**EDUCATECONCIENCIA Journal** 

Volume 30, Issue 36 ISSN: 2007-6347 E-ISSN: 2683-2836

Period: July- September 2022

Tepic, Nayarit, México.

Pp. 220-236

https://doi.org/10.58299/edu.v30i36.555

Received: 08 July 2022

Approved: 12 September 2022

Available online: 30 de September 2022

Analysis of the economic impact caused by the COVID-19health crisis on micro and small-sized businesses in Ahuacatlan, Nayarit

EDUCATE CIENCIA

Análisis del impacto económico causado por la crisis sanitaria COVID-19 en las micro y pequeñas empresas de Ahuacatlán, Nayarit

#### Víctor Manuel Varela Rodríguez

Universidad Autónoma de Nayarit, México victor.varela@uan.edu.mx https://orcid.org/0000-0001-6976-316X

#### Nancy Katia Solís Castañeda

Universidad Autónoma de Nayarit, México katiasolis@uan.edu.mx https://orcid.org/0000-0002-9842-4316

# Ruth Hernández Alvarado

Universidad Autónoma de Nayarit, México ruth.hernandez@uan.edu.mx https://orcid.org/0000-0001-5022-3382

## Rosa Elida Espinoza Inda

Universidad Autónoma de Nayarit, México rosy.espinoza@uan.edu.mx https://orcid.org/0000-0001-5440-8923

#### Adriana Dayanira Caro Romero

Universidad Autónoma de Nayarit, México caro\_romero\_dally@hotmail.com https://orcid.org/0000-0003-4453-5771

# Analysis of the economic impact caused by the COVID-19 health crisis on micro and smallsized businesses in Ahuacatlan, Nayarit

# Análisis del impacto económico causado por la crisis sanitaria COVID-19en las micro y pequeñas empresas de Ahuacatlán, Nayarit

## Víctor Manuel Varela Rodríguez

Universidad Autónoma de Nayarit, México victor.varela@uan.edu.mx https://orcid.org/0000-0001-6976-316X

# Nancy Katia Solís Castañeda

Universidad Autónoma de Nayarit, México katiasolis@uan.edu.mx https://orcid.org/0000-0002-9842-4316

#### Ruth Hernández Alvarado

Universidad Autónoma de Nayarit, México ruth.hernandez@uan.edu.mx https://orcid.org/0000-0001-5022-3382

# Rosa Elida Espinoza Inda

Universidad Autónoma de Nayarit, México rosy.espinoza@uan.edu.mx https://orcid.org/0000-0001-5440-8923

## Adriana Dayanira Caro Romero

Universidad Autónoma de Nayarit, México caro\_romero\_dally@hotmail.com https://orcid.org/0000-0003-4453-5771

## **Abstract**

The economic impact caused by the closure of businesses at the beginning and during the global COVID-19 pandemic also wreaked havoc on micro and small-sized businesses in the municipality of Ahuacatlan. This research has a quantitative approach with a non-experimental and descriptive design, the objective of which is to analyze the degree of economic impact of small businesses, whether it is the increase or decrease in their income. The research question is answered through a 14-item questionnaire, from which 13 are multiple choice and one open question, applied to 78 micro or small-sized businesses in the municipality of Ahuacatlan, Nayarit. The answers show that a third of the business owners suffered a decrease in their income, due to the closure of their businesses at the beginning of the pandemic. **Keywords**: COVID-19, economic impact, social networks.

Journal EDUCATECONCIENCIA. Vol.30, Issue 36. July-september 2023 https://doi.org/10.58299/edu.v30i36.555

#### Resumen

La afectación económica causada por el cierre de negocios al inicio y durante la pandemia mundial COVID-19también causó estragos en los micro y pequeños comerciantes de la cabecera municipal de Ahuacatlán. La presente investigación tiene un enfoque cuantitativo con diseño no experimental y de tipo descriptiva, cuyo objetivo es analizar el grado de afectación económica de los pequeños negocios, ya sea el aumento o disminución de sus ingresos. La pregunta de investigación se responde a través de un cuestionario con 14 ítems, de los cuales 13 son de opción múltiple y uno abierto, aplicado a 78 micro o pequeños negocios de la cabecera municipal de Ahuacatlán, Nayarit. Las respuestas muestran que la tercera parte de los comerciantes sufrieron una notoria disminución de sus ingresos, debido al cierre de sus negocios al inicio de la pandemia.

Palabras clave: COVID-19, impacto económico, redes sociales.

#### Introduction

Koury and Hirschhaut (2020) describe that in December 2019 the city of Wuhan, China became the epicenter of an outbreak of pneumonia of unknown atiology, which did not diminish with treatments commonly used at that time. In a few days, cases of infections increased exponentially, not only in China, but also in other countries. The cause was identified, a new coronavirus (2019-nCoV) was found and later named as SARS-CoV2, which causes the COVID-19 desease. On March 11, 2020, the World Health Organization (WHO) declared this disease a pandemic.

During the second week of December 2019, the first five cases were reported, four of them were urgently hospitalized for presenting severe acute respiratory difficulties and one died. Most of the patients claimed to have been in direct or indirect contact with a food market in the province of Hubei in Wuhan. By January 1, 2020, the Wuhan market had been closed but there was no evidence to confirm person-to-person disease transmission. By January 2, a total of 41 people had been hospitalized. Although only one patient presenting serious pre-existing pathologies had died, the different levels of government began to manifest their concern. On January 7, 2020, the Chinese authorities announced that they had identied a new type of coronavirus (Koury & Hirschhaut, 2020).

#### **Protective measures to the pandemic**

The Chinese authorities reported that the practice of social and physical distancing, and isolation measures managed to prevent person-to-person disease transmission. These measures

allowed China to somewhat control the epidemic in its territory, decreasing the cases since March 19, 2020. However, in other countries where the virus had reached, the number of cases increased disproportionately (Koury & Hirschhaut, 2020). Social and physical distancing has been perhaps one of the main factors that have affected the business area in different countries. The following topics will address this issue.

#### Coronavirus and its effects in Mexico

The COVID-19 pandemic became one of the biggest and most serious challenges that society has faced in recent times. It is still unknown what the total death rate will be. Just as there were great losses in lives along with the health crisis, the world is experiencing an economic collapse which effects will starkly affect the well-being of large parts of the population for the coming years. Some of the measures being implemented by the health authorities in the world will seriously affect the economic life of the population in the future. Comprehending the way in which the different elements of the problem relate to each other will provide an understanding of the social and economic effects that the adopted protective measures bring out (United Nations Development Program [UNDP], 2020).

The pandemic had a significant impact upon the Mexican economy. The magnitude and characteristics are shown in 3 phases according to Esquivel (2020):

- 1. On the one hand, the first effect took place in the first quarter of 2020 due to several countries closing borders and banned flights worldwide. This caused the first breakdown to those companies dedicated to tourist activities such as in Quintana Roo and Baja California.
- 2. Secondly, the slowdown in economic activity as a consequence of the indication to suspend all activities considered as non-essential, to ensure "safe distance". This affected the manufacturing and service industry which were forced to close temporarily.
  - 3. The third phase, defined as a gradual and slow reopening process.

#### Research problem

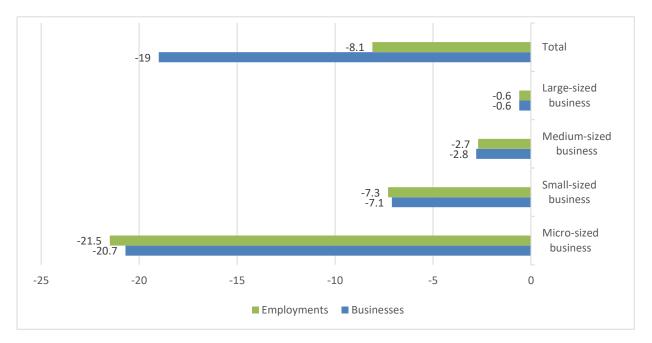
For the Economic Commission for Latin America and the Caribbean (ECLAC 2020), the COVID-19 pandemic is having a serious impact on the economy and society of Latin America and the Caribbean. The ECLAC estimated that before the end of 2020, 2.7 million businesses

could close, which is equivalent to 19% of all existing ones in the region. It was also pointed out that in the case of micro-sized businesses, the percentage could reach 21%.

In terms of employment, the disappearance of more than 8.5 million jobs was estimated. 8.1% of the total would be from formal jobs in the business sector and more than 20% from the jobs generated by micro-sized businesses (See Figure 1).

Figure 1

Latin America and the Caribbean (27 countries): percentages of businesses that could close and lost employments, according to business size.



Note. CEPAL (2020), from official database.

The strong impact experienced by micro-sized businesses is due, for example, to their level of specialization within the business sector. By 2016, approximately 42% of micro-sized businesses in Latin America and the Caribbean performed their activities within this category, which has been one of the most affected by the pandemic.

Bejarano *et al.* (2021), after analyzing the records of the sales of businesses in Aguascalientes, Mexico, claims that there is a huge increase between the drop in sales of microsized businesses in the pre-pandemic stage compared to during the pandemic. All this is

evidenced by the numbers which went from 279 businesses to 597; a drop in sales in micro-sized businesses that exceeded the 100% increase during the health crisis. Therefore, the economic impact experienced by micro-sized businesses owners in the area is demonstrated.

In the same way, Lozano and Chiatchoua (2021) in a study carried out in Mexico City, it was possible to demonstrate that the impact of COVID-19 was not only in the health area. It also adversely affected the economic domains. In this study, the time of operation of the businesses in the Mexican market was also analyzed. It was found that most of them have at least 10 years operating and were the ones that had the greatest losses in their income, especially those operating for less than one year. In this sense, it was revealed that the months with the greatest decrease were April, May and June of 2020.

#### **Background**

Benítez (2020), in a note dated July 23, 2020 in "El Occidental", states that Nayarit is one of the most damaged states during the COVID-19 health crisis. From the 18,000 jobs that have been lost since the start of the quarantine and closure of businesses, only 2,500 have been recovered. This has had a serious impact on the economic development of the state. According to some studies, 72% of jobs in Mexico are generated by micro, small and medium-sized businesses (Márquez, 2021). Therefore, the decrease in available jobs in Nayarit may represent the impact undergone by micro and small-sized businesses.

Sánchez and Mendoza (2021), mention that in the city of Tepic, Nayarit, 23% of restaurant micro-sized businesses stopped working during the months from April to June 2020 due to the COVID19 pandemic. This was due to a significant decrease in sales that made it impossible to continue operating.

Ahuacatlan, located in the south of the state of Nayarit and whose main activity is trade, was no exception. Certainly, it suffered the negative effects of the closure of businesses during the "red light" restriction at the beginning of the pandemic. Therefore, it is interesting to measure the impact that occurred in this period.

# **Objectives**

# General Objective

To determine the impact on sales and economic income in micro and small-sized businesses caused by COVID-19 in the municipality of Ahuacatlan, Nayarit. All this by applying a research instrument to a representative sample of the businesses in the area.

# Specific Objectives

- •Diagnose the increase or decrease in the income of the micro and small-sized businesses in Ahuacatlan
- Describe the affectation among the business owners of the municipality of Ahuacatlan, Nayarit
  - Show strategies to be implemented by the local government

#### **Materials and Methods**

# **Participants**

A record from the local government containing information about 400 micro and small-sized businesses was used to carry out this research and obtain the necessary information. A simple random sample of 78 business owners ranging from 2 to 25 years of operation was taken from the list provided by the local government's economic development department records.

# **Technique and instruments**

A 14-item survey was designed. 13 items were closed questions and only one is an open question. The instrument measures 3 important aspects: the degree of economic impact on the business, the use of technology in the sales of their products and, finally, the acceptance of some strategies that will promote the increase in their income. The survey can be found in Annex 1.

## **Procedure**

The survey was carried out by a student using Google forms. Once the field survey was applied to the 78 business owners, the information was stored for later analysis. The answers

from each item were classified to determine the relevant findings. These were graphed to ensure a correct interpretation and appropriate presentation of the results.

## **Results and Discussion**

The results will be used by the local government of Ahuacatlan, Nayarit to implement strategies regarding the impact caused by the COVID-19 pandemic through the Directorate of Economic Development.

Figure 2

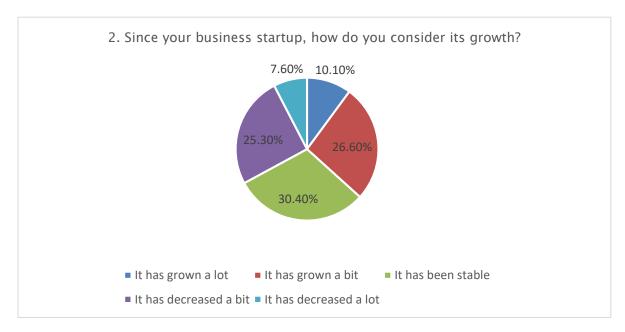
Years of operation of the micro and small-sized businesses in Ahuacatlan.



Note. Data collected by author.

As shown in Figure 2, 62% are recently made businesses, with less than 10 years in the market. Generally, businesses recently placed in the market are more vulnerable to economic impacts such as the closure of businesses for more than 2 moths at the start of the COVID-19 pandemic.

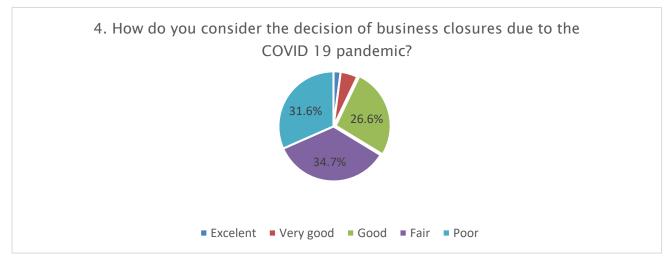
**Figure 3**Self-assessment of business growth or decline.



The graph in Figure 3 shows the decrease in the businesses with 34%, which means that a third of the micro and small-sized businesses in the municipality of Ahuacatlan perceive decreasing sales. Having less income does not allow the businesses to afford the operating costs.

Regarding the open question, the owners that consider a decrease in their businesses stated that it has been caused by the pandemic and the lack of employment opportunities. And those who considered to have had growth in their business, mainly attribute it to the fact that they began to offer their products online, to advertising and to the efficiency in resource management. Therefore, it can be inferred that there is the possibility that the decrease for other businesses may be due to not implementing digital strategies to ensure selling.

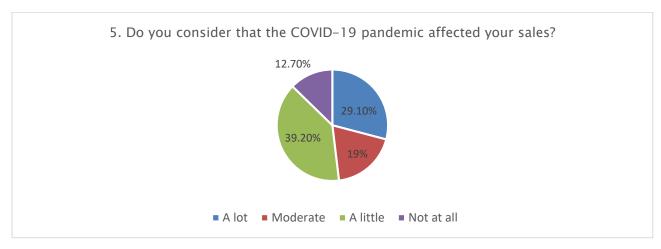
**Figure 4** *Evaluation of the business closing strategy.* 



As shown in the graph of Figure 4, 34% described the decision to close businesses as fair. The closest rated opinion is the 32% who stated that it was a poor decision from the government to indicate the closure of businesses during the first months of the pandemic. This represents the third part of the business owners. They rated the decision as poor since they were directly affected.

## Figure 5

Perspective of micro and small-sized businesses owners regarding the impact on sales caused by the pandemic.

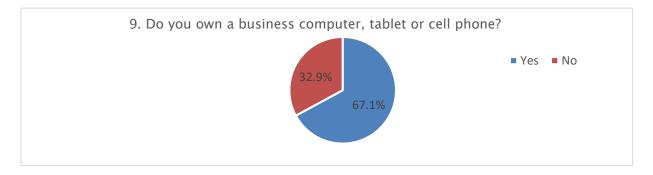


The graph in Figure 5 shows that 49% of the survey respondents perceive a lot and moderate impact due to the pandemic and 39% notice a little affectation. Therefore, only 12% consider that their businesses were not affected. All this shows that the pandemic affected more than a third of the businesses in the area however the owners probably did not dare to recognize it.

The following results show the use of electronic means to conduct sales, that is, the use of computer and/or some electronic device, as well as the use of social networks. The following figures will show the degree of use that micro and small-sized businesses used to deal with the COVID-19 pandemic.

Figure 6

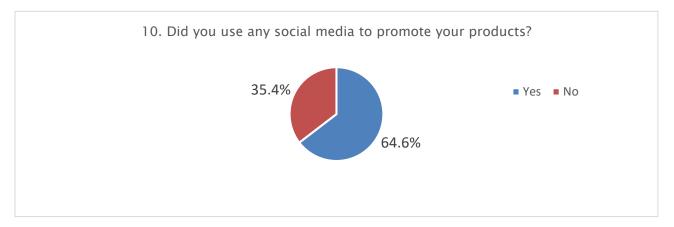
Technological resources available for micro and small-sized businesses in Ahuacatlan.



Note. Data collected by author.

The graph in Figure 6 shows that technology may not be limiting to promote economic development in business, since about 70% have a computer, tablet or cell phone. Probably, the businesses have not yet opened up to an effective use of technological resources to grow or decrease the effect of the pandemic.

**Figure 7** *The use of social media to promote products.* 



*Note.* Data collected by author.

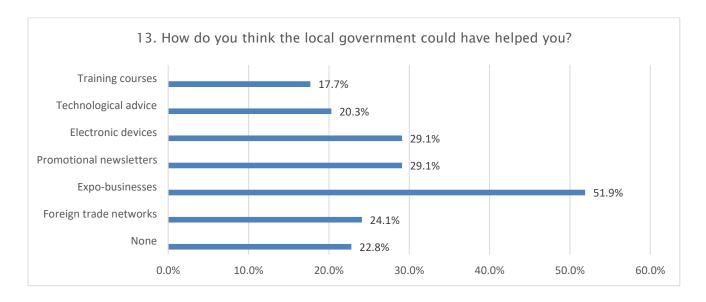
The graph in Figure 7 shows that the percentage of those who have an electronic device and those who use social networks is essentially the same. Probably the percentage difference could be due to not using or not know how to use social networks to conduct sales.

On the other hand, based on the answer to one of the items, it showed that Facebook is the most used social network with 77%, followed by WhatsApp with 17%.

The last part of the results shows the level of acceptance of some strategies that seek to boost the business income and reduce the negative effects caused by the pandemic.

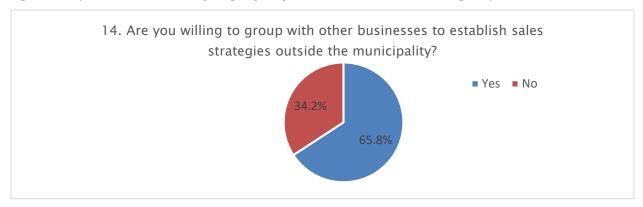
Figure 8

Evaluation of strategies that the local government could implement to help micro and small-sized businesses in Ahuacatlan.



Regarding the strategies that the local government could implement, the graph in Figure 8 shows that the expo-businesses, promotional newsletters from local businesses and the acquisition of technology were the most voted. Therefore, the current city council can start with the implementation of these strategies.

**Figure 9** *Opinions of businesses about grouping to go to sell outside the municipality.* 



Note. Data collected by author.

The graph shown in figure 9 shows that 65% of the businesses are willing to group together and support each other to establish trade networks outside the municipality. This strategy could be worked by the Department of Economic Development along with the previously proposed.

Finally, it can be stated that this work allows to have a knowledge of the economic impact of micro and small-sized businesses in Ahuacatlán, Nayarit in consequence, in one hand, to the temporary closure ordered by the authorities due to COVID-19 pandemic and, in the other hand, to the low sales businesses had after reopening. This demonstrates the stated by Bejarano *et al.* (2021) who claim that one of the main conflicts generated by the pandemic was the sharp drop in sales in the micro and small-sized businesses.

Likewise, Lozano and Chiatchoua (2021) claim that most of the companies economically affected by the pandemic were those that were less than 10 years old, which matches with the 62% of the sample from Ahuacatlan.

This will allow the local government through the Economic Development Department to create and follow helpful strategies for increasing sales in businesses. It would be interesting to carry out research after the implementation of strategies to measure their impact in businesses.

## **Conclusions**

The Covid-19 pandemic has been, without doubt, one of the recent events which has had the greatest impact in social, psychological and economic aspects of people's lives. The sudden changes and damages caused by the health crisis forced international, national and local authorities to create "express" strategies to try to save the lives of those they represented.

However, the measures that sought to protect lives caused economic damage to those who support the development of towns and the national economy, that is, micro and small-sized businesses. This sector was not prepared to face the temporary closures that were ordered for long periods. In addition to the fact that a large percentage of businesses did not have the economic and technological resources to face the measures imposed by the government.

The government of the municipality of Ahuacatlan is committed to set out the actions that businessmen consider, according to this study, as viable options to promote their businesses. The covid-19 will continue among the population of the municipality therefore it is important to

provide the necessary support to enable the businesses to solve the current problems and to face the future ones.

#### Reference

- Bejarano, H., Hancevic, P. & Nuñez, H.M. (2021). Impacto económico del COVID-19 en negocios pequeños y medianos bajo restricciones voluntarias e impuestas. *Ecoquantum*, 18(2), 23-56. https://doi.org/10.18381/eq.v18i2.7229
- Benitez, C. (23 de julio, 2020). Nayarit, el estado con mayor afectación económica en el país. *El Occidental*. <a href="https://www.eloccidental.com.mx/local/noticias-coronavirus-covid-19-nayarit-el-estado-con-mayor-afectacion-economica-en-el-pais-5532788.html">https://www.eloccidental.com.mx/local/noticias-coronavirus-covid-19-nayarit-el-estado-con-mayor-afectacion-economica-en-el-pais-5532788.html</a>
- Comisión Económica para América Latina y el Caribe (2020). *Mipymes y el COVID-19*. *Euromipyme*. <a href="https://www.cepal.org/es/euromipyme/mipymes-covid-19">https://www.cepal.org/es/euromipyme/mipymes-covid-19</a>
- Esquivel, G. (2020). Los impactos económicos de la pandemia en México. *Journal of Economic*, 17(51), 28-44. <a href="http://revistaeconomia.unam.mx/index.php/ecu/article/view/543/576">http://revistaeconomia.unam.mx/index.php/ecu/article/view/543/576</a>
- Koury, J. & Hirschhaut, M. (2020) Reseña histórica del COVID-19 ¿Cómo y por qué llegamos a esta pandemia? *Acta Odontológica Venezolana*, 58(1),3-4 <a href="https://dialnet.unirioja.es/servlet/articulo?codigo=7320726">https://dialnet.unirioja.es/servlet/articulo?codigo=7320726</a>
- Lozano, C. & Chiatchoua, C. (2021). El impacto del COVID-19 en las micro y pequeñas empresas de la Ciudad de México. *Boletín Científico Sapiens Research*, 11(2), 3-11. https://dialnet.unirioja.es/servlet/articulo?codigo=8249089
- Márquez, E. (17 de septiembre, 2021). Cuál es el porcentaje de empleos que generan las micro y pequeñas empresas en México. *Mi Trabajo*. <a href="https://www.mitrabajo.news/noticias/Cual-es-el-porcentaje-de-empleos-que-generan-las-micro-y-pequenas-empresas-en-Mexico-20210917-0006.html">https://www.mitrabajo.news/noticias/Cual-es-el-porcentaje-de-empleos-que-generan-las-micro-y-pequenas-empresas-en-Mexico-20210917-0006.html</a>
- Programa de las Naciones Unidas para el Desarrollo. (2020). COVID-19 serie de documentos de política pública: introducción. América latina y el Caribe. Serie de documentos de política pública.
  - https://www.undp.org/sites/g/files/zskgke326/files/migration/latinamerica/UNDP-RBLAC-CD19-PDS-Number0-ES-Intro.pdf
- Sánchez, S. & Mendoza, J. (2021). COVID-19 Y MiPymes restauranteras de la ciudad de Tepic, 2020. *Brazilian Journals of Business*, *3*(2), 1942-1955. https://brazilianjournals.com/ojs/index.php/BJB/article/view/31641

#### Annexes

## Annex 1. Questionnaire applied to micro and small-sized business owners.

Hi, how are you? This research is carried out by teachers and students from the Ahuacatlan Academic Unit from Autonomous University of Nayarit. In order to measure the economic impact caused by the COVID-19 pandemic on micro and small-sized businesses in the municipality of Ahuacatlan, Nayarit, I request you to answer with all honesty.

1. For how long have you owned the business?

- a) 0-5 years
- b) 6-10 years
- c) 11-15 years
- d) 16-20 years
- e) For more than 20 years
- 2. Since the business startup, how do you consider its growth?
  - a) It has grown a lot
  - b) It has grown a bit
  - c) It has been stable
  - d) It has decreased a bit
  - e) It has decreased a lot
- 3. According to your previous answer, why do you think it happened?
- 4. How do you consider the decision of business closures due to the COVID 19 pandemic?
  - a) Excellent
  - b) Very good
  - c) Good
  - d) Fair
  - e) Poor
- 5. Do you consider that the COVID-19 pandemic affected your sales?
  - a) A lot
  - b) Moderate
  - c) A little
  - d) Not at all
- 6. If the pandemic affected your sales, what might the percentage be?
  - a) 0-10%
  - b) 11-20%
  - c) 21-30%
  - d) 31-40%
  - e) More than 40%
- 7. Did you ever think of definitively closing your business?
  - a) Yes
  - b) No
- 8. Did you use any strategy to avoid being affected by the pandemic?
  - a) Yes
  - b) No
  - c) I did not think about it
- 9. Do you own a business computer, tablet or cell phone?
  - a) Yes
  - b) No

- 10. Did you use any social media to promote your products?
  - a) Yes
  - b) No
- 11. If the answer is yes, choose the one you used the most.
  - a) Facebook
  - b) WhatsApp
  - c) Twitter
  - d) Instagram
- 12. Did you receive any help from the state or local government?
  - a) Yes
  - b) No
  - c) Sometimes
- 13. How do you think the local government could have helped you?
  - a) Training courses
  - b) Technological advice
  - c) Electronic devices
  - d) Promotional newsletters
  - e) Expo-businesses
  - f) Foreign trade networks
  - g) None
- 14. Are you willing to group with other businesses to establish sales strategies outside the municipality?
  - a) Yes
  - b) No
  - c) I could think about it