the field.

2. Descriptive statistics

In purposes of our research, we analyzed financial statements of sample number of 28 publicly available companies.

Table 1. Sample distribution across industries.

Industry classification	Number of firms	%
Electric Utilities	6	21,4%
Diversified Metals and Mining	3	10,7%
Integrated Oil and Gas	3	10,7%
Integrated Telecommunication Services	3	10,7%
Construction Materials	2	7,1%
Packaged Foods and Meats	2	7,1%
Pharmaceuticals	2	7,1%
Railroads	2	7,1%
Agro production	1	3,6%
Coal and Consumable Fuels	1	3,6%
Hotels, Resorts and Cruise Lines	1	3,6%
Soft Drinks	1	3,6%
Steel	1	3,6%
Total	**28**	**100%**

Source: Data from S&P Capital IQ and Data from annual reports, compiled by author

Table 1 shows that the observations are distributed along several sectors, being the ones with more percentage Electric Utilities sector with 21,4% of the total panel each one. Consequently, no influence is expected from the industry. The sample was broadly divided into three groups as presented in Table 2, taking into account the three types of

diversification strategy using the segment report of sales and computing the Entropy Measure of Diversification.

Table 2. Breakdown of the sample within each type of diversification, using Entropy Measure of Diversification Index.

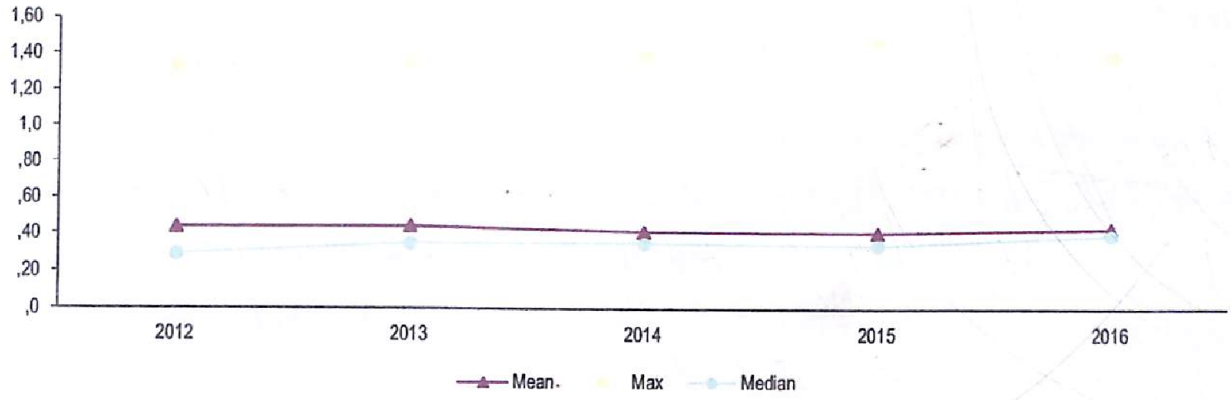
Year	Focused	Medium	High
2012	15	4	11
2013	14	5	11
2014	14	6	10
2015	14	7	9
2016	13	8	9

Source: Data from S&P Capital IQ and Data from annual reports, compiled by author

1. If the Entropy Measure of Diversification Index is equal to 0, the company focused in the single segment, having no diversification, referred to as "focused";
2. Indexes between 0,5 and 1 represents firms with medium diversification ("medium");
3. Being high diversification showed by ratios higher than 1 ("high").

Graph 1 represents the evolution of Average Debt to equity ratios of the sample.

Graph 1. Sample Average Entropy Measure of Diversification Index:



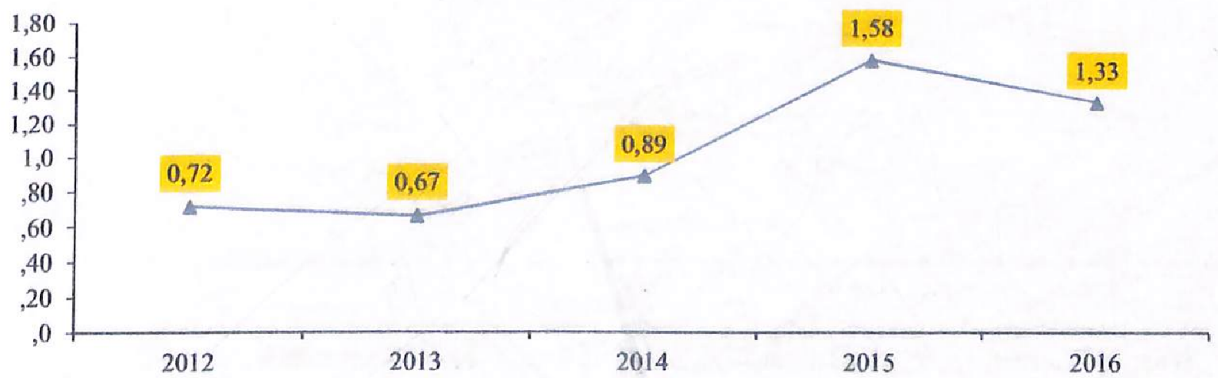
Source: Data from S&P Capital IQ, KASE and Data from annual reports, compiled by author

Table 3. Sample Average Entropy Measure of Diversification Index:

	2012	2013	2014	2015	2016
Mean	0,44	0,44	0,42	0,41	0,43
Max	1,34	1,35	1,39	1,48	1,39
Median	0,29	0,35	0,35	0,34	0,39

Source: Data from S&P Capital IQ, KASE and Data from annual reports, compiled by author

Graph 2. Sample Average debt to equity ratio:



Source: Data from S&P Capital IQ, KASE and Data from annual reports, compiled by author

On average, Kazakhstan companies have more than 50% of the capital structure composed by debt.

According to the comments of most analysts, the increase in the average debt-to-equity ratio in Kazakhstani companies, during the period 2014-2015, was caused by the worsening macroeconomic situation in the country.

Macroeconomic influence

Inflation

Inflation reflects exchange rate fluctuations. In 2015, NBRK introduced the free-floating exchange rate which subsequently led to devaluation of the tenge. Price appreciation primarily affected non-food products.

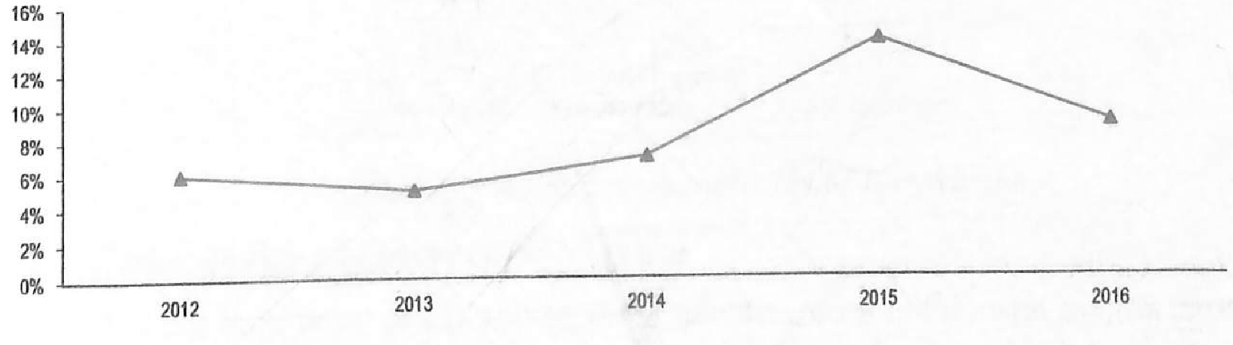
Stabilization of the national currency coupled with indications for further devaluation had a positive impact on the inflation level in 2016.

Table 4. CPI in Kazakhstan

	2012	2013	2014	2015	2016
CPI in Kazakhstan	6%	5%	7%	14%	9%

Source: Committee on Statistics of Kazakhstan

Graph 3. CPI dynamics in Kazakhstan



Source: Data from S&P Capital IQ, KASE and Data from annual reports, compiled by author

Foreign trade

The deteriorating world economy, recession in Russia and a lowering of China demand for energy and metals have weakened the country's foreign trade activity.

A decrease in world industrial production and mineral resource consumption negatively impacted Kazakhstan's export potential in 2015-2016.

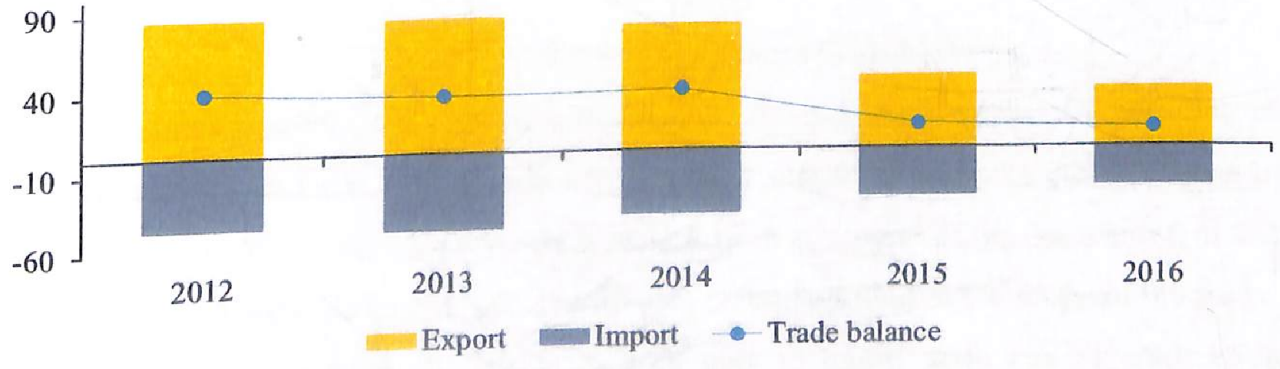
According to the comments of analysts, this factor leading to the abolition of the production of certain segments of production, what causes decrease in diversification of some companies.

Table 5. The dynamics of trade balance of Kazakhstan

	2012	2013	2014	2015	2016
Export	86	85	79	46	37
Import	-46	-49	-41	-31	-25
Trade balance	40	36	38	15	12

Source: Committee on Statistics of Kazakhstan

Graph 4. Trade balance of Kazakhstan



Source: Committee on Statistics of Kazakhstan

Exchange rate and Brent crude oil prices

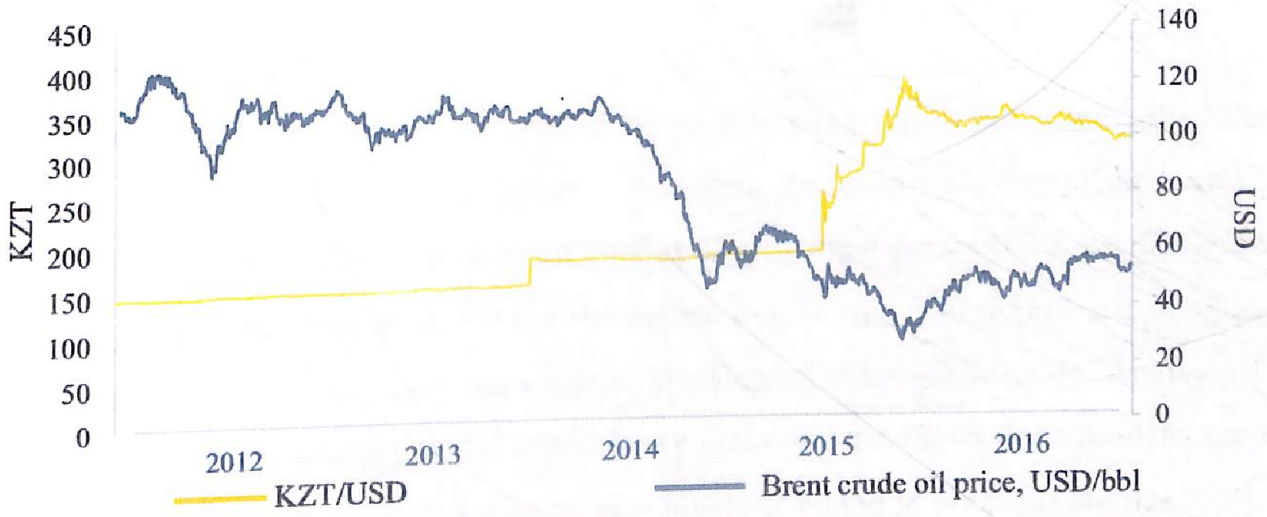
A sharp drop in oil prices and an economic downturn in the main trading partners led to a significant decrease in budget revenues. In August 2015, NBRK abandoned the national currency band for a free-floating exchange rate to implement the inflation-targeting monetary policy.

Table 6. Changes in Exchange rate

KZT/USD	2012	2013	2014	2015	2016
Average	149,11	152,14	179,12	222,25	341,76
End of period	150,74	153,61	182,35	339,47	333,29

Source: Committee on Statistics of Kazakhstan

Graph 5. FX rate and Brent crude oil prices



Source: Committee on Statistics of Kazakhstan

The impact of macroeconomic factors on the financial and operational activities of Kazakhstani companies is very significant. However, statistically determine the impact of these factors on debt to equity ratio and diversification strategies of the companies, at this moment it is not possible to provide, in addition, is not included in the scope of the study. In this regard, we assume that the impact on debt to equity ratio and diversification strategies of Kazakhstani companies was insignificant or equal.

3. Results and findings

3.1 Results

Our aim is to test the relationship between Leverage and Product Diversification, being the main parameters of interest to test the hypotheses the coefficients of PRODDIV.

It will be assessed if the fitted model to the data is statistical significant, performing the following overall test of significance:

H0: $\beta 1 = \beta 2 = \ldots \beta k = 0$

H1: at least one $\beta j \neq 0$

Thereafter, the hypotheses test will be performed to report the empirical evidence obtain, complementing with a balance between the results accomplished and the hypotheses designed. From an overall test of significance perspective, as disclosed in Table 2, p-value is equal to 0.000 for the regression; so, the null hypothesis is rejected. Accordingly, the model as a whole explains the Capital structure variable. Analysing the R^2 , a comparative measure of the explanatory power of the regressions models, models have this indicator above 30%, being similar levels obtained in previous studies. [30].

Table 7. Regression results

	Coefficients	*P-value*	*Significance F*
Intercept	8,931196	0,179019641	0,220154359
PRODDIV	-18,36776322	0,000154359	

Source: compiled by author

The positive expected relationship between Leverage and Product Diversification, defined in H1, was not confirmed for the Capital Structure regressions. In fact, Product Diversification presents a negative relationship with debt ratio in the whole period. Nonetheless, Product Diversification is not statistical significant in Debt measures, as significance level is less than 0,5.

Our findings contrast with the results reported by Barton and Gordon (1988), Singh, et al. (2003) and Singh and Nejadmalayeri (2004), who found significant relationships

between Leverage and diversification variables. Nonetheless, Product Diversification appears with no explanatory power of listed Kazakhstani companies' capital structure, similarly to the result obtain in Menendez-Alonso (2003) for Spanish companies.

3.2 Summary and conclusion.

In this section we will start by presenting the main results achieved in this empirical investigation. Then, we will discuss some study limitations, being the last section dedicated to possible paths of further investigation in this field.

The issue of measuring the determinants of capital structure has been discussed for decades. The main purpose of this study was to discuss the impact of Diversification Strategies in the Capital Structure of listed Kazakhstani companies. The capital structure choice is the result of several determinants, and there is not a single theoretical perspective capable of capture all the important aspects in this complex process. In order to update the financial paradigm and incorporate a new perspective in the capital structure decision, we suggest that corporate strategies, particular the diversification ones, are some of the potential explanations for the firms' financial resources.

Based on a sample of 28 listed Kazakhstani companies for the time period 2012 to 2016, we investigated the impact on Capital Structure of Product Diversification.

Our findings suggest that Product Diversification strategies have no impact on the Debt/Equity ratios of the Kazakhstani companies, contrarian as expected.

Our study makes some contributions to the existing literature that addresses the capital structure study of Kazakhstani companies.

Firstly, it brings the issue of the determinants of capital structure for the Kazakhstani listed companies. Secondly, highlights the impact of Diversification strategies in capital structure, enriching the current literature with some diverging findings from the previous empirical studies.

Our findings are relevant to suggest that contrarian to previous studies for American companies [31]. Product Diversification strategies have low explanatory power of Leverage for listed Kazakhstani companies. However, the results are similar to the ones achieves by Menendez-Alonso for a sample of Spanish companies.

3.3 Suggestions

This topic is quite interesting and needs a more accurate analysis, as the results of studies by different authors contradict each other. However, on this topic it is worthwhile to look at the elimination of all limitations and assumptions.

4. Limitations

This study presents some limitations. The first one is regarding the small sample size, due to small number of listed Kazakhstani companies and available data, which could affect the statistical inference and consequentially the results.

A second limitation is related with the quality of sales segment report for the companies in analysis.

The accuracy of those divulgations, disclosures and the definition of segments, independently of the accounting standard, is a managerial choice, impacting the quality of the report and consequentially, the Diversification Indexes measure.

The third limitation is the possible Reverse Causality between Capital structure and Diversification. The presence of Endogeneity could generate bias in estimates, i.e. reject a hypothesis that is in fact true and do not reject a hypothesis that is in fact false.

The fourth limitation is the unaccounted influence of macroeconomic changes in the country and also the nature and specific requirements of the industry in which the Companies operate.

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ENDIX A. CAPITAL STRUCTURE BREAKDOWN OF CHOSEN SAMPLE NUMBER FIRMS

	D/E 2012	D/E 2013	D/E 2014	
SmithKline plc (LSE:GSK)	2,717	2,336	3,806	
& Company JSC (KAS:SATC)	1,073	1,115	2,623	
Stock Company KazAgro National Management Holding	0,75	1,116	1,67	
Lamenogorsk Titanium and Magnesium Plant JSC (KAS:UTMKP)	0,554	0,69	1,331	
munai LLP	2,471	1,418	1,343	
omtrans LLP	1,609	1,272	1,418	
rands JSC	1,239	1,586	1,439	
coton Plus	4,094	3,684	2,082	
Stock Company National Company Kazakhstan Temir Zholy	0,566	0,507	0,609	
uk-Energy JSC	0,506	0,461	0,658	
Joint Stock Company (LSE:KCEL)	0,74	0,254	0,272	
istau Distribution Power Grid Company JSC	0,189	0,227	0,324	
ransGaz JSC	0,29	0,283	0,392	
nal Company KazMunayGas JSC	0,574	0,572	0,701	
pharm JSC	0,216	0,67	1,25	
Bayan Sulu (KAS:BSUL)	0,161	0,18	0,235	

NDIX A. CAPITAL STRUCTURE BREAKDOWN OF CHOSEN SAMPLE NUMBER FIRMS

	D/E 2012	D/E 2013	D/E 2014	D/E 201
Stock Company Central-Asian Electric Power Corporation	0,377	0,415	0,428	
azEnergo JSC	0,585	0,715	0,426	
e Metalware Plant Joint Stock Company (KAS:AKZM)	0	0	3,05	
hstan Electricity Grid Operating Company JSC (KAS:KEGC)	0,639	0,418	0,299	
l Asia Cement JSC	0,123	0,107	0,256	
tock company Alatau Zharyk Company	0,229	0,26	0,251	
tynEx Company (KAS:ATEC)	0	0	0	
ational Atomic Company Kazatomprom	0,288	0,297	0,328	
la Group Limited (LSE:CGLO)	0,311	0,247	0,214	
htelecom JSC (KAS:KZTK)	0,333	0,24	0,3	
Group Joint Stock Company	0,198	0,146	0,13	
t JSC (KAS:RAHT)	0	0	0	(
ansCom JSC (KAS:KZTC)	0,00011	0,13	0,00174	0,