FACULTY
OF SOCIAL SCIENCES
Charles University

Thesis Evaluation Report

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Advisor:	Jaroslav Pavlíček, M.A.
Title:	The Impact of a Firm's Profitability and Other Factors on Capital Structure: Evidence from the Czech Republic
Opponent	Jiří Novák

Summary

The author analyzes how firm characteristics (e.g. size, tangibility, liquidity, profitability, age) correlate with financial leverage (total, short-term and long-term liabilities) in small and medium enterprises (SMEs) in the Czech Republic between 2006 and 2019. She identifies correlations between some of the measures.

Contribution

Overall, identification of capital structure determinants is a popular research topic that has been investigated for decades. Unsurprisingly, extensive prior research exists in this area. That makes it challenging for any new study to add to our understanding of the topic. In the Thesis, I do not find a strong motivation of how the study extends what we already know about it from prior research other than the use of a specific data sample. I believe the authors should provide a stronger motivation of why it is interesting to investigate behavior of small Czech companies especially when their capital structure decisions may be idiosyncratic and driven by local constraints.

"The topic of capital structure in the context of the Czech Republic was assessed by several authors, starting with Bauer (2004) who covered the topic for listed companies in the Czech Republic, followed by Pinková (2012) that focused on automotive or Aulová and Hlavsa (2013) that covered the agriculture. Moreover, the data for the Czech Republic were also included in studies that were focused on more countries at once, such as works by Delcour (2007), Mokhova and Zinecke (2013) or Fenyves et al. (2020). However, none of the existing studies focused on small and medium enterprises in the Czech Republic, which is the topic of this thesis."

1

Literature

On the one hand, I appreciate that the author reviews a number of prior studies on capital structure determinants. On the other hand, I find some statements rather problematic if not incorrect (see below for details). This makes me wonder how solid understanding of the subject matter the author actually acquired.

Rather importantly for this kind of study, I do not believe that there is a general consensus that external financing is a better option for businesses (see the quote below). On the contrary, the irrelevance theorem essentially suggests that when all types of capital are priced efficiently and there are no frictions then both/all forms of capital are equally desirable. The trade-off model proposes some advantages and disadvantages of all sources of capital. The pecking order suggest preferences over sources of capital depends on whether the choice is made from the perspective of the owners or the managers. Furthermore, it suggests that from the managers' perspective external debt is "in between" internal equity (retained earnings) and external equity (stock issues). Hence, I do not understand why the author makes the following statements.

> *"It is generally believed that external financing is a better option for a business than utilizing its own resources. That way the risk is spread over owners as well as creditors and tax deductibility of interest could be utilized."*

Similarly, I find it incorrect to state that the tradeoff theory and the pecking order theory make no prediction about the association between firm performance and capital structure.

> *"Nevertheless, none of these theories can fully clarify the relation between capital structure and the performance of the company because all theories are based on some critical assumptions which not all hold in the real world."*

Dividend decisions belong to financing decisions.

> *"Among the main financial decisions every company is required to take are investment, financing and dividend decisions."*

Furthermore, I do not find the literature review to offer a sufficient synthesis of what we already know. The literature review that makes an impression of being a collection of individual results documented in prior research. The author does not explain where the remaining areas of controversy are and how her research helps resolving some of these controversies.

Hypotheses should be motivated based on prior (analytical and empirical) research and therefore they should be included in the literature review section (rather than methodology). Every hypothesis should be individually motivated (rather than simply listed).

Methodology

The author uses several methodological approaches to estimate her regressions. I do not think these approaches actually resolve the issue of endogenous determination of the considered variables. In the Thesis, I find little discussion about the direction of causality. Naturally, capital structure is

jointly determined with asset structure and other firm characteristics. Therefore, to be able to draw reasonable policy implications, I find it vital to disentangle the cause and the effect. For example, what if firms with higher debt use the debt to finance the purchase of tangible assets and they decide to maintain higher liquidity levels in order to service the debt? What if more debt makes firms more profitable due to the financial leverage effect (at the expense of having higher risk), which also allows companies to grow faster and become larger in size? These options indicate that the independent variables (e.g. size, tangibility, liquidity, profitability) might not be capital structure "determinants" but capital structure "consequences". I believe the author should address these issues and discuss their implications for the interpretation of her results.

> *"More precisely, the thesis employs three dependent variables (total, short-term and long-term debt ratio) representing the capital structure and several capital structure determinants recommended by previous empirical studies, such as size, tangibility, liquidity, profitability, age, etc., as independent variables in the model."*

I would appreciate a more explicit motivation of the benefits of using various estimation methods in computing the results (Pooled OLS, Fixed Effects, Random Effects model, Difference GMM, and System GMM estimator) as opposed to using only one method that should be conceptually most suitable for analyzing the given research question.

I find the definition of the *TD_ratio*, the *STD_ratio*, and the *STD_ratio* problematic. Many of accounting liabilities do not represent debt from the capital structure perspective. For example, accounts payable or deferred tax liabilities are not considered parts of capital structure. Besides, some accounting equity components (e.g. preferred stocks) have the economic nature of debt from the perspective of financing. Distinguishing between operating liabilities and (financing) debt seems to be essential for this kind of analysis.

The correlation table shows strong correlations between independent variables, which indicates a potential problem with multi-collinearity.

Form

I think that the Thesis only somewhat conforms with academic style of writing. It includes all the essential parts. However, many of the ideas are scattered in rather short paragraphs that are not always well concluded and interconnected.

Some of the formulations are rather simple if not trivial, see below for an example.

> *"In fact, both debtholders and shareholders want to be remunerated for the money they invested into the company, the only difference is in the way how they expect it to happen. Equity represents the money the shareholders invested into the firm; it is perceived as long-term financing as the shareholders do not expect an effective repayment."*

I find the quality of academic English to be fair.

I believe the tables should be formatted in a neater fashion. They should also be accompanied with explanatory notes.

Conclusion

I believe that identifying firm characteristics correlated with financial leverage is a fairly basic topic that would be better suited for a Bachelor's Thesis. It is hard for me to see what causal inferences we can draw from the study and how an analysis of Czech SMEs contributes to what we already know about capital structure. Therefore, I believe the Thesis only barely meets the requirements for a Master's Thesis stipulated by the Faculty of Social Sciences, Charles University. I recommend the Thesis for an oral defense.

The results of the Turnitin analysis do not indicate significant text similarity with other sources.

Questions

I recommend the examination committee to consider asking the author the following questions:

- What original contribution does the Thesis have relative to prior research? What should firm managers or policy makers learn from the Thesis?
- What kind of relationship do the tradeoff theory and the pecking order theory predict between firm performance and capital structure?
- Why is it desirable to use a sample of Czech SMEs for this analysis?
- What is the benefit of using various estimation methods in computing the results (Pooled OLS, Fixed Effects, Random Effects model, Difference GMM, and System GMM estimator) as opposed to using only one method that should be conceptually most suitable for analyzing the given research question?

Awarded Points and Grade

Contribution (max 30)	14
Methods (max 30)	17
Literature (max 20)	11
Form (max 20)	12
Total (max 100)	**54**
Grade (A – B – C – D – E – F)	**E**

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Referee's Signature

15 August, 2022 _____ Jiří Novák
Evaluation Date **Referee's Name**

Grading Scale

LITERATURE REVIEW: The thesis demonstrates author's full understanding and command of recent literature. The author quotes relevant literature in a proper way.

Strong	Average	Weak
20	10	0

METHODS: The tools used are relevant to the research question being investigated, and adequate to the author's level of studies. The thesis topic is comprehensively analyzed.

Strong	Average	Weak
30	15	0

CONTRIBUTION: The author presents original ideas on the topic demonstrating critical thinking and ability to draw conclusions based on the knowledge of relevant theory and empirics. There is a distinct value added of the thesis.

Strong	Average	Weak
30	15	0

MANUSCRIPT FORM: The thesis is well structured. The student uses appropriate language and style, including academic format for graphs and tables. The text effectively refers to graphs and tables and disposes with a complete bibliography.

Strong	Average	Weak
20	10	0

OVERALL GRADING:

Total Points	Grade
91 – 100	A
81 – 90	B
71 – 80	C
61 – 70	D
51 – 60	E
0 – 50	F