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An analysis of the changes in the capital position and capital structure of domestic enterprises and their effects

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1. Introduction

1.1. Thesis statement

The present thesis deals with a division of economy known as the science of decisions and choices between scarce resources, that is, corporate finance, more precisely with the study of the capital structure in different corporate sectors, and its effect on profitability.

The choices and decision in corporate finance appear in the form of two broad questions. Firstly, corporate financial management has to decide about the investments the company carries out. Secondly, it has to choose the most beneficial financing solutions available for the company and make decisions about their rate and structure (Brealey- Myers, 2011).

While different return indicators aid decision-makers in connection with investment issues, choosing the right financing alternative must (should) involve considering several factors.

In parallel with the development of financial culture and the spread of globalisation, the range of resource options expanded as well, which resulted in a change and increase in the factors to be considered for decision-makers. Therefore, the examination of these factors and circumstances is always topical, and thus it has become a common topic in national and international scientific research, which categorises the factors determining the composition of resources into two groups, based on the direction of influence. Components emerging inside the company are endogenous, while determinants originating from outside the company are called exogenous factors. However, endogenous factors are often called micro or company-specific, while exogenous factors are often referred to as macro or country-specific factors in literature, therefore, I will use these terms as synonyms hereafter.

To lay the foundations for my empirical research, my dissertation summarises the results of earlier empirical research on the effects of endogenous factors that can be interpreted on the corporate level; that is, how factors such as company size, company life cycle, wealth, financial and income position, growth prospects, nature of assets and business risk influence corporate capital structure. I also

presented the effect of the economic and financial environment, in other words how the exogenous factors emerging from outside the company, such as interest rates, capital market, banking system (the activities of the banking sector), the tax and legal system affect capital structure decisions.

In addition, I collected the most important findings from all of the capital structure theories, which basically seek to answer the questions whether there is an optimal ratio of internal and external resources that can contribute to the maximisation of the company's value, what considerations need to be taken into account to make the optimal decision, and what the right order of using the resources is. Optimising corporate profitability has also gained some grounds in economic thinking; however, national empirical research in this area – compared to other capital structure research – has received less attention.

Thus, research on capital structure can be divided into two groups. Firstly, there is research concerning capital structure influencing factors and criteria for decision-making, including the so-called hierarchy theory about the order of resources. The other group concerns research on the relationship between performance determined by the defined or established capital structure and market value.

In addition to the relevance of this area at all times, as detailed earlier, it is extremely topical today in connection with the monetary policy measures aimed at mitigating the negative effects of the global coronavirus pandemic. As Bodnár and his co-authors (2014) put it, during the recovery from crisis the rate of economic growth is slower without lending than in times of increased lending. Correspondingly, the National Bank of Hungary launched its Hajrá! programme within the frameworks of the Funding for Growth Scheme. It all shows the relevance of research on company financing and determining optimal (maximal) debt ratio. The novelty of the present research lies in the development of a new model, which examines the explanatory power of the determining factors of capital structure, and can be used for comparing the individual factors, as well. Moreover, it provides a multi-faceted analysis of the link between capital structure and profitability, and effectiveness.

The majority of similar research projects concentrated only on small and medium enterprises (hereinafter: SMEs; SME sector), or one or two types of activity, predominantly agribusinesses and the processing industry. My dissertation, in contrast with earlier practice incorporates large companies as well, and instead of focusing on one sector, I compared all sectors of the economy. Furthermore, given the territorial inequality in Hungary, I also examine capital structure differences per region. Thanks to these new approaches, my dissertation could prove a worthy addition to the existing literature on capital structure.

1.2. Objectives

One of the aims of my empirical research was to examine to what extent capital structure determining factors known from literature explain indebtedness, how great is their effect. Secondly, I wanted to answer the question concerning the rate of return on equity in companies grouped according to different criteria under the given financial leverage[1], that is, how the development of the capital structure influences return on equity. This, in essence, tested how the trade-off theory encountered among other capital structure theories in the literature review section is implemented in different company groups, and I attempted to determine the optimal leverage and debt levels from the point of view of profitability, as well.

In my opinion, the comparative analysis of heterogeneous groups may help uncover such latent factors and links that bring me closer to the main axis of my thesis, namely, defining the optimal capital structure form the point of view of profitability. In this light, I analysed the entire domestic corporate sector, in many cases in the form of company groups having different financing needs, that is, in groups based on size, type of activity and region, and in company clusters determined by cluster analysis.

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[1] In the remainder of the dissertation, leverage refers to the concepts of financial leverage.

Based on the above, I determined the following research objectives:

Objective 1 (C1) Through the critical analysis of national and international literature, **getting to know** capital structure theories, capital structure influencing factors and the effect of capital structure on profitability, **summarising, classifying** similar research by other authors, and **theoretical and professional substantiation for the hypotheses of my dissertation**.

Objective 2 (C2) Using aggregated data provided by the National Tax and Customs Administration on companies subject to corporate income tax using the double-entry system of accounting, and analysing information from the databases of the National Bank of Hungary and chronological changes in the relevant tax legislation, **presenting the capital structure and profitability**, as well as the **capital position of domestic companies**, that is, the changes in the **economic environment**, especially in the credit supply and the tax system.

Objective 3 (C3) Based on the determining factors of capital structure, **developing a model**, which besides the **comparative analysis of the explanatory power of the specific factors**, provides and explanation for the development of indebtedness.

Objective 4 (C4) A **multi-faceted analysis of the link between capital structure and profitability**.

Objective 5 (C5) Determining optimal leverage and debt volume from the point of view of profitability.

Finally, the basic aim of this research is to contribute to improved capital supply and financing efficiency through the extensive publication of the answers to the research questions above.

1.3. Hypotheses

Based on the theoretical relationships encountered in the literature review, the results of my earlier research and published by other author, and in line with the thesis objectives I developed my hypotheses as follows.

When studying capital structure determining factors, we encounter several determinants, which are statistically proven to have an influence on corporate capital structure; however, in my knowledge, there is no national research on their explanatory power or a comparative analysis of these factors. Related to their study, based on the results from international literature, my hypotheses are the following:

> *Hypothesis 1 (H1): Endogenous and exogenous factors known from national and international literature explain indebtedness in varying degrees; there are a few key factors among them that play a significant role.*
>
> *Hypothesis 2 (H2): Similar to international experience, it is also true for domestic companies that in contrast with exogenous factors, endogenous, direct factors explain indebtedness more effectively.*

The starting point for the multi-faceted analysis of the link between capital structure and profitability is the assumption that company size and activity, as well as geographical location, a less common category in capital structure research, have a differentiating effect. In this light, my hypothesis is:

> *Hypothesis 3 (H3): Size, activity and geographical location based company groups show significant differences in their capital structure, just as the strength of the link between capital structure and profitability is also dependent on company size, activity and geographical location.*

Another hypothesis concerning the two factors, capital structure and profitability:

> *Hypothesis 4 (H4): In parallel with the increase in financial leverage, the variance of return on equity (ROE) values also increases (due to the increased business risk and financial risk stemming from financial leverage).*

Alongside the categorisation criteria detailed above, I also grouped the companies in the sample using a statistical method, cluster analysis, in order to uncover the – latent – factors influencing the strength of the capital structure-profitability link. In this respect, I tested the hypothesis below:

Hypothesis 5 (H5): Based on the indicators of corporate performance and capital structure, homogeneous company clusters can be formed, within which there are differences between the strength and direction of the capital structure-profitability link.

There have been significant shifts on the financing map of companies over the past few years, which can typically be traced back to the changes in the volume of external (bank) resources, therefore, I also studied the effects of bank financing on profitability. My assumption is that:

Hypothesis 6 (H6): There is a significant difference in return of equity (ROE) between companies most exposed to bank financing and well-capitalised companies, and the differences pertain to activity groups.

After having analysed – and proven – the links between capital structure and profitability from multiple angles, I developed the following hypothesis:

Hypothesis 7 (H7): There is a certain point of leverage, or level of indebtedness, above which it is highly probable that the company is in deficit. This point of leverage or level of indebtedness varies in different sectors and size categories.

2. Materials and methods

My dissertation relies on secondary and primary research techniques and quantitative methods. This chapter provides a detailed presentation of these.

2.1. Sources of data for analysis, building the database

I carried out the analysis of aggregates, more precisely, of tendencies, on the basis of data from the website of the **Central Statistical Office** (hereinafter: CSO), data available on the website of the **National Bank of Hungary**, similar to public data on the website of any other country's central bank, and aggregated data provided (on all companies subject to corporate tax) by the **National Tax and Customs Administration**.

I accessed individual data, corresponding to information in the annual reports, from the Creditreform company database for the investigation of the links. To investigate the connection between capital structure and profitability, I used data from the balance sheet and the statement of financial performance provided by companies subject to corporate income tax using the double-entry system of accounting, in the knowledge of a given company's geographical location, activity, legal status and size category.

As for time interval, the individual data available cover the year 2018 only; however, I do believe that my hypotheses related to the links between the factors could be tested on cross-sectional data, as well. The tendencies observed during the analysis of aggravated data time-series – according to which there is no significant change in the capital structure or profitability of companies in the past few years – do not justify the analysis of recent time-series data in the investigation of the link, either.

I concluded that corporate tax subjects' joint distribution per all criteria strongly corresponds to the proportions in the total population, in other words, SMEs make up 95% of the companies, and within this category, the rate of micro enterprises is extremely high (app. 90%). The same applies to sectoral composition; it converges with the proportion seen in the entire corporate sector.

The tax subject population was reduced using the following filters:

– Hungary-registered company.

– Commercial profit-making organisations (more precisely, private limited companies, joint-stock companies), and agricultural cooperatives.

Thus, the analysis does not include non-profit making organisations, foundations, public foundations, associations and sole traders, among others.

Given the above restraints, I deleted the companies with missing values from the databases. Then I examined the sample in order to detect extreme outliers for the indicators. I found that the leverage ratio shows extremely high values, which was shown by the exceptionally high range and the parallel significantly lower interquartile range (min=-23,075.5; max= 60,030.11; range: R= 83,105.61, IQR= 1.063), as well. Therefore, to ensure that the sample is not distorted, I found it necessary to remove extreme outliers. In statistics, narrowing the range is a common practice – setting the optimal lowest value of the dataset at the lower quartile minus the value of the interquartile range multiplied by 1.5, while the upper value is calculated by adding the same product to the upper quartile (Freedman et al., 2005) – did not work in my case, as it would have led to significant data loss (20.62% of the sample). For that reason, I determined the outlier threshold at 10, narrowing the entire sample (n=273 739) by 5.45% as outliers ($n_{outlier}$=14 908), resulting in a **sample size of n= 258 831.** It has to be noted, however, that the distribution still shows a significantly sharp peak.

All the analyses used the following size, location, activity type categories:

– **Size** categorisation: the categorisation of companies by size was carried out in two ways. Based on the **Act XXXIV of 2004 on Supporting Small and Medium-sized Enterprises ('SME law') I created 4 groups**, micro, small and medium enterprises, and companies, typically large companies, that do not fit into the previous groups. I used the word "typically" because I also included those companies in this group which fit the SME category based on the number of employees and turnover or balance sheet total but the direct or indirect state or municipal ownership – of capital held or voting rights –, jointly or separately, exceeds 25%.

On the other hand, based on experience from my earlier research and the literature review, during link analysis I also used deciles **based on the company's value (balance sheet total)**, and occasionally the **amount of turnover**, to determine company size.

– **Location** categorisation: I also investigated the capital structure of businesses by geographical location. The (aggravated) data provided by the National Tax and Customs Administration was broken down by administration (region), therefore, due to their high tax performance and other financial indicators, "special" tax subjects, that are overseen by the Large Taxpayers Tax and Customs Directorate (hereinafter: KAVIG), constitute one group. To avoid distortions – substantiated my previous calculations –, I did not include the companies overseen by the KAVIG in the comparative analysis of regions (Southern Transdanubia, Southern Great Plain, Central Transdanubia, Northern Hungary, Northern Great Plain, Western Transdanubia and Central Hungary). The aggregated national data include this group as well, and in certain cases, I handled this company group as a separate unit.

– **Activity type** categorisation: adjusted to the basic idea of the thesis, that is, comparing the capital structure and profitability of different sectors, my analyses for identifying the similarities and differences were based on the main categories of the TEÁOR (Hungarian activity classification), in certain cases in aggregation, using the agriculture, industry and service sector distinction.

2.2. Description of analysis methods

To present the composition of the database, I used **distribution coefficients**, whereas to present my results, I applied **diagrams** and **tables**.

The basic aim of the research was to come to conclusions about the population based on the sample examined, which was accomplished using **mathematical statistics** as detailed below.

In my analysis of **Hypothesis 1 and 2**, that is, the effect of capital structure influencing factors, I employed **route model**, which is series of linear regression models. The model involves causality links, where the variables are linked by arrows to show the direction of the link. It divides the Pearson zeroth-order linear correlation between dependent and independent variables into two additive parts. One part is the effect an independent variable directly has on a dependent variable, while the other part is the effect the independent variable has on this variable through other, intermediate variables. This required building the regression relationships, determining the strength of the routes, their significance, in other words, a structured series of regression calculations was carried out (Füstös et al., 2007; Székelyi- Barna, 2004).

As the first step of the analysis, on an exploratory basis, I calculated the value of the correlation coefficient (r) for the variables in question in order to determine the strength and direction of the connection.

The results of correlation calculations can be of three types: there could be no connection between two variables, or there may be a stochastic (probabilistic) and deterministic (functional) relationship. In the case of a probabilistic relationship, we can predict the value of a variable from knowing the value of another variable, in the latter case the value can be determined precisely in the knowledge of the other value (Szűcs (Ed.), 2004).

I used F-test to check how the models fit the data, which yields a positive result if the level of significance is less than 0.05. Then the calculation of the R^2 coefficient of determination, related to the explanatory power of the model, followed.

Next, the regression parameters (β) of the independent variables were examined, whether they fit the models significantly ($p < 0,05$) (Maddala, 2004), while the standardised regression coefficients (*b*) made it possible to compare the explanatory power of the explanatory variables examined, irrespective of their level of measurement.

I only included the significant independent variables in my dissertation.

- If $\beta > 0$, the relationship between the explanatory variable (x_i) and the response variable (Y) is positive, in other words, a high value of the explanatory variable increases the value of the response variable.

- If $\beta < 0$, the relationship between the explanatory variable (x_i) and the response variable (Y) is negative, in other words, a high value of the explanatory variable decreases the value of the response variable.

I executed the analysis using the enter method, which includes all the independent variables in the model, irrespective of the significance of the partial explanatory power of the variable. Then the method eliminates the non-significant variables one-by-one (E. Szabó et al., 2010).

To test Hypothesis 3, I used **one-way analysis of variance** method, for more precise results, the **Bonferroni post-hoc test** and categorisation by deciles, and I also calculated the strength of association.

Regarding the fact that the available database contained past stock data referring to the last day of the given business year, related to a single year, I could not show changes over time or seasonal fluctuations. However, neither the results – showing stagnation – from the analysis of aggregated data require time sequence analysis, nor does, in my opinion, seasonality play a significant role with respect to the capital structure and profitability indicators.

The **analysis of variance (ANOVA)** is basically used to compare the variance between and within the groups, and it enables the partitioning of variance in a particular variable into components. It helps clarify whether variance deviations are accidental or they are the result of another explanatory factor. Such a factor could be the difference between group averages. Basically, we examine whether the effect of treatment variance in sample means is larger than the error variance caused by a random effect of sampling. The decision is made based on the results of the F-test. Sample means are considered equal if $F_{emp} \leq F_{crit}$.

Since one-way analysis of variance only examines the systematic deviations of category variance (internal variance) from external variance, it also has to be investigated whether the deviations between category variances have systematic causes or they are random. This requires the application of post-hoc ('after the fact') tests. I used the Bonferroni test, given that this particular test is not sensitive to unequal (category) group sizes.

For the analysis of the links, categorisation of the indicators examined by deciles was needed, as their variance is extremely high. Deciles are special position indicators (quantiles), which partition the data ranked in increasing order into 10 (in this case) equally large subsections using data points. The greatest advantage of using this method is that it is appropriate for analysis sensitive to outliers. Moreover, it can help develop a nearly evenly distributed variable. My decision about the hypothesis was made based on the value of the Phi indicator measuring the strength of association after the analysis detailed above. The Phi coefficient ranges between 0-1, it is suitable for measuring the strength of association between variables on a nominal or ordinal scale expressed in 2x2 or larger contingency tables. Its value is considered significantly larger than zero if *p*<0.05.

I also used categorisation by quantile to test **Hypothesis 4**. I divided the data observed into 100 equal subsections, that is, percentiles due to the high range (R). The homogeneity of variance for the groups thus created was tested using the Levene test, which assesses the assumption that the variance for the populations examined is equal, homogeneous. If the resulting *p-value* is smaller than 0.05, it is probable that the variance deviation is not due to the randomness of sampling

from equal variance populations, in other words, the variances for the groups differ. Finally, I tested my hypothesis using graphical representation.

As a first step in the testing of **Hypothesis 5**, I applied the method of **factor analysis**. Then, I created homogeneous groups using **cluster analysis**, which help arrange observation units into relatively homogeneous groups based on the variables involved in the analysis. The aim is to create groups whose elements are similar to each other from a certain perspective (criteria involved in the analysis) and different from the elements of other groups in terms of the same dimension, at the same time. In practice, this method is used in the area of market research, with regard to variables chosen based on preliminary research and theoretical considerations. Therefore, the basic task of clustering is to find the variables that cause the differences between the groups. Our expected results can be approached from the other end of the method, using exploratory research, which looks for connections between the groups created using different variables (Sajtos- Mitev, 2007).

The first step of **cluster analysis** was to determine the statistically optimal number of clusters (7) using **two-step clustering**. Then I created the 7 clusters based on 4 criteria with the help of **K-means clustering** (centroid method). With **variance analysis** I confirmed that the clusters are different with regard to the 4 criteria ($p<0.05$). I used cross-tabulation to measure the strength of association, to check whether the individual clusters show a unique general (size, region, activity) characteristic. In order to examine the existence of the link and measure the strength of association I used the Cramer's V indicator most common in research practice. This indicator measures the strength of association between variables in the table on a scale of 0 to 1, where 0 indicates no association and 1 means a perfect relationship (Saunders et al., 2016). The connection is regarded significant if the test's level of significance is less than 5% ($p<0.05$).

In research practice, clustering is often combined with factor analysis, which is aimed at reducing the dimension number of a pre-defined variable group by condensing correlating variables into a single factor. This way statistical analysis can take place in a transformed space with a lower number of dimensions, but still paying attention to not losing important data. The knowledge of an original variable's explanatory power in the common factor's variance helps to uncover

the hidden connections between components. The larger the size of the sample, the more reliable factors the analysis yields. The applicability of the method requires meeting certain criteria, which can be assessed using the following tests:

– The KMO (Kaiser-Meyer-Olkin) test provides an analysis of the variables' correlation matrix and refers to the rate of average correlation. Factor analysis can be done if the test result is over 0.6.
– Bartlett's test of sphericity assesses whether the off-diagonal elements of the correlation matrix diverge from zero by accident.

I had three criteria for determining the optimal number of factors. First, I used a priori criteria, second, the Kaiser criterion which is based on eigenvalues, and finally, the proportion of variance method. Normally, we accept factors whose eigenvalue is larger than 1, and I looked for the point where the total variance explained amounts to 60% in interpreting the factors (Freedman et al., 2005). Factor extraction was done using the principal component analysis, applying the Kaiser normalisation. The factors generated thus were rotated with the help of the varimax orthogonal transformation method. The variable measured is the element of a factor if

– its factor weight in a given factor exceeds 0.5 (in absolute value),

– or its weight does not exceed 0.5 but it is minimum two times the value of the second largest factor-weight variable measured (Freedman et al., 2005).

After creating the groups, the strength and direction of the link between the capital structure-and profitability indicators were determined based on the **Pearson correlation coefficient**.

During the testing of **Hypothesis 6**, I still used categorisation by quantiles, more precisely deciles and the Phi indicator.

Hypothesis 7 was tested using categorisation by percentiles and graphical representation.

I applied the Microsoft Excel 2016, and the SPSS 24.0 programmes to carry out the statistical analysis of data.

3. New scientific results

In accordance with the objectives of my empirical research, the new scientific results can be grouped into three main categories. They are related, first, to the determining factors of capital structure, second, the system of connections between capital structure and profitability, and third, determining the optimal capital structure.

My dissertation, unlike earlier research on the determining factors of capital structure does not concern the existence or the direction and strength of connection. Instead, my aim was to develop an explanatory model. Based on the results, I drew the following new conclusions.

1) Among the endogenous and exogenous factors known from national and international literature, **size, return on equity, return on assets based on asset composition and business risk, state ownership, foreign ownership based export turnover, liquidity based on financial resources, taxation and geographical location account for 78.3% of indebtedness**. Other factors, such as corporate growth, fame, age, corporate life cycle only measure up to 21.7% of the debt level. Comparing exogenous and endogenous factors, I found that, similarly to international experience, **it is true for domestic enterprises that in contrast with exogenous factors, endogenous, direct factors have a stronger explanatory power for debt**.

During the examination of the connection between capital structure and profitability, I found the following:

2) **Based on comparison by the type of activity and geographical location there are no significant differences in the connection between ROE and leverage, but there are more significant differences in terms of categorisation by size, just like the ROE indicator variance shows a different tendency (decrease and then increase) in the negative and positive range of leverage indicator values.**

A common conclusion of several decades of research on optimal capital structure is that the optimal ratio of equity and debt differs from sector to sector, more precisely, from company to company. Given all this, one of my thesis aims was to determine the particular combination of capital elements, and the level of debt that is the red line between profit- and loss-making management.

Testing the hypothesis related to this objective made it possible to come up with the new scientific finding, which in many cases provide an indication to "safe" (and not necessarily more profitable) management detailed below. It has to be noted, however, that it is indispensable to take situation-specific, current market and other circumstances into consideration to be able to make the optimal decision.

3) **With regard to profit-making management, the optimal level of leverage is in the [0.037 – 4.93] interval,** its **maximum can be determined as** approximately **fifteen times the equity,** and to remain profit-making **84% of the total capital is the maximum debt level for businesses.**

4. Conclusions, suggestions and recommendations for future research

Based on the novel findings of the research and dissertation my *overall conclusion* is as follows. Firstly, that optimal corporate capital structure depends on the context in which it is explained. Second, it is not a definite point, but a defined interval, whose end points can be determined as the result of several (internal and external) factors combined, out of which internal factors, especially profitability, have a significant role.

I found that there are just a few outstanding differences between the company clusters created by different grouping methods (cluster analysis) and using different criteria. In this respect, in accordance with the size, geographical location and activity categorisation used several times in the thesis, and based on the results of the clustering method, I drew the following conclusions and suggestions:

Based on comparison by size, I concluded that the level of measurement has a great effect on the connection between groups. This means that the comparative analysis of corporate capital structure and profitability and their relationship in companies belonging to size categories created based on SME law classification and balance sheet total, or net sales revenues, yields different results. Therefore, I suggest considering further factors (subcategories) alongside the SME law size categories to be included in the granting and appraisal system.

Based on comparison by geographical location, I concluded that despite the regional particularities in Hungary, there are no considerable differences in terms of the capital structure and profitability between the companies belonging to these groups. It leads to the conclusion that employment generating fundamental differences, economic activity and infrastructure have a very small influence on corporate financing. In other words, the factors that cause the differences between the regions do not have a significant effect on corporate micro parameters, such as capital structure, profitability or financial position.

Based on comparison by activity type – not surprisingly –, agriculture shows absolute distinctness, which is due to the risk factors (including weather) causing great insecurity. Consequently, the difficulties of accessing external financing

resources and state subsidies to compensate for this issue have a large influence on the capital structure and the differences in capital structure by sector. At the same time, the "special" factors (e.g. perishable goods, price competition) affecting turnover (and profit margin) have a considerable influence on profitability, and thereby capital structure in the sector. Considering all these, I find strengthening the role of aids and increasing interest subsidies for investment loans the key to put the sector into position with respect to financing.

Based on the comparative analysis of the groups created by cluster analysis, I concluded that the strength and direction of the relationship between capital structure and profitability is different by cluster, which underlies my earlier suggestion that the multi-level stratification of aid and appraisal criteria would lead to a more targeted allocation of such resources.

Based on my findings I have the following ***suggestions for corporate (financial) management***:

– When corporate resource needs arise – in the spirit of financial awareness – they should ***draw up plans to determine the composition of resource elements***[2]. In the long term, this all helps achieve the fundamental aim of businesses, to increase the value of the company and owners' wealth and enhancing corporate efficiency. On the micro level, it leads to increased employment and wages, improved corporate competitiveness; and on the macro level, it contributes to improved GDP and national competitiveness. This requires strengthening controlling activities and more emphasis on putting theoretical models into practice, to which, in my opinion, government efforts to improve corporate (and public) financial culture and financial awareness can contribute greatly.

– To reduce the difficulties of access to resources, they should also ***explore alternative financing resources alongside classic resources***, and

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[2] The detailed (new scientific) results in Chapter 4 – among others – of the dissertation aims at providing help for planning. It has to be emphasised, however, that the optimal decision is always made for the particular case based on current circumstances.

- to improve corporate profitability – as far as it is possible – they should ***bravely make use of financial options*** offered by banks or ***from*** other ***external resources***.

Based on my findings and conclusions I formulated the following recommendations for future research:

1) It would be advisable to include emotional factors influencing managerial decision-making, using the tools of economic sociology and economic psychology in the analysis of the factors of the capital structure and profitability connection. Naturally, these studies involve several difficulties; however, they might lead to new scientific findings, which could be used in the area of active financial planning, as well.

2) In the field of the capital structure-profitability link, new scientific results could be achieved by the causality analysis of the two factors, the uncovering of the causal connections. This requires data series from the same companies over minimum 15 years, which – due to my limited access to data – was not accomplishable within the frameworks of the present dissertation. However, I believe that it would yield milestone results in the research of the topic.

3) In addition, new information of practical relevance, with respect to the risks and costs involved in different financing forms, could be obtained from the analysis and comparison of bank loans examined in my dissertation, and other loans, leasing, shares, bonds and sharing economy financing solutions, in relation to their effect on profitability and efficiency.

5. Summary

Shaping the corporate capital structure is one of the fundamental financial decisions, as it is a means of ensuring the resources for operations and financing growth, as well as profitability, which depends on the combination of these two.

In the first part of the thesis (Chapter 2.), my focus was on the critical discussion of relevant national and international literature. I presented the role capital structure plays in the implementation of the corporate strategy, and its position in the system of financial decisions. I provided a brief overview and a system for the types of financing, detailing the costs of specific capital elements, which serve as the basis of one of the main research questions of the thesis, namely the link between capital structure and profitability. After that, I turned to the investigation of capital structure theories. I found that all of them deal with the issue of optimal capital structure using several simplifications and a single perspective; therefore, there are hardly any practical examples for how they operate in combination. In the remaining part of the chapter, I concentrated on the exogenous and endogenous factors of capital structure and the summary of relevant empirical research results, which provided the theoretical basis for creating a new scientific model in my empirical research.

In the following, third chapter of my thesis I presented the data bases available for my study and the statistical methods I applied.

I dedicated Chapter 4. to presenting my research findings, with a special focus on the specificities of the capital structure, the development of profitability and the changes of the capital position in domestic enterprises over several years. I found that there has not been any significant changes in the capital structure of domestic companies subject to corporate income tax using the double-entry system of accounting between 2010 and 2018. There were smaller changes in the ratio of liabilities according to size, as well as region. However, based on the type of activities I found dominant differences in the capital structure of corporations.

In this chapter, I also examined debt in international comparison and concluded that there was a strong growth in the domestic corporate debt dynamics from the end of 2015, showing a significantly higher rate of increase on the average than in other Eurozone countries from the second quarter of year 2016. Despite the

falling trend witnessed in the other V4 countries (the Czech Republic, Poland, Slovakia and Hungary) from the second half of 2017, the domestic debt dynamics spectacularly exceeded that of the Visegrad members.

The analysis of my hypotheses can also be found in the results chapter. Based on data from all available responses by corporate income tax subjects, using the SPSS and Excel 2016 softwares, I applied different statistical methods (cross tabulation, association, variance analysis, correlation, route model, cluster and factor analysis) to test my hypotheses about the decisive factors of capital structure, the links between the capital structure and profitability of different company types, as well as the optimal capital and debt levels from the point of view of profitability, developed based on the literature review and the thesis aims.

Finally, on the basis of the results, I formulated my new scientific findings (sub-chapter 4.8) and conclusions, implications and suggestions for the direction of future research (Chapter 5.)

One of the main findings of the dissertation is that among the endogenous and exogenous influencing factors known in national and international literature, size, return on equity, return on assets based on asset composition and business risk, state ownership, foreign ownership based export turnover, liquidity based on financial resources, taxation and geographical location account for 78.3% of indebtedness. Other factors, such as corporate growth, fame, age, corporate life cycle only measure up to 21.7% of the debt level. Comparing the factors on the basis of the strength of influence, I statistically proved that as opposed to exogenous factors, endogenous, direct factors have a stronger effect on debt.

Based on the results, my overall conclusion is that regarding corporate profitability, optimal leverage cannot be determined as a definite value, but instead, its level can be found in a defined interval, which can be determined as the range of approximately 5-15.

I believe that my findings provide relevant information for domestic company leaders, especially in times of an economic crisis causing financing difficulties, and the forthcoming reconstruction period, as well. However, they can also prove useful in "times of peace" by helping owners achieve their ultimate goal: wealth and profit maximisation.

I am convinced that the novel scientific findings in the thesis can help company (financial) management in making optimal financial decisions. It has to be noted, however, that the findings presented in the dissertation can only be applied safely in the knowledge of current market and other circumstances, with careful consideration.

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