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QUANTITATIVE ANALYSIS OF SMALL AND MEDIUM-SIZED ENTERPRISES (SMES) FINANCING IN EL SALVADOR, CENTRAL AMERICA. A SITUATION COMPLICATED BY HIGH CRIMINALITY

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ABSTRACT. This article analyzes financing alternatives for SMEs in El Salvador (Central America) that operate in the context of high levels of crime. SMEs represent 9.0% of the country's business sector, and together with micro-enterprises they account for 99.6%. Likewise, both participate with 35% of GDP and 67% of employment. The loans from the financial system, as of December 31, 2020, amounted to \$3,107.22 million, which covered 60% of SMEs' demand. Four hypotheses are proposed and tested using Multiple Indicators Multiple Causes (MIMIC), a structural equation model (SEM). The model revealed that the Salvadoran banking system has low confidence in the country's SMEs, which makes it extremely difficult for these companies to obtain loans. Some structural changes in the country's financial sector are urgently needed, but the state of violence and degree of mistrust in financial and social institutions are difficulties that only a real state of law and order can overcome. This, in turn, can act as a catalyst for sustainable economic progress. The sample includes 405 cases obtained from the surveys of managers in various companies. They were carried out during the months of March, April, May and June in 2019.

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Introduction

El Salvador is located in Central America and is one of the smallest countries on the continent, covering an area of 21,040 km². Yet, it has the highest demographic density in the region, with 316 inhabitants per km², a fact that leads to serious environmental deterioration (Tanner, 2010). Its population is 6,643,000 inhabitants. The urban population index increased from 44.1% in 1980 to 73.4% in 2020, resulting in significant overcrowding in cities, especially in its capital, San Salvador (World Bank, 2020). Additionally, 1,500,000 Salvadorans live abroad, most of them in the USA (Wiltberger, 2014).

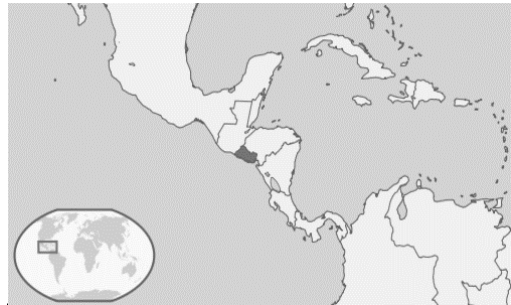


Figure 1. El Salvador. Central America
Source: *Google Maps*

In 2019, Salvadoran emigrants sent \$5,650.2 million in family remittances to their country, almost 20% of GDP, which helps to reduce the 30% level of poverty (World Bank, 2020). The capital, San Salvador, has 2,380,000 inhabitants. The 2019 GDP was \$28,989 million with the GDP per capita of \$4,363.8. The main export product is coffee (Banco Central de Reserva, 2020). As of January 1, 2001, the US dollar was adopted as the country's currency. Likewise, in June 2021, through a virtual conference, the President announced the adoption of Bitcoin as the second legal currency.

The main current problem in El Salvador is insecurity created by gangs called "maras", which comprise organized crime groups (Galvez, 2019). This does not promote a favorable business or social climate, especially in the segment where SMEs carry out their activities (World Bank, 2020). The enormous social differences, which became even more acute since the thirties of the last century, led to a bloody civil war that lasted 12 years, from 1980 to 1992 (Alarcón, 2015). The conflict, far from solving the situation, worsened it, leaving the country



Figure 2: Maras detained in a El Salvador jail.
Source: *Twitter@PresidenciaSV*

with shattered infrastructure, critical insecurity, collapsed institutions and much of the social and family fabric disintegrated. In the mid-1990s, violent youth groups appeared, coming from poor environments, with little or no access to basic social services, such as education, health, housing, drinking water and employment (Musalo, 2018 and Ministerio de Educación, 2009). In the midst of this scenario and at the end of the civil war, numerous multilateral development organizations established themselves in the country to help in its reconstruction. In this way, hundreds of infrastructures, social and microfinance projects were designed and carried out.

The definition of SMEs is categorized as follows: (i) a small business has an annual sales level greater than \$100,000 and up to \$1,000,000, with a maximum of 50 paid workers; while (ii) a medium-sized company, with annual sales between \$1,000,001 and \$7,000,000, with a maximum of 100 paid workers. SMEs, together with micro-enterprises, contribute 35% of GDP and 67.6% of employment (Banco Central de Reserva, 2020). Therefore, they have vital importance for national economic activity. On the other hand, the banking system is usually inclined to lend to large companies, although it claims to have credit lines destined for SMEs. Moreover the tendency is to favour medium-sized companies, so that, in practice, for small entities, access to bank financing is difficult (Chorro, 2010). In this regard, in 2020, the

total credits granted to SMEs were about \$3,107.22 million, according to the following detail presented in table 1.

Table 1. Balances of loans granted to SMEs as of December 31, 2020 (10⁶ US dollars)

Type of company	Banks	Cooperative- saving banks	Financial and saving institutions	Total
Medium	1,643.13	231.97	25.21	1,900.31
Small	1,066.04	36.79	104.08	1,206.91
Total SME's	2,709.17	268.76	129.29	3,107.22

Source: *Supervisor of the Financial System. 2020's report*

According to the World Bank, "Country Strategy" (2016-2019), the amount \$3,107.22 million, represents 60% of the total demand for loans from SMEs. Likewise, this sum makes up 40% of the total credits granted by the system (Superintendencia del Sistema Financiero, 2020). Finally, it should be noted that the influence of SMEs in Salvadoran society goes beyond the strictly economic, given that they have weight in social areas such as the family environment, health, education, poverty reduction and gender equality (Castillo et al., 2014).

The structure of the paper is as follows. After a general introduction, a literature review is presented, followed by the methodological approach used; in this aspect, the experimental design to gather the sample data is commented, as well as the econometric models used to test the research hypotheses and to estimate several causal relations; the use of Multiple Indicators Multiple Causes and Structural Equations Models allow to establish some causal relations that permit to assess the influence of some influential factors on the Salvadorean credit market in this sector of SME's. These models have been estimated with IBM's AMOS software, and the results about the usual diagnostics tests and fit measures are presented, as well as the parameters obtained. The results support the research hypotheses and are followed with a discussion and conclusions about the credit market in the country. In the introduction, a broad presentation of the country, with its main geographical, economic and social aspects, is detailed, highlighting its serious crime problem that affects all the economic system. Then, the sub-sector of SME's and their financing is revealed, derived from the actual academic literature available. Thus, once the general aspects of the country in which SMEs carry out their activity, and the corresponding literature, have been presented, we consider it logical that the methodological approach should follow. This part explains in detail all the statistical tools used in the investigation, beginning with an overview, and ending with the applied model. The third part presents the results obtained and the respective explanations. Finally, in the discussions we have related our article to other pertinent studies, where we have tried to underline that the scenario where Salvadoran SMEs' economic activity differs from scenarios in other countries due to the high degree of crime. And, in the conclusions, an endeavour is made to respond to the hypotheses raised in the investigation, especially the first one, which is related to the low confidence of the banking system towards SMEs. Among them, the "new SMEs" from the microenterprise sector are highlighted.

The objective of this research is to study aspects of the financing available for SMEs in El Salvador, Central America. In this regard, the insufficiency of credits is analyzed, due to the low level of confidence of the entities of the formal financial system towards SMEs. The latter constitutes the main hypothesis of this article, and to support it, a modality of SEM is applied, called Multiple Indicators Multiple Causes (MIMIC). The originality of the theme is found above all in the scenario in which the business of SMEs is developed: in a country where the climate of high criminality is the dominant trend.

1. Literature review

This section gives an overview of the importance of SMEs in developing economies, then relating it to the Salvadorian context. For SMEs and their impact on business and social aspects in general, the latest report of the OECD, 2020, highlighted that sufficient access to different sources of financing is essential so that SMEs can contribute to inclusive growth. But, the taboo subject for financing SMEs in El Salvador is usually risk related to criminality. In the European scenario, Araujo-Lima et al., (2020), present research carried out on 61 selected articles which argues that SMEs represent the backbone of the European economy and growth. That said, the aforementioned taboo is very little studied, and it should be a recurring topic of research, especially for Central American economies.

Information and Communications Technology (ICT) also has a role for SMEs. A study on the application of business software in SMEs was carried out by Yanine et al., (2020). Thus, the use of the “Dynamic Balanced Scorecard” (DBSC) was very helpful for SMEs whose strategies were based on promoting sustainability and innovation. Chege et al., (2019), present an analysis in Kenya on ICT and its effect on job creation in sites communicated via networks. In a sample of 240 people, this study examines the association between technological innovation and the performance of companies in that African country. Kraemer-Eis et al., (2019), study the main SME financing markets relevant to European Investment Bank: equity and debt products (guarantees, securitisation, leasing, private debt funds, microfinance and Fintech). Likewise, Yee-Whah & Ee-Shiang, (2018) analyze the performance and contributions of SMEs in Malaysia. They evaluate the policies and initiatives implemented from the Eighth Malaysia Plan 2001-2005 to the Eleventh Plan 2016-2020, as well as the Master Plan for SMEs 2012-2020. All these studies indicate that ICT has a positive effect one way or another on SME performance.

As for the role of SMEs in sub-Saharan Africa, Sanders, (2017) states that this region, the poorest in the world, should emphasize its development strategy in: (i) the creation of conditions so that the young population does not migrate to Europe, and (ii) job creation, one of the basic conditions being that this is promoted above all through SMEs. An analysis using macroeconomic scenarios that conditions loans to SMEs, is was carried out by Jenkins & Hossain, (2017). They mention that a paradigm shift has been taking place in the financing of SMEs. For example, in Turkey, banks are increasingly targeting SMEs as a new line of business. They study how macroeconomic factors contribute to the increase in commercial banks lending to SMEs in six countries: Turkey, Argentina, Brazil, Mexico, Chile and Poland. They found that a high GDP growth rate and greater competition in the banking sector contributed to increasing such credit. Motta, (2017) affirms that SMEs have difficulties accessing bank loans, due to the requirements that they request, related to annual sales, guarantees, external audits. The results showed that SMEs that met these requirements were more likely to obtain financing.

In the Latin American context, the impact that crime has on the behavior of SMEs was also studied by Motta, (2016). He analyzed the relationship between murders, robberies, vandalism, arsons, etc., on low labor productivity and the high cost of business for SMEs. Briozzo et al., (2016), through a sample of Argentinian SMEs, analyzed the determinants of the financing decisions characterized through three groups: the trade-off, the hierarchy theory, and extreme aversion to debt. They were observed that the characteristics such as the maturity of the SMEs, size and legal constitution, the owner's age and education, etc., were significant variables for financing. Keasey et al., (2015) proposed a theoretical model on financial costs of SMEs. He maintains that such costs are lower when tangible assets are used as collateral for short-term debt; and they increase with the use of long-term secured debt. Cassar et al., (2015) examined whether more sophisticated accounting methods - such as the application of the

accrual principle - interact with other sources of information to reduce problems between SMEs and their lenders. This would reduce the likelihood of loan denial, and even lower the cost of debt. Moro et al., (2015) analyzed the relationship between the quality, quantity, integrity and timeliness of the information that the administrators of 828 loans obtained from SMEs and the amount of credit granted in the short term. The result showed that the amount of the credit increases by 12% when the quality of the information increases.

An analysis of the competitiveness of Salvadoran SMEs was carried out by Castillo et al., (2014), in a document promoted by the technical cooperation of the IDB ATN/ME-12341-ME and carried out in Mexico. Granados, (2019) presented a study on the characterization of bank financing of Salvadoran micro, small and medium-sized enterprises (MSMEs). These studies highlight the difficulty of SMEs in obtaining loans from the formal financial system. Berger et al., (2014) studied the conventional paradigm that community banks are in a better position to establish solid relationships with SMEs, whose quality of information tends to be rather opaque. On the other hand, large banks tend to serve corporations, which in theory are considered more transparent. But, the results show that the paradigm is not fulfilled, perhaps due to the changes implemented in credit technologies and to banking deregulation. Mancusi & Vezzulli, (2014) studied the effects of credit rationing on investment in RandD using a representative sample of manufacturing SMEs. The econometric model contrasted that credit rationing had a significantly negative effect on carrying out RandD activities.

Presbitero & Rabellotti, (2014) in a study on Colombian SMEs, refuted the criticisms about the real impact of microcredit as an antidote to poverty. They suggested that, for example, in Colombia, the distances between the borrower's and the microfinance institution, and the scarce road infrastructure, make it difficult for the financing the business of SMEs. Through a survey among commercial banks in Mexico, Fenton & Padilla, (2013) analyzed the financing of MSMEs. The results showed that there is interest in expanding credit to them. But, the barriers determined were: insufficient information, lack of legal status, failures in the creditor protection system, informality and bankruptcies of commercial banks during the last 30 years. Posey & Reichert, (2011) concluded that credit guarantees in loans to SMEs result in lower interest rates, but in smaller lines of credit. Koljatic & Silva, (2011) reported the results of a study that evaluated intersectoral alliances between SMEs and cooperatives that operate in low-income sectors in Latin America. In this regard, everything indicated that these alliances play an important role in the creation of value chains.

Elsewhere in the world, Zada et al., (2019), assess the impact of forestry SMEs in Pakistan and their potential role in reducing poverty and promoting rural livelihoods. The results reveal that, in addition to obtaining 3% more income and owning 24% more assets, there is a strong positive correlation between these SMEs and the improvement of the livelihoods of a rural community. Lu et al., (2014) studied the industrialization in Guangdong, China, during the last 30 years. They analyzed the contribution of SMEs in 60% of GDP and 75% of employment in that city. However, industrial development had a negative impact on health services and the quality of life of the rural population which had sought permission to emigrate to the cities. Adair & Fhima, (2014) analyzed an imbalance model to estimate credit rationing for SMEs in the Tunisian banking market. Based on panel data of 1,275 SMEs, from 2001 to 2006, the results showed that the demand for bank credit is not determined by endogenous factors. That is, the level of activity and internal resources available to SMEs, but rather due to exogenous factors, such as the cost of financing and the guarantees required by banks. And the latter largely explain the shortage of bank credit for the sector.

Ruiz, (2007) analyzed the causes of the differences in banking between Spain and Latin America. He concluded that the main cause is the lack of confidence in Latin American financial systems due to the different financial crises, a situation that has more repercussions on SMEs. Furthermore, the numerous institutional and legal bureaucratic obstacles - such as

the need to verify the origin of amounts less than 3,000 euros - make it difficult for SMEs to use banking services. Beck & Demirguc-Kunt, (2006) state that is evident that SMEs face greater growth restrictions and have less access to formal sources of external financing. So, they recommended that, for example, leasing and/or factoring, can be considered as better financing alternatives. Likewise, Berger & Udell, (2006) proposed that to reduce the financing problems, credit technologies should be the facilitating conduit through which the country's financial policies flow to satisfy credit demand. In this sense, Berger et al., (2005) mentioned that for the credit rating of SMEs, Small Business Credit Scoring (SBCS), the same criteria are usually used to rate large companies. That is, they are prepared to rate higher amounts and levels of risk. This fact was manifested in numerous events, but the proposed solutions continued to use the same mentality, and therefore models, as for the analysis of corporations.

Despite the fact that COVID-19 burst onto the world scene a few months after this research was carried out, it was considered appropriate to include some bibliographies related to the pandemic and its impact on SMEs. In this way, the study by Rokibul, M. et al., (2022), tried to understand the struggles of SMEs during the Covid-19 crisis in a developing country. Furthermore, it provided a critical strategic framework of dynamic resilience to manage SMEs in the crisis period. Klyver, K. and Løwe, S. (2021) concluded in their study that COVID-19 seriously harmed SMEs; but, at the same time, it motivated them to change their strategies to face the crisis. Thus, through measures of perseverance and innovation, many have managed to survive. However, Ehabu, A. (2022), in his study on SMEs in Ethiopia, mentioned that their survival there has become almost impossible. The option would be to seek the help of governments. But as the budgets are usually very low, only international NGOs are the only potential saviours of the bankruptcy situation of SMEs. Habanik, et al. (2021) mentioned that with Slovakian government interventions in the labor market - including that of SMEs - both employers and workers were forced to adapt to survive at work. Even so, he affirmed that the pandemic brought with it opportunities and new challenges for the optimization of human resources.

The bibliographic reviews on SEM that support this research are indicated below. The literature on MIMIC was introduced by Jöreskog & Sörbom, (1996), where a latent variable is a predictor of observable variables. Holmes & Miller, (2019) examined the estimation of MIMIC parameters when a prior information had an incorrect mean. The results showed that the use of this type of information, with a variance slightly greater than the standard deviation, produces more precise parameter estimates than the maximum probability estimate. Allen et al., (2020) analyzed the services provided by an Italian airport based on an SEM-MIMIC approach. They capture the heterogeneity in perceptions of users and identify groups of passengers with similar assessments of the services. The results suggested the presence of four constructs which affected the overall satisfaction at the terminal: namely information, control, environment, and food service. In more general terms, Bollen, (1989) wrote about the use of latent variables in SEM in different social sectors. Bagozzi & Heatherton, (1994) present a framework to demonstrate personality constructs in four levels of abstraction, using latent variables. Browne & Cudeck, (1993) considered two types of error involved in fitting a model: the first one was error of approximation and the second one was overall error which involved the fit of the model. Bentler, (1990) mentioned that normed - coefficient yield new normed (CFI) - and non-normed fit indexes (NFI) are frequently used as adjuncts to chi-square statistics for evaluating the fit of a structural model.

From the perspective of the bibliographic review, the research hypotheses are presented. The first is related to the lack of trust in the banking system, especially towards small companies (Ruiz, 2007). The second concerns that a state guarantee can facilitate the loans to SMEs (Posey & Reichert, 2011 and Adair & Fhima, 2014). The third refers to the fact that one of the main barriers to granting loans to SMEs is their lack of legal personality (Fenton & Padilla, 2013).

And the fourth, has to do with the level of annual billing and its correlation with the ease, or not, of granting loans (Motta, 2017). The conclusions in relation to El Salvador are therefore:

H₁: Credit demand of SMEs in El Salvador is only partially met due to the low confidence of banks towards them.

H₂: If credit applications from SMEs had a state guarantee, the loan would tend to be easier.

H₃: One of the main reasons for the credit to be denied is the lack of legal status of SMEs.

H₄: The higher the annual sales, the easier it is to access bank financing.

2. Methodological approach

2.1. Overview

SEM is a statistical methodology that uses a confirmatory approach of multivariate analysis applied to a structural theory related to a given phenomenon (Byrne, 2001). And, MIMIC is the model in which some exogenous observable variables are the causes of the latent variable, which, in turn, determines the variation of endogenous observable variables (Jöreskog & Sörbom, 1996).

2.2. Sample data

For this research, 800 surveys were sent to Salvadoran's SMEs, through Google Drive, and 405 have been validated. This number represents a sufficient sample over a finite population of about 318,000 economic units, of which 5.32%, about 17,000, are SMEs (CONAMYPE, 2018 and ASOMI, 2020). The expected sampling error in the estimation of proportions is $\pm 4.81\%$, with a 95% confidence (Lind et al., 2001). In the highly dangerous context in which the country lives (Zúñiga, 2008), that favors the opacity of the economic and social scenario, the reception of 405 surveys can be considered a very good achievement. The addresses of the SMEs surveyed were chosen randomly through the database of REDICCES-CONAMYPE, (2017). Some crucial institutions were also contacted, such as the University of Central America (UCA), as well as different business associations in the country, which sent the survey to their associates via the internet. It was carried out between the months of March and June 2019. The questionnaire had three parts: the information of the owners; general data on SMEs; and their financing. The responses were tabulated using SPSS software, version 26.

The sample includes 49.3% of owners of small companies, 16.3% of general managers or administrators, and 14.3 of financial executives; 66.4% were men and 33.6% women; more than 75% had a degree; 26.7% had an official recognition in general management, or information technologies, but only 5.9% in financial management. Over 69% of the managers were middle-aged (from 31 to 56 years); 69.9% where established companies and the rest acted as self employed individuals. The firms' activities were commercial in 43.7% of the cases, in the service' sector, 48.9%, or industrial, in 7.4% of the cases; 42.5% of the cases are over 15 years old, and 42% had only been working for less than five years or had no previous experience. The number of employees in the firms varies from one to nine in 14.3% of the cases, from 10 to 49 for 69.1%, and larger in 16.6%. Regarding the opportunities of additional financing, 84.9% consider that it would increase these, and 72.8% would demand it from commercial banks, while 13.1% would expect them from the public sector; a lesser proportion would use cooperatives, micro-financing, factoring (well-known by 22.5% of companies), leasing or informal creditors; only 5.7% would consider self-financing the ordinary activities.

In the past, 72.1% have applied for banking finance, one or several times, while over 27% have never used bank's credits; the same proportion appreciates the sector, while 19% think of the financial sector as a 'necessary evil'; over 91% would consider bank's finance in the future; in more than 30% of the cases, credit was refused by the banking sector; this financing is considered in 54.8% of the cases due to its interest and terms offered. The public sector SME's financing has only reached to 1% of firms. Saving-banks, credit cooperatives and micro-financing organizations are well known but seldom used. When applying for finance, most of the cases compare rates, terms and collaterals. Rates and red-tape are considered as a hurdle for many firms that do not use the financial sector. The lack of collateral or capital are the main causes for credit's application denials, while public support has been used in 3% of the approved operations. The banking institutions more active are Banco Agricola (29.1% of credit applications) and Banco Hipotecario (10.9%); the rest are mainly with smaller banks. The destinations of funds are for machinery and equipment (46.5%), inventories (28%), expanding (14.4%) and the rest for working capital; only 1.7% for R&D. Nowadays, bank credit is the preferred option due to lower rates, conditions and speed processing.

2.3. Multiple Indicators Multiple Causes (MIMIC)

As mentioned above, in order to test our hypotheses, the overall statistical SEM-MIMIC model was used. The causal relationships between the measured and latent variables are represented in the graph 3. The variables are observable, obtained from the SMEs, and unobservable construct used in testing the research hypothesis (Caridad y Ocerín, 2016). In relation to the SEM-MIMIC, six exogenous observable variables are the causes of a latent variable, which, in turn, determine the variation of two endogenous observable variables. The following table 2 details the selected variables.

Table 2. Variables in the model

	Ratio	Variable
η	Low confidence of banks in SMEs	Latent
X1	Did the loans approved have a state guarantee?	Exogenous
X2	Credit: Operating investment	
X3	Credit: Equipment investment	
X4	Credit: Real estate investment	
X5	Average annual sales amount	
X6	Legal estatus	
Y1	Number of credit applications granted	Endogenous
Y2	Number of credit applications denied	

Source: own compilation

2.4. AMOS SEM Model

In figure 3, the representation of the causal relationships can be observed. The latter allow specifying, estimating, evaluating and presenting structural models to show hypothetical relationships between the variables that we have previously described.

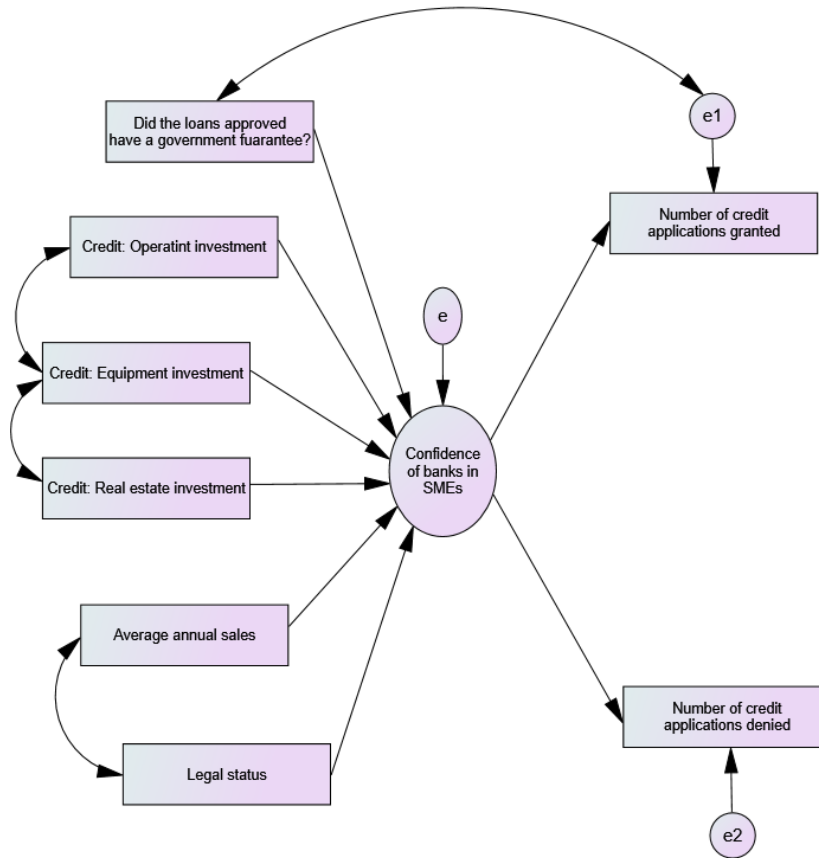


Figure 3. Fitness of the SEM, MIMIC
 Source: *Own data through the AMOS software*

The latent variable η represents the degree of trust in SMEs by the financial sector. This construct is linked to the six exogenous variables. The latent variable is proposed as the cause of the number of successful or unsuccessful credit applications by the Salvadoran SMEs. Each endogenous variable is explained, in part, by the corresponding causal variables; the rest is a random disturbance represented by e_1 and e_2 in the model.

Once estimated, the SEM model's coefficients, the variances of the random errors and the covariances involved, are presented in tables 3, 4 and 5, with their corresponding standard errors and the critical ratio (similar to the ordinary regression's T-tests) to assess the different causal links between the variables, which are also used to confirm the research hypothesis.

In this regard, H_1 is contrasted when observing that the six exogenous variables, 'Did the loans approved have a government guarantee?' (X1); 'Credit: Operating investment', (X2); 'Credit: Equipment investment', (X3); 'Credit: Real estate investment', (X4); 'Average annual sales amount', (X5); and 'Legal estatus' (X6), are causes of the latent variable, 'Low confidence of banks in SMEs' (η). And this determines the variation of the two endogenous variables, 'Number of credit applications granted' (Y1), 'Number of credit applications denied' (Y2).

The H_2 is tested when it is appreciated that the exogenous variable, 'Did the loans approved have a government guarantee?' (X1) is statistically significant; an additional restriction has been imposed on its variance equal to 1 so that the model is identifiable.

The hypothesis H_3 and H_4 are supported by noting the direct influence of the exogenous variables 'Legal status' (X6) and 'Average annual sales amount' (X5), respectively, have a significant statistical influence on the endogenous latent variable 'Low confidence of banks in SMEs' (η).

3. Conducting research and results

The SEM was estimated using the Maximum Likelihood method. The goodness of fit of the model to the data is globally significant. Several measures of fit are presented; the estimated model is labelled as 'default model'; the range of possible values of the different goodness of fit measures are defined within the values obtained for the saturated model (optimal value of the measure) and for the independence model (value in case all the variables are uncorrelated). All the goodness of fit measures are quite close to the optimal value. Following the recommendations of Browne & Mels, (1992), the main results obtained are presented: *CMIN* (log-likelihood ratio statistic and its *p*-value), *FMIN*, *CFI* and *RMSEA*.

3.1. Global test for the model (*CMIN*)

Global goodness of fit can be tested to accept (or reject) the proposed model where the results of credit applications are linked to a latent explanatory variable associated to the bank's confidence in the SME's in the country. This confidence is originated in several observed variables associated to several characteristics of the firms sampled and its credit motivations. Thus, a global acceptance of the model is a prerequisite to consider the estimated structural equations.

The log-likelihood ratio statistics, $G^2 = CMIN = 17.4$, allows a global test of the model (the null hypothesis specify that the proposed model is concordant with the observed market data, while the alternative hypothesis implies the rejection of the model); as its asymptotic distribution, under the null hypothesis, is a chi-square with 18 degrees of freedom; a hypothetical perfect fit model (the saturated model) would have a null value for these statistics; its *p*-value is 0.49; the hypothesis that the proposed model fits well to the data is, thus, accepted. The other measures and indices are descriptive, and, all of them are in line with this global acceptance.

3.2. Goodness-of-fit indexes

Minimum value of discrepancy function *F* (*FMIN*).The use of the population discrepancy functions as measures of the adequacy of the model is convenient, as they show different aspects of the goodness of fit. This function is the value of the discrepancy function obtained by fitting a model to the moments of the population, instead of the sampling moments. The obtained value is 0.043, close to the minimum value (0) of discrepancy for the saturated model.

The Comparative Fit Index (*CFI*) compares the discrepancy between the covariance matrix, of the observed variables, predicted by the model and the calculated covariance matrix with the sample data. The discrepancy between the covariance matrix of the independence model (considering all the observed variables uncorrelated), and the observed covariance matrix, is used to evaluate the degree of loss that occurs when changing our model to the independence model. The values of this index vary between 0 and 1. By convention, the *CFI* value should be greater than 0.90 indicating that at least 90% of the covariance in the data can be reproduced by the model. Therefore, the *CFI* obtained is almost equal to 1, which is excellent.

The Root Mean Square Error of Approximation (*RMSEA*) is based on the variance of errors in the model. It can be interpreted as the mean approximation error per degree of freedom. Values below 0.05 indicate a good fit (Browne & Cudeck, 1993). Therefore, the result obtained, close to 0, indicates a very good fit.

3.3. Coefficient weights: Structural coefficients, Covariances and Variances

It can be mentioned that, except for two exceptions without major relevance, all the coefficients of regression (table 3), covariances (table 4) and variances (table 5), indicate an adequate fit of the model to the data observed.

Table 3. Structural coefficients

Causal relations		Coef.	S. e.	Z	p
Low confidence banks in SME	← State guarantee on credit	1.000			
Low confidence banks in SME	← Average annual sales amount	0.115	0.022	5.308	< 0.001
Low confidence banks in SME	← Credit: Operating investment	0.838	0.072	11.600	< 0.001
Low confidence banks in SME	← Credit: Equipment investment	0.841	0.067	12.526	< 0.001
Low confidence banks in SME	← Credit: Real estate investment	0.442	0.291	1.518	0.129
Low confidence banks in SME	← Legal status	-0.098	0.049	-1.985	0.047
Successful applications	← Low confidence banks in SME	1.000			
Unsuccessful applications	← Low confidence banks in SME	0.155	0.022	7.012	< 0.001

Source: *own compilation*

All the estimated parameters are statistically significant; the least important is that related to the variable of credit employed for real estate investment, as these kinds of small entities within a business climate of insecurity, seldom invest in buildings and other types of real estate goods.

Table 4. Covariances

Interrelations		Estimate	S. e.	Z	p
Legal status	↔ Average annual sales amount	0.174	0.033	5,353	< 0.001
Credit: Operating investment	↔ Credit: Equipment investment	-0.085	0.011	-7,700	< 0.001
Credit: Equipment investment	↔ Credit: Real estate investment	-0.004	0.002	-2,058	0.040
e_1	↔ State guarantee on credit	-0.038	0.008	-5,115	< 0.001

Source: *own compilation*

Table 5. Variances

	Estimate	S. e.	Z	p
Legal status	0.210	0.015	14.213	< 0.001
State guarantee on credit	0.040	0.003	11.985	< 0.001
Average annual sales amount	1.888	0.133	14.213	< 0.001
Credit: Operating investment	0.190	0.013	14.213	< 0.001
Credit: Equipment investment	0.222	0.016	14.234	< 0.001
Credit: Real estate investment	0.010	0.001	14.213	< 0.001
e	0.071	0.206	0.343	0.732
e_2	1.241	0.087	14.187	< 0.001
e_1	0.298	0.208	1.437	0.151

Source: *own compilation*

All estimated variances are positive and significant, and the random variation of the latent variable is quite low, in accordance with the good fit of the model.

The main utility of all the results of the model lies in the confirmation of the first hypothesis of the study: the low confidence of the Salvadoran banking system towards the country's SMEs. This affects the already mentioned unsatisfied credit demand of 40%.

4. Discussion

The life of SMEs in El Salvador unfolds in one of the most insecure scenarios in the world. The maras, linked to organized crime (Martínez-Ventura, 2010), create anxiety in all social, economic and politicians areas. Of the 262 cities and towns, gangs operate in 247 (Cabezas, 2020), that indicates the seriousness of the situation. However, in 2020, the ratio of the number of homicides per 100,000 inhabitants, a decrease of 45% showed, in relation to 2019 (the number was 1,322 reported homicides). In addition, another of the criminal acts of the gangs that represent one of their main sources of income, is extortion (Ministerio de Seguridad, 2020). The direct costs for Salvadoran companies are estimated at \$756 million per year, with SMEs being the main targets (ACNUR, 2017). These payments made considerably increase the operating expenses of the extorted SMEs, which are not accounted, for with all this implies. Besides, El Salvador generates 30,000 jobs per year, but 40,000 are needed for young people that add to the economically active population every year. Therefore, due to the lack of opportunities, crime, violence or emigration are usually the fate that Salvadoran adolescents and youngs choose.

This socioeconomic scene in which Salvadoran SMEs carry out their activities differs from all other countries mentioned in the bibliographic review. For example, the study on European SMEs carried out by Araujo-Lima et al., (2020), affirms that they represent the backbone of the European economy. Likewise, the analysis by Chege et al., (2019) carried out in Kenya, on ICTs, SMEs and the effect on job creation among people connected in networks, it is also difficult to implement in El Salvador, due to the distrust that prevails in all social strata, due to insecurity.

Although at first glance, the study carried out by Kraemer-Eis et al., (2019), also in European SMEs, seems strange, it could be a valid option for the financing of Salvadoran SMEs. It would consist of the creation in the Stock Market of El Salvador of a specific department for SMEs. Likewise, the research carried out by Yee-Whah & Ee-Shiang, (2018), in Malaysia, where the role of SMEs for the development of this country, was incorporated into two nation plans. This initiative could be adapted for El Salvador, including SMEs and microenterprises, considering that together add 99.6% of the business structure (Banco Central de Reserva, 2020). Motta, (2017) affirms that SMEs that operate in the tertiary sector, are fundamental for development of several Latin American countries. In this context, thinking about businesses focused on tourism, for example, could not be implemented in El Salvador until the problem of insecurity is solved.

Conclusions

One of the characteristics of the financing of Salvadoran SMEs is that they must be divided into two: on the one hand, small ones, and, on the other, medium-sized companies. This is important because the attitude of the bank towards each one is different. An important part of small businesses starts their activity as a microenterprise. That is, those to which the bank has graduated for selling more than \$100,000. But the banks continue to consider them, at least for a time, as a micro-business. This is a problem because they are no longer eligible for MFIs to continue lending to them. Thus, temporarily, they suffer an *identity crisis*, during which it is difficult for them to find funding. According to the Superintendencia del Sistema Financiero,

(2020), small companies represent 31.4% of the total of 17,000 SMEs, but the percentage of the new small companies over the total of SMEs is not known.

Regarding the segment of the new small businesses, it is important to highlight that, after the Peace Accords signed in January 1992, the microenterprises received vigorous technical and financial support from international organizations, in the context of an economic and politic model. The main objective was to strengthen the new, but fragile scenario of the country, after 12 years of civil war. Thus began a democratic political model in which the country lives to this day. Within this environment, the financial conditions required by international organizations for Salvadoran entities (many of them NGO) that financed microenterprises were very favorable, especially in relation to the interest rate. This model gave potential borrowers a rather relaxed approach to obtaining financing. It set up a relatively easy negotiation, and the obligation to repay the microcredit was secondary. The result was that quite a few loan portfolios were consumed by delinquencies. This supposedly relaxed attitude in relation to the repayment of loans is the one that remains in the minds of banks until today, with respect to former microentrepreneurs, turned into small entrepreneurs. In this context, if 60% of SMEs has access to bank financing, 40% would be covered, in one part, with own funds, and other, with resources from non-formal sectors.

A second feature refers to savings. A crucial issue to transform a microentrepreneur into a small businessman, besides the annual sales, should be its attitude towards saving. This issue is usually a thorny one. As microfinance entities are not authorized by the Superintendency of the Financial System to capture savings, they do not usually become aware that savings configure the capital market supply. Thus, the microentrepreneur thinks only of borrowing.

A third characteristic is that, with the exception of programs such as the Salvadoran Guarantee Fund (FSG) and the Development Bank of El Salvador (Bandesal), the country does not have a serious financial support plan for SMEs, considering their effects in business and social aspects.

The possible solutions proposed -such as the inclusion of the role of SMEs and microenterprises in the Country Strategy, as well as the opening of a window in the country's stock market aimed at SMEs - due to the space and time spent on this research, will be addressed in future studies.

Even though some criticism of the financing of SMEs as a valid model of economic development, we believe that in El Salvador, improving state policies for the integration of SMEs into the business fabric, is a viable development option. Although crime is the main characteristic of the country, its economic activity does not collapse. The activity was not suspended neither during the 12 years of civil war, nor during this year and a half of the pandemic and it is not intimidated by the current criminality. And it is fair to acknowledge this entrepreneurial spirit.

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The authors declare that there is no conflict of interest.

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