

HUERTA-ARROYO, Emmanuel, HERNÁNDEZ-VELÁZQUEZ, Maribel Rocío and GUERRERO-GARCÍA, Sylja Viridiana

### Abstract

**General Purpose:** To determine the influence of digital technologies in SMEs in Tecamac municipality after the COVID-19, Mexico 2021.

**Specific Objectives:**

- To set the percent of SMEs in Tecamac municipality that use digital technologies in their post – pandemic business operations through the application of a survey focused on a specific target sample of these small and medium companies.
- To collect information about the kind of digital software focused on sales, digital marketing, logistics and accounting and invoicing or any kind digital technology that supports the activities of these SMEs after the COVID-19 pandemic.

**Scientific Hypothesis:** The influence of digital technologies for SMEs in Tecamac municipality is more than 70% since they are used by them for their local and international business and trade operations.

**Methodology:** Application of a data collection method (a mixed type of survey) to the SMEs of Tecamac municipality that have as their main line of business the commercialization of merchandise of any industry, then, graph the results.

**Contribution:** Make a post – pandemic study about strategies applied by SMEs in relation to use digital technologies to be able to continue with their business.

### Introduction

SMEs in Mexico play a very important role in the national economy because of their high impact on job creation. On the other hand, it is important to say that SMEs are currently business models that are becoming more and more prominent in the country, the entrepreneurial culture in relation to the formation of SMEs and innovation are essential for the economic development of the country, now and in the future. At the beginning of 2020, all kind of business were affected by the COVID-19 pandemic, so in the last two years a lot of big companies were forced to make a radical change in their process, now, these are supported using digital technology and e-commerce. For SMEs was not the exception, since the digital transformation was necessary to survive the business.



Figure 1



Figure 2

### References

Hernández Aguilar, M. S. (s.f.). quickbooks. Retrieved 14 March 2022, from quickbooks: <https://quickbooks.intuit.com/mx/recursos/comienzo-tu-negocio/cualesson-los-tipos-de-pymes-en-mexico/>

Westreicher, G. (27 June 2015). Pyme – Pequeña y mediana empresa. Retrieved from Economipedia: <https://economipedia.com/definiciones/pyme.html>

Autores, V. (6 August 2021). Milenio. Retrieved from Milenio: <https://www.milenio.com/opinion/varios-autores/las-voces-deingenierias/las-pymes-y-covid-19>

Latinoamérica, N. C. (26 January 2021). Microsoft. Retrieved from Microsoft: <https://news.microsoft.com/es-xl/pymes-mexicanas-83-realizaron-un-cambio-en-su-negocio-debido-al-covid-19/>

FERMÍN, S. A. (2022 May 29). BBVA. Retrieved from BBVA: <https://www.bbva.mx/educacion-financiera/opinion/pymes-ante-el-covid-19-que-hacer-para-sobrevivir.html>

Contact: HUERTA-ARROYO, Emmanuel

E-mail: [emmanuel\\_1319121013@uptecamac.edu.mx](mailto:emmanuel_1319121013@uptecamac.edu.mx)

Project website: <https://www.ecorfan.org>

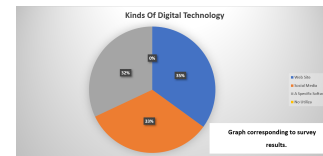
### Materials and methods

The main variable of this research project is digital technologies in the business operations of SMEs.

Results of the applied survey of different companies in the municipality of Tecamac, Mexico.

Company	Industry	Age	Number of employees	Use of digital technologies
1	Construction	10-20	5-10	Yes
2	Manufacturing	20-30	10-20	Yes
3	Retail	10-20	5-10	Yes
4	Services	10-20	5-10	Yes
5	Manufacturing	10-20	5-10	Yes
6	Manufacturing	10-20	5-10	Yes
7	Manufacturing	10-20	5-10	Yes
8	Manufacturing	10-20	5-10	Yes
9	Manufacturing	10-20	5-10	Yes
10	Manufacturing	10-20	5-10	Yes
11	Manufacturing	10-20	5-10	Yes
12	Manufacturing	10-20	5-10	Yes
13	Manufacturing	10-20	5-10	Yes
14	Manufacturing	10-20	5-10	Yes
15	Manufacturing	10-20	5-10	Yes
16	Manufacturing	10-20	5-10	Yes
17	Manufacturing	10-20	5-10	Yes
18	Manufacturing	10-20	5-10	Yes
19	Manufacturing	10-20	5-10	Yes
20	Manufacturing	10-20	5-10	Yes

Table 1  
Source: Own elaboration (Mixed survey applied to SMEs in Tecamac).



Graphic 1  
Source: Own elaboration with data from the survey applied to SMEs

### Results

More than 70% of SMEs use digital technologies for their local and international trade operations.

### Conclusions

According to the results obtained in the research it can be concluded that the scientific hypothesis is true, because of the most of SMEs within the study sample use some digital media to market their merchandise and services after the COVID– 19 pandemics. In general, the digital media most frequented by these are web pages, social networks and digital or online stores such as internal software to support sales and accounting. The scientific hypothesis shows that more than 70% of SMEs use digital technologies for their local and international trade operations, the hypothesis is true.



Figure 3

### Future of research

To keep showing the transformation of SMEs and companies together with technological and / or digital media which is of great importance today as this is a determining factor when it comes to growing a business and, especially, that it can survive over time.

### Acknowledgments

I would like to express my gratitude to the Universidad Politecnica de Tecamac and my advisors for giving me the opportunity to participate. I would like to thank them for all their support and for giving me the knowledge to be able to perform scientific research, to know how to search for information and to strengthen my professional skills, I will always be grateful to them.