Electronic commerce in MIPYMES: Gaps and opportunities in its organizational resilience vs. COVID-19

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Abstract

According to the United Nations Conference on Trade and Development (UNCTAD, 2021), the Andean Development Corporation (ADC), and the Economic Commission for Latin America and the Caribbean (ECLAC, 2020), persistent structural gaps in the global economy and the COVID-19 pandemic during 2020 caused a sharp slowdown in international economic activity and more than 140 million jobs were lost, global wealth increased by 7.4% due to the growth of stock markets, the appreciation of the real estate sector, low-interest rates and unexpected savings were a result of the shutdown.

KeyWords: e-commerce; COVID19, SMEs; journal.

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Introduction

In this global context, the economy of Latin America and the Caribbean recorded, according to the Economic Commission for Latin America and the Caribbean (ECLAC, 2021), the largest GDP contraction since 1900 (6.8%) and the worst performance. In the developing regions, in the medium term before the crisis, average growth was only 0.3% and per capita growth was negative in the period 2014-2019. This six-year period was one of the lowest growth periods since records have been kept. In conclusion, the aforementioned document states, "Near-zero growth before the crisis, together with the contraction of 2020 and the weakness of the welfare state and the health and social protection systems, resulted in unprecedented increases in unemployment. In addition, there was a fall in incomes and a rise in poverty and inequality that exacerbated structural problems. The 2020 contraction also led to a large number of closures of micro, small and medium-sized enterprises (MSMEs) and the destruction of productive and human capacities" (Economic Commission for Latin America and the Caribbean (ECLACa), 2021, p. 2).

According to Veiga (2021), the ECLAC, (2021) and Correa et al. (2020), MSMEs are the engine of the business fabric of Latin American and Caribbean economies as they exceed 99% of business entities in the region; their incidence in the generation of formal employment represents 61% of the total; however, their contribution to the regional gross domestic product (GDP) is only 25%. This contradiction reveals the existing productivity gaps between productive and service entities of different sizes, according to their productive structure, the high specialization in low value-added products and services and their heterogeneity expressed in:

- Its creation answers the urgent need for self-employment in formal as opposed to informal environments.
- formalized and legally protected environments;
- low vs. medium/high levels of education in subordinate human capital;
- barriers vs. administrative-legal facilities for access to national and international financial resources;
- Execution of productive and service activities with low vs. medium technical requirements and demands;
- no vs. low digital innovation in productive and service processes;
- Low vs. medium internationalization of their products and services.

The new and unforeseen economic environment brought about by COVID-19 and the urgent need to change the ways of being, doing and working face-to-face for non-presential online ones, promoted the intensive and extensive use of the benefits, advantages and virtues of information and communications technologies that support electronic commerce in its center. The program promoted the intensive and extensive use of the benefits, advantages, and virtues of information and communications technologies that support electronic commerce in their intra-, inter-, and trans-relationships with the digital ecosystem as a primary alternative in commercial transactions between customers and suppliers of services and goods in a market with new opportunities and challenges to be identified and exploited by micro, small, and medium-sized enterprises (MSMEs) in Latin America. (Andean Development Corporation (CAF) and Economic Commission for Latin America and the Caribbean (ECLAC), 2020); (Economic Commission for Latin America and the Caribbean (ECLACa), 2021); (Economic Commission for Latin America and the Caribbean (ECLACb), 2021).

It is therefore essential to return to the definition proposed by the Organization for Economic Co-operation and Development (OECD) for electronic commerce (e-commerce):

An e-commerce transaction is the sale or purchase of goods or services conducted over computer networks using methods specifically designed for receiving or placing orders. Goods or services are ordered through these methods, but payment and final delivery of the goods or services need not be made electronically. An e-

commerce transaction can take place between businesses, households, individuals, governments and other public or private organizations (Organization for Economic Co-operation and Development-OECD, 2011, p. 74).

The term computer networks used in the above definition is based on the need for a telecommunications and digital connectivity infrastructure that includes at least three relevant technical criteria: quality guarantees to meet the exponential increase in data and information traffic over the Internet; the implementation, renewal and innovation of teleworking as the basis for labor relations; and the formation of efficient and effective logistics chains (sale, purchase, supply, distribution and redistribution) of goods and services.

Katz's (2015) proposal on the concept of the digital ecosystem as a theoretical-conceptual way of highlighting the new industrial context, the economic and social impact, resulting from the massive adoption of information and communication technologies, for which his study involves the following three analytical dimensions: the new ways of producing information and content; the different social behaviors related to the use and consumption of goods; as well as the economic-social impacts generated by the massive, extensive and intensive use of information and communication technologies.

The digital ecosystem in which e-commerce takes place encompasses economic activities involving for-profit and not-for-profit entities, described as:

- business-to-business (B2B), business-to-consumer (B2C), and government-to-business and government-to-citizen (G2B, G2C) transactions.
- the direct provision of services that can be digitally traded, as well as the facilitation of ongoing and additional trade in goods.
- international trade between continents and across land borders, as well as domestic transactions, both wholesale and retail.
- Transactions are conducted through global platforms such as Amazon and Alibaba; regional intermediaries such as Jumia in Africa; Lazada in Southeast Asia and Mercado Libre in Latin America; online domains owned by wholesalers and retailers; as well as small transactions between micro, medium and small enterprises (MSMEs) and individuals. United Nations Conference on Trade and Development (UNCTAD), 2021).

Considering the scenario described above, the general objective of the research will focus on a literature review to identify the impacts, effects, challenges, gaps, opportunities and measurement indicators in the interrelationships between e-commerce, the COVID19 pandemic and organizational resilience in Latin American MSMEs, and based on the perspectives of the authors included in the selected sample, and the factors and analytical dimensions of organizational resilience defined for the research.

The type of qualitative research conducted was based on the criteria provided by (Sánchez Torres & Juárez Acosta, 2017; Maita Guédez, 2019; Perdigón Llanes & Pérez Pino, 2020; and CAF and ECLAC, 2020) which support the following methodological elements:

The identification and conceptualization of the analytical factors for the analysis and evaluation of the organizational resilience of the MSMEs are defined as the object of the research, as follows:

- Organizational resilience: "in the field of organizational science, it has been defined as the capacity that facilitates adaptation and maintenance in the face of adverse conditions, meeting objectives during and after adversity (Meneghel et al., 2013; Limnios et al., 2014; Vera et al., 2017; Williams et al., 2017)", according to (García-Contreras et al., 2021, p. 76).
- Analytical Factor I, Resilience of the digital infrastructure: "is a fundamental component to maintain economic resilience. The capacity of networks to accommodate the communication needs arising from COVID-19 can only be ensured through the joint action of operators, regulators and Internet platforms" (Corporación Andina de Fomento - CAF and

Economic Commission for Latin America and the Caribbean - ECLAC, 2020, p. 8); Analytical factor II, Resilience to production: "The barriers to digitization in the region's chain supply extended to distribution channels" (Andean Development Corporation -CAF and Economic Commission for Latin America and the Caribbean -ECLAC, 2020, p. 12).

- Opportunity/gap indicators in organizational resilience for Latin American MSMEs: the construct of González et al (2017), (Kantur & Iseri-Say, 2015, p. 465) is used as a theoretical-conceptual base, which defines the three dimensions that facilitate the evaluation of resilience organization in companies: "The dimensions of robustness included items aimed at measuring the resilience of companies. The agility dimension includes elements to assess how easily and quickly companies adapt to changing circumstances, and finally, the integrity dimension measures the degree to which employees are joined in the company.
- Search, capture and selection of Economic Commission for Latin America and the Caribbean (ECLAC) reports and selected academic articles based on the following technical criteria:
- Access the website www.cepal.org/es/ to identify the reports prepared by this United Nations entity related to e-commerce, the digital ecosystem and MSMEs in their interrelation with the effects and impacts of the COVID-19 pandemic. COVID19 in the period from January 2020 to July 2021;
- Use of the academic search engine Google in the time interval January 2020 to July 2021, through the keywords: e-commerce; COVID19, SMEs; journal;
- Or only Spanish language articles published in the following platforms SciELO - Scientific Electronic Library Online (https://scielo.org/es/); Sistema de Información Científica de la Red REDALYC de Revistas Científicas de América Latina y el Caribe, España y Portugal (https://www.redalyc.org/) and LATINDEX - Sistema Regional de Información en Línea de Revistas Científicas de América Latina, el Caribe, España y Portugal (https://www.latindex.org/latindex/inicio);
- In the selected period, there are three ECLAC reports and 13 academic articles, broken down into eight in the Scielo platform, two in REDALYC and three in LATINDEX; as shown in Table 1

Table 1. List of selected articles.

AUTHORS	TITLE	PUBLICATION
	CEPAL	
1. (Andean Development Corporation - CAF and Economic Commission for Latin America and the Caribbean - ECLAC, 2020)	The digitization opportunities in Latin America against Covid-19.	
2. (Economic Commission for Latin America and the Caribbean - CEPALa, 2021)	The recovery paradox in Latin America and the Caribbean. Growth with persistent structural problems: inequality, poverty, little investment and low productivity.	July 2021
3. (Economic Commission for Latin America and the Caribbean - ECLACb, 2021)	Data and facts about digital transformation. Report about the main indicators of adoption of digital technologies in the framework of the Digital Agenda for Latin America and the Caribbean.	

	AUTHORS	TITLE	PUBLICATION
		LATINDEX	
1.	(Olguín Ramírez, Barrera Espinosa, & Placeres Salinas, 2020).	Sustainability of MiPyMes in the pandemic supported by electronic commerce.	Vinculatégica – Autonomous University of Nuevo León and Faculty of Public Accounting and Administration, Mexico. July - December 2020.
2.	(Heredia Bustamante, Aguilar Talamante, & Sainz Zarate, 2020)	Situation of SMEs in Hermosillo, Sonora in the face of the crisis presented by COVID-19.	Journal of Research without Borders - University of Sonora, Mexico. January – June 2020.
3.	(Aguilar Talamante, Heredia Bustamante, & Sainz Zarate, 2020)	Entrepreneurship in the face of the pandemic caused by COVID-19.	Journal of Research without Borders - University of Sonora, Mexico. July – December 2020.
		REDALYC	
1.	(Uribe Beltrán & Sabogal Neira , 2021)	Digital marketing in micro and small advertising companies in Bogotá.	University & Business Magazine – University of Rosario, Colombia. June 2021.
2.	(Bargados, 2021)	Impact of Covid-19 on Argentine SMEs.	Work and Society Magazine – University of Santiago del Estero, Argentina. January – June 2021
		SCIELO	
1.	(Sampedro Guamán, Palma Rivera, Machuca Vivar, & Arrobo Lapo, 2021)	Digital transformation of marketing in small and medium enterprises through social networks.	University and Society Magazine – University of Cienfuegos, Cuba. May – June 2021.
2.	(Delgado-Anchundia, Lucas-Mantuano, & Mero-Suárez, 2021)	The usefulness of virtual platforms in the business development of MSMEs in the Montecristi Canton.	Pole of Knowledge Magazine – Polo Publishing House, Ecuador. July 2021.
3.	(Padilla Buñay, Lluglla Luna, Álvarez Arboleda, & Ramírez Rodríguez, 2021)	Crisis and tourist reactivation in times of covid-19. Chamber of Tourism province of Pastaza.	University and Society Magazine – University of Cienfuegos, Cuba. May – June 2021.
4.	(Sumba-Bustamante, Almendariz-Gonzalez, Baque-Chancay, & Aliatis-Bravo, 2020)	Entrepreneurship in times of covid-19: From traditional to electronic commerce.	Promotion of research and publication in Social Sciences, Administrative, Economic and Accounting Sciences (FIPCAEC) - Pole of Training, Research and Publication - POCAIP, Ecuador. October – December 2020.
5.	(Tello Saldaña, Nizama Imán, Huamán Yovera, & Vargas	Impact of online marketing channels in times of COVID-19.	INNOVA Research Journal – International University of Ecuador. September –

	AUTHORS	TITLE	PUBLICATION
	Merino, 2020)		December 2020.
6.	(Chiatchoua & Lozano Arizmendi, 2021)	Mechanisms of adjustment and digitalization of micro and small companies in the face of COVID-19 in Mexico.	Nova Scientia magazine – La Salle University, Mexico. May 2021
7.	(Chanto Espinoza & Loáiciga Gutiérrez, 2021)	Perceptions of entrepreneurship supported by technological tools: a descriptive approach in times of COVID-19.	National Magazine of Administration - State Distance University, Costa Rica. June 2021
8.	(García-Contreras, Valle-Cruz, & Canales-García, 2021)	Organizational selection: resilience and performance of SMEs in the era of COVID-19.	Management Studies Magazine – ICESI University, Colombia. January – March 2021.

Source: own elaboration.

Therefore, this qualitative research is based on a documentary study, where the analysis and evaluation involve **"**a variety of conceptions or frameworks of interpretation, which have a common denominator: each individual, group or social system has a unique way of seeing the world and understanding situations and events, which are built by the unconscious, the transmission of experiences, and through research, we must try to understand it, in its context**"**, according to Hernández Sampieri et al., 2014, p. 10). In essence, this type of research is very useful to understand approaches, ways of doing things, opportunities, and gaps and to understand phenomena from the perspectives, approaches and points of view of direct and indirect participants in their natural context.

DEVELOPMENT

The most relevant results of the study, review and analysis of the selected bibliographic references (Table 1) are based on each of the analytical factors of organizational resilience defined by the authors for MSMEs in Latin America, to show the theoretical-conceptual elements that make up the general context, the particularities and the proposal of the indicators of opportunity/gap, in terms of robustness, agility and integrity for each defined factor.

Analytical Factor I: Resilience to digital infrastructure

This analytical factor highlights the relevance and impact of the capacity of existing computer networks to support the communication demands implied by the COVID19 epidemic, which must be guaranteed by the actions of the technical services network to be provided by telecommunications service providers; government regulatory authorities and virtual Internet platforms, in a new and challenging environment.

The opportunities, gaps and indicators of opportunities/gaps in the organizational resilience of MSMEs in Latin America in this factor are expressed in terms described below.

OPPORTUNITIES

1. The increase in the number of online companies that implies the transformation from passive approaches (informative websites) to an interactive presence (transactional websites) in the use of Information and Communication Technologies (ICT) implies a greater production of segmentation among companies with different capacities (Economic Commission for Latin America and the Caribbean - ECLACa, 2021).

2. **"**Product catalogs of MSMEs using Shopify as an e-commerce platform show that half of the products offered online by these companies in Brazil, Chile, Colombia and Mexico as of October 2020 were published as of April 2020**"**, explains the (Economic Commission for Latin America and the Caribbean - ECLACa, 2021, p. 9).

GAPS:

1. Accelerated digitization is not observed in the value chain related to directly productive activities, but with companies related to sales,

marketing and exchange with suppliers and providers (Economic Commission for Latin America and the Caribbean - ECLAC, 2021).

2. "In the case of Latin America, the effects of network saturation may be greater than in other regions, as there is still a high dependence on international traffic and a lag in the development of international connectivity infrastructures, such as exchange traffic points (IXPs), content delivery networks (CDNs) and data centers," reported by the Andean Development Corporation (CAF) and Economic Commission for Latin America and the Caribbean (ECLAC, 2020, p. 8).

3. In the survey carried out on 70 owners of MSMEs in Mexico by the authors (Olguín Ramírez et al., 2020), it is emphasized by the participants that, among the barriers to the implementation and development of electronic commerce in the country, there is access to digital banking (20%) and lack of internet access (10%).

OPPORTUNITY/GAP INDICATORS

1. Robustness dimension: expresses the resilience of MSMEs to changes, updates and transformations generated in the digital infrastructure that impact their products and services:

a. MSMEs with Internet access, broken down by productive, services and commercial.

b. Digital banking service.

c. Interchange points (IXP).

d. Content delivery networks (CDNs) and Datacenter.

2. Agility dimension: indicates the ease and speed with which MSMEs adapt to changes, updates and transformations generated in the digital infrastructure that impact their products and services:

a. MIPYMES con sitios web informativos, desglosados por productos, servicios y comerciales.

b. MSMEs with digital banking service.

Consequently, the different stages of exclusion and the effective use of the strengths and benefits of the existing digital infrastructure in Latin America have an impact on the resilience of MSMEs in this new and challenging scenario.

Analytical Factor II: Production Resilience

This analytical factor reveals the importance of the digitalization of production as a key component to face the challenges generated by the disruptions caused by the COVID19 pandemic in all direct and indirect actors involved in the national and international value and logistics chains. In this regard, the traceability of goods and services contracted, shipped, in transit, received and distributed to end customers, in their interactions with port operators, carriers and customs authorities, must be taken into account.

The opportunities, gaps and opportunity/deficit indicators in the resilience of MSMEs in Latin America in this factor are related to:

OPPORTUNITIES:

1. The dynamics of growth of productive activities in the period 2019-2020 report the continuity of accelerated growth of economic activities based on the intensive and extensive use of digital platforms (Economic Commission for Latin America and the Caribbean (ECLAC), 2021).

2. The Economic Commission for Latin America and the Caribbean (ECLACb, 2021, p. 23) highlights that "the average annual growth rate between 2011 and 2019 of the value of venture capital investment in Latin America has been close to 53%. Between 2018 and 2019, the amount of value invested increased by $2,627 million, reaching $4,600, practically 30 times what was recorded in 2011. Of the nearly 440 deals closed, 235 went to ventures in the incubator phase, 176 in the early stage and 22 in the expansion phase";

In the study carried out by the authors Olguín Ramírez et al. (2020), based on a survey applied to 70 owners of MSMEs in Mexico, the following contributions stand out:

a. 66% of the participants confirm that "the adoption of online sales helps in the sustainability of MSMEs with a minimum cash flow" (Olguín Ramírez et al., 2020, p. 7);

b. 42% respond that sales increased in the interval between 40% - 100%; and

c. Among the benefits generated by electronic commerce in MSMEs that the respondents most highlight are: a decrease in

fixed costs (64.30%); an increase in sales by new customers (57.10%); improved quality of services (52.90%) and internationalization (32.90%).

1. The results of the standardized questionnaire designed by the authors Heredia Bustamante et al. (2020) applied to 58 SMEs dedicated to retail trade in the city of Sonora, Mexico emphasizes that:

a. 36% of the participants affirm that they adopted the intensive use of ICTs to access the target markets.

b. 30% base their expectations on innovation as a pillar of ICT-based management strategies.

Another study conducted in the aforementioned Mexican city by the same authors, through the application of a standardized questionnaire to 150 entrepreneurs also dedicated to retail trade, underlines that:

a. "30% plan to finance themselves in the face of the crisis by postponing the payment of taxes and services, 23% do not know, 18% postponing payment to suppliers, 12% through bank credit, 10% postponing payment to partners and 7% through others such as the use of accumulated resources" (Aguilar Talamante et al., 2020, p. 7);

2. Another study carried out in the Mexican city mentioned above by the same authors, through the application of a standardized questionnaire to 150 entrepreneurs also dedicated to retail trade, underlines that:

a. "30% plan to finance themselves in the face of the crisis by postponing the payment of taxes and services, 23% do not know, 18% postponing payment to suppliers, 12% through bank credit, 10% postponing payment to partners and 7% through others such as the use of accumulated resources" (Aguilar Talamante et al., 2020, p. 7);

d. The information related to support networks in entrepreneurship during COVID19 highlights that "46% use only the entrepreneurial team to respond to the crisis, 39% turn to family and friends, 8% to other entrepreneurs, 4 % to new investors, 2% to associations and organizations that support entrepreneurs, and 1% to Government Organizations" (Aguilar Talamante et al., 2020, p. 8).

2. The authors Tello Saldaña et al., 2020) designed quantitative research based on the statistical analysis of the results of a questionnaire applied to 267 inhabitants of the city of Lima, Peru, on the impact of online marketing on the following variables:

3. a. "The statistics showed that online marketing channels significantly influence the increase in sales in COVID-19 times, as the significance level was 0.00 < 0.05. The nonparametric Chi-square correlation coefficient was 0.00, demonstrating this relationship. Therefore, the use of online marketing channels has a significant impact on increasing sales in COVID-19 times" (Tello Saldaña et al., 2020, p. 31).

- a. "if there is a significant impact between online marketing channels and purchase intention because the level of significance was 0.00 < 0.05. The non-parametric correlation coefficient of Chi-square was 0.00, showing that there is a considerable relationship. In other words, the use of online marketing channels does have a great impact on the purchase intention" (Tello Saldaña et al., 2020, p. 31);

b. "Statistics showed that online marketing channels have a positive impact on purchase risk since the level of significance was 0.00 < 0.05. The non-parametric correlation coefficient of Chi-square was 0.00, which indicates a strong and high dependence. In other words, the use of online marketing channels does have a great impact on the purchase risk" (Tello Saldaña et al., 2020, p. 31).

a. "Online marketing channels have a significant impact on purchase satisfaction since the level of significance was 0.00 < 0.05. The non-parametric correlation coefficient of Chi-square was 0.00, showing that there is a relevant impact. This means that the use of online marketing channels does have a great impact on purchase satisfaction" (Tello Saldaña et al., 2020, p. 32).

a. a. The research conducted by the authors (Uribe Beltrán & Sabogal Neira, 2021) includes a study on the potential of digital

marketing in 365 micro and medium-sized advertising companies in the city of Bogotá, Colombia, in which the following results stand out:

b. a. "The customer service factor (code 6) verified whether companies use online channels to complement the service or satisfy the needs of their current or potential customers, of which 95.3% of affirmative responses were obtained. The most used channels were, in order, email (82.5%), website forms (76.2%), social network chat (63.2%), WhatsApp (26%) and comments on social networks (12.3%). Within the most used social networks for customer service (code 7) are Facebook (92.5%), Instagram (30.2%), LinkedIn (19.8%) and Twitter (14.2%)" (Uribe Beltrán & Sabogal Neira, 2021, page 14);

c. "The distribution factor (code 9) checked whether the company uses any digital channel to deliver the result of the advertising services it sells to the client. In this aspect, 52.8% do so, distributed among the web page itself (87.4%), through social networks (63.6%) and email (11.3%). The type of content published by micro and small creative services companies to publicize the services they provide in their digital channels (code 10) shows that the most used are their photographs (86.2%), followed by their videos (58.2%), infographics (31.3%) and self-made audios (2.9%)" (Uribe Beltrán & Sabogal Neira, 2021, p. 15).

4. The study published by Bargados (2021) from data provided by the Fundación Observatorio de las PYMES (FOP) under the Coronavirus Research Program: Impact on SMEs, production and employment, based on the receipt of over 6,000 responses from surveys sent to MSMEs in the Primary (Agriculture/Livestock/Forestry/Forestry/Fishing/Mining); Services; Commerce; Manufacturing and Construction sectors, throughout Argentina. This study highlights the following opportunities:

a. "Despite government aid in its different forms, almost 80% of the companies had to resort - in any case - to their reserves to face the crisis. On the other hand, 14% of the companies managed to incorporate new activities and/or products into their business. Logically, this alternative is only an instrument available to companies with very flexible business structures, such as commerce and microenterprises. Indeed, 22% of commercial companies were able to incorporate new products and/or activities, while only 12% of manufacturing companies and 7% of construction companies were able to apply this strategy, characterized by greater productive rigidity. Likewise, greater firm flexibility was more frequently manifested among micro firms (19%) than among medium-sized firms (11%)" (Bargados, 2021, p. 135).

b. "Among the sectors, Services companies find a greater and more immediate possibility than the rest of the sectors to adapt the internal organization of work to a remote mode: 68% of these companies can implement the teleworking system for part or all of the workforce (Bargados, 2021, p. 139).

5. In the survey conducted by the authors (Sampedro Guamán et al., 2021) to 43 small entrepreneurs in the province of Santo Domingo de los Tsáchilas, Ecuador, on the intensive and extensive use of social networks in the marketing of goods and services of the MSMEs they represent, it is reported that:

a. "60% of respondents were already doing social media marketing (40% were positioned in the market and 20% were in the growth phase) before the pandemic, and the remaining 40% started doing social media activity during the pandemic" (Sampedro Guamán et al. 2021, page 488);

b. 53% of participants reported an increase in sales of goods and services marketed by their companies through social networks (Facebook, Instagram and WhatsApp).

c. The benefits, in order of importance and relevance, provided by the marketing or commercialization strategy in social networks are directly related to (1) 88.37% select the management of business reputation; (2) 79.74% highlight the increase in awareness and perception of the brand image of the companies included in the survey; and (3) 79.07% highlight the increase in sales and customer loyalty.

6. The authors Delgado-Anchundia et al. (2021, p. 15) state in their study on MSMEs in the canton of Montecristi, Ecuador that "MSMEs in

the canton of Montecristi register a limited level of use of virtual platforms in business development, so much is their lack of knowledge that they stigmatize the use of technology for business development, which allows microentrepreneurs to contribute to the country's socioeconomic development".

7. The questionnaire designed by researchers (Chiatchoua & Lozano Arizmendi, 2021) applied to 198 Mexican MSMEs, to assess their survival in the context of the impacts of the COVID19 pandemic, reports that 22.11% respond affirmatively to strategy changes toward online sales and delivery model of products

8. The authors (Chanto Espinoza & Loáiciga Gutiérrez, 2021) in their quantitative - descriptive study on the perceptions of entrepreneurship with the support of technological tools, based on the design of a questionnaire applied to 220 entrepreneurs in the province of Guanacaste, Costa Rica, found that the advantages related to the development of a venture with the help of technological tools are linked, in order of importance, to (1) 32. (2) 15.9% to the redesign and revision of the project by a mentor and expert; (3) 14.5% to receiving specialized talks with national and international experts; and (4) 14.1% to the teaching through online courses;

9. The authors (García-Contreras et al., 2021, p. 81) in their empirical study based on the design of a self-administered questionnaire in electronic format applied to 112 entrepreneurs in Mexico (61) and Chile (61), evaluated through a Neural Network Architecture (ANN) model, they revealed "a discrepancy regarding the relative importance of the dimensions of organizational resilience in performance. On the one hand, for Mexican companies, reciprocal cohesion and solidarity between employees and the company are paramount in unfavorable circumstances, while for Chilean companies, the most important is the financial and operational capacity in critical situations".

GAPS:

1. The Economic Commission for Latin America and the Caribbean (ECLACb, 2021, p. 20) confirmed that "Latin America and the Caribbean has a digital industries development index of 18.63, significantly lower than that of OECD countries (33.54), North America (43.21) or Western Europe (35.75). Although the index has had a growth rate similar to that observed in OECD countries, its position in the index is a symptom of the backwardness of Latin America and the Caribbean in this aspect".

2. Productive companies have not taken proactive decisions to digitize their production processes. The Economic Commission for Latin America and the Caribbean (ECLACb, 2021, p. 21) reports, among others, the following indicators: companies connected to the Internet (88.97%); companies that use the Internet in their supply chains (36.90%) and companies that have deployed digital sales channels (17.68%).

3. Productive companies have not made proactive decisions to digitize their production processes. The Economic Commission for Latin America and the Caribbean (ECLACb, 2021, p. 21) reports, among others, the following indicators: companies connected to the Internet (88.97%); companies that use the Internet in their supply chains (36.90%) and companies that have deployed digital sales channels (17.68%);

4. The authors Sumba-Bustamante et al. (2020, p. 152), in a documentary and descriptive research on the use of e-commerce in Ecuadorian companies in times of the COVID 19 pandemic, confirm that:

a. "Entrepreneurs have made greater use of technology, which has become a new distribution channel, allowing them to better market their products, but there are limitations that prevent their ventures from being recognized on the Internet since they do not have or do not know how to manage it, and if they do have it, they do not sell all their products, since there are many consumers who do not trust and also do not have the creativity to motivate people's demand".

5. The research carried out by the authors (Uribe Beltrán & Sabogal Neira, 2021) highlights the following effects:

a. "Within the promotional strategies (code 11), non-intrusive native advertising actions are

investigated, with a negative response of 95.8%. In turn, the search for other digital marketing strategies used by the company to promote its services stands out (...) in a low percentage (3.4%) (...) the use of influencers to generate conversation about its services" (Uribe Beltrán & Sabogal Neira, 2021, p. 15);

"It was also possible to show that the budget mostly allocated for digital marketing strategies is from 0% to 10% of the total (64.3%). Where the micro and small advertising entrepreneurs have the most interest in strengthening their digital marketing strategy is in the formulation of the strategy and guideline tools (37.5%) and the development of digital marketing actions (21%)" (Uribe Beltrán & Sabogal Neira, 2021, p. 17);

6. In the study published by Bargados (2021), the following gaps are identified:

a. in the construction company sector, difficulties in adopting telework are reported in 57% of the total included in the study; interrelationships between closure risk vs. risk of future labor conflict report the following data:

(i) a high weakness in the microenterprise segment, where 12% suffer the risk of closure and 29% exhibit risk of future labor conflict; (ii) in small businesses, the risk of closure is 7% and the risk of labor conflict is 34%; and (iii) in medium-sized companies, the risk of closure occurs in 3% of the companies and the risk of labor conflict in 29%. However, in the primary sector, both a lower risk of company closures (4%) and a lower potential risk of labor conflict (15%) are reported.

7. In the survey applied by the authors Sampedro Guamán et al. (2021) of 43 businessmen in the province of Santo Domingo de Los Tsáchilas, Ecuador, it is explained that:

a. 76.74% of entrepreneurs use Facebook as a social network to market their products, followed by a smaller percentage by Instagram (13.95%) and WhatsApp (9.3%), it is noteworthy that none reported the use of LinkedIn, Twitter and Pinterest.

b. 23.25% state that the companies they represent do not have a website that provides updated information to existing and potential customers.

The authors' research (Delgado-Anchundia et al., 2021, p. 433) presented a preliminary approach to the negative impacts of the COVID-19 pandemic on tourism activity in the province of Pastaza, Ecuador, determining that:

a. Ratio of workers/employees: the massive layoff is centered in a range of 50% to 100% of the personnel dismissed from their jobs issued by the tourism chamber employers, generated by the economic insolvency caused by the COVID-19 pandemic and indicates that the tourism sector warns of problems due to its obligations with the personnel. The economic complications will have a direct impact on the normal capacity to maintain the workers, to which the current legal confrontation is added.

b. Financial loans in arrears: there are 2 ranges of financial arrears; the first ranges between 56% and 71% on the acquired debt; the second become more complex because the default identifies a percentage ratio of (-5% to - 25%), causing the closure of the tourist activity and the collapse. Without tourism economic activity, the humanitarian law has no effect, worse in terms of collection, the entrepreneur is exposed to cancel the late fees for the period finally agreed.

c. Decrease in tourism due to reactivation. The opening of the activity shows an incomplete capacity, there is a decrease and it is shown in 3 ranges. The first is around 28%; the second is 60% - 75%; and the third is 100%, which identifies that the gastronomic sector recovers its activity to the maximum. The lodging, entertainment and community tourism centers have a slight recovery without reaching full capacity. It is evident the inactivity of tour guides and tourist agencies that are not reactivated in the tourist context.

8. The questionnaire designed by the researchers (Chiatchoua & Lozano Arizmendi, 2021, p. 23) applied to 198 Mexican MSMEs to evaluate their survival in the context of the impacts of the COVID-19 pandemic highlights that "81% of the companies do not develop and have not developed links with different social sectors when on the other hand only 18% of the companies developed some link. The links here

must be strategic for the company, it can be with the government, with the university, with other companies in the same sector or not, with society in general and with the market in which it is located or with other markets".

9. The authors Chanto Espinoza & Loáiciga Gutiérrez (2021) in their quantitative - descriptive study on the perceptions of entrepreneurship with the support of technological tools, showed that:

a. "The subjects surveyed consider that in an increasingly digitized market, it is necessary to develop an entrepreneurial culture hand in hand with technological tools; 192 respondents consider that they lack knowledge about free digital tools, money, financial advice and project management knowledge. On the other hand, 28 respondents indicated the need to improve their motivation and to have bibliographical reading based on successful projects and information on entrepreneurship, which is often acquired based on experience, with episodes of trial and error" (Chanto Espinoza & Loáiciga Gutiérrez, 2021, page 78)

b. "Respondents stated that, for an entrepreneur to be successful in times of COVID-19, he/she should consider managing knowledge in marketing and digital marketing; 67.3% (148 in absolute terms) indicated this condition. 49.5% indicated the need to have a strategy or business plan and 31.8% with technical or sales knowledge" (Chanto Espinoza & Loáiciga Gutiérrez, 2021, p. 79);

c. "It was asked why respondents have not been trained in digital tools, especially now, when it is clear that Covid-19 has accelerated the digital economy. The results are interesting: about 30.9% are unaware of the institutions that provide training, 22.7% have not found the right course, 17.7% have not been trained due to lack of time, 8.6% consider it too expensive and 20% give other reasons, such as, for example, that there are no courses they are eligible for, that they are not interested in training, that they do not need it or that it is a waste of time" (Chanto Espinoza & Loáiciga Gutiérrez, 2021, page 79);

d. "70.5% of the study subjects state that, in times of COVID-19, the best option to maintain a business or, failing that, to reach new customers, is through social networks to the fullest extent, without leaving aside the WhatsApp application, with 23.6%; other advertising tools, with 4.1%; and, finally, email, with 1.8%" (Chanto Espinoza & Loáiciga Gutiérrez, 2021, p. 80).

OPPORTUNITY/GAP INDICATORS

1. Robustness Dimension: they showed the resistance capacity of MSMEs to changes, updates and transformations generated in the productive activity that impact their products and services:

a. Growth rate of risk capital investment in MSMEs.

b. Agreements signed/executed with venture capital investors in MSMEs.

c. Digital industries development index.

d. MSMEs at risk of closure.

e. MSMEs with financial loans in arrears.

2. Agility Dimension: they expose the ease and speed with which MSMEs adapt to the changes, updates and transformations generated in the productive activity that impact their products and services:

a. Productive MSMEs on digital platforms.

b. MSMEs of services in digital platforms.

c. Commercial MSMEs on digital platforms.

d. Cash flow in MSMEs with electronic commerce.

e. Increase in online sales.

f. Intensive/extensive use of digital marketing.

g. MSMEs integrated into value and logistics chains.

Integrity Dimension: they revealed the effects, impacts and changes generated in the social situation of the employees of MSMEs in the short, medium and long term:

a. Telecommuting.

b. Support networks used.

c. MSMEs at risk of future labor conflict.

d. Fired employees.

e. Linking actions with universities, union organizations, MSMEs of the sector and MSMEs of other economic sectors.

f. Training actions in digital tools. In this important factor of analysis are the strengths,

opportunities and the most profound, difficult and immense challenges in the development, strengthening and expansion of MSMEs in Latin America as sources that favor the growth of employment and production in this area of the world, taking into account the need and social responsibility they have in their active participation in the post-COVID19 social and economic restoration.

Therefore, Latin American MSMEs must assume a proactive and resilient attitude in at least three main directions: (1) the intensive and extensive use of ICTs that implies the effective use of the existing digital infrastructure, in terms of Internet connectivity and insertion in national and international value and logistics chains; (2) the development, implementation and expansion of e-commerce in all its dimensions: social networks, websites, digital marketing, B2B, B2C, B2G; and (3) the design of broad and inclusive training actions promoted, both by national and international MSME trade organizations and by Latin American governments, to facilitate broad access to the knowledge needed to assimilate the changes promoted by the digitization of production and service processes.

Based on the authors' literature review, 43 opportunity/gap indicators are proposed to assess the organizational resilience of MSMEs in Latin America, based on the two analytical factors defined: resilience to digital infrastructure; and resilience to production, in their interrelations with the three dimensions of organizational resilience: robustness, agility and integrity.

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