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Do family businesses perform better than non-family businesses? The situation in Czech companies

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Abstract

Research background: Recent research conducted in the field of entrepreneurship focuses on a better understanding of specific features of family businesses, which, according to estimates, make up 55–90 % of all business entities in EU member states. Foreign studies emphasise the greater resilience of family businesses in the face of adverse changes in their business environment, their ability of long-term survival and a higher degree of socially responsible behaviour.
Purpose of the article: The main objective of this article is to find out whether there are statistically significant differences in performance between family and non-family businesses. The results will be used to determine whether the performance of family businesses differs from that of non-family businesses and to identify the specific features of family business. This information will also be used to enhance our knowledge of family entrepreneurship and to determine whether the

conclusions of foreign studies are also valid for family businesses in the Czech Republic.
Methods: We compared the results of two sets of data with financial results to identify differences in the performance of family and non-family businesses. Due to the fact that there is currently no register of family businesses, we first had to identify which are family businesses and complement them with non-family businesses. We used the accounting data of almost 8,000 businesses from the years 2014–2018 for this analysis. We defined 44 indicators and tested them using Welch's t-test.
Findings & value added: The analysed sample consists predominantly of small businesses. We identified a total of 30 ratios whose values differ statistically at a significance level of 5 %, for example current assets to sales, retained earnings to total assets and labour cost to sales. We can deduce from the results that there are differences in performance between family and non-family businesses.

Introduction

Family businesses are often assessed on the basis of their financial performance and the factors influencing this performance are investigated. The term financial performance indicates the effectiveness of the activities of the company generally measured by financial ratios such as the return on assets (ROA) or return on equity (ROE). Most previous research has led to the conclusion that family businesses achieve higher performance or at least the same level of performance as non-family businesses. A conclusion often stated by these studies is an inverted U-curve depicting the development of the performance of family businesses depending on the size of the influence of the family in the business. This indicates that performance increases with the increasing influence of the family in the business until the moment at which a negative effect resulting largely from conflict between family members begins to predominate.

A survey study by Williams (2018) shows the most widely used indicators measuring the performance of family businesses to be the return on investment (ROI), the return on equity (ROE), Tobin's Q, the return on assets (ROA), sales and their growth, profit and its growth, and the return on sales (ROS).

Williams (2018) states that private family firms are extremely widespread, but that less attention is devoted to them in spite of the fact that they could better reflect the differences between family and non-family firms because private business leaders are less encumbered by outside stakeholders and regulation. It is, however, difficult to obtain data on private family firms, because the owners of private family businesses hesitate

to provide information and very few countries have a database of family firms.

Most of the published studies devoted to performance confirm the positive effect of the family on the performance of the business. According to Anderson & Reeb (2003), the performance of family businesses is at least as good as that of non-family businesses, if not better (the ROA shows significantly higher values in the case of family businesses). The same conclusions about the greater profitability of family firms were also reached by Erbetta et al. (2013). They also found that the factors profitability depends on are productivity and efficiency, and they revealed a systematic lower efficiency and a tendency to overuse capital and labour in family businesses (a lower cost of labour).

One of the criteria often mentioned in the analysis of performance is investigation of the influence of the family's control over the business. Anderson & Reeb (2003) found that performance is better if the CEO is from the family than it is with an outside CEO. Many other authors studying the issue of performance have followed up from this study. Chu (2009), for example, also came to the conclusion that ownership of the business by the family has a positive effect on its performance primarily when members of the family hold senior positions, i.e. that an essential condition to achieving this positive effect is for members of the family to play an active part in the management and control of the business. Concentrated ownership also has a positive effect on the long-term performance of the business. The effect of family ownership on the firm's performance is also influenced by its size. Cruz et al. (2012) focused directly on the performance of MSEs (micro and small enterprises). They found that employing family members in small and micro firms contributes to an increase in sales, but decreases profitability as measured by ROA. Similarly, the large survey study conducted by Wagner et al. (2015) reached the conclusion that the positive effect of family on performance is more pronounced in samples of public and large firms, measured principally by ROA. No effect of the family on performance was demonstrated with the use of ROE, i.e. an indicator that takes account of the effect of the financial structure.

Family firms take in a wide range of businesses that are difficult to compare with one another. This leads to inconsistent research conclusions. Research on the given topic has been conducted by, e.g., Basco (2013). One of the conclusions he reached was that family business relations can have a detrimental effect on performance. Another argument for inconsistent findings he states is that family management involvement does not necessarily directly affect economic performance, in view of the fact that the aim of family business is long-term sustainability, and the relationship between

family involvement and the performance of the firm is curvilinear. As a final argument, he states that family management may affect a firm's behaviour and its performance.

The research to date focusing on the Czech Republic indicates that family firms are more profitable, use less debt and keep more liquid assets than other Czech firms (e.g. Machek et al., 20191).

Research methodology

This paper aims to identify differences in the performance of family and non-family businesses in the Czech Republic. We formulated the following research question to meet this goal: "Are there statistically significant differences in individual ratios in the group of family and non-family businesses?" Welch's test, a two-sample t-test with independent estimates of distributions, was used for its verification. Statistically significant differences between family and non-family firms at a significance level of 5% were found using this test.

Data used

In view of the fact that there is no exhaustive database of family businesses in the Czech Republic, it was first necessary to identify family businesses. The Czech Register of Family Businesses was established just last year (when this research was underway) and records 500 businesses (as of March 2021). In view of the estimates of a high proportion of family businesses in the Czech Republic, it was necessary to identify both family business and non-family businesses among all businesses. We addressed 76,980 businesses and asked them if they were family businesses or not. A business entity in which one family has an absolute majority of the number of partners or exercises a majority of the voting rights is considered a family firm. At least one member of the given family is a member of the statutory body of the company. At least two members of the given family must be engaged in the company for it to be considered a family firm. The replies received were used to create a database containing 10,684 businesses (6,354 family businesses and 4,330 non-family businesses). We obtained financial statements from the company Bisnode (currently part of the Dun

[1] The paper focuses on eponymous firms. Eponymous firms bear the name of the owners, which is one of the characteristics of family business.

and Bradstreet company). We were unable to obtain data on all these companies – the true numbers are given in Table 1.

The subject of analysis was data for the years 2014 to 2018 (please note that the majority of the data was not available for the years 2014–2015). Almost all the given companies are micro and small businesses, with just 3 % comprising medium-sized companies. Large companies were not primarily addressed for co-operation within the research, for which reason they are almost unrepresented in the set.

More than half of the companies operate in the services sector, while more than 10 % of the set is made up of businesses in manufacturing and construction (see Table 2).

Forty-four indicators, primarily financial ratios, indicators of year-on-year growth and cost indicators, were quantified for all the companies comprising the research set. A list of these indicators is given in Table 3.

Results

Statistically significant differences were found for 30 ratios on the basis of the t-test (see Table 4). The results indicate a statistically significant difference at the one-percent level for 27 ratios and at the five-percent level for 3 ratios. The majority of the ratios used confirm the existence of differences in the performance of family and non-family businesses. The difference between these ratios is not, therefore, random and the probability of error is extremely low.

Statistically significant differences were found for liquidity indicators, which confirms the previous finding that the proportion of liquid assets is different in family and non-family businesses. A statistically significant difference was also found between turnover ratios (debtor collection period, trade creditors payment period, etc.) including the cash conversation cycle. Differences were found between profitability ratios in the case of the return on capital employed and return on sales, though the return on assets and return on equity do not show statistically significant differences. The authors of foreign studies often compare the performance of family and non-family businesses using the ROA. A number of these authors concluded that the ROA is higher in family businesses (e.g. Anderson & Reeb, 2003). Our findings did not demonstrate statistically significant differences in the ROA between family firms and non-family firms. In view of the fact that the sample we analysed is comprised primarily of micro and small firms, the results may have been influenced by the size of the companies (e.g. Wagner et al., 2015). Our findings to date lean towards the conclusions of

Cruz et al. (2012), who found that employing family members in small and micro firms contributes to decreased profitability as measured by ROA.

In contrast, no statistically significant difference was demonstrated in the majority of ratios evaluating year-on-year change, i.e. capital growth, earnings growth, sales growth and total assets growth. Similarly, no difference was found in the investment to sales or investment to fixed assets ratios.

Conclusions

This paper presents the results of analysis into the differences in financial ratios, indicators of year-on-year growth and cost indicators between family and non-family businesses. This is part of a wider research that also takes in non-financial factors.

A total of 44 indicators were included in the analysis. A statistically significant difference was found for 30 ratios on the basis of Welch's test. In addition to the aforementioned indicators of liquidity and cost, there are also demonstrable differences in current assets to sales, retained earnings to total assets and labour cost to sales. We will subsequently be conducting a search for the causes of these differences.

The diverse conclusions of research into the performance of family and non-family businesses may be caused by the varying definition of the research sample, as no universally valid definition of family businesses exists and there is no database of family businesses. This also depends on whether the research focuses on publicly listed companies or private companies, as publicly traded companies achieve better performance and it is easier to obtain data on them. As has already been mentioned, the size of the businesses studied is also important, as larger companies achieve better performance, and differences also arise due to the differences in various sectors. Last but not least, differences are also caused by the use of various ratios for the assessment of performance, as studies that use ROA present better performance for family businesses than those that use ROE (Dyer, 2018).

The results of studies are also influenced by the specifics of the country in which the research is conducted. The set we analysed is comprised of small and newly formed businesses in which there is evidently a greater connection between ownership and company management, i.e. the family is identified with the firm (an emotional bond) and promotes various non-financial goals in addition to financial goals. Shareholders are involved in decision-making in publicly traded companies, and this may lead to a pressure to achieve greater performance, and ownership is also separated from

management and a smaller emotional connection between the family and the firm can also be expected. These companies gradually lose their family nature. To answer the question as to whether family firms are characterised by higher performance than non-family businesses it is, therefore, necessary to investigate the conditions under which this assertion holds true and which factors affect their performance, and this will form the subject of our further research.

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Annex

Table 1. Number of businesses included in the analysis and their division by size

	2014		2015		2016		2017		2018	
	FF	NFF	FF	NFF	FF	NFF	FF	NFF	FF	NFF
micro	4	6	335	225	2804	2069	2920	2233	2906	2207
small	0	0	69	48	1130	839	1257	939	1341	1008
medium	0	0	5	4	196	197	228	223	238	238
large	0	0	0	1	11	7	7	3	10	7
total	4	6	409	278	4141	3112	4412	3398	4495	3460

Note: FF means family firms, NFF means non-family firms. Micro firm: total assets < 9 million CZK or turnover < 18 million CZK. Small firm: total assets < 100 million CZK or turnover < 200 million CZK. Medium firm: total assets < 500 million CZK or turnover < 1 billion CZK.

Table 2. Numbers of analysed companies in 2018

NACE code		Family firms	Non-family firms
A	agriculture, forestry & fishing	109	120
B	mining & quarrying	7	7
C	manufacturing	869	505
D	electricity, gas, steam & air conditioning	13	67
E	water supply, sewerage, waste management & remediation activities	38	76
F	construction	549	370
G-U	services	2532	2262
	unclassified	378	53
total		**4495**	**3460**

Table 3. List of indicators used in data analysis

C/TA	Cash/Total Assets	TC/TA	Trade Creditors/Total Assets
CA/CL	Current Assets/Total Current Liabilities	TC/TL	Trade Creditors/Total Liabilities
CA/S	Current Asset/Sales	TCPP	Trade Creditors Payment Period
CCC	Cash Conversation Cycle	TD/TA	Trade Debtors/Total Assets
CG	Capital Growth	TL/TA	Total Liabilities/Total Assets
CashR	Cash Ratio	WC/S	Working Capital/Sales
DCP	Debtor Collection Period	WC/TA	Working Capital/Total Assets
ROCE	Operating Profit/Capital	TC/TD	Trade Creditors/Trade Debtors
ROS	Operating Profit/Sales	TAG	Total Assets Growth
ROA	Operating Profit/Total Assets	FAG	Fixed Assets Growth
OCF/IE	Operating CF/Interest Expenses	EFA/OP	(Operating Profit/Loss – Operating Profit)/Operating Profit/Loss
OCF/TA	Operating CF/Total Assets	In/S	Investment/Sales
EG	Earnings Growth	In/FA	Investment/Fixed Assets
IA/TA	Intangible Assets/Total Assets	In/NI	Investment/Net Income
ROE	Net Income/Equity	OP/Nu.E	Operating Profit/Number of Employees
QR	Quick Ratio	MEC/S	Material and Energy Consumption/Sales
RE/TA	Retained Earnings/Total Assets	PC/S	Personal Cost/Sales
S/TA	Sales/Total Assets	PC/OP	Personal Cost/Operating Profit
ST/TA	Stock/Total Assets	Se/S	Services/Sales
S/TTA	Sales/Tangible Assets	1-(EAT/EBT)	1-EAT/EBT
SG	Sales Growth	1-(EBT/OP)	1-EBT/Operating Profit
SHP	Stock Holding Period	D/OP	Dividends/Operating Profit

Source: own processing based on expert literature, e.g. Gupta *et al.* (2018).

Table 4. T-test results: p-value

Ratio	p-value	Ratio	p-value	Ratio	p-value
C/TA	0.0000	QR	0.0000	TAG	0.8940
CA/CL	0.0150	RE/TA	0.0000	FAG	0.0010
CA/S	0.0000	S/TA	0.0000	EFA/OP	0.4070
CCC	0.0030	ST/TA	0.0000	In/S	0.5100
CG	0.4270	S/TTA	0.2380	In/FA	0.2210
CashR	0.0000	SG	0.3650	In/NI	0.0000
DCP	0.0370	SHP	0.0000	OP/Nu.E	0.6080
ROCE	0.0030	TC/TA	0.0000	MEC/S	0.0000
ROS	0.0030	TC/TL	0.0000	PC/S	0.0000
ROA	0.1970	TCPP	0.0000	PC/OP	0.0100
OCF/IE	0.0040	TD/TA	0.0000	Se/S	0.0000
OCF/TA	0.9400	TL/TA	0.0000	1-(EAT/EBT)	0.8700
EG	0.0940	WC/S	0.0000	1-(EBT/OP)	0.0040
IA/TA	0.0000	WC/TA	0.0330	D/OP	0.7430
ROE	0.2850	TC/TD	0.0010		