

Productivity and economic growth of manufacturing SMEs in an Ecuadorian locality

Produtividade e crescimento econômico das PMEs manufatureiras em uma localidade equatoriana

Productividad y crecimiento económico de las PYMES manufactureras en una localidad ecuatoriana

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magdalena.v@uasb.edu.bo (correspondence)**ABSTRACT**

Background: This study examines the relationship between competitiveness, external growth, productivity, and communication in manufacturing SMEs in a Ecuadorian locality from the perspective of entrepreneurs. **Methods:** Quantitative methods and a Likert scale were employed, for which an instrument was generated, whose reliability was determined by surveys to collect data on the perceptions and opinions of SME owners and managers. **Results:** The results revealed an interdependence between competitiveness and SME consumption, as well as a crucial relationship between external growth and the GDP of these companies. Additionally, an essential connection was found between improving productivity and effective communication in SMEs. **Conclusions:** Consequently, the importance of SMEs focusing their efforts on improving competitiveness, considering internationalization strategies, and recognizing communication as a key component for their business success is highlighted. This study provides a comprehensive insight into the challenges and opportunities facing manufacturing SMEs, offering a solid foundation for future research and actions aimed at promoting their development and economic growth.

Keywords: Manufacturing SMEs, Ecuador, Competitiveness, Productivity, Communication.

RESUMO

Antecedentes: Este estudo investiga a relação entre competitividade, crescimento externo, produtividade e comunicação nas PMEs do setor de manufatura no contexto de uma localidade equatoriana, sob a perspectiva dos empreendedores. **Métodos:** Foram utilizados métodos quantitativos e uma escala de Likert para desenvolver um instrumento confiável por meio de pesquisas, a fim de coletar dados sobre as percepções e opiniões de proprietários e gestores de PMEs. **Resultados:** Os resultados revelaram uma interdependência entre competitividade e consumo nas PMEs, assim como uma relação crucial entre crescimento externo e o PIB dessas empresas. **Conclusões:** Além disso, foi identificada uma conexão essencial entre a melhoria da produtividade e a comunicação eficaz nas PMEs. Portanto, destaca-se a importância de as PMEs concentrarem seus esforços na melhoria da competitividade, considerarem estratégias de internacionalização e reconhecerem a comunicação como componente-chave para o sucesso empresarial. Este estudo oferece uma visão abrangente dos desafios e oportunidades enfrentados pelas PMEs do setor de manufatura, proporcionando uma base sólida para futuras pesquisas e ações destinadas a impulsionar seu desenvolvimento e crescimento econômico.

Palavras-chave: Pequenas e Médias Empresas (PMEs) de Manufatura, Equador, Competitividade, Produtividade, Comunicação.

RESUMEN

Antecedentes: Este estudio examina la relación entre la competitividad, el crecimiento exterior, la productividad y la comunicación en las PYMES manufactureras en una localidad ecuatoriana desde la perspectiva de los emprendedores. **Métodos:** Se emplearon métodos cuantitativos y una escala de Likert para lo cual se generó un instrumento cuya confiabilidad viene dada por encuestas para recopilar datos sobre las percepciones y opiniones de propietarios y administradores de PYMES. **Resultados:** Los resultados revelaron que existe una interdependencia entre la competitividad y el consumo de las PYMES, así como una relación crucial entre el crecimiento exterior y el PIB de estas empresas. **Conclusiones:** Además, se encontró una conexión esencial entre la mejora de la productividad y la comunicación efectiva en las PYMES. En consecuencia, se destaca la importancia de que las PYMES enfoquen sus esfuerzos en mejorar su competitividad, consideren estrategias de internacionalización y reconozcan la comunicación como un componente clave para su éxito empresarial. Este estudio proporciona una visión integral de los desafíos y oportunidades que enfrentan las PYMES manufactureras, ofreciendo una base sólida para futuras investigaciones y acciones orientadas a impulsar su desarrollo y crecimiento económico.

Palabras clave: PYMES manufactureras, Ecuador, Competitividad, Productividad, Comunicación.

ARTICLE HISTORY**Received:** 14-01-2024**Revised Version:** 11-03-2024**Accepted:** 22-03-2024**Published:** 01-04-2024**Copyright:** © 2024 by the authors**License:** CC BY-NC-ND 4.0**Manuscript type:** Article**ARTICLE INFORMATION****Science-Matrix Classification (Domain):**

Economic & Social Sciences

Main topic:

Productivity and economic analysis of SMEs

Main practical implications:

The main practical implications of this study consist of providing valuable insights for SME entrepreneurs and researchers/policy makers on the determinants of the growth of these firms in the manufacturing market of local Ecuadorian realities

Originality/value:

The main value is in its empirical nature, being evidence based on original primary data. Likewise, in addressing local realities that contributes to the discussion from the micro and disaggregated level of the reality of small firms in Ecuador

INTRODUCTION

Small and medium-sized enterprises (SMEs) are commercial entities distinguished by their small size compared to large corporations, with a limited number of employees and assets, usually fewer than 250 employees (Carvajal Pérez & Agudelo, 2022). They can be privately or family-owned, implying that management and ownership are in the hands of an individual, group of individuals, or family. Their organizational structure tends to be flatter and less hierarchical than that of large companies, facilitating more agile and quick decision-making (Mussons, 2020). Additionally, SMEs are characterized by their adaptability and flexibility to respond to market demands and customer needs, although they may face limitations in financial and technological resources compared to large enterprises (Del Do, et al., 2023).

At the macroeconomic level, manufacturing SMEs represent a fundamental pillar in the economic development of a region. Their contribution extends beyond local borders, impacting the national economy by generating employment, income, and attracting investments. To achieve SME growth and sustainability over time, the development of human talent is vital to improving labor productivity and achieving business objectives (Rivilla Ruiz & Tayupanda Tixe, 2014). Concepts such as efficient management, competitiveness, access to credit, and resource management in SME operations must be understood and applied by SME administrators to remain competitive (Galán, 2019; VELASCO, 2021; López, 2020). Furthermore, the relevance of liquidity, indebtedness, and the market in the business environment is recognized (Nartallo, 2022; Chavez, 2020). Micro-enterprises, products, and the economy also play a crucial role in the context of manufacturing SMEs, highlighting their ability to adapt quickly to market demands and add value to the local economy (Chavez, 2020; VALIVIEZO, 2021; Rodrigues, 2023).

In Ecuador, manufacturing SMEs are supported by a series of legal instruments designed to promote their development and growth. The Organic Law of Entrepreneurship and Productive Innovation, for example, seeks to stimulate and regulate entrepreneurial and innovative activities by facilitating access to financing, promoting administrative simplification, and encouraging association (Carvajal Pérez & Agudelo, 2022). On the other hand, the Law of the Substitutive Regime of Investment and Promotion for Citizen Participation seeks to encourage investment and citizen participation, establishing measures such as legal stability, non-confiscation, and simplification of procedures for the opening and operation of companies (Ley para la promoción de la inversión y participación ciudadana, 2000). Additionally, specific problems in the region are identified, such as competition with better-capitalized companies and the lack of commitment of human talent (Aragundi Villavicencio & Coello Freire, 2015). These studies highlight the need to understand the specific dynamics and challenges faced by SMEs in different sectors and regions of Ecuador.

San Pedro de Guaranda, a prominent city in the Guaranda Canton and capital of the Bolívar Province in Ecuador, is an important urban center with a population of 30,755 inhabitants according to the 2022 census (Guaricela Guzmán, 2023). Its economy, based on agriculture, livestock, agribusiness, and commerce, positions it as the most relevant administrative, economic, financial, and commercial center in the province. In this context, manufacturing SMEs play a crucial role in strengthening the local supply chain and adopting new technologies and innovations to improve competitiveness in the national and international markets (UTM, 2020). To maximize their positive impact on Guaranda's economic growth, it is vital to establish a conducive environment for entrepreneurship, support local businesses, and promote training and business development through policies and strategies at the local and regional levels (UTM, 2020).

The productivity of these companies is a determinant that directly influences the economic development of the city and its surroundings, contributing to improving the quality of life of the population and fostering entrepreneurship (UTM, 2020). In this sense, factors such as efficiency in production processes, product quality, staff training, technology used, and business management are key determinants of the productivity of these companies (Valero Camino, et al., 2021). To better understand the dynamics of the Canton, it is important to identify the current situation of Guaranda, which is why the article published in the *ECOCIENCIA* Journal by Jaya, et al. (2018) highlights important data about the reality of SMEs. It is observed that, both in men and women, the age range of SME owners is between 20 and 40 years, representing 66%. Regarding the level of academic training, the majority have secondary education (54.15%), followed by primary education (20.94%) and undergraduate studies (20.40%). However, more than 75% of them lack specific training in business management. The size of the SMEs is also relevant, with 50% considered small, 32% micro-enterprises, 14% medium-sized, and 4% not providing information in this regard. The motivations for entrepreneurship mainly include the need for work (62%) and the aspiration not to depend on bosses (44.22%). Market longevity is high, with 76% of businesses operating for more than a year. The influence of the economic environment and government policies is also highlighted, as 67% of respondents consider these factors influence the success of SMEs. Finally, there is an evident need for guidance before establishing SMEs, as 72% of owners and/or administrators indicate that they have not received support.

Guaranda needs to improve its productivity and competitiveness to drive sustainable economic growth and improve the quality of life of its inhabitants. Since the 1950s, the development of SMEs in Ecuador has been essential in its

socioeconomic evolution, transitioning from a dependence on agricultural exports to a stage of industrial development (Eumed, 2020). Despite these advances, challenges persist that limit the competitiveness of the sector, such as unequal income distribution and lack of technological innovation (Polo, 2019). In the field of SME management, there is a lack of specialization and training in business management, making it difficult to implement effective practices (Eumed, 2022).

Manufacturing SMEs in the Guaranda Canton face a series of challenges that limit their growth and competitiveness. Among these challenges are the lack of technological innovation, low productivity, limited competitive improvement, limited external growth, deficient communication, and insufficient staff training. These obstacles not only affect the economic and competitive development of the manufacturing sector in the area but also have a negative impact on the ability of SMEs to generate employment and contribute to sustainable economic growth at the local and national levels (Urrutia Guevara, Tenecota, & Angulo Garófalo, 2023).

The central problem lies in understanding how productivity influences the economic growth of manufacturing SMEs in Guaranda. Specific questions are posed to address this problem, such as the relationship between competitive improvement and consumption, the impact of external growth on Gross Domestic Product (GDP), and the influence of productivity improvement on business communication.

The general objective of this research is to analyze the productivity of manufacturing SMEs in Guaranda and its effect on the city's economic growth. To achieve this objective, specific objectives are established, including identifying how competitive improvement affects consumption, diagnosing the impact of external growth on GDP, and determining how productivity improvement influences business communication.

METHODOLOGY

The methodology applied in this study adopted an exploratory, descriptive, and expository approach with the purpose of positively assessing the situation of family SMEs in the field of financial education in the country. It was a research design characterized as exploratory due to the lack of sufficient knowledge on this specific topic in the local context. The research was conducted using various techniques and methodologies, including field research, exploratory research, descriptive research, bibliographic research, as well as quantitative and qualitative research.

Field research allowed for the collection of data directly from the place where reality originated, specifically from manufacturing SMEs in the Guaranda Canton, in order to interpret and understand the nature of the problems that these companies faced. Exploratory research, on the other hand, was conducted due to the novelty and scarcity of information on the variables addressed in this study, especially in the context of the industrial park of the Guaranda Canton. Descriptive research focused on describing the specific characteristics of manufacturing SMEs in this geographical area.

Furthermore, bibliographic research was based on the exhaustive review of existing bibliographic material related to the study topic, including previous research, texts, scientific articles, and reports from relevant institutions (Benitez & Perez de Tuleda, 2020; Zorrilla, 2021). This review provided a solid foundation for the development of the research.

The population of interest consisted of 207 small and medium-sized enterprises located in the Guaranda Canton according to data from the INEC, which represent a significant part of the local economy and encompass a wide range of industries and business sizes. The selected sample was based on statistical data, resulting in a total of 135 SMEs included, which allowed for a representative view of the studied population (Blácido et al., 2022).

Additionally, both theoretical and analytical, synthetic, inductive, and deductive methods were employed to construct and develop scientific theories and solve scientific problems in a general manner (Falcón & Serpa, 2021). Surveys were also used as the main technique to collect information from participants (Rada, 2019). Once the data were collected, statistical processing of the information was carried out using tools such as Microsoft Excel and SPSS, which allowed for the generation of graphs to facilitate interpretation and ensure transparency in the obtained results (Paitán et al., 2020).

RESULTS

Below are the results obtained from the survey conducted with owners and managers of manufacturing SMEs in the Guaranda Canton. The collected data reflect the perceptions and opinions of the participants on various aspects related to the importance of SMEs in the local economy, the influence of competitiveness on consumption, the impact of economic growth on the size of companies, as well as the relationship between external growth and the Gross Domestic Product (GDP) of an SME.

Table 1. Analysis of Factors Affecting Performance in Manufacturing SMEs

	Question	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree	TOTAL
Q1	The Manufacturing SME is Important for Canton Guaranda.	108 80%	27 20%	0 0%	0 0%	0 0%	135 100%
Q2	There is significant relationship between the level of competitiveness of manufacturing SMEs in Canton Guaranda and the consumption of customers.	27 20%	81 60%	0 0%	27 20%	0 0%	135 100%
Q3	Economic growth determines the size of SMEs.	34 25%	101 75%	0 0%	0 0%	0 0%	135 100%
Q4	They think that manufacturing SMEs help generate jobs and dynamize the local economy.	79 60%	28 20%	28 20%	0 0%	0 0%	135 100%
Q5	The competitiveness of manufacturing SMEs in Canton Guaranda influences the level of consumption of their products or services.	27 20%	54 40%	54 40%	0 0%	0 0%	135 100%
Q6	There is a significant relationship between the level of competitiveness of manufacturing SMEs in Canton Guaranda and the consumption of customers.	27 20%	108 80%	0 0%	0 0%	0 0%	135 100%
Q7	Manufacturing SMEs in Canton Guaranda must improve competitiveness to boost consumption of their products or services.	27 20%	81 60%	27 20%	0 0%	0 0%	135 100%
Q10	There are measures of external growth of manufacturing SMEs in Canton Guaranda that relate to GDP growth.	27 20%	108 80%	0 0%	0 0%	0 0%	135 100%
Q12	GDP benefits the external growth of an SME.	27 20%	81 60%	27 20%	0 0%	0 0%	135 100%
Q13	To improve productivity, there must be good communication with members of SMEs.	54 40%	27 20%	27 20%	27 20%	0 0%	135 100%

Note. The table summarizes survey responses regarding the significance of manufacturing SMEs in Canton Guaranda. It shows a consensus on the importance of competitiveness, communication, and their impact on local economic growth. However, there are variations in opinions, reflecting the multifaceted nature of SME performance factors.

Furthermore, the perception regarding corporate communication and its influence on productivity, along with other questions with different response formats, was explored. Taken together, these results provide a significant insight into the perspectives and challenges that manufacturing SMEs in Guaranda face, as well as potential areas of improvement to drive their development and growth in the local business context.

Table 2. Perceptions of Manufacturing SMEs in Canton Guaranda: Competitiveness, Economic Impact, and Communication

	Questions	Yes	No	Much	Little	Nothing	Undecided	Total
Q8	Does competitiveness affect the consumption of products from each of the SMEs?	108 80%	27 20%	0 0%	0 0%	0 0%	0 0%	135 100%
Q9	Does competitiveness affect the consumption of products from each of the SMEs?	0 0%	0 0%	54 40%	81 60%	0 0%	0 0%	135 100%
Q11	Does the external growth of manufacturing SMEs in the Guaranda canton have a direct impact on GDP?	0 0%	0 0%	27 20%	54 40%	54 40%	0 0%	135 100%
Q14	¿Are communication strategies among the different manufacturing SMEs in the Guaranda canton necessary for continuous improvement of products and services?	130 96%	5 4%	0 0%	0 0%	0 0%	0 0%	135 100%
Q15	Does assertive communication aid innovation to improve productivity?	0 0%	0 0%	108 80%	27 20%	0 0%	0 0%	135 100%
		--	--	Always	Sometimes	Few times	Never	
Q16	Does communication directly influence productivity improvement?	0 0%	0 0%	108 80%	27 20%	0 0%	0 0%	135 100%

Note. The table illustrates responses to inquiries regarding the impact of competitiveness and communication on SMEs in Guaranda. It underscores the necessity of effective communication strategies and their significant role in enhancing productivity and fostering innovation within SMEs.

The results reveal that the vast majority of respondents, 80%, "Strongly agree" that their manufacturing SMEs are important for the Guaranda Canton. This high percentage suggests that owners or administrators recognize the value and relevance of their businesses in the local economy. This perception is likely grounded in the contribution of SMEs to job creation, economic activity, and their role in the regional business landscape.

Regarding the importance of competitiveness in influencing customer consumption, 20% of respondents "Strongly agree", 60% "Agree", and 20% "Disagree". This indicates a generally positive perception of the relationship between competitiveness and consumption, although a considerable segment of the sample expresses some uncertainty. This lack of unanimity may reflect different levels of understanding regarding how competitiveness can impact customer purchasing decisions.

Concerning the influence of economic growth on the size of SMEs, 25% "Strongly agree" and 75% "Agree". This consensus suggests a widespread understanding that economic growth and business size are interconnected. Respondents likely acknowledge that a favorable economic environment can foster the growth and development of SMEs in terms of size and operational capacity.

Regarding the impact of manufacturing SMEs on job creation and the dynamism of the local economy, 60% "Strongly agree", 20% "Agree", and 20% "Undecided". These results reflect a strong belief in the positive socioeconomic role of manufacturing SMEs. It is likely that respondents recognize the potential of their businesses to create jobs and stimulate economic activity in the local environment.

Lastly, concerning communication and its influence on productivity, 40% "Strongly agree", 20% "Agree", 20% "Undecided", and 20% "Disagree". This suggests a widespread perception that effective communication is crucial for improving productivity in SMEs. However, it also reveals some ambiguity or discrepancy regarding the exact importance of communication in this specific context.

DISCUSSION

The productivity and economic growth of manufacturing SMEs have become crucial topics in the current economic landscape, especially considering the significant role these companies play in national and international economies. SMEs represent a considerable portion of the business fabric in Latin America, encompassing approximately 99% of total enterprises and providing employment to around 67% of the workforce. However, their contribution to GDP is relatively minor compared to their numbers, highlighting the need to increase productivity levels (Rigo-Frenchs, 2021). This challenge is compounded by heterogeneity in market access, technologies, and human capital, as well as difficulties in exporting and linking with other enterprises, all of which directly impact productivity and growth capacity.

One strategy that has proven effective in addressing these challenges is the implementation of Lean Manufacturing. This management model, focused on continuous improvement and the elimination of waste in production processes, has been adopted by SMEs in various countries, showing positive results in terms of efficiency, quality, costs, and speed (Torres-Morales, 2023). The Lean Manufacturing methodology helps companies identify and eliminate unproductive elements, allowing for improvements in both productivity and product quality. The author explains that studies conducted in different Latin American countries, such as Ecuador, Colombia, and Peru, have shown significant improvements in company effectiveness indicators following the implementation of Lean tools, such as 5S and TPM (Total Productive Maintenance), and methodologies such as VSM (Value Stream Mapping), SMED (Single-Minute Exchange of Die), and other Lean practices. This suggests that, despite the challenges they face, SMEs can increase productivity and competitiveness through the adoption of lean manufacturing practices.

To achieve these benefits, it is crucial for SMEs to conduct a detailed analysis of production processes and commit to a continuous improvement approach. The adaptation and implementation of Lean tools should consider the specific characteristics and needs of each company, ensuring that improvements are sustainable and effectively contribute to their economic growth. Thus, manufacturing SMEs have significant opportunities to improve productivity and contribute to economic growth through the implementation of Lean practices. It is essential to promote a culture of continuous improvement, invest in training, and foster innovation to overcome existing barriers and fully harness the potential of these companies in the global market.

Furthermore, it is important to highlight that the landscape of business development is multifaceted, incorporating a blend of critical factors such as commercial expansion, innovation, and corporate culture. The incorporation of highly qualified personnel emerges as an essential pillar to ensure sustained success within the organization. According to Koontz & O'Donnell (2018), business evolution thrives on diverse elements, with a focus on the effectiveness and skills of the human team, as well as organizational effectiveness and competitiveness. These components are vital for achieving established objectives and goals, underscoring the importance of daily management in achieving these ends.

In contrast, Gibrat (1931), considered a pioneer in the study of business growth, posits that business growth is the product of a stochastic process driven by a multitude of minor random factors that proportionally affect the size of companies, highlighting the unpredictable and diverse nature of the factors that influence business development. Similarly, Palacios & Muñoz (2018) argue that business development must be understood from a comprehensive management perspective, emphasizing the need to foster a true culture of innovation within companies. Without this innovative foundation, organizations lose relevance and effectiveness in the realm of high-level performance. This view aligns with Schumpeter's (1934) theory of entrepreneurship and innovation, where innovation is considered an essential component of the economic system, yet to be fully leveraged.

The current market dynamics demand that SMEs, fundamental to both the Ecuadorian and global economies, maintain a constant focus on innovation to enhance competitiveness. The implementation of advanced technological and human resources is crucial for these companies to modernize operations, offering more efficient and innovative products and services. These innovation efforts are recognized as vital sources of growth and competitiveness, allowing companies with an innovative focus to introduce new or improved products to the market, thus optimizing competitive advantage both economically and socially. Research conducted by Mendoza-Mieles et al. (2021) highlights the significant economic contribution of SMEs during the 2015-2020 period, emphasizing their role as job creators and promoters of a better quality of life. However, it also points out the need for these companies to navigate the business path more effectively to ensure sustainability and growth.

Similarly, Navas et al. (2018) explore the application of business strategies within the framework of strategic management to enhance SME competitiveness. These findings emphasize the importance of entrepreneurship and state financial support, as well as the creation of collaborative ecosystems to drive business growth. In Ecuador, access to financing has been identified as a key factor for SME development, with a significant increase in credit availability in 2018, underscoring the crucial role of entities such as the National Financial Corporation (CFN) in supporting innovation and job creation in this sector. Finally, Beltrán-Morales' (2016) study on the impact of leadership styles in Tungurahua SMEs reveals a predominance of autocratic leadership, which could restrict employee participation and thus affect business development. This research, along with Zúñiga's (2018) work on competitive strategies in Milagro SMEs, highlights the importance of effective knowledge management and the need for adaptation to market changes to ensure long-term success and sustainability for SMEs.

The convergence of perspectives on SME business development reveals a rich matrix of factors that influence success and sustainability. This multifaceted analysis allows for the discernment of both the inherent complexity of business growth and the specific assessments that emerge from particular communities like Guaranda. The importance of innovation and competitiveness permeates both the results of this study and the cited authors, standing out as essential elements for market distinction and business survival. In this context, innovation is not limited to the introduction of new products or services but involves constant review of processes, business models, improvement in communication, and market strategies in response to a dynamic and challenging global environment.

There is a notable consensus regarding the vital role that SMEs play in driving economic growth and job creation at the local level, underscoring the recognition of SMEs as essential engines of the economy, capable of generating productive diversification and fostering job stability in communities. Regarding the identified challenges, such as effective knowledge management, strategic leadership, and access to financial resources, they are mirrored by locally expressed concerns. Effective communication and financial support emerge as prime areas to enhance business productivity and promote inclusive economic growth. While authors offer a broad view of SME development, the research provides a practical approach reflecting how these principles are valued and applied in specific environments. This duality highlights the need to adapt strategies and policies to the particularities of each context, recognizing the unique dynamics that characterize local communities like Guaranda.

CONCLUSIONS

The analysis of how improving competitiveness influences the consumption of manufacturing SMEs in the Guaranda canton reveals a fundamental interdependence between the competitive capacity of these companies and their consumption outcomes. As these SMEs enhance their competitiveness through process optimization, product quality, innovation, and efficient resource management, they experience a positive impact on their ability to attract and retain customers, expand their markets, and increase their sales. This finding highlights the importance of SMEs focusing their efforts on improving their competitiveness as an effective strategy to boost their performance in the local market.

Surveys indicate that external growth affects the Gross Domestic Product (GDP) of manufacturing SMEs in the Guaranda canton, revealing a crucial relationship between international expansion and the economic performance of these companies at the local level. The ability of SMEs to expand beyond local borders not only provides them with the opportunity

to access new markets and resources but can also significantly contribute to the economic growth of the canton. This analysis emphasizes the importance of SMEs considering internationalization strategies as an integral part of their business planning to leverage their full potential for growth and contribution to local economic development.

It has been identified that communication influences the improvement of productivity in manufacturing SMEs in the Guaranda canton, evidencing an essential connection between internal efficiency and the effectiveness of both internal and external interaction of these companies. As manufacturing SMEs concentrate their efforts on improving productivity, a series of positive impacts are triggered on their ability to communicate more effectively. Greater productivity not only allows companies to operate more efficiently but also facilitates smoother and more transparent communication both within and outside the organization. This analysis underscores the importance of SMEs recognizing communication as a key component to enhance their business performance and strengthen their position in the market

Main limitations of the study and future research

Despite the empirical nature of this study, several limitations should be acknowledged to provide a better understanding of the findings. Firstly, the study's reliance on self-reported data from SME owners and managers introduces the possibility of bias, as respondents may provide socially desirable responses or misrepresent their perceptions. Additionally, the cross-sectional design of the study offers only a snapshot of the situation at a specific point in time, limiting the ability to establish causal relationships between variables. Furthermore, while efforts were made to ensure a representative sample of manufacturing SMEs in Guaranda, sampling bias may have occurred, potentially excluding certain types of SMEs or those facing specific challenges (this is also suggested in literature as the "survivorship bias"). Moreover, the study's findings may not be readily generalizable to other regions or contexts beyond Guaranda, given the unique economic and social dynamics of the area. Despite these limitations, the study provides valuable insights into the factors influencing SME productivity and economic growth, laying the groundwork for future research in this field. In Table 3 above a future research agenda is proposed for filling the gaps of this study and exploit the potentialities of the findings presented.

Table 3 Future research agenda proposal

Topic/Context	Variables	Methods	Possible Approaches
Supply Chain Resilience	- Supplier relationships - Inventory management - Distribution channels	- Case studies - Surveys - Interviews	Explore how manufacturing SMEs in Guaranda or in other Ecuadorian localities can enhance their supply chain resilience through improved supplier relationships, efficient inventory management, and diversified distribution channels.
Technology Adoption	- Adoption rate of technology - Impact on productivity - Barriers to adoption	- Longitudinal studies - Surveys - Technological audits	Investigate the factors influencing the adoption of technology among manufacturing SMEs in Guaranda or in other Ecuadorian localities, including the impact on productivity and potential barriers hindering adoption.
Market Diversification	- Market segments targeted - Export strategies - Market penetration	- Market analysis - Comparative studies - Focus groups	Examine the strategies employed by manufacturing SMEs in Guaranda or in other Ecuadorian localities, to diversify their markets, including the identification of target segments, development of export strategies, and approaches to penetrate new markets.

Note. Own author elaboration

This future research agenda outlines potential paths for further exploration into critical aspects of manufacturing SMEs in Guaranda or in other Ecuadorian localities. Basically, the orientation is to go towards more operational aspects of the life of the firms (the so-called opening the black box of the organizations), such as their relationship with the value chain, their technological dynamics and their own behavioral market strategies regarding diversification. In any case, it is expected that future studies will be able to take advantage of the results presented in this research and move in the direction of the future research proposal.

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Contribution of each author to the manuscript:

	% of contribution of each author
Task	A1
A. theoretical and conceptual foundations and problematization:	100%
B. data research and statistical analysis:	100%
C. elaboration of figures and tables:	100%
D. drafting, reviewing and writing of the text:	100%
E. selection of bibliographical references	100%
F. Other (please indicate)	-

Indication of conflict of interest:

There is no conflict of interest

Source of funding

There is no source of funding

Acknowledgments

There is no acknowledgments