Análisis de los elementos del modelo canvas y su relación en el incremento de las ventas en las mypes de Mineral de la Reforma, Hidalgo

Analysis of the elements of the canvas model and their relationship in increasing sales in SMES in Mineral de la Reforma, Hidalgo

Análise dos elementos do modelo canvas e sua relação com o aumento das vendas nos mypes de Mineral de la Reforma, Hidalgo

Gabriela Ortiz Cordero
Universidad Politécnica de Tulancingo, México
gabriela.ortiz@upt.edu.mx
http://orcid.org/0000-0003-2596-2444

Gisela Yamin Gómez Mohedano
Universidad Politécnica de Tulancingo, México
gisela.gomez@upt.edu.mx
http://orcid.org/0000-0001-6507-4092

Resumen

La investigación tuvo como objetivo examinar la relación entre los elementos de un modelo de negocio y el incremento en el nivel de ventas que obtienen las mypes de Mineral de Reforma, Hidalgo. El método de investigación fue el enfoque cuantitativo, transversal, de alcance correlacional, basado en una encuesta dirigida a 350 directores de empresas, la cual estuvo compuesta por 114 ítems para realizar un análisis sistémico mediante las siguientes variables: recursos humanos, análisis de mercado, proveedores, dirección, finanzas, gestión de ventas, innovación, mercadotecnia, producción y operación, satisfacción con la empresa, ventaja competitiva, ámbito de ventas, ISO 26000 y valoración del entorno. Los resultados muestran los elementos del modelo de negocios que mejoran las ventas a partir de un análisis estadístico, el cual

determina las estrategias que ayudan a tener una ventaja competitiva en las mypes de Mineral de Reforma. El estudio está limitado solo para la región de Mineral de la Reforma. Sin embargo, la propuesta establecida es fácil de reproducir en otros municipios de la región debido a la simplificación de la metodología para relacionar el potencial de ventas con los elementos de un modelo de negocios.

Palabras claves: administración, mypes, negocios, ventaja competitiva.

Abstract

The research aims to examine the relationship between the elements of a business model and the increase in the level of sales obtained by the mypes of Mineral de Reforma, Hidalgo. The work uses a quantitative, cross-sectional approach, with a correlational scope, based on a survey addressed to 350 company directors, which is made up of 114 items to carry out a systemic analysis through the following variables: human resources, market analysis, suppliers, management, finance, sales management, innovation, marketing, production and operation, company satisfaction, competitive advantage, sales scope, ISO 26000 and environmental assessment. The results show the elements of the business model that improve sales from a statistical analysis, which determines the strategies that help to have a competitive advantage in the mypes of Mineral de Reforma. The study is limited to the Mineral de Reforma region only. However, the established proposal is easy to reproduce in other regional municipalities due to the simplification of the methodology to relate sales potential to the elements of a business model.

Key words: Administration, mypes, business, competitive advantage.

Resumo

O objetivo da pesquisa foi examinar a relação entre os elementos de um modelo de negócio e o aumento do nível de vendas obtido pelos mypes da Mineral de Reforma, Hidalgo. O método de pesquisa foi a abordagem quantitativa, transversal, correlacional, baseada em uma pesquisa dirigida a 350 diretores de empresas, que foi composta por 114 itens para realizar uma análise sistêmica utilizando as seguintes variáveis: recursos humanos, análise de mercado, fornecedores, gestão, finanças , gestão de vendas, inovação, marketing, produção e operação, satisfação com a empresa, vantagem competitiva, escopo de vendas, ISO 26000 e avaliação do meio ambiente. Os resultados mostram os elementos do modelo de negócios que melhoram as vendas a partir de uma análise estatística, que determina as estratégias que ajudam a ter vantagem competitiva no Mypes

Introduction

Currently, we live in a changing environment where microenterprises (mypes) are fundamental for the economic development of countries, since they represent 95% of all companies (Economic Commission for Latin America and the Caribbean [ECLAC] , 2012); However, most of them work empirically, that is, without relying on a business model that provides them with elements to increase their competitive advantage in the current market.

In Latin America, mypes are characterized by being a heterogeneous group, from those with an informal situation for self-employment to highly efficient companies that have the capacity to innovate and export (CEPAL, 2012). In Mexico, microenterprises have become an indispensable element for the country's economic structure, although most organizations operate informally, generate a large number of jobs and increase national production. Despite the economic and social importance, there are great difficulties that limit its development, such as not having a business model, a structured organization, acceleration of technological changes, globalization of markets and lack of knowledge management practice (Gutiérrez *et al* ., 2013).

In this context, it is necessary for organizations to formulate objectives and develop strategies that promote their sustainability, given the environmental conditions. These activities represent a real challenge, since the main concern of microenterprises is surviving the changing environment where they develop and generating value with their interest groups (Zott and Amit, 2008).

According to Macías *et al* . (2015), a tool to establish business strategies that increase competitive advantage are business models. Osterwalder and Pigneur (2011) define the business model as a "description of the foundations on which a company creates, delivers and captures value" (p.14). The rational is the logical decision on the structure of variables and decisions based on the creation of value, which must be channeled to its interest groups ; however, the same company must capture a two-way win-win relationship. Panda (2020) explains that business models can generate superior value and act as a source of competitive advantage, which is why

they can influence the business economy. Simply put, a well-designed business model can help a company increase sales and improve profitability.

Indeed, the business model is crucial to the success of a company, since it defines how to create, deliver and capture value. This allows you to identify growth opportunities, improve efficiency and profitability, and adapt to changes in the market. Therefore, it is essential for companies to understand the importance of the business model and integrate it into their overall strategy (Pang *et al* ., 2019).

According to Toniut (2020), A business model articulates four main elements: the value proposition, the benefits formula, the activities and the key resources to make it successful. Ponce *et al.* (2022) mention that the best business model is described through nine basic blocks, which show the dynamics of how an organization intends to make money, they are based on the four functional areas of any company, which aim to address problems or satisfy a client's needs.

For Calva (2020) business models are a tool to build competitive advantage. The function of a business model is not only to increase profits by directly affecting price, volume or cost through the processes it generates, but also to interrupt competitors' processes. Jarma (2018) explains that it is of great importance that each microenterprise has well identified its business model and differentiation with its competitors.

Osterwalder and Pigneur (2011) point out that a business model reflects how the organization "creates, delivers and captures value." Its approach is based on the canvas business model, which is a strategy that is applied to the structures, processes and systems of an organization. This model is considered a choice for business ideas to be viable in the market, since it is an easy tool to apply in any type of company (Osterwalder and Pigneur, 2011).

On the other hand, the *business* model canvas, as shown in Figure 1, is a methodology developed by Alexander Osterwalder, which is consolidated as an instrument to give greater commercial value and differentiate an idea from the competition. of business. This methodology uses nine essential modules referring to the four areas of a company: customers, offer, infrastructure and economic viability (Osterwalder and Pigneur, 2011).

Figure 1 . Business m odel canvas

Source: Osterwalder and Pigneur (2011)

According to Bahena (2019), MSEs have limitations in their financial resources, in management systems and have insufficient infrastructure to carry out their activities. Therefore, to achieve a higher level of activities, competitive advantages and increase their economic and financial performance, they need to manage and exploit internal factors to the maximum, such as human capital and knowledge generated inside and outside the company. the organization with the aim of avoiding its closure.

Mypes within the national and international context have a high economic and social effect. Without a doubt, it is necessary to analyze the problems they face and that may limit their operation and continuity in the market. For Parra (2014), mypes are created with the minimum of knowledge about the business idea and resources, but this is not enough for the company to survive in today's changing environment, much less to be an innovative and competitive company.

For companies, the methodology that supports them with the objective of generating value is the business model, in this case, the canvas business model, considered a strategic business analysis tool to support MSEs (Carballo and Nichols, 2016) . According to Ferreira (2015), the way to apply the canvas model is by classifying two main contexts: the market and the business. Within the market area the following points of the canvas model are classified:

- Value propositions: It is the solution to the client's problem, not the product as such, but the solution given to the client; and the differentiator with the competition.
- Market segments: Know your main clients to look for business opportunities.
- Channels: Way of delivering the value proposition to the main customers (distribution, communication and sales channels).
- Customer relations: Contact and monitoring of the customer segment.
- Income sources: Income generated when customers acquire the value proposition offered.

In the business area there are the following points of the canvas model:

- Key resources: Assets and resources necessary and essential for the business idea to be carried out.

- Key activities: Essential functions to achieve the business objective.

- Key associations: Partners that are required to achieve and materialize the business objective (partners, suppliers).

- Cost structure: Elements of the company's financial statements.

The analysis of each of the elements of the canvas model allows us to reduce the risk of failure, know the financial performance of the organization, but above all have a tool that allows managing the development and growth of the mype in the current environment in which are found (Lozano Chaguay *et al* ., 2019). According to Puga (2023), through the analysis of the nine blocks of the canvas, business opportunities and challenges are identified, allowing for more informed strategic planning for microenterprises.

According to Jin *et al* . (2022), the business model canvas is important for companies because it allows them to clearly and easily visualize and analyze the different components of their business model, identify opportunities for improvement and innovation, better adapt to market changes and improve its profitability. Additionally, the canvas is a useful tool for communicating the company's business model to employees and investors in a clear and concise way.

The canvas business model is one of the common strategic ones that helps companies plan and forecast their progress and status from the early stages. This can benefit all companies of all sizes, from micro, small, medium or even large businesses. Therefore, it is one of the recommended models to increase the probability of business success, as it improves the efficiency and effectiveness of your business operations (Fakieh *et al.* , 2022). For Erlyana and Hartono (2017), the business model, by adapting to the needs of the market and trends in the business environment, means that microenterprises can improve their ability to generate income and increase their sales.

It is known that microenterprises lack a methodology to add value to business ideas, given their heterogeneity, and that most of their activities are carried out empirically . However, strategies that work on a day-to-day basis can be identified based on a personalized study that adapts to the needs of a certain region .

Therefore, this work analyzes business strategies in the municipality of Mineral de la Reforma to identify the relevant characteristics that allow for a competitive advantage from increased sales. The study is based on the analysis of the results of a survey applied to 350 company directors in the region, who contribute their experience when implementing the elements of the business model

and the sales flow. Furthermore, based on the analysis, a business model is proposed with the strategies that are most relevant in the study area with respect to increasing sales; This is done through the search for the research hypothesis *: the elements of the instrument related to the canvas model depend on the increase in sales last year.*

The document is organized as follows: in the methods section a brief description of the study area is presented and the instrument is described with its respective operational definition. The following section presents the variable evaluation model and the implementation of the statistic proposed for the analysis. Subsequently, the results are offered, which show the elements of the canvas model that increase sales in the microenterprise and the most valuable strategies. Finally, the discussion and results of the variables that are most statistically related to the income stream are provided.

Materials and methods

Study area

The state of Hidalgo is made up of eighty-four municipalities, one of which is Mineral de la Reforma. This is located 9 km from the metropolitan area (which is Pachuca de Soto) and 100 km from Mexico City, as shown in figure 2. It has a territorial area of 105.87 km 2 (0.4 %) of the surface total for the state of Hidalgo (National Institute for Federalism and Municipal Development [INAFED] 2010) . Its population is 202,749 inhabitants, 52.5% women and 47.5% men. The educational level of the municipality is 37.6% in higher education, 32.4% in high school and 29.9% in basic education. Retail trade contributes the largest units in the economic sectors, with 2,375 units. The economic sectors with the highest total income are the manufacturing industries with income of $6,244M MX, retail trade with $6,195M MX and wholesale trade with $5,067M MX (National Institute of Statistics and Geography [Inegi], 2020) . The municipality shows an emphasis on the commercial sector compared to the services and industrial sector, similar to what occurs in most developing countries. (López, 2007).

Figure 2. Geographic location of the study area

Source: self made

Instrument

The work was based on a research with a quantitative, transversal, correlational approach, based on a survey applied randomly by digital means to 350 company directors (137 women and 213 men). The questionnaire—designed by the Network of Latin American Studies in Administration and Business (Peña *et al.* , 2023)—is made up of 114 items through a Likert scale to carry out a systemic analysis using the following variables: human resources with items such as " My company has managed to hire employees who treat everyone well" and "My company has managed to hire very qualified employees"; market analysis with items such as "I have effective methods to evaluate whether the price of my products or services is appropriate" and "I have effective methods to evaluate the quality of the care I provide to my clients"; suppliers with items such as "The most important thing for me in a supplier is the quality of their product or service" and "The most important thing for me in a supplier is that they treat me very well and address my complaints"; direction with items such as "I set specific objectives that we must achieve in the company" and "My company's competitive strategy generally arises from a formal planning process"; finances with items such as "I am very clear about the value of all my expenses" and "I am very clear about the value of my sales each month"; sales management with items such as "I carry out activities to detect and attract new customers to the company"; innovation with items such as "I encourage employees to propose changes in my products, services and processes"; marketing with items such as "I focus primarily on providing excellent service to my customers"; competitive advantage with items such as "Customers choose us because we treat them very well " and "Customers choose us because our product or service is the best in its category"; sales scope with items such as "Sales to customers in my neighborhood are important for my company" and "Sales to customers in my city (town) are important for my company"; production and operation,

satisfaction with the company, ISO 26000 and assessment of the environment with the purpose of differentiating management strategies in directors of Latin American MSEs (Ortiz et al., 2022) .

Likewise, a statistical analysis was applied, in which the hypothesis test is used to contrast the relationship between the sales variable and the variables related to the elements of the business model, using a Chi square test. Table 1 shows the described variables of the instrument.
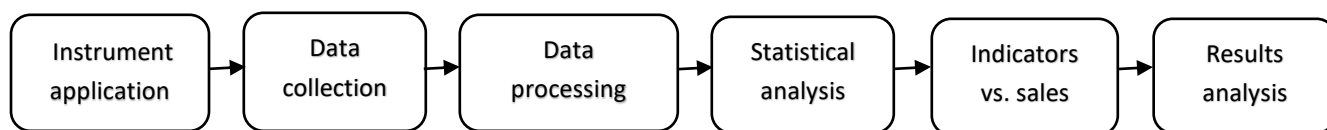
Table 1. Operational definition of the variables

BUSINESS MODEL ELEMENTS	VARIABLES	OPERATIONAL DEFINITION	ITEMS
Income flow	Sales	Operation through which one person transfers the ownership of an asset or right to another, in exchange for a specific price.	1
Elements of the business model			
Value proposal	Competitive advantage	Main value generated by the microenterprise.	6
Distribution channels	Marketing	Strategies carried out by the microenterprise to create, communicate and exchange products or services that have value for customers.	eleven
Key resources	Human Resources	Workers' perception of the microenterprise.	9
Cost structure	Finance	Knowledge of the financial statements of the microenterprise.	13
Key partners	Suppliers	Selection criteria for microenterprise suppliers.	6
Customer segment	Sales scope	Territorial scope in which the microenterprise has influence on sales.	6
Key activities	Address	Decisions regarding financial resources and actions that lead to having a vision of the future of the microenterprise.	6
Distribution channels	Sales management	Actions that the microenterprise carries out to place its products on the market. It covers everything from prospecting customers to after-sales service.	6
Relationship with clients	Market analysis	Access to knowledge related to customer perception of the microenterprise and its products, as well as what the competition is doing.	9
Value proposal	Innovation	Actions and investments that the microenterprise makes to create or significantly modify products or services, production or distribution processes,	8

Revista Iberoamericana para la
Investigación y el Desarrollo Educativo
ISSN 2007 - 7467

		marketing methods, and ways of organizing the company.	

<div align="center">Source: self made</div>

The study contrasts the dependence on the elements of the canvas model and the increase in sales compared to last year of the directors of mypes of Mineral de la Reforma to generate a proposal of strategies that show an increase in sales. The process of generating and evaluating the variables is shown in Figure 3.

Figure 3. Sequence of the evaluation of results of the elements of the business model

<div align="center">Source: self made</div>

The analysis allows us to observe whether there is any moderate or more pronounced dependence on the elements of the canvas model in the study area. The hypothesis of the study is the following:

H1: The elements of the instrument related to the canvas model depend on the increase in sales last year.

Chi square test

The contrast of dependence of the increase in sales against the elements of the business model is carried out by comparing the observed and expected frequencies using the Chi square test, with a significance level of 15%. The variables considered are the following: competitive advantage, marketing, human resources, finances, suppliers, sales scope, management, sales management, market analysis and innovation of the scale items. The analysis determines if there is a significant difference between the elements of the canvas model with respect to the sales of the previous year in order to determine the competitive strategies that validate the hypothesis to increase the competitive advantage of the Mineral de la Reforma mypes.

The hypothesis test on the dependence of the variables, the Chi square value is given by

$$\chi^2 = \left[\frac{O_1 - E_1}{E_1}\right]^2 + \left[\frac{O_2 - E_2}{E_2}\right]^2$$

where

O_1 =The observed frequencies of "Very frequent" of the elements of the canvas model ,

O_2 =The observed frequencies of "Uncommon" of the elements of the canvas model,

E_1 =The expected frequencies of "Sales increased a lot" compared to the previous year,

E_2 =The expected frequencies of "Increased little" in sales compared to the previous year,

where O_i are the observed frequencies, E_i are the expected frequencies, with degrees of freedom $gl = n - k - 1$ that vary depending on the number of observations n, and k the number of parameters that are estimated. Based on the proposed methodology, the variables studied in the instrument and their relationship with sales can be explored.

Results

The analysis of the information determines the main elements of the business model that the directors of the Mineral de la Reforma microenterprises use to increase their sales. The results of the chi square statistics for each of the instrument elements related to the canvas are shown in Annex 1.

Figure 4 shows the nine basic modules of the canvas model carried out by the directors of the Mineral de la Reforma MSEs, which reflect the logic that a company follows to achieve greater income. The modules cover the four main areas of a business: customers, offer, infrastructure and economic viability.

Figure 4. Canvas model with the strategies identified as the best to increase sales
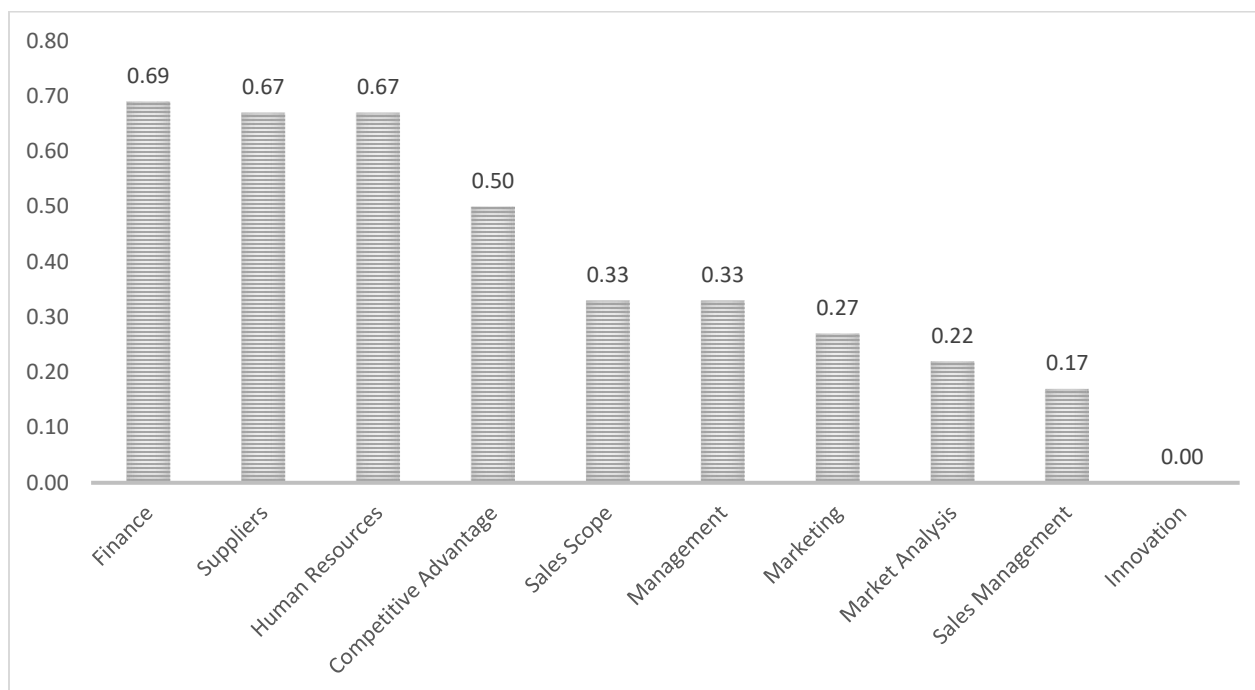
Source: self made

Canvas model				
SMES in Mineral de la Reforma, Hidalgo				
● **Key partners** Verify the product or service, the price they offer to the SME, and the treatment of each of the suppliers that provide to the microenterprise	● **Key activities** Decisions regarding financial resources and actions that lead to having a vision of the microenterprise's future. Improving employee well-being, productivity, and having clear rules about the good and bad consequences of what employees do ● **Key resources** Having employees who are polite to all customers, capable, and loyal	● **Value proposal** The product or service offered by the microenterprise is the best in its category and offers the best price	●**Relationship with clients** Provide excellent customer service, set prices for their products and services based on customers and competition. Customer service ● **Distribution channels** Sell primarily to end users	● **Customer segment** The customers from nearby neighborhoods and their city are the most important for the microenterprise
● **Cost structure** They have a clear understanding of the value of everything they spend. Monthly sales. Available funds (whether in cash or in the bank). The value of everything they purchase from suppliers each month. The value of everything they collect each month. The value of their company's asset			● **Income sources** Sales of products or service	

Source: self made

Figure 5 shows the percentage concentration of the elements associated with the main variables of the business model and the increase in sales within microenterprises.

The variables with the greatest relationship are finances with 69%, while supplier and human resources activities have a relationship of 67%. Likewise, it is detected that the elements of the business model that are not related to the increase in sales are the activities linked to innovation, sales management and market analysis.

Figure 5. Elements of the canvas model that increase sales in the mypes of Mineral de la Reforma, Hidalgo

Source: self made

Business models are considered a strategic business analysis tool; Therefore, this article identifies the elements of the canvas model that are related to increased sales through the analysis of the following variables: competitive advantage, marketing, human resources, finances, suppliers, sales scope, direction, sales management. sales, market analysis and innovation, as shown in table 2 in the Annex.

Finance is the variable with the greatest relationship to increasing sales, given that directors are very clear about the value of what they spend, what they sell each month, how much money they have available (whether in cash or in the bank), the value of everything they buy from suppliers each month, the value of everything they charge each month and above all how much their company's assets are worth.

On the other hand, the relationship between suppliers and the increase in sales of microenterprises is based on continually verifying the product or service, the price, and the treatment of each of the suppliers.

Likewise, human resources is one of the variables on which directors focus most to increase sales, since it has a notable relationship with personnel to achieve this goal. The MSEs with the greatest sales advantage in the region have employees who are qualified, capable and loyal. The director focuses on improving the well-being and productivity of his employees and having clear

rules about the consequences within the mype . In addition, they transmit specific objectives to employees, keeping the mission and vision clear.

The marketing indicator seeks to provide good service to its customers, setting the prices of its products and services based on customers and competition. Furthermore, as a distribution strategy, it seeks to sell mainly to the end user.

Competitive advantage as a variable to increase sales is related to your product or services being the best in its category in both quality and price.

Within the relationship between the market segment indicator and the increase in sales, the directors are clear that their main and most important segment for the mypes are the clients of the nearby neighborhoods and their city.

Also, the study determines that there is no relationship between the increase in sales of Mineral de la Reforma microenterprises with the innovation variable.

Discussion

Currently, micro and small businesses (MSEs) face a series of limitations, such as access to financing, a lack of business skills, and a technological gap compared to more developed organizations, as noted by Trujillo et *al* . (2016). Given this scenario, it is confirmed that the MSEs of Mineral de la Reforma do not precisely identify the concepts and strategies of the business model, which becomes an obstacle to using or planning a comprehensive business model within the company, such as as detected in this article.

Lara (2019) mentions that the implementation of the canvas model, with its nine blocks, provides a better vision of the aspects of the microenterprise. However, during this research it was observed that most microenterprises do not have a clear understanding of the importance and vision encompassed by the nine blocks of the canvas model.

Samsudin *et al* . (2021), within their research findings, revealed that business model practices—that is, product value, customer interface, infrastructure management, and financial aspects—positively impact performance. of microenterprises. This research highlights that the directors of Mineral de la Reforma show greater interest in the elements of the business model canvas related to financial aspects and key partners, which is due to the fact that they have a clear knowledge of the value of their expenses, income, cash availability, purchases from suppliers and value of your assets . This allows them to make better financial decisions, allocate resources efficiently and maximize revenue, which contributes to increased sales.

Therefore, the results of this analysis seek to provide a guide to entrepreneurs in the region through the most relevant strategies of the elements of the model, as mentioned by Mamani and Tirado (2021), where it is highlighted that business productivity is influenced by the business model canvas.

Conclusion

In this research, the elements of the canvas business model carried out by the directors of the Mineral de la Reforma MSEs to increase sales in their businesses were identified. Among the variables that are most related to sales, finance variables were found, through knowledge of the financial statements of the microenterprise and suppliers based on the selection criteria of the microenterprise's suppliers. This leads us to conclude that the directors of microenterprises focus more on the business area (internal) than on the market area (external). Furthermore, they carry out these activities empirically without having solid bases and knowledge to improve strategies within microenterprises in order to survive the environment and, above all, increase competitive advantage.

On the other hand, although it is true that the Mineral de la Reforma mypes carry out some elements of the canvas model that help increase sales, there is still a long way to go before they have well defined the elements of the model and how to use strategies to increase their sales. Therefore, it is necessary to generate synergies through collaboration between mypes, universities and public institutions to improve the aspects that exist, such as the lack of knowledge of the concept of a business model and to develop support for mypes to create and innovate their business model. business, so that they can improve business strategies and approaches and, therefore, increase their competitiveness.

Future lines of research

As future work, based on what was obtained in this article, we intend to implement the canvas model in two craft micro-enterprises in Mineral de la Reforma with the objective of demonstrating that the comprehensive use of this model has greater advantages than only focusing on some blocks. with greater emphasis. This will be achieved by benchmarking sales pre- and post-implementation of the model. Incorporating new data analysis techniques such as neural networks to improve the precision of results.

References

Bahena, E. (2019). Expectations of survival or closure of mypes in the state of Morelos. Case: municipality of Jiutepec. *Ibero-American Journal of Accounting, Economics and Administration , 8* (16). https://doi.org/10.23913/ricea.v8i16.133

Calva, A. (2020). *Reformulation of business models* (degree work). University of cantabria. https://repositorio.unican.es/xmlui/handle/10902/20512

Carballo, Y. and Nichols, A. (2016). *Metamodel of the business incubation process: business model component* . In Proceedings of the IV Scientific and Technological Symposium on Computing, SCTC (9).

Economic Commission for Latin America and the Caribbean [ECLAC] (2012). *Latin American Economic Outlook 2013: SME Policies for Structural Change* . https://www.cepal.org/es/publicaciones/1463-perspectivas-economicas-america-latina-2013-politicas-pymes-cambio-structural

Erlyana, Y. and Hartono, H. (2017). Business model in marketplace industry using business model canvas approach: An e-commerce case study. *In IOP Conference Series: Materials Science and Engineering , 277* (1). https://doi.org/10.1088/1757-899X/277/1/012066

Fakieh, B., AL-Malaise, S. and Ragab, M. (2022). The Effect of Utilizing Business Model Canvas on the Satisfaction of Operating Electronic Business. *Complexity* . https://doi.org/10.1155/2022/1649160

Ferreira, D. (2015). The canvas model in project formulation. *Cooperatives and Development , 27* (107), 69-80. https://doi.org/10.16925/co.v23i107.1252

Gutiérrez, J., Gutiérrez, J. and Asprilla, E. (2013). Dimension of technological management in SMEs: Colombian perspective. *Economic cuc* .

National Institute of Statistics and Geography [INEGI] (2020). *Data Mexico Beta* . https://datamexico.org/es/profile/geo/mineral-de-la-reforma?redirect=true

National Institute for Federalism and Municipal Development [INAFED]. (2010).

Jarma, J. (2018). *Redesign of the business model of the business development unit of the family compensation fund of the Valle del Cauca-Guadalajara de Buga region* (master's thesis) Universidad del Norte.

Jin, Y., Ji, S., Liu, L. and Wang, W. (2022). Business model innovation canvas: a visual business model innovation model. *European Journal of Innovation Management* , *25* (5), 1469-1493. 10.1108/EJIM-02-2021-0079

Lara, J. (2019). *The canvas model as a tool to optimize a microbusiness* (degree work). Autonomous Mexico State University.

López, N. (2007). Elements of integration of commercial microenterprises in the east of the State of Mexico in the first years of the 21st century. *Accounting and Administration* , (221). http://www.scielo.org.mx/scielo.php?pid=S018610422007000100006&script=sci_abstract &tlng=p--

Lozano Chaguay, L., Caicedo Flores, J., Fernández Bayas, T. and Onofre Zapata, R. (2019). The business model: canvas methodology as strategic innovation for the design of business projects. *Journal of Science and Research* , *4* , 87-99. 10.5281/zenodo.3594014

Macías, R., Díaz, M. and García, G. (2015). Business model for entrepreneurs: case study. *RAN-Academy & Business Magazine* , *1* (2). https://papers.ssrn.com/sol3/Papers.cfm?abstract_id=2777550

Mamani, P. and Tirado, S. (2021). The application of the Canvas business model and its influence on the business productivity of olive companies in the La Yarada Los Palos district, year 2019. *Veritas et Scientia* , *10* (2), 215-229.

Ortiz, G., Téllez, C., López, A. and Muñoz, R. (2022). Differences between the management strategies of directors of the mype of Mineral de La Reforma, Hidalgo, Mexico. In N. Peña (ed.), *Difference between management strategies in directors of the mype in Latin America* (pp 249-256). Mc. Graw-Hill .

Osterwalder, A. and Pigneur, Y. (2011). *Generation of business models* (3rd [ed] .).

Panda, K. (2020). Application of business model innovation for new enterprises: A case study of digital business using a freemium business model. *Journal of Management Development* , *39* (4), 517-524. 10.1108/JMD-11-2018-0314

Pang, C., Wang, Q., Li, Y. and Duan, G. (2019). Integrative capability, business model innovation and performance: Contingent effect of business strategy. *European Journal of Innovation Management,* *22* (3), 541-561. 10.1108/EJIM-09-2018-0208

Parra, I. (2014). Internal control systems in MSMEs and their impact on business effectiveness. *Context Journal of Research in Administration, Accounting, Economy and Society* , (2). https://www.redalyc.org/articulo.oa?id=551856273008

Peña, B., Posada, R., and Aguilar, C. (2023). Method and general results of the study of the differences between the management strategies of directors of MSEs in Latin America. In Peña, B., Posada, R., and Aguilar, C. (Coords.). *Differences between the management strategies of male and female directors of Latin American mypes. Volume I* (pp.1-9). Mc. Graw-Hill.

Ponce, A., Delgado, E. and Lucas, S. (2022). Business model and innovation in the context of the artisanal sector of the Montecristi canton. *Mastery of Sciences* , *8* (1). http://dx.doi.org/10.23857/dc.v8i1.2564

Puga, G. (2023). The business model canvas or model canvas: tool for entrepreneurs. *Magazine FAECO Sapiens* , *6* (1), 347-363. http://portal.amelica.org/ameli/journal/221/2213811033/

Samsudin, A., Alias, Z., Khan, U. and Bazkiaei , A. (2021). Do Business Model Practices Predict Microenterprise Performance? *International Journal of Entrepreneurship* , *25* , 1-15.

Toniut, R. (2020). The use of the business model for business innovation: contributions from the main authors. *Palermo Business Review* , (22). https://www.palermo.edu/negocios/cbrs/pdf/pbr22/PBR_22_08.pdf

Trujillo, E., Gamba, M. and Arenas, L. (2016). *The difficulties of SMEs in Latin America and Colombia to be competitive and sustainable* (specialty thesis). University of Bogotá Jorge Tadeo Lozano.

Zott, C. and Amit, R. (2008). The fit between product market strategy and business model: Implications for firm performance. *Strategic Management Journal* , *29* (1) . https://onlinelibrary.wiley.com/doi/abs/10.1002/smj.642

Contribution Role	Author(s)
Conceptualization	Gabriela Ortiz Cordero.
Methodology	Gabriela Ortiz Cordero.
Software	Gabriela Ortiz Cordero.
Validation	Gisela Yamin Gómez Mohedano.
Formal Analysis	Gabriela Ortiz Cordero.
Investigation	Gabriela Ortiz Cordero.
Resources	Gabriela Ortiz Cordero.
Data curation	Gabriela Ortiz Cordero.
Writing - Preparation of the original draft	Gabriela Ortiz Cordero.
Writing - Review and editing	Gabriela Ortiz Cordero and Gisela Yamin Gómez Mohedano.
Display	Gabriela Ortiz Cordero and Gisela Yamin Gómez Mohedano.
Supervision	Gisela Yamin Gómez Mohedano.
Project management	Gabriela Ortiz Cordero and Gisela Yamin Gómez Mohedano.
Fund acquisition	Gabriela Ortiz Cordero.

Exhibit

Table 2. Relationship of variables against sales in the mypes of Mineral de la Reforma, Hidalgo

INDICATORS	ITEM	Statistical X^2
Competitive advantage	Clients choose us because we treat them very well	0.7
Marketing	I mainly focus on providing a very good service to my clients.	1.1
Human Resources	My company has managed to get employees who treat everyone well.	1.3
Competitive advantage	Customers choose us because our product or service is the best in its category	1.5
Finance	I am very clear about the value of everything I spend	1.6
Suppliers	The most important thing for me in a supplier is the quality of their product or service.	1.6
Suppliers	The most important thing for me in a supplier is that they treat me very well and address my complaints.	1.6
Sales scope	Sales to clients in my neighborhood are important for my company	1.8
Finance	I am very clear about the value of what I sell each month	1.9
Finance	I am very clear about how much money I have available (whether in cash or in the bank	2.0
Finance	I am very clear about the value of everything I buy from suppliers each month	2.0
Human Resources	My company has managed to obtain very capable employees	2.1
Address	I propose specific objectives that we have to achieve in the company	2.2
Human Resources	My company has managed to obtain very loyal employees	2.32
Finance	I am very clear about the value of everything I pay to suppliers each month	2.4
Sales management	I carry out activities to detect and add new clients to the company	2.5
Suppliers	The most important thing for me in a supplier is that they give me the best price	2.5
Sales scope	Sales to customers in my city (town) are important for my company	2.6
Finance	I am very clear about the value of everything I charge each month	2.6
Suppliers	The most important thing for me in a supplier is that they always have what I need	2.6
Market analysis	I have effective methods to evaluate whether the price of my products or services is appropriate	2.7
Human Resources	I mainly focus on improving the well-being of my employees.	2.7
Address	I have a clear mission and vision, I share it with my employees and we try to achieve it	2.8
Marketing	I set the prices of my products and services based on my clients and my competition	2.9

Market analysis	I have effective methods to evaluate the quality of care I give to my clients.	3.1
Finance	I am very clear about how much my company's assets are worth.	3.1
Human Resources	I mainly focus on improving the productivity of my employees.	3.1
Marketing	As a distribution strategy, I sell mainly to the end user	3.3
Competitive advantage	Customers choose us because we offer the best price	3.3
Finance	I am very clear about how much my clients owe me	3.5
Finance	I am very clear about how much I owe to my suppliers	3.5
Human Resources	I have clear rules about the good and bad consequences of what my employees do.	3.8
Finance	I am very clear about how much my inventory is worth.	3.9
Competitive advantage	Customers choose us because they know that we always have the product or service available	4.0
Market analysis	I have effective methods to get to know my clients, their needs and preferences.	4.3
Human Resources	I evaluate the performance of my employees.	4.9
Sales management	I carry out activities to promote sales	5.2
Innovation	I frequently offer new products or services based on suggestions from my clients.	5.2
Address	My company's competitive strategy generally results from a formal planning process (that is, the formal plan precedes the action)	5.5
Market analysis	I have effective methods to evaluate the quality of my products or services.	5.6
Sales management	I carry out activities to sell in a larger area or in more places	5.6
Innovation	I encourage employees to propose changes in my products, services and processes	6.7
Finance	I am very clear about how much I owe to the bank and other institutions	7.0
Address	I am attentive to detect new trends in my business and find out what my competition is doing.	7.2
Finance	I am very clear about how much I would get for selling everything I have in my company	7.2
Marketing	I take concrete actions so that my clients are loyal to the company	7.9
Marketing	I seek to create, develop and use a brand so that my clients identify my company	8.2
Market analysis	It is easy for other companies like mine to appear	8.9
Innovation	I focus a lot on offering innovative products or services that distinguish the company	9.1
Suppliers	The most important thing for me in a supplier is its brand	9.1
Competitive advantage	Customers choose us because they appreciate our brand	9.1
Marketing	There is strong competition in my company's sector	9.3

Sales scope	Sales to customers from other towns are important for my company	9.5
Finance	I am very clear about how much I owe in loans to family and acquaintances	10.0
Market analysis	I carry out activities to detect the strengths and weaknesses of my competition.	10.3
Marketing	I carry out advertising and promotion activities about my product or service	10.5
Market analysis	It is easy for other products or services to appear that replace the ones I offer.	10.9
Human Resources	I involve my employees in decision making.	13.1
Market analysis	I frequently compare the results of my company with those of other companies	13.6
Sales management	I make changes and adaptations to my products or services to close some sales	13.7
Competitive advantage	We focus only on a part of the clients to adapt to their needs	13.7
Market analysis	The company monitors actions taken by the competition	14.2
Innovation	Development or payment to innovate my production or distribution processes	14.2
Marketing	I test my products or services before launching them on the market	15.1
Innovation	Development or payment to innovate the products or services I offer	15.3
Suppliers	My suppliers have very strong bargaining power over the company.	15.3
Innovation	Development or payment to innovate the way I sell my product or service (design, packaging, promotion, way of pricing)	15.6
Sales management	I invest time and money in customer relationships even without trying to sell immediately.	17.3
Address	I do not usually plan the company's strategy in advance, but rather it emerges as I see the best way to achieve our objectives.	17.9
Sales management	I give discounts to some clients to close sales	17.9
Address	I do not propose a commercial strategy until I do some trial and error actions	18.0
Innovation	Development or payment to innovate the way I organize the company	20.1
Human Resources	My company pays salaries much higher than other companies in the area	20.1
Marketing	My clients have very strong bargaining power over the company	20.8
Marketing	As a distribution strategy, I sell mainly to wholesalers or intermediaries	twenty-one
Marketing	My strategy is to give credit to my clients.	22
Sales scope	Sales to other companies are important for my company	23.4
Innovation	I attend fairs, courses, conferences, or other activities related to the business	30.7
Sales scope	Government sales are important to my company	35.7
Sales scope	Sales to clients abroad are important for my company	36.4

Source: self made