



Digital Transformation and Competitiveness in Family Businesses: A Focus on Technological Innovation

Dra. Aída Dinorah García Alvarez

*Universidad Juárez Autónoma De Tabasco, México adgaral@gmail.com ORCID: <https://orcid.org/0000-0002-2846-6924>

Citation Dra. Aída Dinorah García Alvarez et al (2024), Digital Transformation and Competitiveness in Family Businesses: A Focus on Technological Innovation, *Educational Administration: Theory and Practice*, 30(6), 3382-3388, Doi: 10.53555/kuey.v30i6.6111

ARTICLE INFO

ABSTRACT

The technological era has catalyzed the growth of new generations, radically transforming the business world. This not only makes the job easier, but also improves marketing strategies and optimizes business models. This article examines how emerging technologies benefit family businesses, drawing on desk research that analyzed previous studies, academic papers, and industry reports. The findings indicate that the integration of new technologies has increased operational efficiency, enabled more effective marketing strategies, fostered innovation in business models, and facilitated geographic expansion. In conclusion, technology plays a crucial role in the success of family businesses, underscoring the need to continue investing in technology to stay competitive in an ever-changing business environment.

Keywords: Business Technology, Family Businesses, Digital Innovation

Introduction

In the Southeast region of Mexico, several companies, including family-owned ones, meet specific requirements in formality. These companies constitute groups of assets organized by a corporate name, either internal or external, private, which allow the operation of a company where the members of the same family have functions and responsibilities.

These companies can represent a valuable asset to the region if they have the capacity to grow and adapt on their own. However, not all micro, small, medium, and large businesses can be considered family-owned, even if they are run by people with the same surname or some degree of kinship.

Currently, family businesses require technological innovation to boost their operations, derived from the current context of providing a fast and efficient service. This need is a consequence of the diversity of companies that emerged and transformed after the global COVID-19 crisis. Matary (2023) mentions on his page that business innovation is crucial to stay in a competitive market in constant transformation. In an environment characterized by the speed of change, globalization, and new technologies, companies must adapt quickly to survive.

Family businesses have the ability to adapt to sudden changes based on the circumstances of today's landscape, where technology is advancing rapidly. This ability to adapt has become an essential guideline to ensure the prosperity and continuity of these organizations. The relationship between technology and innovation is totally linked. Keeping up with technological trends is a differentiating factor in the market, as they provide tools to drive innovation.

Running a family business can be complex due to the intertwined nature of its systems. However, family businesses seem empowered to understand new challenges and often benefit from their agility and ability to make long-term decisions. The balance between tradition and adapting to the new realities of the market is key to success. It is essential that the company culture continuously underpins its strategy and fosters risk-taking, agility and collaboration.

We must understand that technology is constantly evolving. From automation and artificial intelligence to data analytics, there is a wide range of technologies that can transform a family business.

The adoption of these technologies can optimize processes, improve the customer experience, and create new business models (Matary, 2023). Yépez (2024) mentions innovation in family businesses as a driving force behind sustained growth and adaptability. It draws significantly on the diversity of skills and perspectives that the next generation can bring. This dynamism is essential in a rapidly evolving business world, where the ability to reinvent and adapt to new paradigms can be the difference between continued success and stagnation. In this context, encouraging successors to develop competencies that complement or enhance those existing in

the family business becomes a fundamental strategy for the future. For many founders or company leaders, embracing new ideas or approaches can be challenging, especially when these innovations come from the next generation. The key to overcoming this resistance lies in recognizing that innovation does not imply devaluing the established, but building on it to reach new heights (Yépez, 2024).

Methodology

This document is based on documentary research, using sources of information obtained through reliable sources on the internet, which detail the topic and each of the current processes related to the ongoing research. Data were collected from various sources already cited to provide a more complete and specific approach to the topic of interest.

Documentary methodology is an essential technique in scientific research that focuses on the analysis and evaluation of documentary sources to obtain relevant and accurate information on a specific topic. In the context of technological innovation for the promotion and development of family businesses, this methodology plays a crucial role in the collection and analysis of relevant data that support the study. A solid theoretical framework is established that supports the research, incorporating key theories and concepts related to technological innovation and family businesses, located in the context of southeastern Mexico, for an exhaustive analysis.

In addition, the applied research study model was used. The knowledge acquired comes from the experience of the author of this research, who is an entrepreneur and founder of a family business with 24 years of experience. The qualitative part is based on the contributions of Matary and Yépez, whose web pages provided numerical and textual data, adequately cited to ensure the reliability of the sources. This data focuses on the culture of innovation that currently prevails in family businesses, and how technology has become a habit in these organizations.

This research may be of interest, based on the results obtained, both for family businesses that implement their business model through mobile technology. For this reason, it is considered that the analysis and justification are aligned with previous research, reflecting the daily reality of family businesses today

Development

Challenges of family businesses in Mexico

The author Figueroa (2023) points out in her article that family businesses are a fundamental piece in Mexico's economy today. These companies are not only important because of their family-friendly nature, but also because they have grown through generations, fostering a well-organized and cohesive company culture.

Importance of family businesses in Mexico

In Mexico, most companies are considered family-owned. Currently, these companies represent 9 out of 10 formally incorporated companies, although most are first generation. Alarming, 70% of family businesses disappear after the death of their founder, as has been observed in recent cases across the country. Only 12% of these companies manage to survive to the third generation.

This pattern is also observed among companies listed on Mexican stock exchanges, where about 70% of the entities are mostly controlled by a family, with an equity stake of approximately 50% of the total outstanding bonds.

This shows the maturity of Corporate Governance that can be achieved, while maintaining control of the company within the family (Figueroa, 2023).

Digital transformation not only involves technological change, but also strategic, cultural and organizational change for family businesses, which usually have a long-term vision. However, some resist change, due to a conservative mindset and a preference for stability.

In addition, they may face difficulties in aligning the interests and expectations of the different generations of the family (Capital, 2024).

Innovation challenges and opportunities for family businesses in the digital age

According to Faster Capital (2024), the digital age has brought significant changes to the business world, especially for family businesses. A relevant fact is that 70% of companies contribute to the world's GDP and employ more than 60% of the global workforce.

Family businesses must balance tradition with innovation, preserving and honoring their heritage and values while adapting to market changes and customer needs. They should leverage their history and reputation as sources of differentiation and competitive advantage, while looking for new ways to create value and impact for their stakeholders.

To enhance and reward entrepreneurial behaviour, family businesses must give autonomy and authority to their members and employees to carry out innovative and entrepreneurial initiatives, providing them with adequate resources and support. In addition, they should recognize and celebrate the achievements and contributions of their innovators and entrepreneurs, sharing their stories and best practices with the rest of the organization.

As the author mentions, it is crucial for family businesses to adopt technological tools, as they are beneficial for their development. This can serve as part of an effective strategy to gain knowledge and experience over the years. Today, family businesses, not only in Mexico but worldwide, have a great impact on the value of GDP.

Although some family businesses are conservative and reluctant to change, this stereotype does not reflect the reality of many companies that have embraced innovation and adapted to changing market conditions. Successful examples include Walmart, Samsung, BMW, and L'Oréal, which have managed to balance preserving their values with seeking new growth opportunities (Faster, 2024).

Proceeds

In her blog, the author García (2023) talks about the benefits that technology can bring to companies, highlighting advantages such as:

Cost reduction: More efficient methods in processes, such as automation and optimization of resources, allow a significant reduction in costs, saving time and effort.

Access to new markets: Technological innovation allows companies to access new markets or become leaders in their sector.

Process facilitation: Implementing technological innovations brings efficiency, flexibility, and agility to business processes.

What does technological innovation represent in companies?

García (2023) states that technological innovation improves the productivity of family businesses. The implementation of technology allows you to control operations in real time, track processes, and make smarter decisions. Companies that understand the importance of technological innovation can avoid being left behind and continue to grow.

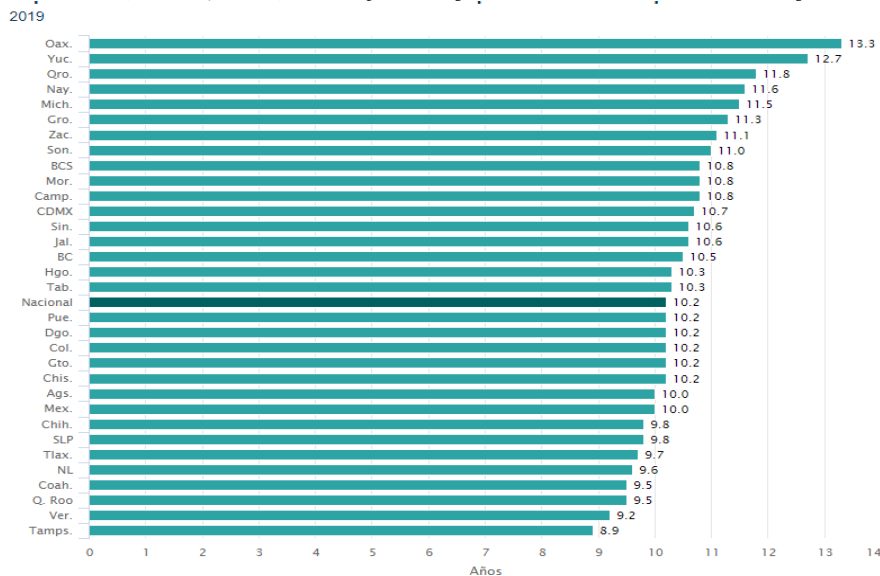
Family businesses represent 90% of business units in Mexico Leyva Reus (2022) mentions on the El Financiero page that Mexican families represent around 90% of businesses in Mexico, contributing to 85% of GDP and representing 90% of business units in the country. These families were put to the test during the two years of the pandemic.

According to data from the National Institute of Statistics and Geography (INEGI), family businesses are equivalent to 90% of business units in Mexico, but their main problem continues to be high mortality.

Probate process

Most companies do not survive their founder, with only a third making it to the second generation and just over ten percent surviving the third generation. In a videoconference, María Fonseca, director of the Institute of Business Families for Mexico and Latin America at Tecnológico de Monterrey, explains that family businesses are an important part of Mexico's business fabric, since few are not family businesses in the country (Reus, 2022). Graph shown by INEGI in recent years

Graph 1: Taken from (INEGI, 2021) life expectancy of establishments when they reach 5 years of life



Source: Business Demographics 1989-2019

The graph refers to the indicators of business demographics, you can know the life expectancy of a business of any age.

For example, the following graph shows that until 2019 at the national level, when a business is already 5 years old, its average life expectancy is 10.2 years more.

At the state level, it is in the state of Oaxaca where businesses have the highest life expectancy in the country, with 13.3 more years; in contrast, in the state of Tamaulipas, businesses have the lowest life expectancy when they turn 5 years old, with 8.9 years more.

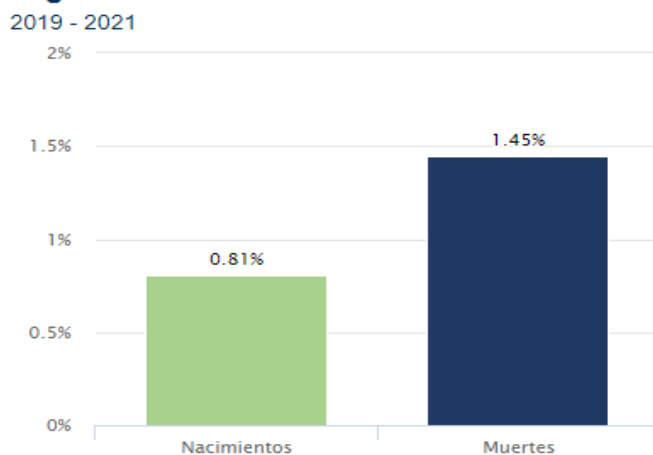
Monthly Business Birth and Death Rates

In the second period, it was identified that the monthly death rate is 1.45% while the birth rate is 0.81%, which means that for every 10,000 establishments existing at any given time, in the span of a month 145 die and 81 are born.

Going back to data from previous years, the COVID-19 pandemic caused the death of a large number of establishments, although new establishments also emerged, but not in the same proportion.

The impact of the pandemic on the life expectancy of businesses will be known when information is available on all establishments that carry out some economic activity, which will happen when the 2024 Economic Census is carried out.

Graph 2: Taken from (INEGI, 2021), Monthly rates of business birth and death.



Source: Inegi 2021

These graphs were the last census that INEGI carried out that is still in force, these were the data currently found by the INEGI website, which covers up to the year 2021, which currently shows how Mexico is in terms of the family businesses that currently exist, how long they last in terms of generations and how long they last in the market for years

Family Business Case Studies Method

Molotla et al. (2012), mention how a case study is elaborated to analyze family businesses, the case study has taken a new boom due to the interest that arises in qualitative research against the quantitative, mentions that Robert Yin is the most recognized author in the conceptualization and application of this methodology which commits a research strategy which commits all the methods of the logic in the design of specific approaches for data collection and analysis.

For Peña (2009), the case study is an empirical investigation that is applied to a contemporary phenomenon within its real context of social life, where the boundaries between what is the phenomenon and the context are not clearly visible.

Characteristics of a case study

- 1.- Investigate phenomena in which the answer is sought to what, how and when it occurs and that range from describing the phenomenon to explaining it.
- 2.- Contrast various contexts and generate several views from different disciplines
- 3.- Theoretical generalization: This involves the emergence of new interpretations and concepts in which the existing theory is inadequate.

In this case, the author shows us some of the examples of how family businesses can be studied using this study method:

Table 1: Application of the case study method of research on family businesses.

Title	OBJECTIVE O QUESTION FROM RESEARCH	METHOD USED	DESCRIPTION OF THE METHOD
The problem of generalization in The Case Study qualitative. One Family Business Southeast Mexican The problem of generalization in the qualitative case study. A family business in southeastern Mexico	To contribute elements of discussion to one of the most important methodological debates in the social sciences and humanities: the generalization of the results obtained from qualitative case studies.		The use of the case study for the description of the company is implicitly perceived. However, it is not explicitly described

<p>Qualitative methodology: an option to study the growth and continuity of the family business</p>	<p>To approach qualitative methodology as an option for researching the family business.</p>	<p>Case study.</p>	<p>It was based on a research question. The units of analysis (3 companies) were selected. The family partners of each of the companies were interviewed. The adjustment of the information obtained in the companies was carried out in relation to the established propositions and the designed pattern. The criteria for interpreting the results were applied by comparing the results obtained in each of the companies, categorizing each of the questions of the various interviews.</p>
---	--	--------------------	--

Source: Authors' elaboration based on data from Molotla et al. (2012)

Figure 2: Application of the case study method of family business research.

Title	RESEARCH OBJECTIVE OR QUESTION	METHOD USED	DESCRIPTION OF THE METHOD
<p>The small artisanal family organization: the case of the Chignahuapan sphers</p>	<p>To recognize, from an organizational perspective, the complexity of the artisanal family, which works in groups as small producers and carries out an economic activity, but also reproduces a social and cultural order in its own living space.</p>	<p>Multi-case study</p>	<p>The methodological tools of the interview and documentary analysis were used</p>
<p>The Family Dimension in a Tourism Cooperative: The Case Study as a Form of Approach to the Organizational Phenomenon</p>	<p>What is the role of the family in relation to the formation of the identity of the tourist cooperative?</p>	<p>Case Study</p>	<p>The techniques used are: observation, interview and documentation. Once the information was obtained, the recordings of the field notes of the visits were transcribed. Regarding the interviews, as they were carried out, they were transcribed, without the need to wait for all of them to have been prepared. Subsequently, two matrices were structured in which the initial topics of the interviews were included in the first instance. As the data were classified, other categories emerged, and based on the repetition and importance of the topics, they were added to the matrix. By having the matrices, one general and the other derived from the information of the customers, we proceeded to integrate, according to the theoretical elements, the identity referents. Finally, the results are presented.</p>

Source: Authors' elaboration based on data from Molotla et al. (2012)

Table 3: Study method for studying family businesses

TITLE	RESEARCH OBJECTIVE OR QUESTION	METHOD USED	DESCRIPTION OF THE METHOD
<p>Culture and Governance in Family Businesses: the Case of Construcciones Ah Kim Pech</p>		<p>Case Study</p>	<p>It is only stated that the methodological design used for the analysis of this case is illustrative. It takes as its main units of analysis culture and governance, described through the problems that arise in the company where the intervention was carried out, which is analyzed according to the different theoretical approaches presented for these constructs</p>
<p>OATATI: State Quality Award 2007 Study</p>		<p>Case Study</p>	<p>It is based on observation and interviews with members of the company under study.</p>
<p>Information Technology to Improve Productivity: The Case of the Family Business of Professional Folk Dance Footwear</p>	<p>To know from the organizational perspective what information technology can be implemented in the family microenterprise.</p>	<p>Documentary and field</p>	<p>Bibliographic research in books, internet articles and magazines. Field research using file review, observation, interview and survey as an information collection technique, aimed at the owner and staff of a family micro-enterprise</p>

Source: Authors' elaboration based on data from Molotla et al. (2012)

Case Study Rationale for an In-Depth Analysis of Technological Innovation in Family Businesses

The study of technological innovation in family businesses is essential to understand how these organizations can maintain their relevance and competitiveness in a globalized and ever-changing economic environment. Family businesses have a unique structure that combines tradition and inherited values with the need to adapt to new market realities.

Analyzing specific cases of family businesses that have embraced technological innovation provides a detailed view of the challenges and opportunities they face. It allows you to identify the best practices and strategies that have led to success, as well as the obstacles you have had to overcome. This in-depth analysis can serve as a guide for other family businesses looking to implement technological changes, helping them avoid common mistakes and maximize the benefits of innovation.

The importance of this study lies in its ability to show how the integration of advanced technologies can transform the operability and sustainability of family businesses, ensuring their survival and long-term growth. In addition, it provides a theoretical and practical framework that can be used by researchers, academics and professionals in the sector to further explore and improve the dynamics of innovation in these key organizations for the economy.

By focusing on the specific context of south-southeast Mexico, this study also addresses the regional particularities that may influence the implementation of technologies, offering recommendations adapted to the needs and characteristics of this region. Ultimately, research on technological innovation in family businesses not only benefits individual organizations, but also contributes to the economic and social development of the region and the country as a whole.

Remarks

The adoption of the use of technology in family businesses is of vital importance to face a more demanding market that is aware of what it really needs. Innovative technologies such as Artificial Intelligence, data analysis and process automation allow organizations to achieve efficiency in results and speed in delivery.

Differentiation in companies is a clear factor for their growth. Opportunities in obtaining resources are marked by creativity and technological innovation. Some case studies highlighted in the tables above show the need to include technological support in enterprises.

Let's return to the importance and control that companies had when reinventing themselves and providing new solutions through the use of technology from the confinement due to the health risk, which led millions of people to be infected and die. The obsolescence of services and products in companies has led family organizations to close their doors and abandon their life projects. However, for many companies, the crisis represented an opportunity to innovate, survive and grow in the face of adverse circumstances.

This analysis highlights the crucial importance of technological innovation for family businesses in Mexico, especially in a context of rapid change and constant challenges. The ability of these companies to adapt and reinvent themselves by adopting new technologies not only ensures their survival, but also positions them as leaders in their respective markets.

The need for a strategic approach towards the implementation of advanced technologies is evident. Companies that invest in artificial intelligence, data analytics, and process automation are better prepared to meet the challenges of the modern marketplace and meet the demands of increasingly informed and demanding consumers. Technological innovation, therefore, is not just an option, but an imperative necessity for any family business that aspires to remain relevant and competitive in the 21st century.

Conclusions

This study highlights how the adoption of innovative technologies can transform the operability and sustainability of family businesses. The integration of artificial intelligence, data analysis, and process automation allows organizations to improve efficiency and speed in their operations, responding appropriately to a demanding market. In addition, it highlights the importance of creativity and technological innovation in the differentiation and growth of companies.

The case studies analysed show that technological support is essential for family businesses. The pandemic forced many organizations to reinvent themselves and find new technological solutions to survive and thrive in the midst of the crisis. For some companies, the health crisis presented an opportunity to innovate and adapt to adverse circumstances, while others, without the ability to innovate, were forced to close.

In summary, the research underscores the need for family businesses in Mexico to adopt a strategic approach to technological innovation. This approach not only ensures their survival, but also positions them as leaders in their respective markets, preparing them to face the challenges of the future successfully.

References

- 1 Capital, F. (March 18, 2024). <https://fastercapital.com/>. Retrieved from <https://fastercapital.com/es/contenido/Ecosistema-de-innovacion-de-empresas-familiares--Impulsar-el-crecimiento--como-innovan-las-empresas-familiares-en-la-era-digital.html>
- 2 Faster, c. (2024, March 22). fastercapital.com. Retrieved from <https://fastercapital.com/es/contenido/Innovacion-en-empresas-familiares--de-la-tradicion-a-la-innovacion--como-prosperan-las-empresas-familiares-en-la-era-de-las-startups.html>
- 3 Figueroa, Y. (2023, October 26). <https://welcome.atlasgov.com/>. Retrieved from <https://welcome.atlasgov.com/es/blog/gobierno-corporativo/empresas-familiares-mexico/>
- 4 García, M. (2023, 03, 22). [blog.maestriasydiplomados](https://blog.maestriasydiplomados.tec.mx/). Retrieved from <https://blog.maestriasydiplomados.tec.mx/innovacion-tecnologica-que-es-sus-tipos-y-sus-beneficios#:~:text=La%20implementaci%C3%B3n%20de%20la%20innovaci%C3%B3n,decisiones%20mejor%20y%20m%C3%A1s%20inteligente>.
- 5 matary, J. (2023, OCT 18). japonmatari.es. Retrieved from <https://japonmatari.es/2023/10/18/innovacion-y-tecnologia-en-empresas-familiares-un-camino-hacia-la-prosperidad-y-la-continuidad/>
- 6 Nieto, M. M. (2012, 07, 02). [Researchgate](https://www.researchgate.net/publication/260772742_El_metodo_del_estudio_de_caso_para_estudiar_las_empresas_familiares). Retrieved from https://www.researchgate.net/publication/260772742_El_metodo_del_estudio_de_caso_para_estudiar_las_empresas_familiares
- 7 Reus, J. L. (2022, 02, 10). [The financial](https://www.elfinanciero.com.mx/economia/2022/02/10/empresas-familiares-representan-el-90-de-las-unidades-de-negocio-de-mexico/) . Retrieved from <https://www.elfinanciero.com.mx/economia/2022/02/10/empresas-familiares-representan-el-90-de-las-unidades-de-negocio-de-mexico/>
- 8 Yépez, R. (Feb. 08, 2024). [Linkedin](https://es.linkedin.com/pulse/innovaci%C3%B3n-clave-para-el-futuro-de-las-empresas-v9buf?trk=article-ssr-frontend-pulse_more-articles_related-content-card). Retrieved from https://es.linkedin.com/pulse/innovaci%C3%B3n-clave-para-el-futuro-de-las-empresas-v9buf?trk=article-ssr-frontend-pulse_more-articles_related-content-card
- 9 Peña, W. (2009). The case study as an appropriate methodological resource for research in social sciences. *Revista Educación y Desarrollo Social*, 2, 180 - 195.