

**Szent István University
Management and Business Administration PhD School
Gödöllő**



Theses of doctoral (PhD) dissertation

***The relationship between corporate financial
strategy and the components of internal and
external financial culture***

Tóth Róbert János

**Gödöllő
2020**

Doctoral school

name: Szent István University
Management and Business Administration PHD School

discipline: Management and Business Administration Studies

head: **Prof. Dr. Zoltán Lakner**
University professor, Doctor of the Hungarian
Academy of Sciences,
Szent István University,
Faculty of Food Science,
Department of Food Economics

Supervisor: **Prof. Dr. Zoltán Zéman**
Szent István University
Faculty of Economics and Social Sciences
Institute of Business Studies
university professor

Dr. Imre Túróczi Ph.D.
University of Debrecen
Faculty of Economics and Business
Institute of Accounting and Finance
college professor

.....
Approval of Head of Department

.....
Approval of Supervisor

.....
Approval of Supervisor

Introduction

The global financial crisis of 2007/2008 exposed the problems stemming from management systemic risks on micro- and macroeconomic levels alike. This global recession had a significant impact on households, businesses, the banking system and also on the functioning of the nation states, thereby creating a new situation and putting an end to the *Great Moderation* (Stock-Watson, 2002; Bernanke, 2004), a somewhat grace period (Muraközy, 2011). The post-crisis changes require proper awareness and resolution from market operators, which line of thought leads to one of the central strands of the thesis, that is, the need for an adequate level of financial culture. The constant development of the financial culture has become a more and more frequent aim of national economies, including Hungary, since the level of financial culture, its quality, is in the common interest of all participants of the economy (Béres, 2013; Dembinski, 2018; Béres, 2013; Botos et al., 2012; Németh, 2016). The improvement of the quality of the financial culture is also in the best interest of the state, as those countries that have a higher level of financial culture are usually in a better competitive position (Klapper, 2012; Jakovác-Németh, 2017). On the microeconomic level, it can be stated that the higher the level of financial culture in a household or an economic operator, the more likely they are to avoid financial decisions that are detrimental to them (Dembinski, 2018; Béres, 2013; Botos et al., 2012; Németh, 2016), and also to make economic decisions that have a positive effect on the whole operation of the business, which indirectly contribute to the stability of the financial system in a given country. The 2008 crisis revealed that economic operators need a change in order to avoid a similar scale economic recession. A possible key could be a change in financial behaviour. It is necessary to clarify the issues of responsibility in banking activities, business behaviour and likewise in state involvement, and it is of particular importance to strengthen responsible management, responsible lending and financial awareness. The dissertation is based on this approach and aims to show how important the role of corporate financial strategy is in responsible and knowledgeable management. Another aim is to interpret the role of internal and external financial culture in corporate performance.

Timeliness and relevance of the topic

The main objective of the research project is to create new information in the field of corporate financial culture, with a special emphasis on the domestic SME sector. During the course of choosing the research topic I studied related

literature to gain ideas from previous research and to find an area which had not been studied at all or not by many. Attention was drawn to the real significance of financial culture by the 2008 financial crisis (Klapper – Lusardi – Panos, 2012). The events leading to the 2008 global financial crisis, and the series of banking scandals that followed, all demonstrate the moral decline in the financial sector. The autumn of 2008 witnessed negative economic processes all over the world; businesses as well as banks disappeared overnight, there was a sharp drop in exchange rates, etc. (Tóth, 2017). In developed market economies the most serious financial downturn of our time was followed by the general trend of financial awareness and customer protection acquiring more significance (Tóth, et.al, 2018). In order to bridge the gap in trust and restore stability following the 2008 recession, financial customer protection has made a global breakthrough, which is reflected in the incentive for creating a European banking union as well. In connection with “the consumers of the financial markets” education also has a significant role, given that in countries where two thirds of the national income comes from services, society is most often knowledge-based.

The primary aim of the research project was mapping the financial situation and assessing the financial strategies of Hungarian small and medium enterprises, as well as identifying the components of the internal and external financial culture that take part in their development. The main hypothesis of the thesis is that to ensure the long term and sustainable competitiveness of domestic small and medium enterprises, they need a company-specific financial strategy, and also a strategy-driven way of thinking from the part of company leaders, in which financial culture plays a key role.

Objectives, hypotheses

The objectives of the thesis are presented as follows:

Sub areas to be examined	
I.	Examine and analyse the existence, role and effects of financial strategy and financial culture on domestic small and medium enterprise competitiveness and financial efficiency. In my study I will investigate whether the general assumption that the majority of businesses struggle with competitive disadvantages due to their poor and unfounded management practice is true. Owing to the low level of financial culture – ad hoc, not properly drawn up and applied corporate financial strategy, or controlling tools and techniques – businesses are not able to react efficiently and rapidly to the challenges of the constantly changing market environment.
II.	Examine the components of financial culture on the corporate level.
III.	Identify those elements of internal financial culture that play a major role in corporate financial strategy-making and have a significant effect on corporate performance and competitiveness.
IV.	Identify the system of external financial culture.
V.	Examine the relationship system between export activities, innovation activities, trust, and corporate financial culture.
VI.	Examine how businesses assess business environment and whether it has a role in developing corporate financial culture.

Based on the objectives, the hypotheses were formulated after the literature review and synthesis. The hypotheses of the study are as follows:

- **H1** Based on the indicators measuring internal and external financial operations the corporate financial culture index can be created.
- **H2** The strength of export activities in a company raises the need for corporate financial awareness, therefore, the need for the development of financial culture.
- **H3.1** The level of corporate financial culture has an effect on the corporate financial results, the efficiency of operations.

- **H3.2** The level of corporate financial culture has an effect on the outcome of corporate financial decisions.
- **H3.3** The level of corporate financial culture has an effect on corporate risk-taking.
- **H3.4** Company size has an effect on the quality of corporate financial culture.
- **H4** Human capital development in a company has an effect on the level of corporate financial culture.
- **H5** The level of corporate financial culture has an effect on corporate growth.
- **H6** The strength of corporate innovation activities raises the need for corporate financial awareness, therefore, the need for the development of financial culture.
- **H7.1** Based on the results of my secondary research and the above empirical results, I believe that the way how a company relates to its business environment, the level of trust it shows towards it, have a direct influence on its level of financial culture.
- **H7.2** The assessment of the business environment and trust also have an indirect effect on corporate financial culture, as the previous – in my understanding – influence how much a company spends on trainings, which has a direct effect on financial culture.

Materials and methods

A systematic examination of hypotheses is required to be able to decide whether they are proven to be true or false, and to come to accurate conclusions, not inaccurate ones that are in line with our earlier convictions, beliefs, or established routines.

Materials

Literature review

I used the normative method to review literature for my doctoral dissertation. The research proposition defined the problem and formulated the questions. The literature review as the basis of the study had two main aims.

- The first aim was to explore relevant sources, fundamental theories and concepts, and get information about which authors, when, under what circumstances, and using which methods dealt with the problems defined in my topic, and also which aspects of it and in what context were examined, and how it all relates to or modifies the preconceptions of the present dissertation.
- Secondly, reviewing literature helps to put research results into context and to formulate implications, thus, it enables the future use of research results.

Scientific databases served as the primary literature source, such as sciencedirect.com and webofknowledge.com, as well as Scopus, EBSCO and Elsevier databases, since these contain selected, high-quality and high-impact articles and academic works that underwent several independent control processes. The second group of sources consists of derivative literature, including doctoral works written on this topic, which are available on the doktri.hu website. These also underwent serious control processes, therefore, their use and review cannot be left out from the in-depth analysis of the topic.

Examined businesses

After having reviewed literature, the research methodology included **quantitative data collection** using **questionnaires**. The aim of data collection was to gather information on corporate financial culture from respondent businesses, which was examined along the following themes:

1. Demographic characteristics

- Size, turnover, activity, place of business, ownership structure
 - Hierarchical segmentation, the situation of (middle and senior) managers (age, experience, qualifications)
 - Sources of knowledge
 - Market environment (competition, buyers, suppliers, partners)
 - Professional sources, journals, conferences
 - External consultants, professional partners, training institutions
- 2. The general situation of the business, factors related to trust and expectations**
- In which areas the situation improved/deteriorated since the crisis and in the last 3 years, and confidence in the future, expectations for the forthcoming 3 years
 - What and how much the changed can be attributed to
 - general economic environment
 - market situation, competition
 - the development of own reserves
- 3. Execution of financial functions**
- Importance and content of the planning function in the company, such as:
 - Preparation of different financial plans
 - Financial strategy planning and execution
 - Existence of a detailed system of objectives and tools
 - Investment strategy
 - Importance and content of the analysis, forecasting function in the company, such as:
 - Cost structure management
 - Profitability analysis and forecasting
 - Liquidity management
 - Importance and content of the controlling function in the company, such as:
 - Efficiency monitoring
 - Range of performance indicators, application areas
 - Specific intervention methods and application areas
 - Regular and ad-hoc analyses, reporting and related methodology
 - The structure of controlling tools and their integration into the financial strategy
- 4. Execution of financing functions**
- External sources
 - Rate, extent, duration and aim of utilisation
 - Types and extent of grants, their target areas

- Origin of own resources
- Using alternative financing opportunities (capital market instruments, community financing)
- Involvement of external partners, consultants, support organisations for the above
- Liquidity
 - Grouping problems and difficulties, their possible causes
 - Role and tools of liquidity management
 - What temporarily recovered financial resources are used for
- Development of investments
 - Type and rate of financial investments (e.g.: securities, government securities)
 - Is there an active strategy in this area?
- Risk-taking and insurance

5. Technological readiness, change after the crisis

- use of cashless payment methods
- use of new financial techniques
- innovations in the business (technological, workplace, organisational, market)
- use of integrated management systems

6. Relations and cooperation

- Involvement of external experts
- Cooperation with other businesses, strategic partnerships
- Export activities

The businesses were basically contacted during two national roadshows:

- 1) The **Hungarian Innovation Forum** organised by the Ministry for Innovation and Technology (ITM) and the National Research, Development and Innovation Office (NRDI Office) in partnership with the Hungarian Chamber of Commerce and Industry (MKIK). The nationwide consultation on innovation covered 25 venues between 5 February and 6 March 2019 with the participation of about 2000 entrepreneurs.
- 2) The ITM announced its strategy entitled “**Strengthening the position of Hungarian micro, small and medium enterprises (2019-2030)**” in spring, based on a national consultation roadshow. The series of programmes were held between 5 April and 9 May 2019 covering 18 regional venues and a large scale joint Budapest and Pest County event. The programme was a great success where more than 1000 domestic

small and medium entrepreneurs had the chance to share their views specifically to their sector.

Representativeness and reliability

During the course of research and sample building I paid special attention to constructing an appropriate sample, determining appropriate theoretical diversity, finding the best possible sampling methodology to reach sub—populations, as well as to the application and verifiability of representativeness and reliability. When building the population I used the following criteria:

- Hungarian place of business
- Independent business
- Business size (based on EU recommendation 2003/361.)
 - Lower limit:
 - Minimum 25 staff headcount¹
 - Upper limit (based on EU SME principles)
 - less than 250 staff headcount
 - annual turnover is less than 50 million euros, OR annual balance sheet total does not exceed 43 million euros.

Based on the above criteria, agricultural primary producers and family farmers (unless they operate as a partnership), as well as one-person businesses or sole traders are not included in the population. **On this basis the population size is $N=32.157$** (HCSO, 2017)². To determine the optimal sample size I used 95% confidence level in my analysis. Ultimately, the hypotheses were tested on **responses from 511 enterprises**. Therefore, (1) sample size: $n=511$, (2) margin of error: 4.31% and (3) confidence interval: 95%. Taking the entire population into account, the survey covered 1.589%. Bering in mind the aims of the research, I wish to establish two different types of representation in the sample.

- The population distribution of aggregate economic branches should be viewed by activities.
- The aim is to obtain an evenly stratified sample in terms of headcount, as population ratios would break up the sample into too many fragments. Thus, the sample should represent small and medium-sized enterprises in the same proportion.

¹ Preliminary research showed that smaller businesses have a minimal financial toolbox and use a limited financial management toolbox. Consequently, the present research only included businesses with over 25 staff headcount.

² HCSO (Hungarian Central Statistical Office): A kis- és középvállalkozások jellemzői [Characteristics of the small and medium-sized enterprises], 2017. <http://www.ksh.hu/docs/hun/xftp/idoszaki/pdf/kkv17.pdf>

Methods

The research was conducted according to proposed guidelines in literature. I put special emphasis on ensuring that the most appropriate statistical methods are used in data analysis. The research methods used were adjusted to the hypotheses and the primary data base gained from the questionnaire survey.

Quantitative research

The basis of the research was a detailed questionnaire survey. The questionnaire mainly contained closed-ended questions, a total number of 87 questions. For the full questionnaire form see Appendix 5. Measurement was carried out using ordinal (Likert) and ratio scales, which determine the application of mathematical and statistical methods. The questionnaires were administered in the spring and summer of 2019 and data collection ended in September 2019. The data base for the quantitative research includes primary data gained from the 511 respondent enterprises. Questionnaire responses were processed in an Excel database for the graphical representation of descriptive statistical data. The values of the Microsoft Excel database were analysed using the Statistical Package for Social Science programme. It has to be noted here that the questionnaire contained several questions that are not closely or directly related to hypothesis testing; however, they serve as useful checking questions and as an appropriate basis for statistical data analysis supporting professional publications.

I used the following data analysis methods:

- Crosstab and association strength
- Pearson's chi-square (χ^2) test
- Cramér's association coefficient
- Factor analysis
- Cluster analysis
- Route models – Multiple linear regression

New and novel scientific findings

The research tests and analyses facilitated the birth of several new and novel findings. In the following section, the most important findings are detailed in connection with the original hypotheses found in the *Objectives, hypotheses* section of the present dissertation.

Data processing of data received from domestic small and medium-sized enterprises related to financial awareness, and research results related to testing the hypotheses resulted in new findings. As a result of the representative, primary and empirical research among domestic small and medium-sized enterprises it was proven that financial culture can not only be interpreted for the general public (Habschik et al., 2007; Marcolin et al., 2006; Botos et al., 2012), but it also applicable in the business sphere, on the level of enterprises. Having conducted the analyses, I defined corporate level financial culture as follows: **“Corporate financial culture is the informed and company-specific application of those methods and know-how in the internal financial management toolbox, as well as of external macroeconomic financial variables that contribute to improving corporate effectiveness, efficiency and competitiveness”**.

Based on the research, the following thesis can be considered a new scientific result:

***TI** I developed the corporate financial culture index by properly combining certain elements of the management toolbox, and external components that have an effect on corporate financial operation. The index can be broken down to two parts. The first is the internal financial culture index (IFCI) – Planning, Analysis, Financial management components and Financing sub-indices –, and the second is the external financial culture index (EFCI) – Taxation, External financial components as well as Risk and insurance sub-indices.*

Using correlation tests I concluded and proved that there is a statistically significant correlation between the quality of corporate financial culture and corporate export activities. On this basis it may be said that export activities lead to more awareness in business activities and improve corporate financial activities and awareness. **The results and the thesis sentences relating to the second hypothesis** have significant new implications with regards future market efforts for domestic SME leaders. It can be concluded that being present on the export market results in more stable and aware operations, which clearly improves the business position and competitiveness of enterprises (see earlier research by Tóth, e.g.: 2016).

T2: *Export activities in domestic SMEs lead to positive changes in corporate financial culture.*

New conclusions of scientific value can also be drawn from **the results of the analysis of H3**, namely, there are links between corporate management and the quality of corporate financial culture. Four areas were examined with respect to the third hypothesis, – based on the literature reviewed –, efficiency, the outcome of financial decisions, risk-taking and company size.

T3.1 *Businesses having a higher level financial culture conduct their business operations more efficiently and in a balanced way.*

T3.2 *The high level of financial culture in domestic SMEs improves the chances of a positive outcome in decision-making.*

T3.3 *The high level of financial culture in domestic SMEs leads to a more aware risk management.*

T3.4 *Larger company size (by staff headcount and turnover) results in a higher level of financial awareness and financial culture.*

Research testing T4 has proven that there is a positive correlation between employee training and the level of financial culture in domestic small and medium enterprises. The novel and scientific link is that the more a company invests in employee training, the higher the level of its financial culture. Following a more accurate and more detailed analysis the thesis was formulated as below:

T4 *The more a company spends on employee training, the higher the level of its external financial culture.*

This suggests that those companies that put a heavier emphasis on human capital development find the analysis and observation of the external environment, and consequently improving the quality of external financial culture more important. In today's turbulent world this can be viewed as a highly positive attitude.

The fifth hypothesis concerned the correlation between corporate growth and financial culture. The results of the study among Hungarian small and medium enterprises confirmed that those businesses that include growth among their objectives have a higher level of financial culture than those companies that lack such aims.

T5 *Enterprises that have a higher level of financial culture put more emphasis on active growth.*

The research has shown that the majority of businesses use strategies aimed at moderate growth by active choice.

The sixth hypothesis examined business behaviour concerning innovation activities with regards to corporate financial culture. The test results showed that there is a correlation between financial culture and innovation activities; thus the formulated hypothesis is proven true, and can be formulated as new knowledge, a new thesis as follows.

T6 *The strength of corporate innovation activities depends on the level of corporate financial culture.*

Based on this, and also taking H2 into account, it is advisable that domestic SMEs put a high emphasis on the “magic triangle” of financial culture, export and innovation activities. The combined application of these gives businesses the possibility to improve their competitive position.

Finally, I looked for more complex interrelations between the assessment of the business environment, the general level of trust, expenditure on trainings and the quality of corporate financial culture. Similar relationships were studied by the following authors: Plakovic (2015), Avlijas et al. (2014), Bire et al., (2019), Rifai (2017), Shalahuddinta (2014), Purnamawati et al. (2017) – whose former research inspired me to identify domestic specificities. Based on the examination results carried out to confirm hypotheses 7.1 and 7.2 two new scientific theses can be formulated as follows:

T7.1 *Businesses having a high level of internal financial culture have low levels of trust in the micro and macro environment. Environmental confidence is inversely proportional to internal financial culture and is directly proportional to external financial culture.*

T7.2 *Business environment has no direct effect on corporate financial awareness. However, a favourable business environment encourages the implementation of internal and external trainings, which in turn leads to a higher level of corporate financial culture, thus it improves financial awareness.*

As a final conclusion, in my opinion, it can be stated that all the theses of the present doctoral dissertation underline the importance and economical

significance of financial awareness and financial culture in domestic small and medium-sized enterprises.

HYPOTHESIS	By research results the hypotheses were proven	THESIS
H1 Based on the indicators measuring internal and external financial operations the corporate financial culture index can be created.	TRUE <i>KMO=0.848;</i> <i>$\chi^2=1282.047;$</i> <i>p=0.000;</i> <i>MVA=64.812%</i>	T1 I developed the corporate financial culture index by properly combining certain elements of the management toolbox, and external components that have an effect on corporate financial operation. The index can be broken down to two parts. The first is the internal financial culture index (IFCI) – Planning, Analysis, Financial management components and Financing sub-indices –, and the second is the external financial culture index (EFCI) – Taxation, External financial components as well as Risk and insurance sub-indices.
H2 The strength of export activities in a company raises the need for corporate financial awareness, therefore, the need for the development of financial culture.	TRUE <i>p <0,05</i>	T2 Export activities in domestic SMEs lead to positive changes in corporate financial culture.
H3.1 The level of corporate financial culture has an effect on the corporate financial results, the efficiency of operations.	TRUE <i>p <0,01</i>	T3.1 Businesses having a higher level financial culture conduct their business operations more efficiently and in a balanced way.
H3.2 The level of corporate financial culture has an effect on the outcome of corporate financial decisions.	TRUE <i>p <0,01</i>	T3.2 The high level of financial culture in domestic SMEs improves the chances of a positive outcome in decision-making.

H3.3 The level of corporate financial culture has an effect on corporate risk-taking.	TRUE <i>p < 0,039</i>	T3.3 The high level of financial culture in domestic SMEs leads to a more aware risk management.
H3.4 Company size has an effect on the quality of corporate financial culture.	TRUE <i>p < 0,01</i>	T3.4 Larger company size (by staff headcount and turnover) results in a higher level of financial awareness and financial culture.
H4 Human capital development in a company has an effect on the level of corporate financial culture.	TRUE <i>p < 0,044</i>	T4 The more a company spends on employee training, the higher the level of its external financial culture.
H5 The level of corporate financial culture has an effect on corporate growth.	TRUE <i>p < 0,05</i>	T5 Enterprises that have a higher level of financial culture put more emphasis on active growth.
H6 The strength of corporate innovation activities raises the need for corporate financial awareness, therefore, the need for the development of financial culture.	TRUE <i>p = 0,000</i>	T6 The strength of corporate innovation activities depends on the level of corporate financial culture.
H7.1 Based on the results of my secondary research and the above empirical results, I believe that the way how a company relates to its business environment, the level of trust it shows towards it, have a direct influence on its level of financial culture.	TRUE <i>p = 0,000</i>	T7.1 Businesses having a high level of internal financial culture have low levels of trust in the micro and macro environment. Environmental confidence is inversely proportional to internal financial culture and is directly proportional to external financial culture.
H7.2 The assessment of the business environment and trust	TRUE <i>p = 0,000</i>	T7.2 Business environment has no direct effect on corporate financial awareness. However, a favourable business

<p>also have an indirect effect on corporate financial culture, as the previous – in my understanding – influence how much a company spends on trainings, which has a direct effect on financial culture.</p>		<p>environment encourages the implementation of internal and external trainings, which in turn leads to a higher level of corporate financial culture, thus it improves financial awareness.</p>
--	--	--

Source: author's own compilation based on own analysis, 2019

Conclusions, recommendations

From a broader perspective it can be said that Hungary performed well in the last decade. This is confirmed by the fact that it was removed from the excessive deficit procedure, then GDP increased by an average of 3.5%, and Hungary witnessed the most significant improvement of the budget balance, by about 7 percentage points. The rate of government debt decreased by around 20% (from 85% to 65%), and the foreign currency exposure of government debt decreased significantly (by more than 50%). It is worth noting that corporate foreign currency debt was squeezed out of the debt market by the Central Bank's (MNB) Funding for Growth Scheme. It is clear that Hungary is a forerunner in growth, despite the fact that the external environment has become less favourable in the past 6-8 months (the economic downturn in European countries has been deteriorating at a growing pace). It can be concluded that Hungary is characterised by balanced and stable economic growth. In 2019, GDP increased by 5.3% in the first quarter, 4.9% in the second, and 5% in the third.

There are more and more signs that the world economy is entering, if it has not entered the state of imbalance. The world economy slowdown that started in the past 12-16 months is expected to reach Central-Eastern Europe soon; therefore, preparations must be made on the entire level of economic policy. The primary task of Hungary is to maintain the above results and pace in the long run. To achieve this, however, further contribution from successful and motivated businesses is needed that are committed to success.

The SME sector has a decisive role in the improved competitiveness of Hungary. In this light, the improvement and development of economic actors in the sector are inevitable for economic and social growth.

In full accordance with the intentions of the Hungarian Government I believe and conclude that **the SME sector has to be put into position as soon as possible**, and its competitiveness, efficiency and productivity have to be improved. In my opinion, this can only be achieved by taking a series of targeted and consistent measures, which should be based on corporate financial awareness and financial culture development.

The present study sought to explore the importance, to define the measurements of corporate financial culture on the micro, that is, on the corporate level. The dissertation also addressed, among others, the relationship between corporate financial culture, corporate competitiveness, exportability and innovation.

The paper confirmed that

- based on internal and external financial variables the corporate financial culture index can be determined;
- there is a positive significant relationship between the level of corporate financial culture and export activities;
- there is a significant relationship between the quality of corporate financial culture, and the outcome of financial decisions, company size, the elaborateness of risk-management and corporate efficiency;
- there is a significant relationship between the quality of corporate financial culture and human capital development, and related expenditure;
- there is a statistically significant relationship system between the level of corporate financial culture and active corporate growth;
- there is also a statistically justifiable positive relationship between the level of corporate financial culture and innovation activities;
- finally, there are identifiable connections between the assessment of the business environment, the level of general confidence, expenditure on trainings and the quality of corporate financial culture, as well.

On this basis it can be concluded and suggested that enterprises should prioritise corporate financial culture. To this end, the application of aware corporate management and strategy-making are proposed. In connection with the results gained from the quantitative research, the recommendations below for leaders of small and medium enterprises are formulated based on the *financial*, as well as the *learning and growth* perspectives of the Balanced Scorecard (BSc) model:

A. Financial recommendations

I. Recommendation for maintaining cash-flow balance

For the majority of small enterprises – and in many cases for medium enterprises – maintaining cash-flow balance is one of the greatest problems; however, it is one of the bases for the survival and growth of the company. If this ratio is positive, it indicates that a company’s liquidity is appropriate, and it enables the company to meet its current payment obligations, raise its wealth, repay its existing external debts, and possibly build a financial reserve. On the contrary, negative cash-flow means that the company’s liquid assets are decreasing. The main aim should be keeping expenditure at the lowest minimum, while keeping revenues at the highest possible value.

Consequently, the constant monitoring of cash-flow is of outmost significance in every company’s life. There are of course a number of methods that can improve corporate cash-flow. One of these techniques is optimising, shortening payment deadlines, as well as assessing new clients’ creditworthiness. This is usually a sensitive issue, since overly firm client

rating can lead to loss of clients, while too lax client policies may cause losses. Therefore, it is advisable to use the services of, for example, a factoring company. Corporate cash-flow may not only be improved through the clients, but also inside the company. For example by optimising, accelerating corporate processes: the fastest possible product delivery, followed by immediate invoicing, or the constant monitoring of payment deadlines and taking necessary measures. In terms of cash-flow it is also important that the company uses cash-flow forecasting. Its significance lies in getting prepared for unexpected events that are sure to come in any company's life, to which small businesses in particular can react more slowly. If a business has cash-flow forecasting, there is no need to waste time on finding out the possible effects, instead management strategies can be developed immediately.

II. Recommendation for the use of aware cost management as part of active planning

The present day market turbulence, that is, the rapid changes in the market environment require flexibility, high levels of adaptability, agility and being solution-oriented from today's entrepreneurs. In this respect, companies need to pursue the use of such tool systems in their operative and strategic functions that ensure the best possible operation. Such solutions are strategic planning, business planning, financial strategy planning, human resources planning, investment planning, savings planning and cost planning. Corporate management can only make sound decisions in the possession of up-to-date necessary information, and having a clear understanding of level of expected costs, and the direction of its possible changes. Thus, it may be concluded that the major aim of companies is profitable operations, so every company needs awareness in cost management, cost-management activities. It can be established that a precise knowledge of costs is far more important than expected turnover, since in the knowledge of costs it may be determined how much turnover is required for profit making. With regards costs, investor's vision is also important, which means that all costs need to be returned, that is, costs have to produce their own return and also expected profits. Building an appropriate cost structure cannot be ignored either. Its basis is optimisation, which, however, does not equal cost reduction. It all means that during the course of everyday operations there are certain types of costs that need to be reduced, while the reduction of other types might hinder growth.

III. Recommendations for ensuring a well-informed financing structure as part of financial planning

Currently, SMEs' high amounts of cash, low levels of indebtedness and the favourable business environment provide stable grounds for implementing

corporate investments, and thus for desirable corporate growth. At the same time, the rapid changes in the external domestic and international environment surrounding businesses, forces them for continuous movement and renewal. This requires adaptability, which is influenced by the corporate financial and capital structure. The issue of optimality, whether optimal structure exists at all, may arise. Company management should bear in mind that optimal capital structure is one that enables the business to use their own and external sources the most efficiently, that is, the use of market-based financing supports dynamic growth appropriately, without posing unnecessary credit risk for the organisation. It has to be emphasised here again, that determining the optimal equity-debt ratio requires conscious financial planning. Such well-informed planning serves as the basis of corporate operations.

IV. Recommendations for the development of adequate investment policies

Recently, there has been considerable improvement in updating in all segments of assets (e.g.: machinery and vehicle fleet). The reason for this is the efforts made to improve efficiency and competitiveness, as today more and more businesses recognise the long-term cost reduction effect such investments entail. Businesses should be made aware that these investments can only become drivers of the economy if alongside pursuing past due investment needs they can ensure corporate growth by means of new, enhancing investments. To make sure that appropriate investments are implemented, financial resource estimate plans and resource mapping are necessary. Businesses also need to take account of the fact the EU funds are shrinking. It can be stated that those businesses benefit that are already prepared for the times when they will have to use other alternative financing channels to provide for their investment needs. To sum up, a well-designed investment policy is required that entails financial resources needed for implementation in detail.

The effective implementation of the above four areas covers profit objectives, appropriate returns and profitability; moreover, they can help meet general cost reduction and efficiency expectations.

B. Learning and growth recommendations

I. Recommendations for ensuring the atmosphere of openness for development and modernisation among management and employees alike

In the 21st century, one of the most important corporate competitiveness factors is agility, which ensures all internal actors – employees, managers and owners – the ability to respond to challenges with rapid, flexible and tailor-made solutions. Nowadays it is vital to use management approaches which build on broad cooperation, openness and continuous improvement. Simon Hayward, in his book entitled *The Agile Leader* says, “Desire to learn and openness should be first in company management, which come with a well-structured and learning culture and framework that is clear to employees as well.” This requires written training strategies and defined personalised development paths, which serve at once the development of human capital and that of the company as well.

II. Building trust and cooperation

Trusting one another has a major role in agile leadership and performance detailed above. Trust can be one of the means of corporate efficiency, effectiveness and productivity. While employees need to trust each other’s expertise, managers should trust employee abilities and commitment. It is clear that one of the tasks of corporate management is to build a climate in which employees carry out their tasks with motivation, efficiently, and they are open to try new things and to acquire new knowledge. A key to this is the existence of direct, personal relationships based on trust, which “provide inner cohesion needed for companies to be able to react in an agile way to the rapid and constant changes in the environment”, says Simon Hayward in his book.

Further research possibilities

1. Taking the above into account a macroeconomic level extension of the present study is recommended. In my opinion, it is important to examine in future to what extent the level of corporate financial culture affects national economic competitiveness, and its growth as a percentage of GDP. This requires the development of a targeted state programme – e.g. based on the current National Entrepreneurship Mentor Programme –, which provides the means for backtesting the results. Actual outturns can only be determined if the programmes become measurable. Backtesting could indeed show to what extent corporate financial awareness in management contributes to improving national economic competitiveness and economic growth. As shown, financial awareness, exportability and innovation activity are related. The latter two are known to be beneficial in terms of national economic competitiveness. I believe it is high time to verify on the national economic level that advanced corporate financial culture can also improve the national

economy. In this light, one of basic hypotheses for a future study can be formulated as follows: a higher level of corporate financial culture has a positive effect on the development and growth of the entire national economy. The research project would require a multidisciplinary approach using the methods of economic psychology, economic sociology and human sciences.

2. Another possible research area is the combined introduction of all the variables of the corporate financial culture index on the corporate level, as well as the detailed presentation of its results using a **case study**.
3. In addition, it is recommended to carry out a **causality analysis based on time series data**, especially with respect to innovation and export activities. Time-series analysis can help clearly identify cause and effect in the relationship system, the knowledge of which could promote the further development of corporate awareness in operation and management.

Summary

To maintain the dynamic GDP growth of the recent years a turnaround in competitiveness is needed, as analyses by the Ministry for Innovation and Technology, the Ministry of Finance, the National Competitiveness Council, the Hungarian Chamber of Commerce and Industry and the National Central Bank show. It is a common position of all experts that a turnaround in competitiveness is inevitable to stabilise domestic GDP growth at 4-5%. The Hungarian SME sector has a decisive role, its efficient operative and strategic functioning are both required to achieve this aim. However, this also requires an adequate level of financial awareness and financial culture to make economic and financial decisions.

As an analyst and researcher in the past few years I was looking for a topic area that had not been studied at all or not by many, in Hungary. The novelty of the present paper lies in the fact that the definition of financial culture and its variables has only been studied by a few, and in less detail in the context of the SME sector. This led to the study of corporate financial awareness, and its significance in corporate operations. One of the main aims of the study was to define corporate financial culture, focusing on the Hungarian SME sector, and in this context to develop the corporate financial culture index to ensure measurability.

This required extensive literature review, during which I read and processed nearly 300 related professional publications. The introduction section of the dissertation presented the basics and the results of domestic and international research. Based on these the model of the doctoral dissertation was developed, which includes mainly internal and external financial factors and variables. Based on the research aims developed after having reviewed relevant literature, the hypotheses were formulated, altogether 11, focusing on 7 areas.

- After reviewing relevant literature, presenting the research design and finalising the hypotheses, the materials and methods of the exploratory research were detailed. To complete my dissertation, I conducted quantitative data collection. To develop the thesis 511 domestic small and medium-sized enterprises were asked to take part in my questionnaire survey. The received data were tested using SPSS software and various analytical methods (crosstabs, association, variance analysis, factor analysis and route models). My hypotheses related to the research aim were all statistically proven true.

Using the proven results of the present doctoral dissertation and further literature review, more extensive studies can be conducted extended to the whole national economy. In this framework, it is advisable to examine the effect of corporate financial culture on the competitiveness of the national economy. It has to be noted though that by further developing the research methodology of the dissertation more detailed results could be gained.

I believe that the results and the recommendations of my doctoral dissertation are useful for policy-makers, practising professionals and entrepreneurs alike. The conclusions drawn from analysis provide relevant, novel and meaningful information to domestic company leaders. I am convinced that the scientific results of the paper help and support companies in optimal (financial) decision-making in the future.

List of publications related to the thesis

Journal articles published in Hungarian language:

1. **Tóth Róbert**, Mester Éva (2015): A magyarországi kkv-k aktuális helyzete és finanszírozási lehetőségei. *ECONOMICA (SZOLNOK)* (vol. 8. 1.) pp. 74-90.
2. Mester, Éva; **Tóth, Róbert**; Túróczi, Imre (2018): A vállalatok stratégiaalkotására ható tényezők: A gazdasági növekedés, a társadalmi fejlődés a fenntarthatóság és a versenyképesség. *ECONOMICA (SZOLNOK)* 9: 1 pp. 39-48., 10 p.
3. **Tóth Róbert** – Mester Éva (2016): A stratégia szerepe a vállalati működésben: Magyarország regionális különbségei, különös tekintettel a humán tőke szerepére. *A FALU* 31:(4) pp. 57-66.
4. **Tóth Róbert** – Szijártó Boglárka – Mester Éva – Túróczi Imre (2017a): A vállalkozások belső és külső finanszírozási gyakorlata – A finanszírozást megalapozó döntések. *CONTROLLER INFO* V:(2) pp. 28-33.
5. **Tóth Róbert** – Mester Éva – Szijártó Boglárka – Túróczi Imre – Zéman Zoltán (2017b): A vállalkozások beruházási döntéseinek elemzése és kontrollja. *Polgári Szemle*, 13. évf. 1–3. szám, 2017, 51–71., DOI: 10.24307/psz.2017.0906
6. **Tóth Róbert** (2017): A logisztikai vállalatok versenyképességének elemzése, valamint a pénzügyi kultúrának értelmezése ezen ágazatban, *Logisztikai trendek és legjobb gyakorlatok* 3:(1) pp. 34-38.
7. **Tóth Róbert** – Gyurcsik Petronella – Túróczi Imre (2019b): A vállalati pénzügyi kultúra és innováció szerepe Magyarország versenyképességének javításában. *Polgári Szemle*. 15. évfolyam: 4-6. szám pp. 392-404.
8. **Tóth Róbert** – Túróczi Imre – Pataki László – Zéman Zoltán (2019): A dél-alföldi régióban működő mezőgazdasági vállalkozások pénzügyi helyzetének elemzése. *A FALU* 34: 1 pp. 5-10., 6 p.
9. Gyurcsik Petronella – **Tóth Róbert** – **Túróczi Imre** – **Mester Éva** – **Kozma Norbert** (2019): A tudatos vállalkozásfinanszírozás a Controlling és az alternatív finanszírozási források szemszögéből. *CONTROLLER INFO* 7: 1 pp. 29-33.
10. **Tóth, Róbert** – Túróczi, Imre – Gyurcsik, Petronella (2019): Lehetőségek és kihívások a mezőgazdasági és az élelmiszeripari vállalkozások versenyképességének javításában. *A FALU* XXXIV. évfolyam pp. 13-19. 7 p.
11. **Tóth Róbert** – Szük Krisztina – Sisa Krisztina – Szijártó Boglárka (2019): Az oktatás és szakképzés szerepe a vállalati (és nemzetgazdasági)

- versenyképesség növelésében. Polgári Szemle, 15. évf. 4–6. szám, 2019, 36–55., DOI: 10.24307/psz.2019.1204
12. **Tóth, Róbert** ; Túróczi, Imre ; Gyurcsik, Petronella (2018): A pénzügyi kultúra értelmezése a hazai mezőgazdasági vállalkozások vonatkozásában – I. rész. A FALU 33: 1 pp. 77-85., 9 p. (2018)
 13. Hezam, Leila Melinda; Pataki, László; **Tóth, Róbert** (2017): A hazai kis- és középvállalkozások pénzügyi helyzetének controlling elemzése a növekedési stratégia tükrében. CONTROLLER INFO 5: 2 pp. 48-54., 7 p. (2017)
 14. Mester, Éva; **Tóth, Róbert**; Túróczi, Imre (2017): Ellátási lánc eredményessége, valamint a felmerülő kockázati tényezők a controlling rendszer tükrében. CONTROLLER INFO 5: 1 pp. 2-7., 6 p. (2017)
 15. Szijártó, Boglárka; **Tóth, Róbert**; Sisa, Krisztina; Túróczi, Imre (2017): A vezetői számviteli információs rendszer kapcsolata a vállalkozás pénzügyi tervezésével. CONTROLLER INFO 5: 4 pp. 36-40., 5 p. (2017)
 16. Tóth, Róbert; Túróczi, Imre; Gyurcsik, Petronella (2017): A vállalatok jövőorientáltságának és pénzügyi stratégiájának szerepe a vidéki gazdaság erősítésében. A FALU 32: 4 pp. 61-70., 10 p. (2017)
 17. Mester, Éva ; Tóth, Róbert (2016): Logisztikai vállalatok finanszírozása és a bizalom szerepe a hitelezésben. LOGISZTIKAI TRENDEK ÉS LEGJOBB GYAKORLATOK 2 : 1 pp. 50-52. , 3 p.

Journal articles published in foreign languages:

1. Mester, Éva – **Tóth, Róbert** (2015): Financing SMEs, prospects in Hungary. STUDIA MUNDI - ECONOMICA 2 : 2 pp. 113-126. 14 p.
2. Kozma, Tímea – Gyenge, Balázs – **Tóth, Róbert** (2016): Was Ist Das Geheimnis Des Geschäftserfolgs Nach Der Krise? Geschäftsmodell Im Unternehmen? = What Is The Secret Of A Successful Business Model After Chaotic Period? SELYE E-STUDIES 4 pp. 1-14. , 14 p.
3. Kozma, Tímea ; Gyenge, Balázs ; **Tóth, Róbert** (2015): Supply chain management controlling: a modern concept in logistics and strategy. Selye E-Studies 6 : 1 pp. 101-116. , 16 p.
4. **Tóth Róbert** – Gyurcsik Petronella (2020): Domestic SME competitiveness development areas – Corporate financial culture in focus. Polgári Szemle. *Megjelenés alatt (in press)*
5. **Róbert Tóth** – Krisztina Szük – Boglárka Szijártó – Krisztina Sisa (2020): The role of modern day education and qualified workforce in improving corporate and national economic competitiveness. *Megjelenés alatt (in press)*

Scientific book/book chapter:

1. **Tóth Róbert** (2016): A magyarországi kis-és közepes vállalkozások regionális különbségei, In: Csath Magdolna (szerk.): Regionális

versenyképességi tanulmányok. 319 p. Budapest: NKE Szolgáltató Nonprofit Kft, 2016. pp.143-179.ISBN:978-963 439001 5

2. **Tóth Róbert** – Kozma Tímea – Gyenge Balázs – Mester Éva (2016a): Hazai vállalkozások finanszírozási gyakorlata. In: Fenyvesi Éva, Vágány Judit (szerk.). KORKÉP: XXI. századi kihívások. 280 p. Budapest: Budapesti Gazdasági Egyetem, 2016. pp. 114-145.

Article published in scientific conference proceedings in Hungarian language:

1. **Tóth, Róbert** ; Gyurcsik, Petronella ; Mester, Éva ; Kozma, Norbert ; Túróczi, Imre (2018): A felelős hitelezés és a vállalati pénzügyi tudatosság kapcsolatrendszer. In: Földi, Péter; Borbély, András; Kápolnai, Zsombor; Zsarnóczky, Martin Balázs; Bálint, Csaba; Fodor-Borsos, Eszter; Gerencsér, Ilona; Gódor, Amelita Kata; Gubacsi, Franciska; Nyíró, András; Szeberényi, András (szerk.) Közgazdász Doktoranduszok és Kutatók IV. Téli Konferenciája : Konferenciakötet. Budapest, Magyarország: Doktoranduszok Országos Szövetsége, (2018) pp. 34-40. , 7 p.
2. Gyurcsik, Petronella ; **Tóth, Róbert** ; Csapó, Ildikó (2017): Tőkeszerkezet a gyakorlatban - egy kérdőíves felmérés eredményeinek bemutatása. In: Dorisz, Györfő; Vivien, Kleschné Csapi; Zsolt, Bedő (szerk.) ICUBERD 2017 : Book of Papers Pécs, Magyarország : University of Pécs, (2017) pp. 316-328. , 13 p.
3. Mester, Éva ; **Tóth, Róbert** ; Kozma, Tímea (2017): a vállalkozások újszerű finanszírozásának lehetőségei a stratégia és egy új üzleti modell fókuszában. In: Bene, Szabolcs (szerk.) XXIII. Ifjúsági Tudományos Fórum. Keszthely, Magyarország : Pannon Egyetem Georgikon Kar, (2017) pp. p-p. , 8 p.
4. Tóth, Róbert (2016): A magyarországi kis- és közepes vállalkozások jelentősége a versenyképességben. In: Kozma, Tímea (szerk.) Ellátási lánc- és folyamatmenedzsment Gödöllő, Magyarország : Szent István Egyetemi Kiadó, (2016) pp. 8-13. , 6 p.
5. **Tóth, Róbert** ; Kozma, Tímea (2016): A vállalati életciklus szakaszok értékelése a gyakorlatban, különös tekintettel a finanszírozási helyzetre. In: Takácsné, György Katalin (szerk.) Innovációs kihívások és lehetőségek 2014-2020 között : XV. Nemzetközi Tudományos Napok. Gyöngyös, Magyarország : Károly Róbert Főiskola, (2016) pp. 1597-1605. , 9
6. **Tóth, Róbert** ; Gyenge, Balázs ; Kozma, Tímea (2016): Logisztikai vállalkozások finanszírozási lehetőségei. In: Takácsné, György Katalin (szerk.) Innovációs kihívások és lehetőségek 2014-2020 között : XV. Nemzetközi Tudományos Napok. Gyöngyös, Magyarország : Károly Róbert Főiskola, (2016) pp. 1585-1595. , 11 p.

Article published in scientific conference proceedings in foreign languages:

1. **Tóth Róbert** – Gyurcsik Petronella – Túróczi Imre – Mester Éva – Kozma Norbert (2018): A felelős hitelezés és a vállalati pénzügyi tudatosság kapcsolatrendszere, Doktoranduszok Országos Szövetsége, Téli Konferencia, Szent István Egyetem
2. Gyurcsik, Petronella – **Tóth, Róbert** – Csapó, Ildikó (2018): The importance of financial strategy and capital structure in the light of competitiveness SME sector, with reference to the role of financial consultancy. In: Dinya, László; Baranyi, Aranka (szerk.) XVI. Nemzetközi Tudományos Napok : „Fenntarthatósági kihívások és válaszok” - A Tudományos Napok Publikációi. Gyöngyös, Magyarország : EKE Líceum Kiadó, (2018) pp. 769-776. , 8 p.
3. Gyurcsik, Petronella – **Tóth, Róbert** – Pataki, László (2018): Analysis of the funding and financial situation of businesses in the primary and secondary sector in Hungary. In: Illés, Bálint Csaba (szerk.) Proceedings of the International Conference “Business and Management Sciences: New Challenges in Theory and Practice” / "Gazdálkodás- és szervezéstudomány: Új kihívások az elméletben és gyakorlatban" nemzetközi tudományos konferencia tanulmánykötete : Volume I / I. kötet. Gödöllő, Magyarország : Szent István Egyetemi Kiadó, (2018) pp. 161-167. , 7 p.
4. **Tóth, Róbert** – Gyurcsik, Petronella – Mester, Éva – Túróczi, Imre (2018): Analysis of sme funding strategies in the light of financial awareness. In: Illés, Bálint Csaba (szerk.) Proceedings of the International Conference “Business and Management Sciences: New Challenges in Theory and Practice” / "Gazdálkodás- és szervezéstudomány: Új kihívások az elméletben és gyakorlatban" nemzetközi tudományos konferencia tanulmánykötete : Volume I / I. kötet Gödöllő, Magyarország : Szent István Egyetemi Kiadó, (2018) pp. 177-183. , 7 p.
5. Mester, Éva – **Tóth, Róbert** (2017): An Analysis Of Hungarian Corporate Competitiveness And Business Environment With A Special Focus On The Sme Sector. In: Keresztes, Gábor (szerk.) Tavaszi Szél = Spring Wind 2017 [tanulmánykötet] 2.. Budapest, Magyarország: Doktoranduszok Országos Szövetsége, (2017) pp. 334-339. , 6 p.
6. Kozma, Tímea – Gyenge, Balázs – **Tóth, Róbert** (2018): Supply Chain Management Controlling – A Modern Concept In Logistics And Strategy. In: Szent, István University Gödöllő; J, Selye University; University, of Debrecen (szerk.) 8th International Conference of Young Researchers : “New Drivers in the Economy” Gödöllő, Magyarország :Szent István Egyetem Egyetemi Kiadó, (2015) pp. 193-208. , 16 p.

