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ANALYSIS OF FINANCIAL INNOVATION IN MSMES AND SMES IN BOCA DE RÍO, VERACRUZ, MEXICO

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Abstract: Through the following research, we seek to know the possibilities of improvement for micro, small and medium-sized enterprises (MSMEs) in the city of Boca Del Río Veracruz, Mexico, giving main emphasis to the implementation of new technologies to improve efficiency in the different monetary transactions carried out by the company, based on the hypothesis that Financial technologies (Fintech) make monetary movements more efficient and agile, as they are carried out through electronic money and not physical money, obtaining not only benefits for the company thanks to the implementation of new collection methods, but also providing facilities so that customers and suppliers can buy and/or sell different goods or services to the company through electronic money.

Keywords: Financial Innovation, Technology, Fintech.

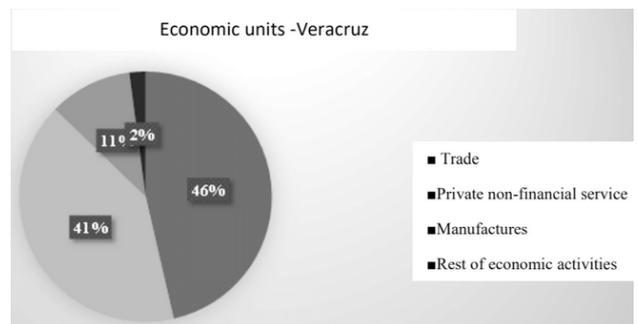
INTRODUCTION

Boca Del Río, Veracruz, Mexico; It is a large city, coming into contact with the city of Veracruz port, and being one of the main seaports of the state of Veracruz and the Country of Mexico, naturally, in this city there is a large number of companies, of which, a large Part of them are MSMEs, mainly oriented to service or commerce, with few dedicated to their own manufacturing, according to the newspaper Vanguardia de Veracruz.

“In 5 years there was a growth in the number of companies in the entity, reporting at least 276,739 SMEs in 2019. The economic units in the state of Veracruz, 96.3 percent correspond to microenterprises, with a contribution to the economy of 15.3 percent; while small ones account for 3.1 percent of the total, providing 16.3 percent to the economy. However, with the Agreement for Economic Reactivation announced in February 2020, Governor Cuitláhuac García Jiménez is not enough to support all micro and small businesses, since the state government only has a pool of 100

million pesos to grant. 10 thousand loans to microentrepreneurs, without interest. This means that he will only be able to support 5 percent of micro and small entrepreneurs. In order to fully support them, 2,767 million 390 thousand pesos would have to be allocated.” (Vanguard of Veracruz, 2020)

SECTORS	UNITS	DISTRIBU-TION %	National	Weight % in the National
Commerce	128,472	45.42	2,227,058	45.42
Private non-financial service	113,089	40.86	1,868,993	40.86
Manufacturers	29,432	10.53	582,013	10.53
Rest of economic activities	5,746	2.07	95,931	2.07
All the sectors	276,739	5.79	4,773,995	5.79



1 Table and Graph: Economic Units provided by MiPyMes in Veracruz, INEGI 2022.

This implies that, despite the growth in MSME companies in the city of Veracruz being exponential in recent years, little government support is provided to them, forcing MSMEs to adopt new forms of market and technology or disappear in the attempt.

MSMES AND THEIR FINANCIAL TECHNOLOGICAL DEVELOPMENT

The expectations of the implementation of Fintech in the MSMEs of Boca del Río are increasing due to the need for the use of technology has increased exponentially in the last 3 years, this caused by the confinement by the pathogen known as COVID-19, as well as the rapid automation and integration of new systems and technologies in companies, currently in Mexico just over 91% of the population has access to ICT (INEGI, 2021), as well as the number of jobs based on research and development of technologies, this since 2016 at 52.3% (INEGI, 2016).

Thanks to these new technological advances globally but more focused on Mexico, as well as the high demand and use of ICT, various applications and systems have been created that allow users to make purchases and monetary transactions from their cell phone or electronic devices. (devices with internet connection access), these systems and applications, also known as "Fintech", facilitate the process of online purchases and sales, as well as allowing users to manage their electronic money in a more efficient and faster way. (SAP BLOG, 2019), which in turn allows companies that implement this technology to make their resource and/or material purchasing processes much more efficient, as well as the sale of manufactured products or services, Therefore, it is a good addition to any company that wants to incorporate new technologies, however, the changes that this implementation entails must be taken into account and that many companies, especially MiPyMe, are not willing to make for various reasons. Many MSME companies in the city of Boca del Río are in this transition of including this new technology into their business, which has generated conflicts and losses in these companies and, despite the future benefits,

they prefer to continue with their traditional operations. through cash, which they believe will provide greater stability to entering the technological field.

METHODOLOGY

To carry out the research, surveys were carried out on employees, managers, directors and owners of MSMEs in the city of Boca del Río, Veracruz, in order to know their position regarding new financial technologies and How they think this could affect their business, either positively or negatively, and what problems they think implementing such an implementation could bring to their business. The main purpose of the measurement instrument is to know the perspective of MSMEs when implementing these new technologies and what facilities and/or complications they believe they may have for their clients.

Surveys were carried out on the topic of the use of Fintech in MSMEs in the city of Boca del Río, Veracruz, from these surveys the data was extracted to carry out the research and this way, better understand the situation of MSMEs with regarding the Fintech used and whether they are willing to implement this technology in their current collection or service provision systems.

As mentioned previously, surveys were carried out on the topic of the use of Fintech in MSMEs in the city of Boca del Río, Veracruz, in order to extract the necessary data regarding the knowledge, use and distribution of this technology in companies, likewise, to know the degree of interest and/or possibility of implementation of any of these technologies in the companies surveyed. To do this, a simple type of probabilistic sampling was used (Velázquez, 2017), as well as already established mathematical formulas to determine the sample size necessary for the research (Abanto, 2018).

Micro, small and medium-sized non-financial and non-governmental services companies located in the municipality of Boca del Río. According to the National Statistical Directory of Economic Units (DENUE) (INEGI, 2021), there are 2,749 registered companies in this municipality.

The sampling carried out was of a simple random probabilistic nature, using the following formula:

Obtained from QuestionPro, formula for calculating the size of a sample according to Murray and Larry (2005)

$$n = \frac{Nz^2pq}{(N - 1)e^2 + z^2pq}$$

Where:

n: sample size

N: population size (2,749)

Z: 95% confidence level (1.96)

p: probability of occurrence (0.5)

q: probability of non-occurrence (0.5)

e: error (0.10).

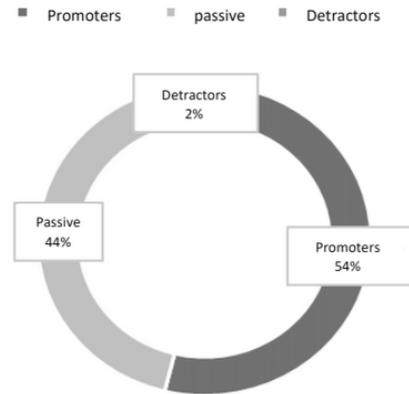
The result remains n=93 service companies to be surveyed. The actual sample was 104.

According to the formula presented previously, and given the selection of companies surveyed to carry out the research, there is a total sample size of 104 companies, there is a confidence level equivalent to 95% due to the variations of people surveyed and a margin of error of 5% is expected, giving us a total of 74 service companies as the sample size for the research, which will be useful to know the results of the research. To ensure the credibility of the sample, as well as to include the greatest amount of information possible to carry out the research, various selection and exclusion criteria were determined, always seeking to take the appropriate information for the development of the research (Abanto, 2018)

RESULTS FROM THE APPLICATION OF THE SURVEYS

Once the surveys were completed, as well as their analysis, referring to the corresponding research, the following results were obtained

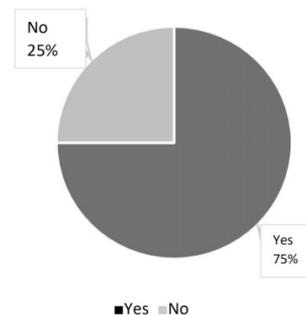
How familiar are you with the use of technology?



1. Chart of familiarization of respondents towards the use of technology

This graph shows how familiar the population is with respect to the use of technology, the most familiar participants are considered “Promoters”, while the “Detractors” are the participants least familiar with the topic discussed, the “Passive” are the participants who are in an intermediate range, so it can be noted that the number of participants familiar with the use of technology corresponds to more than half of the population, with a minimum of participants unaware of the use of technology.

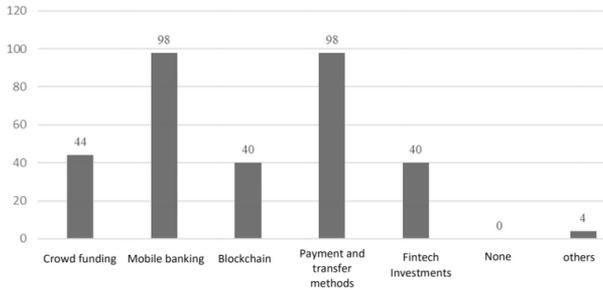
2. Have you heard the term Fintech?



2 Graph that shows if the participants know the term Fintech

The previous graph shows whether the participants know the term “Fintech”. It can be noted that the majority of participants, being members of businesses or MSME companies, are familiar with this term, while 25% are unaware of it.

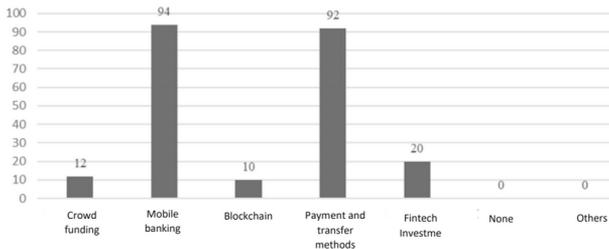
3. Which of the following terms do you know?



3 Graph of the Fintech technologies most recognized by participants

In this graph you can see a more specific panorama in relation to which Fintech technologies are known by the participants, these being Mobile Banking and Payment and electronic transfer methods, with Crowdfunding, Blockchain and investments being in a medium/low range.

4. Which of the following technologies do you use?

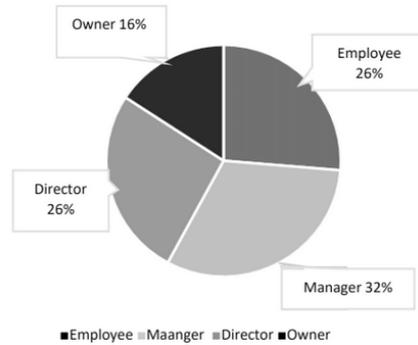


4 Graph of the use that each user has of the mentioned Fintech technologies

It can be noted that the knowledge of technologies is proportional to their use, since as seen in the previous graph, the vast majority of participants use Mobile Banking, Payment Methods and electronic transfer, with Crowdfunding being much less used, Blockchain and Fintech investments, the little

use of Crowdfunding can be interpreted since the majority of participants prefer their own financing to using other people’s money and/or receiving investments electronically by investors.

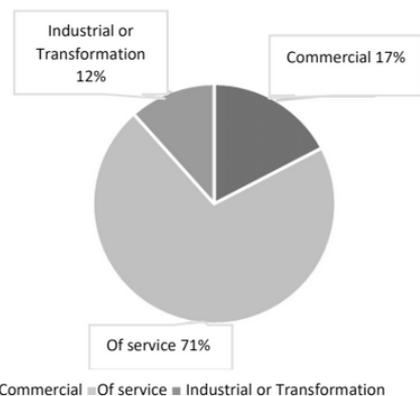
5. What is your role within the company?



5 Graph in percentage of what role in your company the survey participants belong to

The graph shown provides us with a percentage of what role the participants belong to in their company. It can be noted that the majority of respondents have the role of manager, along with the managers and employees and, finally, the owners. of companies have a lower percentage compared to other roles.

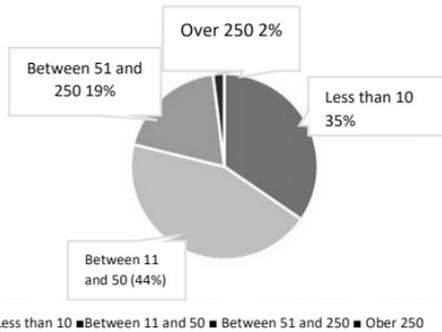
6. What is the business of your company?



6 Graph of the line of business that the participating company is focused on

It can be seen in the previous graph that a large majority of the survey participants come from companies whose line of business is Services, followed by commercial companies and at the end, industrial companies, this agrees with the type of MiPyMe that exist in the city of Boca del Río, with companies that provide some service such as hotels or restaurants being much more present, these companies dedicated to services were chosen as the final sample for the development of the research.

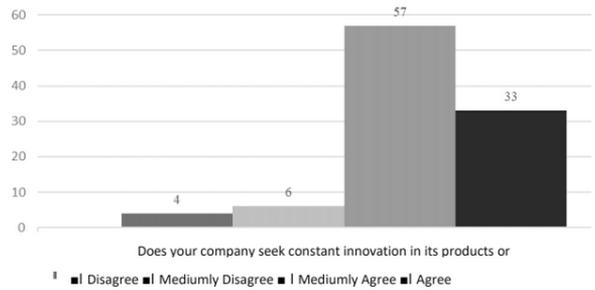
7. Indicate the number of employees in your company during the period January - June 2022



7 Graph of the degree of training in the use of ICT in employees within the company surveyed

In the graph shown above you can see the total number of employees that the companies surveyed have at the date the research was carried out, it is noted that a large majority of the companies manage to enter the range of MiPyMe (Micro, Small and Medium Companies) with a minimum of companies in a range greater than 250 employees, classifying as large companies.

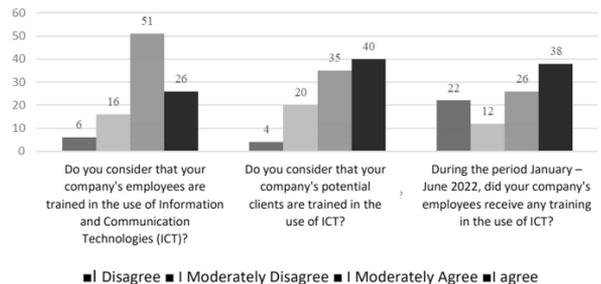
8. Respond responsibly



8 Graph of the number of employees belonging to the companies surveyed

Given the results of the graphs, it can be noted that the majority of the companies surveyed seek to gradually and constantly innovate their products and/or services, keeping up to date with what they do or produce.

9. Respond according to your company information

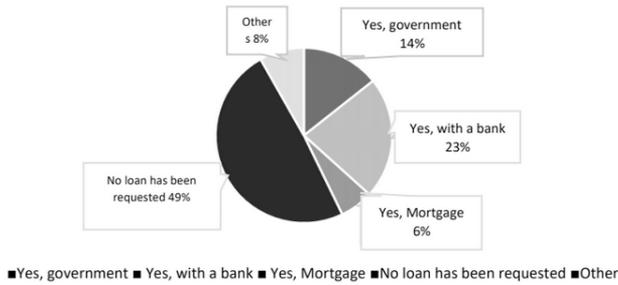


9 Graph of the degree of training in the use of ICT in employees within the company surveyed

In the previous graph you can see the degree of training in the use of ICTs that the surveyed companies provide to their employees, as well as whether they consider that their clients are trained in their use and if the employees received any training in In the period from January to June 2022, it is also perceived that the majority of companies believe that their employees are moderately trained in the use of ICTs. This may be due to the type of business carried out in the MiPyMe company and if it requires the mandatory use of ICTs.

It can be seen that the majority of companies believe that their clients are trained in the use of ICT, this is consistent with the fact that, currently, the vast majority of people already own at least one electronic device. It can also be seen that MiPyMe companies in the city of Boca del Río Veracruz have an intermediate concern in terms of training their employees for the use of ICT with a clear tendency to prefer professional training, this may be due to the incorporation of new technologies in companies and the requirement to know how they work to be used.

10. Has your company requested any type of loan or credit?

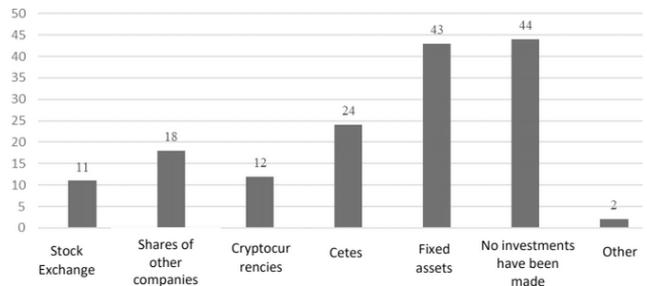


10 Graph that shows if the company has received any type of support and/or external investment

The purpose of the previous graph is to show whether the companies surveyed have resorted to some type of external financing to carry out their operations, in order to determine whether they have used Crowdfunding or not, it can be noted in an almost contradictory way that a little less Of half of the MSMEs in Boca del Río Veracruz, have not received any loan since the beginning of their operations, this may mean that the company was started with the own capital of the same founder or CEO, and that it has not been in need of request external support, on the other hand, it can be seen that the companies that have requested external support, the majority have requested it from banks, this may be due to the fact that the support programs for MSMEs offered

by the government, unfortunately, have not provided significant support to MSME companies, however, just over 14% have obtained government support, and only 6% of companies have found themselves needing to mortgage some assets.

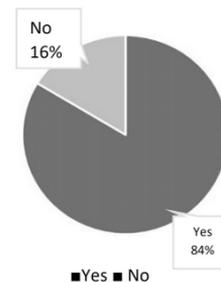
11. Has your company made any investments in the stock market, cetes, cryptocurrencies, etc.?



11 Chart showing whether the company has made investments

The objective of this questioning was to determine if the participating companies had made any investment, either to improve their productivity in their activities or acquire goods that generate income passively. It can be noted in the graph that, despite the great opportunity, the investment of MSMEs focuses on the acquisition of fixed assets, preferring the expansion of their capabilities or their business area. Likewise, it is intriguing that almost the same number of companies have not made any investment, this possibly derived from that are recent companies and do not have stable capital to make investments.

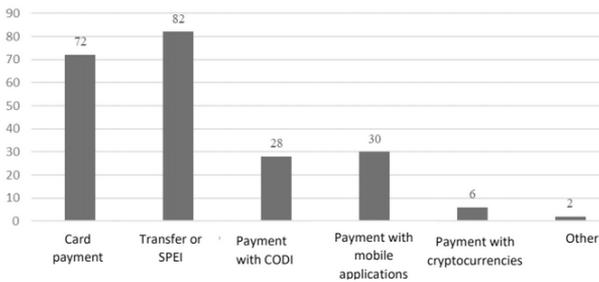
12. Does your company use alternative collection methods to cash?



12 Graph of whether the participating company has made any investment

This question was asked with the main reason to answer the following 2 questions, based on whether or not the participating companies have alternative collection methods to cash payment, it can be noted that a large majority of the MSMEs in the city of Boca del Río Veracruz, have alternative payment methods to cash, compared to 16% who do not have them.

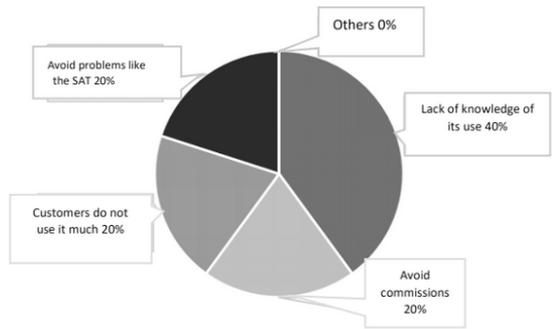
13. What collection methods does your company use besides cash?



13 Chart indicating the collection methods used by the company

Question 13 allows us to know what is the alternative payment method most used by the participating companies. It can be noted that, as expected, the majority of MSME companies in the city of Boca del Río Veracruz allow payment by card and transfers, in a smaller percentage the use of the CODI application and payment with mobile applications, possibly because these companies do not have their own application to make payments from it, finally, payment with cryptocurrencies has the least number of uses, most likely caused by how complex it can be to implement a collection system with this payment method.

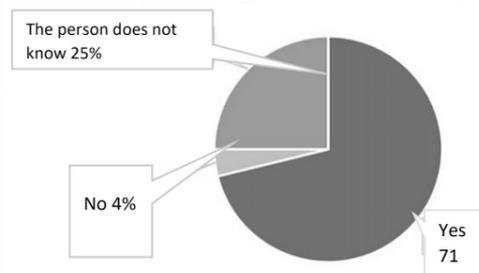
14. For what reason has your company not chosen to use electronic payment methods?



14 Chart showing the various reasons why a company has not implemented electronic payment methods

The following graph shows the different reasons why some of the participating companies have not implemented electronic collection means, the majority is due to lack of knowledge of use, this caused by the lack of information regarding the implementation, little interest or lack of training, on the other hand, 60% of the other companies that responded that they had NOT implemented an alternative payment method, 20% responded that it was to avoid problems with the SAT, another 20% responded that their clients did not use these media and 20% responded that they preferred to avoid any type of commission granted by these payment methods.

15. Would you be interested in implementing electronic payment methods and/or financial technologies in your company?

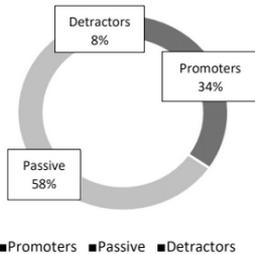


15 Chart on which are the collection methods most used by the MSME companies surveyed

The objective of the questioning is to know the interest in implementing some Fintech

technology in the companies participating in the survey, it can be noted that a large majority is interested in the implementation of said technologies in their company, 25% of the participating companies are not sure of its implementation and only 4% show no interest in implementing these technologies.

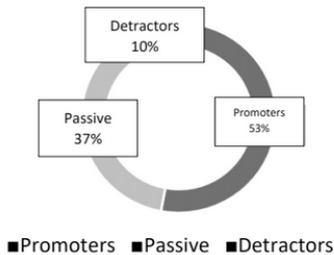
16. What level of impact do you suppose the use of technologies generates in commerce and finance?



16 Chart showing the various reasons why a company has not implemented electronic payment methods

The objective of the questioning is to know the opinion of the participating companies about whether the use of Fintech technologies has a great impact or not. It can be seen that the vast majority of participants have a neutral decision, that is, they believe that it will have an impact but perhaps not too much, 34% of the participants believe that the use of these technologies will have a great impact and, finally, 8% of the participants believe that it will not have any impact on trade and finance.

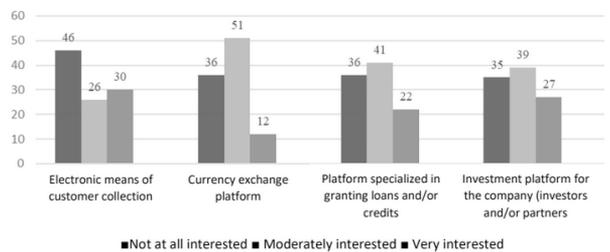
17. Do you believe that using collection methods other than cash will maximize your company's profits while reducing its costs?



17 Graph showing the interest of participating companies in incorporating Fintech technologies

This graph shows whether participating companies believe that, by using Fintech, they will maximize their profits and decrease their costs or, on the contrary, it could reduce profits and increase costs. It can be noted that just over 53% of participants believe that the use of Fintech will improve their profits, 37% believe that their profits and costs will remain the same or a little higher or lower than they are currently, and, finally, 10% believe that the use of Fintech would only increase their costs without improving their profits.

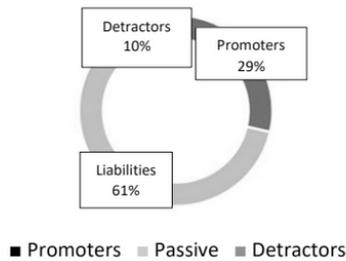
18. Which of the following Fintech technologies would you be interested in implementing in your company?



18 Graph of the impact of the use of Fintech according to the companies surveyed

The following graph aims to show the interest of the participating companies in implementing some of the mentioned technologies. It can be noted that the greatest interest is concentrated in the means of electronic collection, however, it is also the least interesting, this due to that the vast majority of companies already have this type of technology implemented, on the other hand, the majority of the companies surveyed show a medium interest in implementing a currency exchange platform, this is most likely caused by the area of residence of the participating companies, the city of Boca del Río Veracruz, is a tourist area where people from all over the world are received, in addition to receiving merchandise from the port of Veracruz, so its own platform to exchange currencies can be useful to deal with foreign clients.

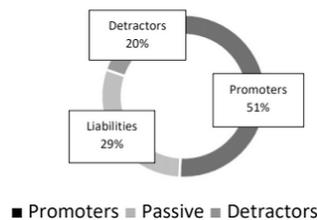
19. Do you consider that the implementation of the aforementioned technologies could be of interest to companies?



19: Graph on the interest of participating companies in implementing any of the Fintech technologies mentioned

The previous graph shows the opinion of the companies surveyed whether the technologies shown in the previous question could be of interest to other companies in general. Corresponding to the previous graph, it can be noted that 61% of the participants show an intermediate opinion regarding the interest of the technologies mentioned above, 29% of the participants believe that they are of great interest, while 10% believe which is not interesting at all.

20. If you have implemented and use any Fintech technology in your company such as those mentioned above, how useful and/or favorable have they been for you?



20 Graph on the interest of participating companies in implementing any of the Fintech technologies mentioned

This question aims to know the degree of satisfaction of the participating companies with respect to Fintech technologies. Only if they already have one implemented and in use, it can be noted that just over 51% are very

satisfied with the technologies. implemented technologies, marking them as very useful and/or favorable, 29% of those surveyed show an intermediate degree of satisfaction, most likely caused by the lack of training or by poor implementation and/or use of the technology and, therefore Lastly, 20% of the participating companies show that Fintech technologies have not been useful and/or favorable to them, probably due to lack of training in their use, bad practices in their operation, poor implementation or the technology was never implemented. technology.

CHART RESULTS

Based on the results obtained, it can be observed that the greatest challenge or impediment for MSMEs in the city of Boca del Río Veracruz to implement Fintech as alternative collection means and/or electronic financial platforms consists of the lack of information and in the distrust of company managers in these technologies, said distrust is caused by lack of knowledge about the functioning of Fintech regulatory systems, as well as organizations that protect the use of these technologies combined with the lack of interest in the use from the same.

However, thanks to the survey carried out, it is possible to see that MiPyMe companies that implement Fintech technologies in the city of Boca del Río Veracruz are increasingly abundant compared to those that do not have them, and in turn, it is demonstrated that, the majority of companies find the use of Fintech favorable and very useful to carry out their financial activities, since just over 54% of the participants surveyed found that their profits were maximized by using them, and that just over 51% Of them, they believe that these technologies are very favorable for their business and/or company.

CONCLUSIONS

According to the data obtained in the investigation, as well as their analysis and study, the following is concluded:

Through the survey, it was possible to identify the challenges and expectations of the implementation of Fintech in MSMEs in the city of Boca del Río, Veracruz, demonstrating that the majority of companies see the following as a limitation for implementation: the lack of information regarding regulatory bodies, as well as distrust on the part of the same bodies, we can also add lack of knowledge and little interest in the use of Fintech, a challenge that can be mitigated thanks to the training given to company collaborators. before, during and after implementation.

The operational aspects of Fintech were correctly analyzed, showing their use and the

way in which they can help maximize and/or facilitate different financial movements automatically through technology.

The benefits obtained by MiPyMe companies in the city of Boca del Río, Veracruz, could be successfully identified, showing that companies that have said implementation show greater efficiency in their collection processes, as well as a maximization of their profits, by expanding their market allowing electronic collection methods, billing, among other aspects.

Currently, in the Boca del Rio Veracruz region, thanks to MSMEs and the increase in cash flow after the confinement, there has been strong economic growth in the city, which has led other companies to decide to implement new technologies, as well as new ways to make your businesses more efficient to remain competitive.

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