

Fintech in the Entrepreneurial Ecosystem: Analysis of the Relationship of Variables in SMEs in the State of Mexico

Zugaide Escamilla-Salazar

Universidad Autónoma del Estado de México
Centro Universitario Atlacomulco
Estado de México, México
zescamillas@uaemex.mx

Lila Margarita Bada-Carbajal

Senior Lecturer of Management
Instituto Tecnológico Superior de Álamo Temapache
Tecnológico Nacional de México
Veracruz, Mexico
lila.bc@alamo.tecnm.mx

Anahí Hernández-Botellodel

Universidad Autónoma del Estado de México
Centro Universitario Atlacomulco
Estado de México, México
ahernandezb004@alumno.uaemex.mx

Abstract

Small and medium-sized enterprises (SMEs) generate a significant boost in the national economy; however, the permanence in the market of these companies is relatively short due to the various problems they face, among which the lack of access to financing stands out. The entrepreneurial ecosystem is a gear that moves the economy through the participation of all the actors, and, without a doubt, financing is part of this gear; therefore, the new ways of financing SMEs are a point of discussion since Fintech are companies that promote certain benefits for these businesses. Therefore, the research objective of this paper is to analyze the relationship between Fintech services and the financial characteristics of SMEs in two municipalities. The type of research is quantitative, diagnostic, and correlational. The research method is deductive. The study subjects are SMEs in the northern zone of the State of Mexico. The results show that the entrepreneurs of these SMEs surveyed perceive Fintech as a handy technological tool to finance themselves through crowdfunding platforms. In conclusion, using the Fintech tool as a financing alternative can be used by entrepreneurs who need help obtaining financing due to the high-interest rates they must pay when applying for a loan.

Keywords

Fintech, Financing, Entrepreneurial Ecosystem, Business Financial Inclusion.

1. Introduction

Small and medium-sized enterprises (SMEs) generated a significant boost in the national economy only in 2022; with the generation of 1.7 million jobs, which resulted in a 3.1 percent increase in the employed population (INEGI 2023), however, the permanence in the market of these companies is relatively short due to the various problems they face, among which the lack of access to financing stands out since through this the same survey revealed that only

20% of small and medium-sized companies in the country had access to financing during 2022. The entrepreneurial¹ ecosystem is a gear that drives the economy through the participation of all stakeholders and, without a doubt, financing is part of this gear; therefore, the new ways of financing SMEs is a point of discussion since Fintech are companies that promote certain benefits for these businesses. Everybody these arguments lead to the following objectives.

1.1 Objectives

1. Analyze the relationship between Fintech services (financial intermediaries, fintech services, reasons for not using financial services, utility of Fintech services, Fintech benefits, crowdfunding financing) and SMEs in two municipalities.
2. Analyze the relationship between the financial characteristics (financing sources, internal financing, external financing, expected benefits when applying for loans, loans requested per year, amount of loans, the destination of financing, the preferential interest rate when applying for loans, maturity term of the credit, guarantees granted when applying for credit) and, the SMEs of two municipalities.

The paper is organized as follows. Section 2 shows the importance of SMEs and financing. Section 3 describes the method addressed to achieve compliance with the set hypotheses. Finally, section 4 shows the data collection that was carried out through the field study, and in section 5, the results and discussions are presented, and finally, the conclusions are shown.

2. Literature Review

Small and medium-sized companies represent a high percentage of participation in the economies (Cuervo et al. 2006) of the countries; in Mexico, according to figures from the National Institute of Statistics and Geography (INEGI), small companies represent 93.6% of companies, while small companies only 0.8%. However, they contribute 52% to the GDP and generate 72% of formal employment. However, they have relatively low survival rates, given that only 62.6% of these ventures remain until the first year of their birth, and 42.6% only survive up to two years (Reyes 2019), like companies anywhere in the world, SMEs in the country also need help to remain in the market.

In this sense, the most recurring problems found in Mexican SMEs, according to Schorr (2021), have to do with administrative issues and a considerable technological lag; for his part Chávez (2020) adds other factors that are related to the lack of support from public policies, the second is the lack of financing, although the author points out that this does not imply that such support does not exist, but that it is complex for enterprises to access it.

Information and Communication Technologies (ICTs): An ally in entrepreneurship. ICTs are conceived as those techniques used to process and transmit information through electronic means such as the Internet and telecommunications; these technologies have constituted a change in the performance of tasks in the financial field thanks to the management of public finances, personal and business through the use of the Internet, which is why today they are considered a central component of the financial market, given that the impact generated by these tools fosters the expansion of Fintech companies that innovatively offer financial products (Bermeo et al. 2019), positioning itself as an ideal alternative in the business field. Therefore, it is evident that technology promotes inclusion and financial competitiveness in Mexico, and not only in the country, based on a technological innovation that promotes a reduction in the costs of financial services so that users can access better financial products and services (Gutiérrez 2019) very quickly.

In this sense, Fintech has become an alternative source of financing for those people and companies that are excluded from the traditional financial system (Pérez 2020). It is essential to mention that the expansion of the Fintech industry has been developed thanks to the low investment costs involved in the constitution of these companies, given that, in general, they do not have physical facilities and ATMs or networks to provide their services, as is the case traditional financial entities (Pandu-Nugraha et al. 2022), therefore, they have a greater capacity to invest in technology and reach more users by offering lower costs, because among their advantages is the use of technological advances to reach users excluded by the traditional financial system (Fan and Chao 2023), in addition to creating low-cost banking

¹An entrepreneurial ecosystem refers to more than physical proximity since an entrepreneur requires training, financing, human talent, an appropriate cultural and social context, and an open market and infrastructure (Sarabia and Delhumeau 2009).

products that can be used with any electronic device that has an Internet connection. However, one of its disadvantages may be money laundering or financing of illegal activities (Cuya 2017, as cited in Saldarriaga and Gallego, 2020); the reality is that the advantages for SMEs are much more (Khai-Nguyen and Cuong-Dang 2022).

The review of the literature has allowed us to detect that studies on financing have been addressed for more than a decade in the field of entrepreneurship, emphasizing the analysis of the restrictions that these companies have to obtain monetary resources from financial institutions, such as This is the case of the works of Mora (2014), Guercio et al. (2017), Franco et al. (2019), Carvajal and Carvajal (2018) and, Canossa and Rodríguez (2019); to name a few, in said writings it is observed that qualitative and quantitative research has been carried out around the world aimed at knowing the factors that affect access to financing of SMEs, finding very similar findings among them, which define that this sector opts for self-financing through suppliers, since derived from the requirements requested by traditional financial institutions to grant credit, they opt for obtaining financial resources from other sources to monetize.

It is essential to mention that this work is based on solid arguments extracted from recent works such as those by Xiang et al. (2020) and Perez (2020). Next, some studies found from the variables and indicators extracted from the works mentioned above are mentioned.

2.1 Research carried out with the variables under study

Firstly, those studies will be described that, based on the literature review, focus on some variables selected in this work; therefore, it begins with the group of variables corresponding to Fintech, which in turn includes the financial intermediary indicators and services offered, then the group of variables corresponding to financial characteristics will be described, including internal-external financing and bank loans.

Fintech variable and the services offered indicator, the study carried out by Britto and Castro (2019) analyzes the types of services that these companies provide and that SMEs in the construction sector can acquire in the municipality of Risaralda Colombia, thus determining that they have a wide variety of services that they can contract, they also highlight that these services or products that can be applied to the sector are crowdfunding or P2P loans, invoice financing, investment advice, security, security systems, payments and transfers, online accounting and marketing, the main contribution is that Fintech can be adopted in any venture depending on the characteristics and needs that each one presents.

In this order of ideas, Pérez (2020) carried out a study on Fintech in Colombia. Their perception of SMEs regarding the services offered, applying a questionnaire to 790 SMEs to determine the knowledge and opinion they have about Fintech companies and the services they offer, obtaining that seventy-eight percent of the companies under study would use the financial services offered by Fintech companies because they are attracted to characteristics such as flexibility, time savings, and cost reduction, however, 22% would not use these services due to lack of trust and ignorance of how they work.

On the other hand, regarding the Fintech variable and the financial intermediaries indicator, Xiang et al. (2020), based on the study carried out in 1,185 high-tech SMEs in China to determine the use of Fintech, refer that in terms of services financial technology offered by this sector of companies, financial intermediaries are the digital platforms through which the financial service is contracted (Stolbov and Shchepeleva, 2023). Therefore they provide cheaper loan services than traditional financial institutions operating entirely online. For this reason, when contracting financing through Crowdfunding services and P2P loans, the organization that provides the Crowdfunding website or platform is identified as the intermediary (Awais et al. 2023), as indicated by De Jesús et al. (2021) in their study aimed at identifying the factors that impact the financing success of SMEs that participate in collaborative funding platforms, companies that provide financing services through crowdfunding must be registered to act as intermediaries in providing this service.

Therefore, regarding the variable Financial characteristics and the indicator of internal and external financing, the study by González (2014) is rescued, which aimed to determine the link between financial management and obtaining financing in 1,455 SMEs in the commerce sector of Bogotá in Colombia, obtaining that SMEs are financed internally through their assets, mainly using suppliers, accounts payable and financial obligations as sources of financing, because they require more current assets. However, few companies usually use external financing through bonds and commercial paper, although their incidence is almost zero, which is why the author affirms that this source of financing is exclusive to large companies.

Moreover, it points out that financing through internal sources is since entrepreneurs prefer to maintain control of their business by preventing the entry of third parties. However, it can also be a consequence of the distrust of the financial market in the business segment of SMEs, which agrees with what Gaviria et al. (2018) express in their study carried out regarding the financing alternatives for SMEs in Antioquia Colombia where the application of a questionnaire to 100 companies it was obtained that 32% of the sample has not been able to access external financing, due to because they do not have the documentation requested by the banking institutions. Consequently, they do not have sufficient liquidity to cover the debt.

In this sense, regarding the bank loan indicator, Xiang et al. (2020) point out that this option is one of the three primary sources of financing used by SMEs. However, Córdova et al. (2014) refer in their study applied to family SMEs in the commercial sector in Machala Ecuador, that although these companies resort to bank loans as a primary source of financing, they present a series of obstacles in terms of this type of financing, Because they face the high-interest rates imposed by the banks to grant the credit, likewise, the microentrepreneurs express that other obstacles face when seeking financing through this means are the guarantees that request to ensure that they will cover the amount Of the debt.

Based on the studies above, it can be observed that the majority of them are investigations aimed at knowing the perspective of SMEs regarding the services offered by Fintech, as well as the factors that influence the acceptance of financing from these companies, therefore, from According to the most outstanding findings of these investigations, Fintech is identified as being an innovative and accessible business model for SMEs (Xiaohui et al. 2023).

Based on the theoretical arguments raised previously, the following hypotheses are proposed:

- H1: There is a positive and significant relationship between the indicator financial intermediaries and SMEs
- H2: There is a positive and significant relationship between the Fintech services indicator and SMEs
- H3: A positive and significant relationship exists between the indicator that does not use Fintech service and SMEs
- H4: There is a positive and significant relationship between the utility indicator of the Fintech service and SMEs
- H5: There is a positive and significant relationship between the indicator benefits of the Fintech service and SMEs
- H6: There is a positive and significant relationship between the Crowdfunding indicator and SMEs
- H7: There is a positive and significant relationship between the financing sources indicator and SMEs
- H8: There is a positive and significant relationship between the internal financing indicator and SMEs
- H9: There is a positive and significant relationship between the external financing indicator and SMEs
- H10: There is a positive and significant relationship between the credit facility indicator and SMEs
- H11: There is a positive and significant relationship between the credits per year indicator and SMEs
- H12: There is a positive and significant relationship between the indicator amount of loans and SMEs
- H13: There is a positive and significant relationship between the destination indicator of financing and SMEs
- H14: There is a positive and significant relationship between the interest rate indicator and SMEs
- H15: There is a positive and significant relationship between the maturity term indicator and SMEs
- H16: There is a positive and significant relationship between the indicator guarantees granted and SMEs

3. Methods

The type of research is quantitative, diagnostic, and correlational. The research method is deductive. The study subjects are SMEs in the northern zone of the State of Mexico; in this sense, according to data provided by the Institute of Statistical Information and Geography (INEGI 2018), there are a total of 3,955 SMEs, of which 3,169 correspond to small ones and 786 to medium-sized ones business (Table 1).

However, for the present investigation, 3,955 companies established in the State of Mexico are considered as the total population since there is no official record of the number of SMEs that are located in the municipalities of the northern zone of the State of Mexico, specifically in the municipality of Atlacomulco and Temascalcingo where the field research is carried out, as shown in the following table 1. It should be noted that the sample with which we finally work corresponds to 46 SMEs ²from the municipalities above.

²The arguments of Rovira (wd) are adopted, who affirms that more than 30 subjects are sufficient, explaining that: “if a sample is large enough ($n > 30$), whatever the distribution of the variable of interest, The distribution of the sample

Table 1. Calculation of the sample

Error range	50%
Confidence level	95%
Population size	3,955
Sample size	46

Source. Own development based on online sample calculator

In order to collect the information in the field, a questionnaire was prepared based on the authors mentioned above, which is made up of 22 questions in three blocks; the first one refers to the characteristics of the company, made up of two dichotomous questions and four multiple choice questions, block two corresponds to the financial characteristics of the company and is made up of eleven multiple choice questions, finally, block three corresponds to the Fintech, in it, five questions are integrated, two dichotomous and three multiple choices, however for this work, only the variables corresponding to the Fintech block and financial characteristics are presented.

4. Data Collection

For data collection in the two municipalities selected for this work, small and medium-sized entrepreneurs were identified through references from the inhabitants of said municipalities for data processing. The data obtained were recorded in an Excel spreadsheet, which was transferred to the SPSS statistical program. Likewise, Cronbach's alpha ($^3\alpha$) reliability test was carried out, obtaining that $\alpha = 0.770$, according to George and Mallery (2003) cited in Galindo (2020), a value between 0.7 and 0.8 is acceptable, and it is usually considered that those instruments that have a Cronbach's alpha value greater than 0.70 are reliable.

5. Results and Discussion

Univariate analysis was used since it allows studying the behavior of the variables individually through simple tabulations of frequencies and percentages (Fernández, 2004). Therefore, the frequency distributions (f) and absolute percentages (%) of the variables selected for this work are presented below: *Fintech services* (Financial Intermediaries, Fintech Services, Reasons for not using financial services, Usefulness of Fintech services, Fintech benefits, Crowdfunding financing) and *financial characteristics* (Financing sources, Internal financing, External financing, Expected benefits when applying for loans, Loans requested per year, Amount of credits, Financing destination, Preferential interest rate when applying for loans, Credit expiration term, Guarantees granted when requesting a loan) in SMEs of two municipalities in the northern zone of the State of Mexico, tables 2 and 3 show the results.

mean will be approximately normal. In addition, the mean will be the same as that of the variable of interest, and the standard deviation of the sample mean will be approximately the standard error”, arguments supported by Gorgas et al.(2011).

³ Method used to measure the reliability of a measurement instrument (Galindo 2020).

Table 2. Statistics descriptive corresponding to Fintech Services

Variables	Indicators	Atacomulco		Temascalcingo	
		Frecuency	%	Frecuency	%
F I N T E C H	Intermediarios Financieros				
	Fintech Companies	0	0%	1	7%
	Lenders	1	13%	3	20%
	Cooperatives	2	25%	4	27%
	I do not go to other types of intermediaries	5	63%	7	47%
	Fintech Services				
	Yes	5	63%	13	87%
	Not	3	38%	2	13%
	Reasons not to use financial services				
	I don't know how these kinds of financial services work	0	0%	1	7%
	It does not give me confidence	1	13%	3	20%
	I prefer traditional banking	2	25%	0	0%
	None of the above	5	63%	10	67%
	Other	0	0%	1	7%
	Utility of Fintech services				
	Very useful	5	63%	12	80%
	Little useful	3	38%	3	20%
	Nothing useful	0	0%	0	0%
	Fintech Benefits				
	Accesibilidad	2	25%	3	20%
	Flexibilidad	2	25%	6	40%
	Ahorro de tiempo	1	13%	5	33%
	Reducción de costos	3	38%	1	7%
Crowdfunding					
Yes	6	75%	13	87%	
Not	2	25%	2	13%	

Source. Self-made

It is detected that of the total SMEs surveyed, 73.9% would use financial services from Fintech companies (n=34), and only 26.1% have little interest in going to a Fintech to obtain financial services. In this way, 15.2% of the total SMEs surveyed would not use Fintech services because they do not know how they work (n=7), 13.0% do not trust them (n=6), 8.7% prefer traditional banking (n=4) and 60.9% do not express the reasons why they would not use these financial services (n=28). In this context, for 78.3% of the SMEs surveyed, it is beneficial to contract financial services through Fintech companies (n=36). In comparison, for 17.4%, it could be more beneficial to request financial services from these companies (n=8), and 4.3%, do not represent any utility to Fintech. Therefore, 30.4% of the SMEs surveyed find it more interesting to hire Fintech services due to the flexibility of this business model (n=14). Likewise, 28.3% are interested in reducing costs (n=13), 26.1% in accessibility (n=12), and 15.2% in saving time (n=7). In summary, 80.4% of the SMEs surveyed would request financing through crowdfunding platforms (n=37). However,

19.6% have nyet interest in obtaining financing for their company through this service offered by Fintech companies (n =9).

Table 3. Statisticians descriptive corresponding to the Characteristics financial

Variables	Indicadores	Atacomulco		Temascalcingo	
		Frecuency	%	Frecuency	%
C H A R A C T E R I S T I C S F I N A N C I A L	Financing sources				
	External	1	12.50%	1	6.70%
	Internal	3	37.50%	6	40%
	Both	3	37.50%	4	26.70%
	None	1	12.50%	4	26.70%
	Internal financing				
	Profit retention	1	12.50%	2	13.30%
	Parther contributions	2	25%	2	13.30%
	Sale of assets	1	12.50%	3	20%
	Financial performances	1	12.50%	1	6.70%
	None of the above	3	37.50%	7	46.70%
	External financing				
	Banks loans	1	12.50%	3	20%
	Credit lines	3	37.50%	4	26.70%
	Informal financing	1	12.50%	3	20%
	None above	3	37.50%	5	33.30%
	Expected benefits when applying for credits				
	All of the above	1	12.50%	4	26.70%
	Ease of request	0	0%	3	20%
	Facilities to make payments	1	12.50%	2	13.30%
	Competitive interest rates	2	25%	2	13.30%
	None of the above	4	50%	4	26.70%
	Loans requested per year				
	From 1 to 2	2	25%	6	40%
	From 3 to 4	2	25%	2	13.30%
	One every two years	1	12.50%	0	0%
	One every three years	0	0%	1	6.70%
	It is not usual to request credits	3	37.50%	6	40%
	Amount of credits				
	\$1,000 to \$10,000	1	14.30%	6	42.90%
\$11,000 to \$50,000	2	28.60%	3	21.40%	
\$51,000 to \$100,000	2	28.60%	0	0%	
\$101,000 to \$200,000	0	0%	0	0%	
More than \$200,000	0	0%	0	0	
Others	2	28.60%	5	35.70%	
Financing destination					

Working capital	1	12.50%	2	13.30%
Investment	4	50%	8	53.30%
Incidentals and expenses	0	0%	2	13.30%
None of the above	3	37.50%	3	20%
Others	0	0%	0	0%
Preferred interest rate when applying for loans				
Fixed interest rate	5	62.50%	6	40%
Variable interest rate	0	0%	1	6.70%
Both interest rates	0	0%	1	6.70%
None of the above	3	37.50%	7	46.70%
Credit expiration term				
Short term	1	12.50%	5	33.30%
Medium term	2	25%	6	40%
Long term	2	25%	1	6.70%
None of the above	3	37.50%	3	20%
Guarantees granted when applying for a loan				
I'll pay	1	12.50%	3	20%
Garment	0	0%	0	0%
Mortgage	0	0%	2	13.30%
Endorsements	2	25%	8	53.30%
None of the above	5	62.50%	2	13.30%

Source:Self-made

Regarding the financial characteristics and the indicators that comprise it, it is observed that in the SMEs surveyed, they resort to internal financing with 52.2% (n=24), and only 4 of the companies request external financing (represented by 8.7%), although 23.9% also refer to using both sources of financing (n=11), and only 15.2% express not resorting to any source of financing. Likewise, it is identified that most of the internal financing resources come from the partners' contributions, represented by 26.1% (n=12), and in turn by the retention of profits with 23.9% (n=11). On the other hand, 30.4% resort to external financing by requesting lines of credit (n=14), 15.2% to informal financing (n=7), and 13.0% to bank loans, although 41.3% indicate not contracting or request external financing through these means of attracting resources. Another percentage resorts to external financing by requesting lines of credit, 30.4% (n=14), 15.2% to informal financing (n=7), and 13.0% to bank loans. However, 41.3% indicate not hiring or requesting external financing through these means of attracting resources. Of the SMEs surveyed, 34.8% request bank loans 1 to 2 times a year on average (n=16), while 8.7% contract between 3 to 4 loans a year (n=4), 6.5% indicate that they resort to credit every two years (n=3) and 4.3% reported requesting credit every three years (n=2), however, 21 of the SMEs surveyed expressed not requesting credit, representing 45.7% of the total.

Therefore, regarding the indicator credits requested, it is observed that 34.8% request bank loans 1 to 2 times on average a year (n=16), while 8.7% contract between 3 to 4 credits a year (n=4), 6.5% indicate that they resort to credit every two years (n=3) and 4.3% refer to requesting credit every three years (n=2), however, 21 of the SMEs surveyed express not requesting credit, representing 45.7% of the total. Regarding the credit amount indicator, 22.7% of the SMEs surveyed refer to requesting credits for an amount between \$1,000.00 to 10,000.00 pesos (n=10). In comparison, 15.9% express that the requested credits are between \$11,000.00 to 50,000.00 pesos (n= 10); likewise, 20.5% indicate that they contract credits for amounts of \$51,000.00 to 100,000.00 pesos (n=9) 6.8% say they request credits of \$101,000.00 to 200,000.00 pesos (n=3) and 4.5% for amounts more significant than 200,000.00 pesos, however, 29.5% indicate that they do not request credits.

Meanwhile, 15.2% allocate the financing requested for working capital (n=7), although more frequently, 54.3% use the financial resources requested for investment (n=25), and 8.7% use it to cover unforeseen events and expenses (n=25). However, 19.6% reported not requesting loans; regarding the interest rate indicator, 63.0% said they prefer to request a credit or fixed bank loan (n=29). In comparison, 2.2% indicate that they prefer variable interest rates (n=1),

and 4.3% express that they prefer interest rates—both fixed and variable interest (n=2). Regarding the guarantees granted, the SMEs surveyed most frequently grant the promissory note as a promise to pay their creditors, with 17.4% of the total (n=8), 4.3% resorting to the pledge (n=2), 10.9% giving a mortgage as a guarantee (n=5) and 28.3% presents guarantees to be able to access the requested credit (n=13). Finally, the indicator called financial intermediaries shows that 8.7% have applied for financing with Fintech companies (n=4), 19.6% with lenders (n=9), 15.2% have resorted to cooperatives (n=7), and 56.5% have not resorted to any other type of intermediary other than banks to request a loan or credit.

To determine if there is a relationship between the variables under study, Fintech services (financial intermediaries, Fintech services, reasons for not using financial services, utility of Fintech services, Fintech benefits, crowdfunding financing) and financial characteristics (financing sources, internal financing, external financing, expected benefits when applying for loans, loans requested per year, amount of loans, the destination of financing, the preferential interest rate when applying for loans, credit maturity, guarantees granted when applying for a loan) in SMEs of two municipalities in the northern zone of the State of Mexico, a bivariate analysis is carried out through the calculation of the Pearson correlation coefficient (r), the results are shown in Table 4.

Table 4. Correlation Matrix Bivariate

		SMEs	IF	SF	NSF	UF	PF	C	FS	FI	FE	CF	CPY	AC	FD	IR	EP	GG
SMEs	Pearson	1																
	Next (bilateral)																	
	N	46																
Intermediaries Financial	Pearson	-0.16	1															
	Next (bilateral)	0.288																
	N	46	46															
Services Fintech	Pearson	-0.015	0.079	1														
	Next (bilateral)	0.923	0.601															
	N	46	46	46														
Not Services Fintech	Pearson	-0.068	0.036	.572**	1													
	Next (bilateral)	0.655	0.81	0														
	N	46	46	46	46													
Utility Fintech	Pearson	-0.199	0.225	0.269	-0.021	1												
	Next (bilateral)	0.184	0.134	0.071	0.889													
	N	46	46	46	46	46												
Profits Fintech	Pearson	0.279	0.016	0.022	-0.041	0.054	1											
	Next (bilateral)	0.06	0.915	0.883	0.787	0.721												
	N	46	46	46	46	46	46											
Crowdfunding	Pearson	0.043	0.172	.456**	.324*	0.275	0.185	1										
	Next (bilateral)	0.775	0.254	0.001	0.028	0.065	0.22											
	N	46	46	46	46	46	46	46										
Funding Sources	Pearson	.437**	0.121	0.088	0.248	.023	0.075	0.25	1									
	Next (bilateral)	0.002	0.425	0.559	0.097	0.879	0.619	0.094										
	N	46	46	46	46	46	46	46	46									
Financing Internal	Pearson	0.179	.330*	0.082	0.135	0.202	0.009	0.006	.410**	1								
	Next (bilateral)	0.234	0.025	0.586	0.37	0.179	0.863	0.967	0.005									
	N	46	46	46	46	46	46	46	46	46								
Financing External	Pearson	0.065	.459**	0.065	-0.037	0.211	0.052	0.08	0.07	0.274	1							
	Next (bilateral)	0.67	0.001	0.67	0.808	0.16	0.732	0.598	0.642	0.065								
	N	46	46	46	46	46	46	46	46	46	46							

⁴ Bivariate analysis methods study the relationships between variables taken in pairs, retrieved from: http://cv.uoc.edu/moduls/UW03_84003_01131/web/nwin/m1/medidas_3.pdf.

	N	46	46	46	46	46	46	46	46	46	46								
Credit Facilities	Pearson	-0.074	0.123	0.184	0.119	0.286	0.033	0.286	0.029	0.012	0.162	1							
	Next (bilateral)	0.624	0.414	0.222	0.43	0.054	0.826	0.054	0.851	0.935	0.282								
	N	46	46	46	46	46	46	46	46	46	46	46							
Credits per Year	Pearson	0.079	0.12	0.025	0.053	0.088	0.079	0.133	0.117	0.093	.576**	.343*	1						
	Next (bilateral)	0.601	0.426	0.87	0.725	0.56	0.602	0.377	0.439	0.537	0	0.02							
	N	46	46	46	46	46	46	46	46	46	46	46	46						
Amount of Credits	Pearson	0.034	0.219	0.168	-0.052	0.271	0.091	0.077	-0.017	0.046	.628**	.408**	.682**	1					
	Next (bilateral)	0.828	0.154	0.274	0.736	0.075	0.555	0.619	0.914	0.768	0	0.006	0						
	N	44	44	44	44	44	44	44	44	44	44	44	44	44					
Financing Destination	Pearson	0.015	.295*	-0.033	0.288	0.251	0.223	0.079	0.242	0.196	.424**	.344*	.484**	.559**	one				
	Next (bilateral)	0.923	0.047	0.826	0.052	0.092	0.137	0.604	0.105	0.191	0.003	0.019	0.001	0					
	N	46	46	46	46	46	46	46	46	46	46	46	46	46	4	46			
Interest Rate	Pearson	0.243	0.196	-0.009	0.051	0.172	0.184	0.088	0.214	.473*	.419**	0.184	.476**	.596**	.638**	one			
	Next (bilateral)	104	0.193	0.951	0.738	0.254	0.221	0.959	0.153	0.001	0.004	0.22	0.001	0	0				
	N	46	46	46	46	46	46	46	46	46	46	46	46	44	46	46			
Expiration Period	Pearson	-0.087	.458**	-0.042	0.263	.297*	0.045	0.014	0.122	0.145	.487**	.393**	.457**	.664**	.710**	.519**	one		
	Next (bilateral)	0.566	0.001	0.779	0.078	0.045	0.766	0.927	0.42	0.335	0.001	0.007	0.001	0	0	0			
	N	46	46	46	46	46	46	46	46	46	46	46	46	44	46	46	46		
Guarantee Granted	Pearson	-139	0.258	-0.003	0.066	0.11	0.037	0.11	-0.02	0.087	0.106	0.248	0.275	0.102	.330*	.350*	0.256	one	
	Next (bilateral)	0.358	0.083	0.984	0.661	0.466	0.809	0.466	0.894	0.564	0.482	0.096	0.065	0.51	0.025	0.017	0.085		
	N	46	46	46	46	46	46	46	46	46	46	46	46	44	46	46	46	46	

Source: Self-made

The main results show that the only variable selected for this work is the financing sources variables since there is a weak positive correlation when crossing with the SME variable ($r=.437$). Therefore, 52.2% of the SMEs surveyed affirm that they resort more frequently to internal financing, although 8% tend to resort to external financing, which agrees with what was reported by González (2014) regarding the fact that SMEs tend to finance themselves internally, however, few companies use the external financing, so its incidence is almost nil. However, it is observed that when crossing the variables of internal financing and financing sources, there is a weak positive correlation ($r=.410$), likewise for external financing and financial intermediaries, there is a weak positive correlation ($r=.459$), external financing and financial intermediaries show a weak positive correlation ($r=.459$), maturity term and financial intermediaries show a weak positive correlation ($r=.458$), the utility of Fintech services and the reason why they would not be used present a medium negative correlation ($r=-.572$), crowdfunding and reasons for not using Fintech services show a weak positive correlation ($r=.324$), expiration period and Fintech utility show a weak positive correlation ($r=.297$), as reported by González (2014), Gaviria et al. (2018), Britto and Castro (2019), Pérez (2020) to name a few.

6. Conclusion

Fintech financial services detect the use of this technological tool as a source of financing in SMEs in two municipalities in the north of the State of Mexico. Therefore, the following is concluded: Of the SMEs surveyed, they resort to internal financing, while they only resort to external financing. Internal financing comes from the partners' contributions and the retention of profits. External financing comes from requests for lines of credit, informal financing, and bank loans. The financing is used for working capital and investment and covering contingencies and expenses. SMEs turn to financial intermediaries such as Fintech companies, lenders, and cooperatives of the SMEs surveyed if they would use financial services from Fintech companies and are not interested in going to a Fintech to obtain financial services. SMEs would not use Fintech services because they need to learn how they work, do not trust them, and prefer traditional banking. For SMEs, it is beneficial to hire financial services through Fintech companies. At the same time, it is not very useful to request financial services from these companies, and Fintech companies do not represent any use. SMEs find it more interesting to contract Fintech services due to the flexibility of this business model, while others are interested in cost reduction, accessibility, and time savings. Of course, SMEs would request

financing through crowdfunding platforms while he has no interest in obtaining financing for their company through this service offered by Fintech companies.

In this sense, by analyzing the perspective of SME entrepreneurs in the northern area of the State of Mexico regarding Fintech services, it is determined that they are willing to contract Fintech services and request financing through crowdfunding platforms, since it is helpful for them to hire these financial services due to the accessibility, flexibility, cost reduction, and time savings that it implies. However, there still needs to be more trust and knowledge about using these financial services that use technology to provide users with a different experience. In this way, the proposed hypothesis is accepted because, through the analysis of the perspective of SME entrepreneurs in the northern zone of the State of Mexico regarding Fintech services, it was possible to detect the use of this technological tool as a source alternative for financing. Precisely, it is estimated that the data obtained regarding the use of Fintech services as a financing alternative is because in Mexico, entrepreneurs have difficulties obtaining financing due to the high-interest rates they must pay when applying for a loan (Entrepreneur, 2019), which is why some entrepreneurs of the SMEs surveyed expressed that it is beneficial for them to use Fintech services due to how these services are contracted through electronic platforms. Likewise, the use of Fintech services does not represent a problem for entrepreneurs since one of the characteristics of entrepreneurs is precisely their ability to assess risks and accept new challenges (Santillán et al. 2015), so using platforms Crowdfunding is a new challenge that they are willing to accept to keep their companies at the forefront of technology and thus be able to more easily access the financial resources they need to continue growing and expanding their business.

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Biographies

Zugaide Escamilla Salazar. Ph.D. in Administration, Ph.D. Candidate in Methodologies and lines of research in Accounting and Auditing from the University of Cantabria, Spain. She currently works as a Full-Time Professor at the UAEM and is an academic certified by ANFECA. He is a member of various Research Networks. His publications include scientific articles and book chapters, and he has presented papers in national and international forums. His research revolves around the variables associated with entrepreneurship, family businesses, and social responsibility. In the last five years, he has advised undergraduate theses awarded by ANFECA, creator of the National Research Contest "The pleasure of investigating" (CU UAEM Atlacomulco - ANFECA) has PRODEP recognition, belongs to the National System of Candidate Level Researchers.

Lila Margarita Bada -Carbajal is a Senior Lecturer of Management at the graduate Research and Department of Engineering in Administration at Tecnológico Nacional de México, Instituto Tecnológico Superior de Álamo Temapache Veracruz, Mexico and Visiting Lecturer at the Department of Postgraduate Research at Instituto Politécnico Nacional, Escuela Superior de Comercio y Administración USTO in Mexico City. She is a Member of the National System of Researchers (SNI) of the National Council of Science and Technology (CONACYT), with the Distinction of National Researcher Level I. She has led projects of business sustainability to help organizations implement sustainability and research projects funded by the Program of Faculty Professional Development for Higher Education (PRODEP) in Mexico. Dr. Bada -Carbajal has published over 18 articles and scientific journals and participated in various international conferences. Her research applies to management, competitiveness, supply chain, value chain, clusters, quality management, and business sustainability.

Anahi Hernandez Botello is graduated in Administration from the UAEM Atlacomulco University Center, Autonomous University of the State of Mexico. Winner of 1st Place in papers in the 6th. Research Contest the Pleasure of Investigating, She currently works in a service company, and the position he holds is an operational assistant.