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Evaluation of the Variables in the Development of Dynamic Capabilities in Organizations with Respect to the Role of Senior Management

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A B S T R A C T

This study examines the role of top management in fostering dynamic capabilities within SMEs amid an increasingly uncertain economic landscape. Using a quantitative correlational approach with surveys and interviews, the study explores the relationship between dynamic capabilities (absorption, innovation, learning, adaptation) and strategic dimensions (strategy, organization, HR, technology). Results show that SMEs with proactive leadership and strategic vision demonstrate higher adaptability and innovation, supporting long-term resilience. The findings underscore the importance of leadership in promoting learning, knowledge management, and tech integration. Future studies are encouraged to investigate other factors affecting business sustainability.

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INTRODUCTION

In an economic environment marked by volatility and uncertainty, the ability to adapt has become a determining factor for the survival and growth of small and medium-sized enterprises (SMEs). The concept of dynamic capabilities, developed by Teece, Pisano, and Shuen (1997), refers to the ability of an organization to integrate, develop, and reorganize its resources and competencies in a strategic manner, allowing it to respond in an agile way to market changes. Beyond representing a competitive advantage in the short term, these capabilities are key to ensuring the long-term sustainability of companies, especially in sectors with limited resources and a constantly changing business environment.

SMEs face multiple challenges, including dependence on the mining sector and poor industrial diversification. According to the National Institute of Statistics and Geography (INEGI, 2022), approximately 90% of the economic units in the region belong to this business segment. Their vulnerability to changes in economic policies and the lack of technological innovation places them in a fragile position in the face of market challenges. In this context, the role of senior management is crucial, as their strategic decisions have a direct impact on the company's ability to adapt, innovation and competitiveness.

The purpose of this research is to analyze the influence of senior management on the development of dynamic capacities within SMEs. Based on this analysis, it seeks to design strategies that strengthen its competitiveness and sustainability over time. Key factors that affect the implementation of these capacities are identified, assessing both their enablers and the barriers that may hinder their development.

The literature has highlighted the importance of dynamic capabilities as an essential factor for organizational resilience. Teece et al. (1997) argue that these capabilities allow firms to anticipate and respond effectively to changes in their competitive environment, ensuring their permanence in the market. For SMEs, their relevance is even greater because their limited size and resources make them more likely to suffer the impact of external disruptions.

A key element in building dynamic capabilities is senior management leadership. According to Bass and Avolio (1993), transformational leadership plays a central role in employee motivation and development, fostering an organizational culture based on innovation and continuous learning. This leadership style, combined with efficient knowledge management, makes it easier to identify opportunities, optimize resources, and promote internal collaboration.

To achieve the proposed objectives, a descriptive and correlational methodological approach was adopted, combining qualitative and quantitative techniques. The target population was made up of SMEs with at least three years of formal operation. Data collection was carried out through surveys and structured interviews aimed at general managers and members of senior management, to evaluate dimensions such as innovation, adaptability and the ability to reconfigure resources.

The analysis of the information was carried out using advanced statistical tools to identify significant patterns and relationships between the variables studied. Additionally, a more in-depth qualitative analysis was carried out, providing a better understanding of the perceptions and strategies used by business leaders in the local context.

The results of the study show that senior management plays a fundamental role in the creation of a strategic vision that promotes innovation, organizational learning and the ability to adapt. It was identified that companies led by managers with well-developed strategic skills showed a greater ability to implement effective changes and respond to market demands.

THEORETICAL REVIEW

Dynamic capabilities are key for companies to gain a competitive advantage. This approach highlights the importance of internal resources and their strategic management to take advantage of opportunities in the market. According to Sáez de Viteri Arranz (2000, p. 132), the strength of a company lies in how it uses these resources to differentiate itself and generate sustainable value.

Barney, cited by Vargas-Hernández (2013, p. 45), emphasizes that capabilities analysis should focus on the specific assets that firms own and control, since these differences impact their productivity and competitiveness in the long term. In this context, business strategy is defined as the constant search for profitability and sustainability.

Operational Capabilities Can Be Classified Into Three Broad Categories:

1. Coordination and innovation: Ability to reorganize internal and external resources to respond quickly to changes in the environment.
2. Efficient use of resources: Implementation of strategic actions aimed at maximizing results.
3. Progressive development: Building new capacities through learning and adaptation.

The concept of dynamic capabilities highlights that competitive advantage does not come only from resources, but from how they are managed. Grindel and Hilderbrand, cited by González Bazaldúa (2021, p. 89), define competence as the ability of a company to operate effectively and sustainably.

Rotundo (2020, p. 54) highlights adaptability as a key factor in innovation and product development in constantly evolving markets. Eisenhardt and Martin (2021, p. 45) agree that these capabilities include processes such as decision-making and strategic collaboration, which are fundamental for business renewal.

In addition, Zollo (2001, p. 67) points out that critical skills are acquired through experience and knowledge transfer, allowing companies to strengthen their management practices. Wang (2007, p. 112) adds that the preparation and coordination of resources are essential for adaptation to change.

Garzón (2015, p. 76) indicates that the ability to generate and update knowledge is vital to respond to market demands. Verona (2003, p. 135) stresses the importance of integrating external knowledge into organizational management.

Key Parameters of Dynamic Capabilities:

1. Absorption capacity: Identification and assimilation of external knowledge to strengthen internal capacities.
2. Innovation: Creation of new products, services and markets.
3. Adaptability: Agile response to changes in the environment.
4. Learning capacity: Organization and generation of knowledge from various sources (Wang, 2007, p. 116).

Effective leadership is a fundamental driver of business competitiveness and sustainability. Teece, Pisano, and Shuen (1997, p. 520) describe dynamic capabilities as the ability to integrate and reconfigure resources to respond to changing environments. Eisenhardt and Martin (2000, p. 1110) define them as strategic routines that facilitate innovation.

Helfat et al. (2007, p. 5) emphasize its evolutionary nature, based on experience and organizational learning. Barreto (2010, p. 256) and Zollo and Winter (2002, p. 340) agree that these capabilities strengthen flexibility and continuous improvement.

Organizational resilience is closely linked to adaptability. Sutcliffe and Vogus (2003, p. 98) argue that it does not only imply overcoming challenges, but also turning them into opportunities. Hamel and Valikangas (2003, p. 55) and Linnenluecke (2017, p. 28) highlight that organizational stability and innovation are essential to face uncertainty.

Innovation and Dynamic Capabilities:

The relationship between innovation and dynamic capabilities is key to business evolution. Christensen (1997, p. 123) introduced the concept of disruptive change, which allows companies to exploit new opportunities. Tidd, Bessant, and Pavitt (2005, p. 215) emphasize that the transformation of innovations into sustainable strategies is essential.

In the context of SMEs, adapting to dynamic markets is crucial. Teece (2007) highlights that these companies must build flexible competencies to adjust to changing demands. Eisenhardt and Martin (2000) argue that the reorganization of resources in response to the environment is a decisive factor.

Winter (2003) mentions that agile responsiveness gives SMEs a competitive advantage in dynamic markets. Continuous innovation and strategic decision-making, according to Teece (2009), are essential pillars in this process.

Eisenhardt and Martin (2000) stress that organizational learning is a powerful tool for SMEs to strengthen their capacities and react quickly to new opportunities. External collaboration and strategic alliances, according to Winter (2003), are essential to broaden the resource base.

Dynamic capabilities therefore represent a key strategy for competitiveness, resilience and innovation. In an ever-changing environment,

adaptation and effective resource management make the difference between business success and stagnation.

Table 1. SME Comparison

Author	Main concept	Developments in SMEs
Eisenhardt and Martin (2000)	Dynamic capabilities as time-dependent processes that enable resource recombination	SMEs must develop efficient processes to maximize the use of limited resources
Winter (2003)	Adaptability as a competitive advantage derived from dynamic capabilities	SMEs must adjust their operations quickly to capitalize on emerging opportunities
Teece (2007)	Dynamic capabilities allow for the integration, building and reconfiguration of competencies	In SMEs, these capabilities are key to adapting and anticipating market changes
Teece (2009)	Dynamic capabilities foster innovation in high-uncertainty environments	SMEs that develop these

Note*:* A comparison of the evolution of dynamic capacities is shown Source: own elaboration based on Eisenhardt and Martin (2000), Winter (2003), Teece (2007), Teece (2009)

Role of Senior Management

Top management plays a critical role in defining an organization's strategy and long-term success. Their functions are decisive in guiding business direction, improving efficiency and strengthening corporate culture.

Key Functions of Senior Management

Strategy Formulation

Senior management is responsible for defining the strategic direction of the company. As Peter Drucker pointed out, "the strategy is to make the right choice; the tactic is to make the choice well." This process involves deciding which markets to address, what products and services to offer, and how to differentiate yourself from the competition.

Decision-Making

Managers must make strategic decisions in uncertain environments and with incomplete information. Herbert A. Simon, Nobel laureate in economics, points out in his theory of bounded rationality that business decisions are not completely rational due to constraints of time and resources. Therefore, senior management must assess risks and act with agility.

Leadership and Motivation

Organizational leaders have a responsibility to inspire their employees and create a sense of shared purpose. John P. Kotter highlights in *Leadership and Organizational Change* that motivation and clear communication of the corporate vision are essential to achieve business objectives.

Organizational Development

Gary Yukl stresses that senior management must ensure that the company has the structure, culture, and resources necessary to execute its strategy. This involves fostering innovation, adaptability, and continuous learning within the organization.

Change Management

Top management must communicate the need for change, reduce resistance, and lead the organization through transition processes.

Top management is crucial in the creation and evolution of dynamic capabilities, which allow companies to integrate, develop, and reorganize their resources to face changes in the environment (Teece, 2018). According to Mintzberg (2009), strategic leadership involves anticipating, managing, and facilitating organizational change.

Agile decision-making is key in companies with outstanding dynamic capabilities. Eisenhardt and Sull (2001) point out that these organizations stand out because their leaders make quick decisions and adjust strategies as market conditions change.

Promoting a culture of innovation is another essential task of senior management. Christensen (2013) highlights that encouraging creativity and experimentation allows for the development of new products and strengthens a proactive attitude towards change.

In addition, risk management is critical in turbulent markets. Miller and Waller (2003) indicate that the ability to anticipate threats and design mitigation strategies is essential for business stability.

Key Strategies for Senior Management

Resource Optimization

Barney's (1991) resource-based view emphasizes the importance of developing strategic assets, such as human capital and technology, to maintain a competitive advantage.

Organizational Learning

Senge (2006) highlights that companies that promote continuous learning not only adapt to the environment but also generate constant knowledge and innovation.

Reconfiguring Resources

Helfat and Peteraf (2003) argue that the ability to reorganize internal resources is essential for adaptation and business growth.

Strategic Alliances

Dyer and Singh (1998) highlight that collaboration with other organizations allows companies to access new resources and knowledge.

Transformational Leadership

Bass and Avolio (1994) explain that this type of leadership drives innovation and organizational flexibility. For his part, Kotter (1996) points out that managing change successfully requires structured strategies to minimize resistance.

Knowledge Management

Nonaka and Takeuchi (1995) state that effective knowledge management is crucial for the development of dynamic capabilities and competitive advantage.

Organizational Resilience

Hamel and Valikangas (2003) highlight the importance of recovering from crises and seizing opportunities in times of uncertainty.
Top management not only defines business strategy, but also drives adaptation, innovation, and organizational transformation. Their leadership is key for companies to be competitive in an environment of constant change.

Linking Top Management and Dynamic Capabilities

In a business environment marked by uncertainty and high global competition, the relationship between senior management and the development of dynamic capabilities is essential to ensure the sustainability and success of a company.

Dynamic capabilities, understood as the ability of an organization to renew, adapt and respond effectively to changes in its environment, require more than a clear strategic vision; they demand concrete actions that facilitate the integration, construction and reconfiguration of internal and external competencies (Teece, Pisano & Shuen, 1997, p. 510). In this context, senior management plays a decisive role in providing leadership and defining the necessary guidelines for these processes.

Role of Senior Management in the Development of Dynamic Capabilities

One of the most critical aspects is strategic decision-making. Eisenhardt and Martin (2000, p. 1111) emphasize that dynamic capacities depend on the experience and judgment of leaders. This highlights the importance of informed and proactive leadership, capable of interpreting changes in the environment and making sound decisions.

In addition, investment in technological innovation and organizational talent development is a priority for senior management, as it strengthens competitiveness and improves the company's ability to adapt. For this process to be effective, it is key to foster an organizational structure and culture that promotes flexibility and innovation.

Transformational leadership is a critical tool in dynamic capacity building. Bass (1990, p. 22) argues that this type of leadership not only reacts to changes, but also drives them. Transformational leaders foster an environment of trust and collaboration, essential factors for success in changing environments.

Key Factors for Dynamic Capacity Building

Strategic Vision

A clear vision allows companies to adapt and take advantage of new opportunities. Teece (2007) argues that a well-defined strategy is the starting point for developing dynamic capacities.

Organizational Culture

Schein (2010, p. 11) emphasizes that leaders are responsible for shaping the company's culture. An environment that values innovation and continuous learning makes it easier to adapt to market changes.

Knowledge Management

Nonaka and Takeuchi (1995, p. 239) underline the importance of managing and renewing organizational knowledge to maintain competitiveness. Senior management can implement systems that facilitate the capture and application of knowledge.

Flexible Organizational Structure

Helfat et al. (2007, p. 113) highlight that an agile and flexible structure is crucial for the rapid reconfiguration of resources and adaptation to new environmental conditions.

Data-Driven Decision-Making

Eisenhardt and Martin (2000, p. 1113) explain that the ability to analyze large volumes of information facilitates the anticipation of market trends and the formulation of effective strategies.

Change Management

Effective leadership in times of change minimizes internal resistance and optimizes organizational transition. Winter (2003) argues that companies must adjust their resources and processes to respond successfully to new conditions.
The link between senior management and the development of dynamic capabilities is an interdependent process that combines strategic vision, transformational leadership, organizational culture, and knowledge management. Top management must not only define the direction of the company, but also create the necessary conditions for the organization to adapt, innovate, and stay competitive in an ever-evolving environment.

Table 2. Factors that Promote Dynamic Capabilities

Factor	Description	Author(s)
Strategic vision	Top management must detect opportunities and threats,	Teece (2007); Teece, Pisano & Shuen

	mobilizing resources.	(1997)
Organizational culture	It promotes innovation, flexibility and continuous learning in adapting to change.	Schein (2010)
Innovation	Reconfiguration of resources and processes to adapt to new demands.	Eisenhardt & Martin (2000)
Knowledge management	Capture, transfer and effective application of knowledge to adapt quickly.	Nonaka & Takeuchi (1995)
Organizational structure	Structural flexibility to allow for rapid reconfiguration of resources.	Helfat et al. (2007)
Transformational Leadership	Inspire and motivate employees to exceed expectations and embrace change.	Bass (1990)
Adoption of advanced technologies	Digitalization that facilitates informed and agile decision-making.	Venkatraman (1994)
Organizational Learning	Promotes continuous learning to improve processes and products.	Garvin (1993)
External collaboration	Strategic alliances that allow access to new knowledge and technologies.	Teece (2007)

Note: a comparative table of the factors that promote dynamic capacities is shown Source: own elaboration based on various authors cited

This research focuses on examining and understanding four fundamental dimensions of dynamic capabilities: absorption, adaptation, learning, and innovation. These skills are essential for the sustainability and success of organizations, as experts such as Teece (2007, p. 1325) and Eisenhardt and Martin (2000, p. 1110) have pointed out. They represent a company's ability to adjust and respond to ever-changing environments.

METHODOLOGY

The study takes a quantitative approach to analyze the relationships between variables using numerical data and statistical tools. Hernández-Sampieri and Mendoza (2018) explain that a research design is a strategy that guides the collection and analysis of data to answer a research question (p. 12).
The quantitative method is characterized by its rigor and structured approach, ensuring objectivity in the results. According to Creswell and Creswell (2018), this approach allows us to understand phenomena through numerical data, generally obtained through surveys, experiments, or statistical analysis (p. 52). In addition, it facilitates the establishment of causal relationships and the generalization of findings, which is essential to evaluate the impact of dynamic capabilities on organizational performance.

Bryman (2016) points out that quantitative design is structured and inflexible, since it controls and manipulates variables to establish clear correlations (p. 159). In this sense, this study seeks to relate dynamic capacities

(absorption, adaptation, learning and innovation) with the strategic roles of senior management (strategy, human resources, technology and innovation). Likewise, Pelekais (2000) highlights that quantitative analysis allows the generation of statistical representations and graphs that facilitate the interpretation of the results, making the data accessible to various audiences (p. 83). Therefore, this approach is key to evaluate the data collected and obtain verifiable and applicable conclusions.

The methodological design of this research is based on a quantitative correlational model, which seeks to identify how dynamic capabilities and strategic leadership interact in the context of SMEs. This approach facilitates the analysis of interactions and their impact on organizational performance, providing a more complete and grounded view of the phenomenon studied.

The research focuses on the study of dynamic capabilities in SMEs and the role of senior management in their development. A quantitative approach is adopted with a descriptive and correlational design, which allows characterizing dynamic capabilities and analyzing the relationship between them and strategic leadership in organizations.

The population under study is made up of small and medium-sized companies in the service sector, registered in the municipality's Commerce, Squares and Markets registry and with a minimum of three years of experience. The 2024 census indicates that there are 420 registered SMEs, of which 120 meet the criteria of seniority and sector. From this population, a representative sample of 95 units was determined, selected by stratified probability sampling. The formula for finite populations was used in the calculation of the sample size, guaranteeing a confidence level of 95% and a margin of error of 5%.

Various instruments were applied for data collection, including direct observation, interviews and structured surveys. In the first phase, the observation made it possible to identify organizations that met the selection criteria. Subsequently, interviews were conducted with managers, owners and directors of SMEs, addressing key aspects of dynamic capabilities and organizational leadership. Additionally, a questionnaire based on a Likert scale was used, designed by Rubén Darío Sae Fernández from the Tecnológico Metropolitano de Medellín, which has been previously validated in similar research. The application of this instrument was approved by its author.

Data analysis was carried out using statistical tools such as SPSS and Excel. Pearson correlation coefficients were calculated to assess the relationship between the variables, as well as significance tests to determine the statistical relevance of the results. The validity and reliability of the instruments were guaranteed through internal consistency tests and correlation analysis.

The methodology used combines a quantitative approach with a descriptive and correlational design, using data collection techniques that include observation, interviews and surveys. The use of advanced statistical methods allowed to obtain accurate results on the relationship between senior management leadership and dynamic capacity building in SMEs.

Study Variables
Dependent variables:
The dimensions of dynamic capabilities:
Absorption capacity.
Ability to adapt.
Learning capacity.
Capacity for innovation.

Independent Variables:
The roles of senior management:
Strategic role.
Organizational role.
Role of human resources.
Role of innovation and technology.

Statistical Analysis

Pearson's correlation coefficient (r) will be applied to measure the strength and direction of the relationships between the variables. In addition, significance tests (p-value) will be performed to determine if the observed correlations are statistically relevant.

RESULTS

The study identified that SMEs develop their dynamic capacities in four main dimensions: absorption, innovation, learning and adaptation. These factors are essential for business competitiveness, since they allow them to face environmental challenges and take advantage of emerging opportunities (Teece, 2007).

The findings show a positive trend in the development of these capabilities, with averages ranging from 3,802 to 3,929, indicating moderately high performance in the companies analyzed. The importance of these skills has been widely highlighted in the literature. Authors such as Barney (1991) and Eisenhardt and Martin (2000) state that its correct application can position organizations in highly competitive markets.

Absorption Capacity

With an average of 3,929, absorption capacity is the most developed dimension. Zahra and George (2002) define it as "the ability of an organization to identify the value of external knowledge, assimilate it and use it to its advantage". In dynamic environments, this capability is crucial, as it allows for the integration of external innovations and improved performance.

Cohen and Levinthal (1990) explain that this skill not only involves the acquisition of information, but also its transformation into useful knowledge to solve organizational problems. In addition, they highlight that it depends on the company's prior knowledge, which underlines the need to invest in continuous training and information management.

Capacity for Innovation

With an average of 3,858, innovation capacity reflects the ability of organizations to develop new products, processes, or services. Eisenhardt and Martin (2000) associate it with repeatable processes that allow responding to technological and market changes. Innovation not only generates competitive differentiation, but also drives sustainable growth (Christensen, 2013).

Tushman and O'Reilly (1996) argue that innovative success requires a balance between exploration and exploitation. In other words, companies must look for new opportunities without neglecting the optimization of their current resources. This approach is critical for SMEs in dynamic industries, where product lifecycles are short, and market preferences change rapidly.

Learning Capacity

With an average of 3,802, this capacity evidences the organizational ability to generate knowledge from previous experiences. Helfat et al. (2007) emphasize that organizational learning is key in the evolution of dynamic capabilities, since it allows strategies to be adjusted according to changes in the environment and acquired knowledge.

Argyris and Schön (1996) differentiate between single-loop and double-loop learning. The former involves minor adjustments to existing processes, while the latter questions the basic assumptions of the organization, promoting deeper changes. In Fresnillo's SMEs, fostering double-loop learning could be key to disruptive innovations and staying competitive.

Adaptability

The ability to adapt, with an average of 3,805, shows the ability of organizations to adjust to a changing environment. Winter (2003) considers it a key competitive advantage, since it allows resources and processes to be reconfigured to maximize opportunities in volatile markets.

Teece (2009) highlights that this capacity is crucial in industries subject to accelerated technological changes. According to him, companies that master this skill not only survive, but thrive in uncertain scenarios. Barrales-Molina, Montes, and Gutiérrez-Gutiérrez (2013) add that the ability to adapt is influenced by organizational culture, structure, and leadership, which highlights the need for comprehensive management.

Generally speaking, dynamic capabilities not only help SMEs react to change, but also anticipate it, making them strategic tools for organizational success. Teece (2009) points out that these skills are essential in globalized markets with constantly evolving conditions. For his part, Barreto (2010) stresses that its development requires a proactive attitude, flexible structures and constant investment in learning and innovation.

Helfat and Peteraf (2009) state that "dynamic capabilities are not static, but evolve over time as organizations gain experience and face new challenges." Therefore, SMEs must adopt a mindset of continuous improvement, where innovation and learning are fundamental pillars.

Barney (1991) emphasizes that "dynamic capabilities are difficult to imitate, which makes them a sustainable source of competitive advantage." For

Fresnillo SMEs, this feature allows them to differentiate themselves in a highly competitive market and strengthen their relationships with customers and partners.

Role of Senior Management

Senior management plays a key role in the development of dynamic capabilities in organizations. In the SMEs of Fresnillo, Zacatecas, four essential dimensions were identified in their role: strategy, organization, human resources and technology.

Strategy

The strategic dimension obtained an average of 3,888, indicating that the formulation and execution of strategies aimed at change is one of the most developed areas. Mintzberg (2009) describes strategic leadership as the ability to anticipate and manage transformations, which is crucial for companies to adapt.

Teece (2007) points out that management strategy not only involves long-term planning, but also the reconfiguration of resources to respond to market demands. Eisenhardt and Sull (2001) highlight the importance of quick decision-making in contexts of uncertainty, which favors SMEs operating in local markets with economic and regulatory fluctuations.

Organization

The organizational aspect obtained an average of 3,796, highlighting the importance of well-defined structures. Robbins and Coulter (2021) argue that an effective organization requires clear coordination and communication systems to align resources with strategic objectives.

Christensen (2013) states that "the organizational structure must be flexible to foster innovation, but stable to ensure operational efficiency." In SMEs with limited resources, this balance is essential. Helfat et al. (2007) add that organizational design influences the ability to innovate, learn, and adapt.

Human Resource Management

In this area, the average was 3,896, which underscores its importance in organizational development. Barney (1991) mentions that "human capital is a key strategic resource", since the skills of personnel have a direct impact on business performance.

Ulrich and Brockbank (2005) state that senior management should encourage talent development through strategies that promote commitment and continuous training. Lepak and Snell (1999) underline the importance of aligning talent management with organizational strategies.

Innovation and Technology

With an average of 3,851, technology plays a key role. Teece (2009) considers it a facilitator of dynamic capacities. Drucker (1999) emphasizes that

technological innovation must be aligned with the strategic objectives of the company.

Christensen (2013) argues that technology should not only improve existing processes, but also explore new opportunities. Top management must foster a culture of innovation that motivates employees to come up with ideas and experiment.

Evaluation of the Variables of Dynamic Capacities

Each variable is analyzed with basic descriptive statistics, such as mean (\mu), standard deviation (\sigma), and upper (\mu + \sigma) and lower (\mu - \sigma) limits.

These variables include:

1. Absorption: Average 3,929; Standard deviation 0.988; Lower limit 2,940; Upper limit 4,917.
2. Innovation: Average 3,858; Standard deviation 0.988; Lower limit 2,871; Upper limit 4,846.
3. Learning: Average 3,802; Standard deviation 0.978; Lower limit 2,824; Upper limit 4,781.
4. Adaptation: Average 3,805; Standard deviation 0.966; Lower limit 2,839; Upper limit 4,771.
5. These statistics reflect the central trend and variability of each variable, offering a basis for understanding their behavior.

Correlations between Variables of Dynamic Capabilities and Senior Management

Correlation coefficients are presented between four strategic dimensions (Strategy, Organization, Resources, and Technology) and the first variables (Absorption, Innovation, Learning, and Adaptation). The coefficients are as follows:

1. Absorption: High correlations with Strategy (0.7897), Organization (0.7997), Resources (0.7131), and Technology (0.7393).
2. Innovation: Notable correlations with Strategy (0.8299), Organization (0.8362), Resources (0.7184), and Technology (0.7375).
3. Learning: Important relationship with Strategy (0.8255), Organization (0.8128), Resources (0.7338), and Technology (0.7659).
4. Adaptation: High correlations with Strategy (0.8570), Organization (0.8450), Resources (0.7770), and Technology (0.7461).

Table 3. Correlations of Dynamic Capabilities and Top Management

	Strategy	Organization	Resources	Technology
Absorption	0.7897	0.7997	0.7131	0.7393
Innovation	0.8299	0.8362	0.7184	0.7375
Learning	0.8255	0.8128	0.7338	0.7659
Adaptation	0.8570	0.8450	0.7770	0.7461

CONCLUSIONS AND RECOMMENDATIONS

This study examined the role of senior management in developing and consolidating dynamic capacities in SMEs, highlighting their impact on sustainable competitiveness. The findings reveal various opportunities and challenges that these companies must face to stay competitive in an ever-changing economic and social environment.

Dynamic capabilities, defined by Teece, Pisano, and Shuen (1997) as the organizational skills to integrate, build, and reconfigure internal and external resources in response to market demands, have proven to be essential for the competitiveness of SMEs.

While the companies studied recognize the importance of adaptation and innovation, they face significant barriers, such as a shortage of financial resources, limited leadership training, and a lack of a clear strategic framework. Eisenhardt and Martin (2000) argue that dynamic capabilities are not simple routines, but unique processes that depend on the organizational context and require proactive senior management to overcome structural constraints.

To enhance these capabilities, it is essential to develop specific skills in change management, continuous innovation, and strategic leadership. In addition, these skills allow not only to respond to market fluctuations, but also to anticipate emerging trends, generating sustainable competitive advantages.
Another key finding of this study is the relationship between dynamic capabilities and organizational resilience. According to Sutcliffe and Vogus (2003), companies that invest in strengthening these capabilities are better prepared to face crises and turn challenges into strategic opportunities. This reinforces the importance of prioritizing strategies that foster flexibility, the integration of new technologies, and collaboration with other organizations and institutions.

It was also identified that these capabilities contribute to business sustainability. Hart and Dowell (2011) highlight that companies that integrate economic, social, and environmental objectives into their operational strategy achieve balanced and sustainable development. However, many SMEs still face difficulties in this area due to lack of access to finance and technical resources. This emphasizes the need for public policies that facilitate access to financial tools and favorable environments for innovation.

FURTHER STUDY

Future research should delve deeper into the specific mechanisms by which senior management can effectively develop dynamic capabilities in SMEs, especially in resource-constrained environments. Comparative studies across different industries or regions could provide insight into contextual factors that facilitate or hinder the development of these capabilities.

It would also be valuable to explore the role of leadership development programs in enhancing strategic agility, change management, and innovation within SMEs. Additionally, longitudinal research could assess how dynamic capabilities evolve over time and their long-term effects on organizational resilience and sustainability.

REFERENCES

Argyris, C., & Schön, D. A. (1996). Organizational learning II: Theory, method, and practice. Addison-Wesley.

Barney, J. (1991). Firm resources and sustained competitive advantage. Journal of Management, 17(1), 99-120. https://doi.org/10.1177/014920639101700108

Barreto, I. (2010). Dynamic capabilities: A review of past research and an agenda for the future. Journal of Management, 36(1), 256-280. https://doi.org/10.1177/0149206309350776

Bass, B. M. (1990). From transactional to transformational leadership: Learning to share the vision. Organizational Dynamics, 18(3), 19-31.

Bass, B. M., & Avolio, B. J. (1993). Transformational leadership and organizational culture. Public Administration Quarterly, 17(1), 112-121.

Bass, B. M., & Avolio, B. J. (1994). Improving organizational effectiveness through transformational leadership. SAGE Publications.

Bryman, A. (2016). Social research methods (5th ed.). Oxford University Press.

Christensen, C. M. (1997). The innovator's dilemma: When new technologies cause great firms to fail. Harvard Business Review Press.

Christensen, C. M. (2013). The innovator's solution: Creating and sustaining successful growth. Harvard Business Review Press.

Cohen, W. M., & Levinthal, D. A. (1990). Absorptive capacity: A new perspective on learning and innovation. Administrative Science Quarterly, 35(1), 128-152. https://doi.org/10.2307/2393553

Creswell, J. W., & Creswell, J. D. (2018). Research design: Qualitative, quantitative, and mixed methods approaches(5th ed.). SAGE Publications.

Drucker, P. F. (1999). Management challenges for the 21st century. HarperBusiness.

Dyer, J. H., & Singh, H. (1998). The relational view: Cooperative strategy and sources of interorganizational competitive advantage. Academy of Management Review, 23(4), 660-679. https://doi.org/10.5465/amr.1998.1255632

Eisenhardt, K. M., & Martin, J. A. (2000). Dynamic capabilities: What are they? Strategic Management Journal, 21(10-11), 1105-1121.

https://doi.org/10.1002/1097-0266(200010/11)21:10/11%3C1105::AID-SMJ133%3E3.0.CO; 2-E

Eisenhardt, K. M., & Sull, D. N. (2001). Strategy as simple rules. Harvard Business Review, 79(1), 106-116.

Garvin, D. A. (1993). Building a learning organization. Harvard Business Review, 71(4), 78-91.

Garzón, J. (2015). Innovation and competitiveness in organizations. Editorial Alfaomega.

González Bazaldúa, E. (2021). Knowledge management and business competitiveness. McGraw-Hill.

Hamel, G., & Valikangas, L. (2003). The quest for resilience. Harvard Business Review, 81(9), 52-63.

Hart, S. L., & Dowell, G. (2011). Invited editorial: A natural-resource-based view of the firm. Journal of Management, 37(5), 1464-1479. https://doi.org/10.1177/0149206310390219

Helfat, C. E., & Peteraf, M. A. (2003). The dynamic resource-based view: Capability lifecycles. Strategic Management Journal, 24(10), 997-1010. https://doi.org/10.1002/smj.332

Helfat, C. E., Finkelstein, S., Mitchell, W., Peteraf, M., Singh, H., Teece, D. J., & Winter, S. G. (2007). Dynamic capabilities: Understanding strategic change in organizations. Blackwell Publishing.

Hernández-Sampieri, R., & Mendoza, C. (2018). Research Methodology (6th ed.). McGraw-Hill.

Lepak, D. P., & Snell, S. A. (1999). The human resource architecture: Toward a theory of human capital allocation and development. Academy of Management Review, 24(1), 31-48. https://doi.org/10.5465/amr.1999.1580439

Linnenluecke, M. K. (2017). Resilience in business and management research: A review of influential publications and a research agenda. International Journal of Management Reviews, 19(1), 4-30. https://doi.org/10.1111/ijmr.12076

Mintzberg, H. (2009). Managing. Berrett-Koehler Publishers.

Nonaka, I., & Takeuchi, H. (1995). The knowledge-creating company: How Japanese companies create the dynamics of innovation. Oxford University Press.

Robbins, S. P., & Coulter, M. (2021). Management (15th ed.). Pearson.

Rotundo, M. (2020). Leadership and business strategies. Ediciones del Centro.

Schein, E. H. (2010). Organizational culture and leadership (4th ed.). Jossey-Bass.

Senge, P. M. (2006). The fifth discipline: The art and practice of the learning organization. Doubleday.

Sutcliffe, K. M., & Vogus, T. J. (2003). Organizing for resilience. In K. S. Cameron, J. E. Dutton, & R. E. Quinn (Eds.), Positive organizational scholarship: Foundations of a new discipline (pp. 94-110). Berrett-Koehler.

Teece, D. J. (2007). Explicating dynamic capabilities: The nature and microfoundations of (sustainable) enterprise performance. Strategic Management Journal, 28(13), 1319-1350. https://doi.org/10.1002/smj.640

Teece, D. J., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management. Strategic Management Journal, 18(7), 509-533. https://doi.org/10.1002/(SICI)1097-0266(199708)18:7%3C509::AID-SMJ882%3E3.0.CO; 2-Z

Tidd, J., Bessant, J., & Pavitt, K. (2005). Managing innovation: Integrating technological, market and organizational change (3rd ed.). John Wiley & Sons.

Winter, S. G. (2003). Understanding dynamic capabilities. Strategic Management Journal, 24(10), 991-995. https://doi.org/10.1002/smj.318