

Credit utilization and firms' growth in a developing country – A firm-level analysis based on controlling characteristics

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Abstract- Considering the importance of MSMEs to the economy, this paper makes a major contribution and offers recommendations for policy establishment and financial support of MSMEs in a developing country. The main contribution of this article is its approach to the problem in a perspective which analyses the utilization rate of credit as a result of the behaviour of different characteristics linked to the enterprise.

The article analyses the impact of credit on MSMEs growth. The study is based on a firm-level survey, while its analysis includes correlation matrix, two-sample t-test, probit regression and marginal effects after probit. The controlling characteristics have indicated a determinant role in the model.

The final results confirmed the positive impact of access to credit for enterprises growth, except for, size and ownership which appeared negative. Moreover, the z-values indicated that credit access and size have statistically significant impact on enterprise growth. Thus, micro enterprises are about 60% less likely to grow their business using credit, while single-owner firms about 2% less likely. The Kolmogorov-Smirnov two-sample t-test, indicated differences between the selected categories of this study, while supporting the main hypothesis.

Index Terms- Access to finance; Credit; Micro small and medium-sized enterprise; Business growth; Entrepreneurship.

the basis of accessing the traditional banks. Thus, the article analyses how access to credit has affected growth of MSMEs in Macedonia. This research process has considered various controlling characteristics, which concern the success rate of access to credit, as a precondition for MSMEs growth. The study is conducted at a firm level, and is based on the data derived from a special survey of 339 enterprise managers/owners.

An enterprise with growing objectives, needs more finances in order to achieve the goal. More often, these enterprises must obtain these funds through external financing resources, mostly banks or microfinance institutions. It is proven by several authors, that an effective use of external financial funds can bring a lot of improvements, in terms of technology and know-how spillovers for MSMEs in many countries.

The purpose of this study is to assess whether this impact is also present in enterprises of North Macedonia, considering several characteristics, such as firm-related characteristics (size, age and industry), manager-related characteristics (education, experience) and credit-related characteristics (amount, interest rate, repayment period and collateral).

As a result, this study will contribute in understanding the major constraints of access to credit and their relation to enterprise growth. Based on the final results, will follow recommendations for policy establishment and further in-depth studies on this topic.

I. INTRODUCTION

Many times, access to finance was defined in terms of ease of obtaining loans from banks, or non-banking sources. When it comes to analysing access to finance, an important issue which needs to be considered is also the process of managing or utilization of the credit funds. Alongside the characteristics related to the enterprise, researchers should consider the controlling characteristics related to the manager, on the process of investing the funds they obtain from banks, and characteristics related to the credit.

This paper analyses the importance of access to finance, and its impact on micro, small and medium-sized enterprises (MSME) growth. It's a fact, that MSMEs are known for their advantages in economic development, and their disadvantages on

II. LITERATURE REVIEW

The topics related to micro, small and medium enterprises are discussed a lot among researchers. Yet one of the biggest concerns of these enterprises is access to financial funds for growth, development, innovation and internationalization. The assumptions of this study are derived and based upon the economic literature and theories. There are plenty of entrepreneurship theories mentioned by many authors. This study is related to the theory of behavioural finance, and the resource-based theory, given that the article approaches the problem by the aspect of how the manager has accessed the funds and how they have used these funds in their business growth activities. I think that their decision is based on their experience and education, and also the characteristics related to the enterprise. On the other hand,

the process of an enterprise's growth is based on how much access they have to financial resources, especially credits, and how they approach them, as an opportunity for business growth. Some characteristics related to the credit itself as financing resources or constraints, play a significant role in enterprise growth.

The study of (Bhaumik et.al, 2015) states that we have limited knowledge about the impact of financial constraints on small business growth, and future researchers need to examine the impact of funding gaps on growth. In this context many authors have shown their results and recommendations on the topic. According to the study of (Teima et.al., 2010), financial access can help firms start up and expand their businesses through *inter alia* development of new products and production processes, and investment in human capital. [...] In general, financial access in developing countries is observed to be much lower compared to that for developed countries, and concentrated among top borrowers.

In this context, the size-age-growth relationship has now become one of the most disputed issues related to the patterns of firm growth and industrial dynamics according to (Hashi & Krasniqi, 2011). Based on this, (Abraham & Schmukler, 2017) state that this nature of SMEs may hinder lending. SMEs tend to be young and banks typically require at least two years of accounting records. Whereas (Aterido et.al., 2011) conclude that objective conditions in the business environment vary substantially across firms of different sizes and that there are important nonlinearities in their impact on employment growth. And according to (Love, Roper & Zhou, 2016) there is more indication of a negative relationship between age and the number of regions to which SMEs export. Also, managers with prior experience have a positive impact on SMEs internationalization and growth.

On the other hand (Mertzanis, 2017) stated that private ownership, and ownership by other special interests as well as the larger owners exert a significant positive effect on firms' financing constraints. Moreover (Andres, 2011) concludes that contrary to theoretical considerations, the results indicate that family firms are not more susceptible to external financing constraints. And (Chung, 2014) found that family businesses are more likely to expand and grow their business in host regions. Also (Bhaumik et.al, 2015) conclude that there is a need to consider how different ownership and governance regimes and their associated financing, influence the nature of entrepreneurial growth. A longer term, lower risk, typically attributed to family firms may influence their willingness to take external finance to realize growth potential. Even (Zhang et.al, 2012) concluded that family ownership has a negative effect on a firm's expansion level and a positive effect on a firm's internal financing preference (rate of internal to external funds).

Even though MSMEs are considered the backbone of an economy, and play a significant role in economic development, they still face difficulties accessing traditional finance funds given the fact that they bear the risk of asymmetric information. As concluded by (Yoshino & Taghizadeh-Hesary, 2017) many SMEs in Asia borrow money by paying high rates of interest or offering costly collateral, which hinders their growth.

According to (Demirguc-Kunt, 2006) the research suggests that a competitive business environment, of which access to finance is an important component, facilitates entry, exit and

growth of firms and is therefore essential for the development process. Moreover, the study of (Blancher et.al, 2019) is consistent with the finding that financial inclusion has a positive impact on employment growth, with SMEs being a key driver.

Furthermore (Wulandari et.al, 2017) conclude that the most important requirements to acquire finance vary among the finance provider types. Although banks and MFI-s both provide credit, they focus on different requirements. Banks perceive character in terms of the history of loan repayments, the capacity of farmers to pay back the loan, and farmer ability to manage their farms as very important requirements. MFI focuses on character and knowledge of the finance application.

Meanwhile (Kumarasamy & Singh, 2018), in their study put forward that better access to formal or bank finance improves firms' chances of entering the export market. Greater financial sector development translates into higher likelihood of firms entering the export market. [...] Further inclusiveness in the financial sector would improve access to finance and promote exports from the remotely located firms. On the same track, (Butler & Cornaggia, 2011) found that production increases the most over the sample period in areas with relatively strong access to finance, even in comparison with a control group.

Even (Ayyagari, Demirgüç-Kunt & Maksimovic, 2008) concluded at 5% significance level, finance, crime, and policy instability have direct effect on firm growth, whereas at the 1% level only finance and crime have a direct effect on growth.

In his study about African countries, (Fowowe, 2017) finds that firms that are able to participate in financial markets will be able to grow faster. [...] The implications of these results are that firms who want to grow must overcome credit constraints and obtain more external finance. Likewise in his study (Harvie et.al, 2013) stated that access to finance is found to have a significant impact on the innovation capability and export market participation by SMEs. This study suggests that larger SMEs, by having access to larger loans, of a longer-term of repayment and with a lower interest rate, are in a better position to benefit from improved innovation capability and exporting activity. Obtaining external finance on more favourable conditions provides these SMEs with more time and resources to engage in improving their innovation capabilities and in entering foreign markets. Also (Tannous, 1997) states the same problem while studying the financing export activities of Canadian enterprises, showing major constraints of financial institutions in providing more financial resources.

Most of the time, these enterprises only use growth alternatives based on efficiency improvement, without focusing on other methods of growth based on internationalization. Managers of small enterprises often avoid engaging in these activities, due to lack of finance and investments. As discussed by (Wakkee et.al, 2015) a possible explanation for the discrepancy between commonly used and profitable growth paths may be found in the necessary investment that firms have to make, to embark on the more profitable growth paths: starting a new venture and entering a foreign market demand time, knowledge of the market and having the right contacts. And (Manova, 2013) finds that the impact of credit constraints on trade is driven by reductions in total output.

Moreover (Beck et.al, 2008) find that small firms and firms in countries with poor institutions use less external finance,

especially bank finance. They don't use other types of external sources thus they cannot compensate for the lack of access to banking finances. But larger enterprises can expand their external funds more easily.

III. MICRO, SMALL AND MEDIUM-SIZED ENTERPRISES SECTOR IN NORTH MACEDONIA

Micro small and medium-sized enterprises represent the most important group of enterprises for the economy of North Macedonia (N.M). This statement is based on the statistical data

presented by various state resources and institutions, also by international statistical databases.

The (European Commission, 2017) report says that SMEs account for almost two thirds of total value added and nearly three quarters of all jobs, considerably above the respective EU averages of 57 % and 67 %. While the wholesale and retail trade sector accounted for the largest share with nearly a third of SME value added, along with a similarly high share of employment.

According to the latest official statistical data, MSMEs are the most common type of enterprises in Macedonia. The majority of active enterprises are micro and small-sized and this trend is actual every year.

Table 1. Structure and number of active enterprises in Macedonia

Year	Number of active enterprises by size				Total
	Micro	Small	Medium	Large	
2009	38107	32406	533	197	70710
2010	59276	4051	1211	203	75497
2011	60620	4452	1187	185	73118
2012	61053	4732	1280	201	74424
2013	60599	4776	1291	209	71290
2014	60215	4961	1305	206	70659
2015	56261	4979	1339	231	70139
2016	56725	5141	1363	233	71519
2017	56658	5255	1382	236	71419
2018	57184	5271	1399	240	72315
2019	51800	22579	936	599	75914
2020	47589	23613	973	616	73061

Source: Prepared by the author according to the data of State Statistical Office of N.M. (Државен Завод за Статистика, 2021)

This table shows the fact that MSMEs are the most important entities of the economy of N.M. Regarding these numbers, we must admit that growth and development of these enterprises can lead to major developments of our economy, in terms of employment, GDP, exports, innovation, technology, etc. Providing an accessible financial infrastructure is a must, in order to support their growth and development, with the aim of economic growth and development of the country.

According to the report of (European Commission, 2017) the commercial banking sector is relatively sound and well capitalized, and has funds for loans. However, SMEs, especially micro companies and start-up companies face difficulties in accessing bank loans. Financial institutions working with smaller companies consider the latter to often have a low level of financial literacy (although no assessment has been made available about such a level of financial literacy amongst businesses). Smaller and micro companies continue to lack important skills in business planning and financial management which limit their potential to grow and access financing.

Access to finance is also presented on the evaluation reports of Doing Business, as one of the most important pillars and is set in a quite high rank. In their last country report, North

Macedonia (N.M.) is ranked very well. In terms of getting credit N.M is ranked in 12th place with a score of 85 out of 100 (see more: (WB Group, 2019).

According to the report of EIB about assessment of financing needs of SMEs by (Hauser et.al, 2016), the demand for finance in Macedonia is uneven across economic sectors. The size of each economic sector directly affects demand for finance. In addition, the demand of each economic sector will increase or decrease accordingly depending on the expected development of the sector. Trade is expected to continue driving the SME sector and, hence, the overall SME demand for finance [...] Small enterprises will drive the demand for SME finance. In terms of size, small enterprises will most probably lead demand. Micro-enterprises do not perform well, and their number and contribution to it turnover and value added have been declining. At the same time, demand from medium-sized companies is expected to be stable. This is a reasonable conclusion, relying on the fact that trade is the most developed sector in N.M. It is mentioned also in the country report conducted by (Culkin & Simmons, 2018) which pointed out that SMEs are concentrated in the retail and repair sectors, followed by manufacturing. [...] Well over 80% of these sectors are inward domestic rather than outward export-orientated.

In fact, we have to point out the fact that the political state of the country has a major impact in the financial support of MSMEs, based on the fact that N.M has been having a difficult transition period since its independence. This is also concluded in the study of (Bah et.al, 2011), as they see this situation as a formidable barrier to the survival and growth of firms.

Following the aforementioned facts, in this article we will discuss the following questions: 1) does size, and ownership affect access to credit? 2) Does access to finance affect enterprise growth? 3) Which firm-related characteristics are the most significant factors in obtaining credit for growth and development of the business? 4) How the manager's level of education and experience is linked to the business growth? 5) How is the interest rate linked with growth of the enterprise? 6) How the number of employees, assets and sales are affected by the access to credit? The final results will be presented and discussed, in order to make a comparison between the aforementioned reports and papers, and the real situation of financing and growth of MSMEs in North Macedonia.

IV. METHODOLOGY

This research is based in the economic theory that recognizes access to finance as a mere development opportunity for MSMEs. Likewise, it has been proven by the authors cited above, that mentioned financial resources, easier access to finance and use of credits, as preconditions which would have a positive role and impact, resulting in the development of the private sector, namely MSMEs. Following this, in the article will be estimated the impact of access to credit on MSMEs growth. In order to achieve even more detailed results, for every category of enterprises, the data are divided into groups, based on the size of MSMEs.

The data were collected directly from an enterprise survey as micro-level data. In the dataset I have included controlling variables such as; characteristics of enterprises, characteristics of enterprise managers, characteristics related to the credit, number of employees, asset and sales of enterprises. Based on the type of random sample data provided through the survey, I considered using different characteristics of variables or categorical variables, in order to extract the most valuable results.

2.1. Survey preparation

On this stage it is important to mention that the survey covers many aspects and characteristics of enterprises, which provides more data, in order to generate accurate results that match the reality. The questionnaire consists of 29 questions. It comprises questions about the enterprise, including: size, life expectancy, type of industry, city or location, type of ownership, problems and the most common challenges they have faced. The second part contains questions regarding the level of manager's education and experience. In the third part are some questions related to the financing part: type of financing (loan), purpose of the credit funds, also the financial institution from where they have obtained credits, credit amount, interest rate, collateral, repayment period and the non-financing assistance provided by the lender. For enterprises that didn't have to use external funding, they had the opportunity to show the reason why they did not want to use this form of funding. They were asked about the challenges or

obstacles their enterprises had faced during their business life. The survey made it possible for respondents to rate these problems encountered through grades, from one for the most common problems, to five for the rarest problems their business has faced.

In the last section of this survey, they have also answered some questions, which will help us reveal the effect of external financing in the development of MSMEs. Here I have included: enterprise growth rate, number of employees, value of asset (in MKD), value of products/services sold (in MKD). All these questions have been divided on the basis of pre- and post-credit situations.

2.2. Model specification

Many studies and literature have been consulted in order to choose the methodology that will be employed in this case. Many authors have also carried out studies on this topic, and they have used different models and methods to obtain their results. Thus (Wilfred et.al., 2013) have used Ordinary Least Squares (OLS), (Thylen M. & Selen V., 2016) have used Probit and OLS, while (Mustafa A., 2015) has used Logit regression.

Based on the type of the obtained data, I will use Probit - Cumulative standard normal distribution (Φ) method. This method is used when data is categorized as 'categorical' variables and the dependent variable takes a value between 0 and 1, or is ordinal. Probit measures the probability that the dependent variable is 1 ($Y = 1$), as a result of the changes of the independent variable, while other variables remain constant. In this case, the probit model according to (Gujarati, 2004) is as follows:

$P_i = P(X) = P(I_i^* \leq I_i) = P(Z_i < \beta_1 + \beta_2 X_i) = F(\beta_1 + \beta_2 X_i)$,
where $P(Y=1 | X)$ indicates the probability that the event will occur, taking in consideration the value of X-es and Z_i is normal standard variable.

$$P(\text{Growth} = 1 | X) \\ = \beta_0 + \beta_1 \text{Size} + \beta_2 \text{Ownership} \\ + \beta_3 \text{M. Education} + \beta_4 \text{Credit} \\ + \beta_5 \text{Colateral} + \beta_6 \text{Interest} + \mu$$

2.3. Descriptive statistics

The questionnaire was prepared specially for this research study, and was distributed electronically to over ten thousand enterprises. Of the received responses, only the fully answered questionnaires were put in the dataset. The data set is formed by 339 surveyed enterprises.

The variables presented in the table of descriptive statistics are the selected variables. The Y variable is considered growth of enterprise before and after credit (considering a five years period). The dependent variable has the value 1 if the enterprise has had a growth up to 20%, and it has taken the value 0 if the enterprise did not grow. These variables are presented with short codes and their explanation is as follows: industry - type of industry the firm is active in, city - city or location (capital city=1), size - size of the enterprise according to the number of employees (micro enterprise=1), ownership - type or status of ownership (single-owner and family business=1), age - age or duration of their business activity (up to 3 years=1). Variables linked to the manager: education – level of education of the owner (manager), (up to high school level=1), experience – experience of the manager expressed by years (up to 5 years=1). On the next part we see the obstacles - challenges or problems (production costs, experience of employees, access to finance, law and regulations and finding markets). Variables considered as representative of

characteristics related to credits: credit – need for use of credit (yes=1), subject – lending institution/credit provider, amount – credit amount, purpose – purpose or use of credit, interest - interest rate (up to 10%=1), collateral - need for loan guarantee (yes=1), type of collateral, repayment – repayment period, support services – any support services granted by the credit provider during the process (yes=1), non-financing reason - reasons for not using

credit. At the bottom of the table, I’ve shown variables which represent credit results: growth - enterprise growth before and after credit, employees - number of employees before and after credit, assets – value of assets before and after credit, sales - sales before and after credit.

Table 2. Descriptive statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
timestamp	0				
industry	338	4.440828	3.042389	1	8
city	338	3.656805	3.939524	1	12
sizebyempls	337	.7566766	.4297268	0	1
ownership	338	1.568047	.824216	1	4
agecompany	338	4.378698	.967616	1	5
educationm~r	338	2.905325	.7164254	1	4
experience~r	338	4.66568	.721073	1	5
obstaclesf~s	328	3.012195	1.273046	1	5
obstaclesa~e	328	2.789634	1.373053	1	5
obstaclesp~s	327	3.067278	1.280481	1	5
obstacleem~s	326	2.711656	1.536125	1	5
obstaclela~g	327	2.862385	1.377745	1	5
credit	336	.6071429	.4891139	0	1
subjectcre~t	249	2.116466	.874418	1	5
nonfinacin~n	229	2.637555	1.406309	1	5
amount	206	2.936893	1.596001	1	6
purpose	206	2.23301	1.512252	1	6
interest	191	1.905759	.6739657	1	5
colateral	188	.5159574	.5010797	0	1
typecolate~l	120	1.8	.8054437	1	3
repaymentp~d	182	1.71978	1.047778	1	5
supportser~s	191	2.602094	.7939215	1	3
growth	297	.6531987	.4767552	0	1
employeesb~t	332	11.57831	24.47472	1	250
employeesaft	327	13.57492	26.95269	1	250
assetsbefor~t	236	2.23e+07	6.09e+07	100000	5.80e+08
assetsaft~t	215	4.37e+07	2.19e+08	60000	3.01e+09
salesbefor~t	200	4.10e+07	1.59e+08	1000	1.80e+09
salesaft~t	198	1.14e+08	9.10e+08	1000	1.26e+10

Source: Authors’ calculations in Stata

The primary analysis of the sample shows that the majority of the surveyed enterprises are based in Skopje (capital) about 56 percent and the rest are in other cities. Also 75% of the sample are micro enterprises (up to 10 employees). In terms of ownership, it turns out that 82% of enterprises have one owner and/or incorporated (family-owned enterprises), while the rest are partnerships and corporations.

As for the duration of business activity or age of enterprises, it turns out that our sample has 6.8% new enterprises with up to 3 years, while the rest are enterprises with business activities over 3 years. In terms of the characteristics of the enterprise manager, we can see that 25.4% of managers have lower or secondary education while the rest have higher education. About 8% of managers have up to 3 years’ experience, while the majority have over 3 years of business experience.

In terms of credit characteristics, 89.9% of enterprises have received loans in the past years. It results that 88% of the enterprises have paid up to 10% interest for their credits. Of the total number of enterprises which have had access to finance, 51.6% of them stated that the banks have required some sort of collateral as a loan guarantee, while 41% stated that they have used the family real estate as collateral (house, land, etc.). As a reason for not asking for credit, 26% of them stated that it was because of the high interest rate, while 20% stated that the main problem were

the difficult procedures and numerous documents required for loan application in a bank.

What is important to say is that, only about 20% of enterprises have benefited from any form of assistance or counselling, about credit allocation and management, during or after the crediting process. This assistance often has included credit management advice and a very small percentage includes credit management training.

The impact of credit on enterprise growth has been very significant according to managers, as 95.3% of enterprises have resulted in growth of up to/around 20%.

In the last part of the survey, managers have marked the changes before and after credit, in terms of the number of employees, as well as the amounts of assets and sales. As a result, the average number of employees has increased from 11.55% to 13.5%. The assets mean has increased from 2.23% to 4.37%, while sales were lowered from 4% to 1%.

1. RESULTS

The results below will show the role and importance that access to credit has played for MSMEs growth and development. The following tables present more detailed results of the analysis, in order to see how the elaborated characteristics, such as type of industry, location, size by number of employees, type of ownership, experience and education characteristics of managers, have impacted MSMEs growth.

Table 3. Analysis of the enterprise-related characteristics

City	Freq.	Percent	Cum.
1	191	56.51	56.51
2	30	8.85	65.36
3	15	4.44	69.82
4	3	0.89	70.71
5	5	1.48	72.19
6	6	1.78	73.96
7	18	5.33	79.29
8	15	4.44	83.73
9	7	2.07	85.80
10	4	1.18	86.98
11	10	2.96	89.94
12	34	10.06	100.00
Total	338	100.00	

SizebyEmplo yees	Freq.	Percent	Cum.
0	82	24.33	24.33
1	255	75.67	100.00
Total	337	100.00	

Ownership	Freq.	Percent	Cum.
1	212	62.72	62.72
2	67	19.82	82.54
3	52	15.38	97.93
4	7	2.07	100.00
Total	338	100.00	

Industry	Freq.	Percent	Cum.
1	93	27.51	27.51
2	57	16.86	44.38
3	18	5.33	49.70
4	11	3.25	52.96
5	14	4.14	57.10
6	3	0.89	57.99
7	28	8.28	66.27
8	114	33.73	100.00
Total	338	100.00	

Age.Company	Freq.	Percent	Cum.
1	7	2.07	2.07
2	15	4.44	6.51
3	31	9.17	15.68
4	75	22.19	37.87
5	210	62.13	100.00
Total	338	100.00	

Source: Authors' calculations in Stata

The table shows that 56.5% of the enterprises are located in the capital city, followed by the largest cities; 8.8% are in Tetova, 5.3% in Bitola and 4.44% in Gostivar and Prilep, while in other cities we have less distribution. The distribution according to business activity across industries is diverse. The random sample consists of 27.5% construction companies, 16.9% wholesale and retail companies, 5.3% companies in processing industry, 3.25% farming and agriculture companies, 4.1% transport and storage, 3% tourism and catering, and 8.2% in information and communication industry, the rest are placed in other industries.

Regarding the age or business life of enterprises, the result shows that only a small proportion of enterprises are new businesses or start-ups. So, we have 27% of enterprises with more than 10 years business activity, 22% of enterprises with business activity more than five years or up to 10 years.

Table 4. Analysis of manager-related characteristics

Education.M anager	Freq.	Percent	Cum.
1	9	2.66	2.66
2	77	22.78	25.44
3	189	55.92	81.36
4	63	18.64	100.00
Total	338	100.00	

Experience. Manager	Freq.	Percent	Cum.
1	1	0.30	0.30
2	9	2.66	2.96
3	17	5.03	7.99
4	48	14.20	22.19
5	263	77.81	100.00
Total	338	100.00	

Source: Authors' calculations in Stata

The results regarding enterprise managers show that 55% of managers have higher education or bachelor degree, while 77% have secondary education and 63% have higher education including master's or doctoral degree. Also, in the part of manager's experience, they have stated that 22.8% have over 10 years' experience, 14.2% have between five and 10 years, while 5.3% have experience up to five years. Whereas, about 3% of managers have declared experience up to 3 years.

The influencing characteristics related to the credits include: loan amount, purpose, interest rate, presence of collateral and type, as well as repayment period. According to the results, 30% of the MSMEs have obtained credits between 15,000EUR-30,000EUR, while 20% of them have obtained small amounts up to 5,000EUR. In terms of credit destination, MSMEs have used their loan funds in different ways. About 40% of them have used credits for supply of working assets, while 37% for purchase of fixed assets. Only 7% of them have used credit funds for innovation. The most encountered repayment period has been the 'short-term loans'. About 58% of enterprises have used loans with a repayment period up to 3 years, and 23.6% of them have used loans with repayment periods up to 5 years.

Table 5. Analysis of credit-related characteristics

Amount	Freq.	Percent	Cum.
1	41	19.90	19.90
2	62	30.10	50.00
3	35	16.99	66.99
4	25	12.14	79.13
5	23	11.17	90.29
6	20	9.71	100.00
Total	206	100.00	

Purpose	Freq.	Percent	Cum.
1	76	36.89	36.89
2	83	40.29	77.18
3	12	5.83	83.01
4	14	6.80	89.81
6	21	10.19	100.00
Total	206	100.00	

Interest	Freq.	Percent	Cum.
1	46	24.06	24.06
2	122	63.67	87.96
3	20	10.47	96.43
4	1	0.52	96.95
5	2	1.05	100.00
Total	191	100.00	
Repayment.P eriod	Freq.	Percent	Cum.
1	106	58.24	58.24
2	43	23.63	81.87
3	15	8.24	90.11
4	14	7.69	97.80
5	4	2.20	100.00
Total	182	100.00	
Colateral	Freq.	Percent	Cum.
0	91	48.40	48.40
1	97	51.60	100.00
Total	188	100.00	
Type.Colate ral	Freq.	Percent	Cum.
1	53	44.17	44.17
2	36	31.67	75.83
3	29	24.17	100.00
Total	120	100.00	

Source: Authors' calculations in Stata

Table 6. Correlation matrix of credit and credit-related variables

	credit	employ~t	employ~t	a~befo~t	a~afte~t	salesb~t	salesa~t
credit	1.0000						
employeesb~t	0.0127	1.0000					
employeesaf~t	0.0178	0.9528	1.0000				
assetsbefo~t	0.0260	0.3764	0.5457	1.0000			
assetsafte~t	0.0271	0.6631	0.7004	0.7721	1.0000		
salesbefor~t	0.0201	0.7065	0.7968	0.4918	0.4061	1.0000	
salesafter~t	0.0099	0.3693	0.4059	0.2922	0.2886	0.5030	1.0000

Source: Authors' calculations in Stata

V. DISCUSSION

The descriptive statistics above provided very meaningful information, which already gives us an overview of the results we can expect from the following model analysis. As

On this point, it is worth mentioning the need for an analysis of the correlation matrix among variables, such as credit and variables that have changed as a result of access to credit. The table below shows a positive correlation between access to credit with the following variables: number of employees before and after credit treatment, assets before and after credit treatment, sales before and after credit treatment.

The results indicate a positive correlation, but the changes are smaller. This could be a result of an improper use of the credit by the managers. In the first part it's mentioned that credits have been used mostly for supply of fixed and working assets, about 77%, while only a small percent of enterprises have used credits for any kind of innovation.

it's mentioned above, the Probit regression model was suggested, based on the type of data and the variables available for this study, since the dependent variable has a qualitative and binomial character, meaning that it receives value from 0 to 1, according to the probability of change of the independent variables.

Table 7. Probit regression

Iteration 0:	log likelihood =	-117.28026			
Iteration 1:	log likelihood =	-111.04966			
Iteration 2:	log likelihood =	-111.02058			
Iteration 3:	log likelihood =	-111.02057			
Probit regression					
Log likelihood =	-111.02057				
Number of obs =	179				
LR chi2(5) =	12.52				
Prob > chi2 =	0.0283				
Pseudo R2 =	0.0534				
growth	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]
colateral	.0483425	.2014758	0.24	0.810	-.3465429 .4432279
interest	.3165973	.3001932	1.05	0.292	-.2717705 .9049652
sizebyempl~s	-.6915821	.2329452	-2.97	0.003	-1.148146 -.235018
ownership	-.0277541	.2925873	-0.09	0.924	-.6012147 .5457065
educationm~r	.1485256	.2300032	0.65	0.518	-.3022723 .5993235
_cons	.5299542	.4556403	1.16	0.245	-.3630844 1.422993

Source: Authors' calculations in Stata

In this case we have set the dependent variable which is, growth of MSMEs (in the table: growth). The set of independent

variables in the model are: collateral, interest, size, ownership and manager's education. The coefficient of Prob> chi2 is 0.028, it is

is not being able to meet the criteria of the traditional crediting system, due to their risky nature. The main problem is to measure the impact of credits in firms' growth and find a solution, of how to provide an easy access to finance and funds for them, in order to support their growth through a more suitable business environment.

The analysis for this study is based on a survey of 339 companies, while the data were analysed through correlation matrix, probit regression model and two-sample *t* test. Regarding the qualitative nature, the data is initially analysed through descriptive statistics. The primary results gave a positive signal, this means that the selected variables are quite significant, and have the power to explain the dependent variable (enterprise growth). The set of independent variables included: enterprise characteristics (size, type of industry, ownership, and age), manager characteristics (education and experience), credit characteristics (amount, interest, purpose, collateral, etc.), changes in the number of employees, amount of assets and sales (before and after credit).

The first statistical results showed that 78% of the surveyed enterprises are micro. About 75% of managers have mainly higher education. About 89% of enterprises have received credits in the last five years. The most frequent interest rate has been up to 10% while about 52% of enterprises have been asked to guarantee their credit through collateral. The amounts of loans they have received were mostly up to 30,000 EUR, followed by loans up to 5,000 EUR.

The probit regression result confirms that access to finance has a positive impact on enterprise growth, but in a more detailed analysis, it has proved that the partial coefficients of size and ownership are negative. These coefficients show that micro enterprises are about 60% less likely to obtain credit, while those with a single owner of familiar businesses are about 2% less likely to obtain credit or have access to finance. Based on the means obtained from the *'two-sample t-test'*, the Kolmogorov-Smirnov test indicates that there are differences between the categories of the selected variables and there is shown a statistical significance of the variables.

Thus, based on the derived results we can come to a conclusion that smaller firms often are left out of the traditional financing system. However, we cannot define the guilt only onto the banking sector. These enterprises must provide more reliability to the financial sector through effective credit utilization, commitment to innovation, management and staff training, and technology transfer.

On the other hand, the government institutions of developing countries similar to N.M., must provide serious opportunities of financial support, whether from the banking sector or non-banking sector. As a researcher I recommend to the government, a promotion of new policies, involvement of microfinance, crowdfunding, business angels, venture capital, business accelerators, and other types of financial support. The role and impact of these types of financial support for small businesses represents a good basis for future studies.

REFERENCES

- [1] Abraham & Schmukler. (2017, 10). Addressing the SME Finance Problem. Research and Policy Briefs From the World Malaysia Hub. No. 9, 9, 1-4.
- [2] Andres. (2011). Family ownership, financing constraints and investment decisions. *Applied Financial Economics*, 1641-1659. doi:10.1080/09603107.2011.589805
- [3] Aterido et.al. (2011). "Big Constraints to Small Firms' Growth? Business Environment and Employment Growth across Firms. *Economic Development and Cultural Change*, 59(3), 609-647. doi:10.1086/658349
- [4] Ayyagari, Demirgüç-Kunt & Maksimovic. (2008). How Important Are Financing Constraints? The Role of Finance in the Business Environment. *World Bank Economic Review*, 22(3), 33:483-516.
- [5] Bah et.al. (2011). With a Little Help From Our Friends: The effect of USAID assistance on SME Growth in a Transition Economy. *Journal of Comparative Economics*, 39, 207:205-220. doi:10.1016/j.jce.2011.03.001
- [6] Beck et.al. (2008). Financing patterns around the world: Are small firms different? *Journal of Financial Economics*, 89(3), 467-487.
- [7] Bhaumik et.al. (2015). What Do We Know About Entrepreneurial Finance and Its Relationship with Growth? *International Small Business Journal*, 33(1), 70-88. doi:10.1177/0266242614547827
- [8] Blancher et.al. (2019). Financial Inclusion of Small and Medium-Sized Enterprises in the Middle East and Central Asia. *International Monetary Fund. Departmental Paper Series*, 19(2), 54:1-66. Retrieved from www.elibrary.imf.org
- [9] Butler & Cornaggia. (2011). Does Access to External Finance Improve Productivity? Evidence From a Natural Experiment. *Journal of Financial Economics*, 99, 184-203. Retrieved from <https://econpapers.repec.org>
- [10] Chung. (2014). The role of family management and ownership on semi-globalization pattern of globalization: The case of family business groups. *International Business Review*, 23(1), 260-271. doi:10.1016/j.ibusrev.2013.04.005
- [11] Culkin & Simmons. (2018). Study of the Challenges that Hinder MSME Development in FYR Macedonia. Country Report for the British Council and Swedish Institute. British Council. Retrieved from www.britishcouncil.org
- [12] Demirguc-Kunt, B. &. (2006). Small and Medium-size Enterprises: Access to Finance as a Growth Constraint. *Journal of Banking & Finance*, 30, 2941: 2931–2943. doi:10.1016/j.jbankfin.2006.05.009
- [13] European Commission. (2017). Small Business Fact Sheet. Country Report. FYR Macedonia. Brussels: European Commission. Retrieved from http://ec.europa.eu/small-business/index_en.htm
- [14] Fowowe. (2017). Access to finance and firm performance: Evidence from African countries. *Review of Development Finance*, 7, 14: 6-17. doi:<http://dx.doi.org/10.1016/j.rdf.2017.01.006>
- [15] Gujarati. (2004). *Basic Econometrics*, Fourth Edition. The McGraw-Hill company.
- [16] Harvie et.al. (2013). Small and Medium Enterprises' Access to Finance: Evidence from Selected Asian Economies. *ERIA Discussion Paper Series*, 41:1-54. Retrieved from www.eria.org > ERIA-DP-2013-23
- [17] Hashi & Krasniqi. (2011). Entrepreneurship and SME Growth: Evidence from Advanced and lagged Transition Economies. *International Journal of Entrepreneurial Behaviour & Research*, 17(5), 461:456-487. doi:DOI 10.1108/13552551111158817
- [18] Hauser et.al. (2016). Assessment of Financing Needs of SMEs in the Western Balkans Countries. Country Report - FYROM. Economics Department. EIB. Retrieved from www.eib.org
- [19] Kumarasamy & Singh. (2018). Access to Finance, Financial Development and Firm Ability to Export: Experience from Asia-Pacific Countries. *Asian Economic Journal*, 32(1), 36:15-38.
- [20] Love, Roper & Zhou. (2016). Experience, age and exporting performance in UK SMEs. *International Business Review*, 25, 814: 806–819. doi:10.1016/j.ibusrev.2015.10.001
- [21] Manova. (2013). Credit Constraints, Heterogeneous Firms, and International Trade. *Review of Economic Studies*, 80(2), 711-744.
- [22] Mertzanis. (2017). Ownership structure and access to finance in developing countries. *Applied Economics*, 49(32), 3204:3195–3213. doi:<http://dx.doi.org/10.1080/00036846.2016.1257106>
- [23] Mustafa A. (2015). Access to Bank Loan of SMEs in Kosovo. Master Thesis. Ljubljana: Faculty of Economics. University of Ljubljana.
- [24] Tannous. (1997). Financing Export Activities of Small Canadian Businesses: Exploring the Constraints and Possible Solutions. *International Business Review*, 6(4), 411-431. Retrieved from <https://www.sciencedirect.com>

- [25] Teima et.al. (2010). Scaling-up SME access to financial services in the developing world (English). Washington DC: World Bank Group. Retrieved from <http://documents.worldbank.org/curated/en/669161468140035907/Scaling-up-SME-access-to-financial-services-in-the-developing-world>
- [26] Thylen M. & Selen V. (2016). Beg, Borrow or Sell - The Impact of Microcredit on Financial Inclusion. Master Thesis. School of Economics and Management, Lund University.
- [27] Wakkee et.al. (2015). Effective Growth Paths for SMEs. *The Journal of Entrepreneurship*, 183:169-185. doi:DOI: 10.1177/0971355715586894
- [28] WB Group. (2019). Doing Business 2019. Economy Profile. Macedonia FYR. 16th Edition. The World Bank Group. Retrieved from www.doingbusiness.org
- [29] Wilfred et.al. (2013). The Impact of Microfinance Service Delivery on the Growth of SMEs in Uganda. Dakar: Investment Climate and Business Environment Research Fund & Trust Africa. Retrieved from www.trustafrica.org/icbe
- [30] World Bank. (2019, 05 10). Data Bank. World Development Indicators. North Macedonia. Retrieved 05 10, 2019, from World Bank: <https://databank.worldbank.org/data/reports.aspx?source=2&country=MKD#>
- [31] Wulandari et.al. (2017). Access to Finance From Different Finance Provider Types: Farmer Knowledge of the Requirements. *Plos One*, 12(9), 12:1-15. doi:<https://doi.org/10.1371/journal.pone.0179285>
- [32] Yoshino & Taghizadeh-Hesary. (2017). Solutions for Small and Medium Enterprises' Difficulties in Accessing Finance: Asian Experiences. *ADB Working Paper* 768, 16:1-23. Retrieved from <https://www.adb.org/publications/solutions-smesdifficulties>
- [33] Zhang et.al. (2012). Family Ownership and Business Expansion of Small- and Medium-sized Chinese Family Businesses: The Mediating Role of Financing Preference. *Journal of Family Business Strategy*, 3(2), 97-105. doi:doi.org/10.1016/j.jfbs.2012.03.002
- [34] Државен Завод за Статистика. (2021, 12). Мак Стат база на Податоци, Деловни Субјекти. Retrieved 15 12, 2021, from Државен Завод за Статистика: <http://makstat.stat.gov.mk/PXWeb/pxweb/mk/MakStat/>

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